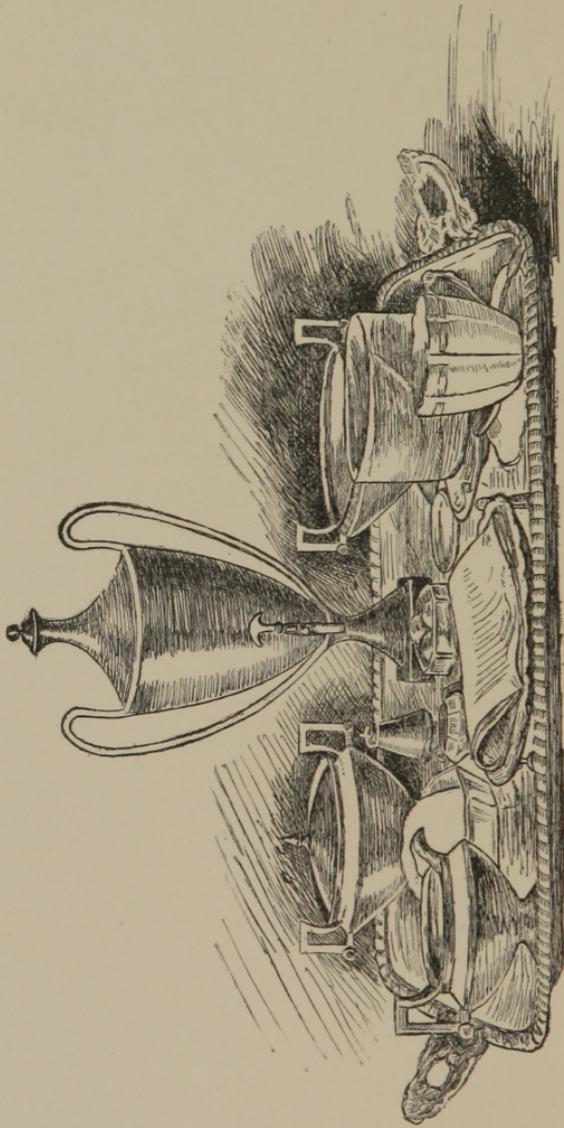


DIET IN ILLNESS
AND
CONVALESCENCE

ALICE WORTHINGTON WINTHROP



TRAY WITH BREAKFAST SERVICE

DIET IN ILLNESS AND CONVALESCENCE

BY
ALICE WORTHINGTON WINTHROP

PROFUSELY ILLUSTRATED



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PREFACE

DIET IN ILLNESS AND CONVALESCENCE is founded on DIET FOR THE SICK, published by Messrs. Harper & Brothers in 1885. As that admirable book is out of print, and as there is none which exactly fills its place, the present writer has been asked to incorporate its essential portions in a work which shall include also the later ideas on the science and practice of dietetics. She complies with this request with a certain hesitation, being aware that she cannot improve on the original work; but in view of the great advance, since it was published (and partly through its instrumentality), in the knowledge of the relation of diet to health, and of the alleviating and even curative effects of diet in illness, she feels justified in making such additions and changes as the intervening years require, and as the present general interest in the subject demands.

In the preparation of the scientific portion of this work she has been materially assisted by various French and German writers, and by Pavy, Fothergill, and other English authorities, including Mrs. Ernest Hart, whose excellent work, *Diet in Sickness and in Health*, has been frequently quoted. She wishes also to express her indebtedness to the recently published *Lectures on the Malarial Fevers*, by Dr. Thayer, of Johns Hopkins University.

PREFACE

The writer's experience at Montauk Point during the months of August and September of this year has been supplemented by valuable information obtained from surgeons and nurses at that hospital-camp, where opportunities for the study of typhoid and malarial fever were only too abundant.

The additional illustrations are by Miss Milicent Johnson.

The author does not apologize for certain specimens of cookery-book English—a distinct branch of the language—which will be found among the receipts that have been added to those in the original work. Many of these receipts were taken down from the lips of accomplished cooks, and have been edited as little as possible, lest their practical value and directness should thereby be impaired.

ALICE WORTHINGTON WINTHROP.

WASHINGTON, D.C., *November*, 1898.

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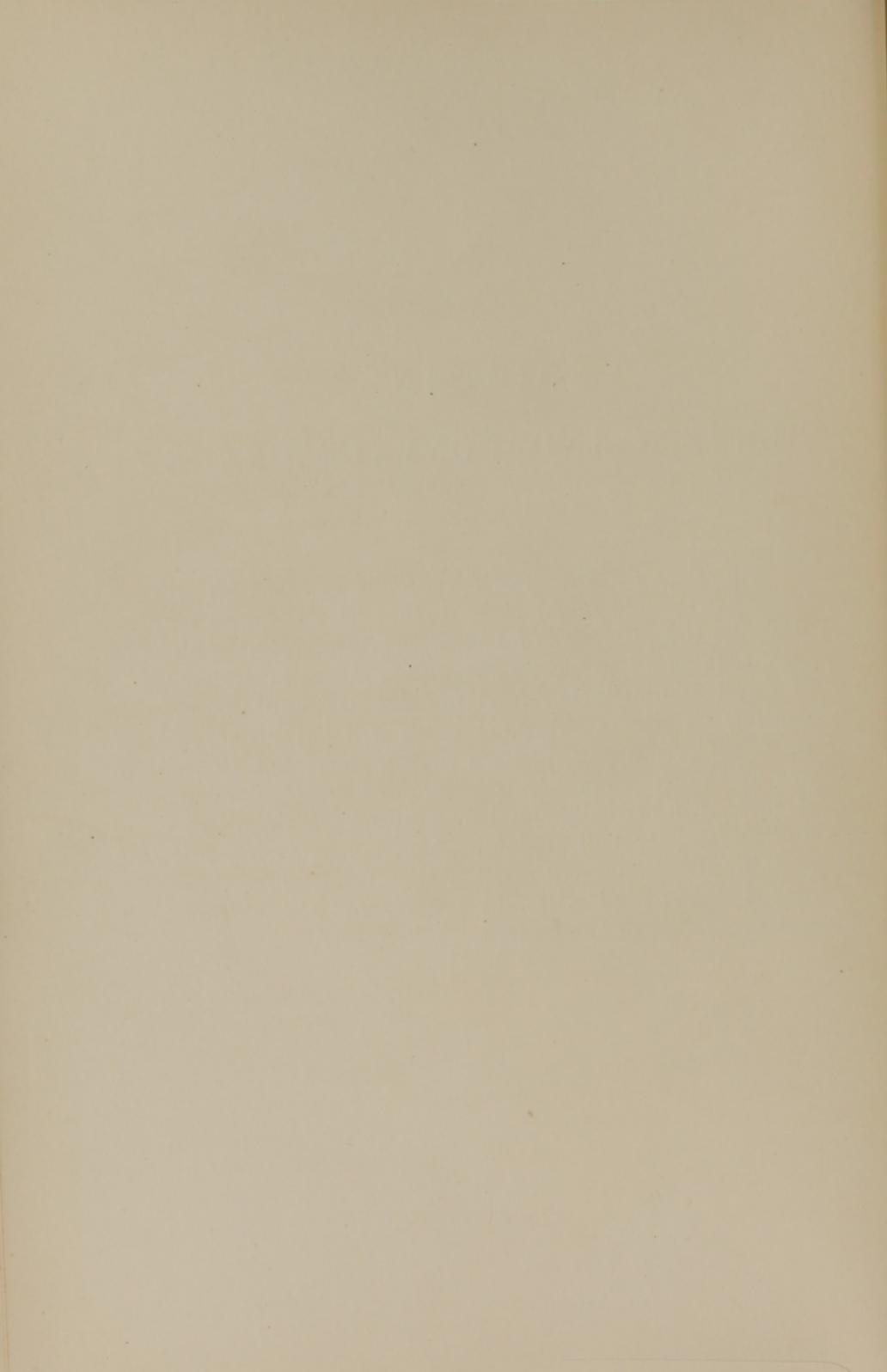
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DIET IN
ILLNESS AND CONVALESCENCE

DIET IN ILLNESS AND CONVALESCENCE

IN a work on Diet for Invalids, it is essential to consider the Chemical Constituents of Food, and to describe the processes of Digestion—briefly, but with sufficient detail to aid an intelligent nurse in preparing and administering food for the sick, and in observing its effects. A good nurse will never exceed or depart from the doctor's instructions; but there are occasions when her possession of accurate, even if limited, knowledge on the subjects of chemistry and physiology will enable a physician to give more definite directions, will assist him in the performance of his duties, and will add greatly to the comfort and well-being of the patient.



CONSTITUENTS OF FOOD

Constituents of Food.—Food is composed of organic and inorganic substances. The organic may be divided into nitrogenous and non-nitrogenous elements. The inorganic foods are water, mineral salts, and vegetable salts and acids.

The nitrogenous elements are contained in all flesh-forming foods except fats. They are found principally in meat, eggs, milk, wheat, oats, corn, beans, peas, and nuts.

The nitrogenous foods are essential in the process called metabolism, or tissue-change, on which health and even life depend. Their uses are: 1. To repair the waste of nitrogen in the tissues in which it exists; 2. To promote the destruction of old, as well as the formation of new, tissue; 3. To stimulate the division or splitting-up of the nitrogenous and non-nitrogenous foods into their respective elements, and, under certain circumstances, to assist in the production of heat and fat.

As the assimilation of food and tissue-change are most rapid in childhood and youth and during hard labor, it will be readily seen that an ample supply of nitrogen is then demanded by the system. When change is slower, and when the supply of energy equals the demand, as it does with well-nourished persons in middle life and old age, the amount of nitrogenous food should be diminished.

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When the virtue of nitrogenous food is exhausted, its products are thrown from the blood and excreted by the kidneys in the form of uric acid. If used in excess, nitrogenous food throws too great a burden on these organs, leading to their degeneration, as in Bright's disease.

The non-nitrogenous foods largely furnish the fuel necessary to consume the nitrogenous substances. They consist of fats, of the various forms of sugar and starch, and of stimulants.

Fats not only maintain the bodily heat and produce force, but they serve as a stored-up supply of combustible matter and energy. They also prevent waste of tissue and diminish the amount of nitrogenous food required.

Sugar and starch especially supply the bodily fuel—*i.e.*, are “energy-producers.” In some way, which is not yet fully explained, they also increase the formation of fat.

Among stimulants are alcohol, tea, coffee, cocoa, etc. It has not been definitely ascertained how alcohol acts; but it undoubtedly prevents waste of the tissues, and thereby economizes food, although it interferes with the elimination of injurious substances from the system. The same may be said of tea and coffee. The effects of stimulants will be considered in a separate part of this work.

Of the inorganic foods, water will also require a section to itself.

Salts are mineral and vegetable. The former, in the form of chloride of sodium, or common salt, is found in every tissue and fluid of the body. Vegetable salts and acids have little nutritive value, but are needed for the assimilation of other food.

DIGESTION

The Processes of Digestion.—After the food has been broken and ground by the teeth, it is softened and moistened by the saliva, an alkaline secretion which has the property of converting the insoluble starch of farinaceous food into soluble dextrine, a form of sugar. By means of the tongue and of the self-acting muscles of the throat, the food is conveyed through the œsophagus, or gullet, into the stomach, where the albumen and the cane-sugar are acted on by the gastric juice. This juice is composed of hydrochloric (and sometimes lactic) acid, mucus, and pepsin. The acid in the gastric juice is an antiseptic, or germ-destroyer. It stops fermentation, and is the only medium in which pepsin, the active principle, can work. During the gastric process, which requires from three to five hours, according to the digestibility of the food submitted to it, there is a slow, continuous, churning motion of the walls of the stomach, by which all the food is subjected to the action of the gastric juice, which changes the albumen in the nitrogenous food into albumose, or peptones, and the cane-sugar into grape-sugar, or glycose. These, with various salts held in solution, are nearly all absorbed by the delicate walls of the blood-vessels of the stomach, and are carried by the portal vein to the liver. Here they are converted, by some process which is still obscure, into material necessary for nutrition. The glycose becomes

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glycogen, and is stored in the liver for future use. The albumose again becomes albumen and passes into the circulation, constituting the serum and the fibrin of the blood. It is the muscle-producing element of nutrition.

After the albumen and cane-sugar are digested, and to a great extent absorbed, the remaining food (principally starch, sugar, and fat), now a semi-fluid mass called chyme, passes out of the stomach, in small quantities at a time, through the narrow opening of the pylorus into the duodenum.

In health, unless there is some irritating substance present, this passage of the food causes no discomfort. When there is any substance producing irritation, or when the digestion is impaired, the pylorus refuses to act; the muscles of the stomach, through sympathy, contract spasmodically, and the food is forcibly returned to, and ejected from, the mouth by the act of vomiting.

When it has passed into the duodenum, the chyme is acted on by two fluids—the bile and the alkaline pancreatic juice. Here the digestion of the starch, begun by the saliva and suspended during the action of the gastric juice (for it can only take place in an alkaline medium), is accomplished. The pancreatic juice has the property of converting starch almost instantaneously into sugar. It acts also on the fats which are not affected either by the saliva or the gastric juice. They become emulsified—*i.e.*, broken up into tiny globules, which do not afterwards reunite, and which are absorbed, later on, by the lacteals—minute absorbents which line the small intestine.

The bile is secreted in the liver, the largest and one of the most important organs in the body. The action of the bile is not clearly understood, although it is essential to digestion; but it is known that its influ-

DIGESTION

ence is antiseptic, or germ-destroying, and that it aids in emulsifying or separating the fats. It also throws down, or precipitates, the partially digested and undigested particles in the food-mass, or chyme, which after its subjection to the pancreatic juice becomes chyle. Leaving the duodenum, the chyle enters the small or long intestine. Here the action is both secretory and absorbent. The long intestine is lined with glands, which secrete a watery fluid, and with minute absorbents called villi and (as above mentioned) lacteals.

This watery fluid has, in a less degree, the same properties as the gastric and pancreatic juices, and it converts the albumen and starch, which have not been digested, into albumose and glyucose. The villi take up the glyucose and convey it through the mesenteric veins to the portal vein, and thence to the liver. The lacteals take up the fats, and they are carried through the thoracic ducts and the left jugular vein to the heart, and thence to the lungs, where they are consumed in the process of breathing.

The presence of food in the small intestine stimulates the muscles, which act involuntarily, and which propel the remains of the food-mass, and the excretions of the process of digestion, into the large intestine, whence they pass out of the body.

It is beyond the province of this book to describe the circulation of the blood; but it is necessary to state that the impurities with which the blood becomes charged, especially when it contains an excess of albumen, take the form largely of urea or uric acid, which it is the function of the kidneys to eliminate.

When the imperfect digestion of albumen throws too great a burden on these organs, or when they are, from functional or organic weakness, incapable of performing the work assigned to them, uric acid is

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secreted in excess, and, if thrown back on the system, results in the condition which the unscientific term "biliousness," in headache, gout and rheumatism, albuminuria, true Bright's disease, and possibly in other forms of disease. Dr. Haig, who has carefully studied the effects of uric acid, writes as follows: "When it is present in the blood self-reliance is absolutely gone, extreme modesty is common, or even habitual, a feather-weight will crush one to the dust, and even the greatest good-fortune will fail to cheer. If roused from such a condition, a considerable amount of irritability and bad temper is sure to be manifested, quite out of proportion to the requirements of the case. Clear the blood of uric acid, and the mental condition alters as if by magic; ideas flash through the brain, everything is remembered, nothing is forgotten, exercise of mind and body is a pleasure, the struggle for existence a glory, nothing is too good to happen, the impossible is within reach, and misfortunes slide like water off a duck's back."

ARTIFICIAL DIGESTION BY MEANS OF PANCREATIC FERMENTS AND OF PEPSIN

IMPORTANT discoveries have of late years been made in the matter of supplying artificially digested, or partly digested, food, which is of benefit in the treatment of certain diseased conditions. The digestive agent is pancreatic juice, or ferment, which can be taken from animals in an active, potent form. This is mixed with milk, milk-gruel, milk-punch, beef-tea, and other foods, as explained in the receipts. Such digested food is especially indicated when there is an inability to digest the caseine of milk, or starch or fats, as often occurs with infants unable to retain milk in the stomach, and with consumptives who cannot digest fats. It is also indicated in cases of extreme emaciation or weakness, in cases of typhoid fever,* and especially in gastric troubles brought on by alcoholic excesses.

Many physicians resort to artificial digestion only in cases where exercise and bracing air cannot accomplish their usual results in aid of natural digestion.

At present there is a reaction against the frequent administration of pre-digested foods. In certain forms of acute illness they are undoubtedly useful, but when

* The ulcerated bowels common to typhoid fever must not be exposed to the irritation of foods that leave a solid residue after digestion. The curdling of the caseine of milk may be prevented in part by giving it already digested (*peptonized*).

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the patient rejects the idea of all food, it is generally true that the powers of assimilation, as well as the organs of digestion, fail to act, and in that case there is danger of the decomposition of the pre-digested food in the system.

Pepsin for stomachic indigestion has long been in use. Much of the digestive process, especially in the case of fats and starches, takes place when the food has left the stomach and entered the duodenum. This may be called duodenal digestion. It is here that the pancreatic ferment does its work.

For information on this subject—*viz.*, the practical use of pancreatic extract and its action on the human system treated philosophically—we are indebted to Dr. William Roberts, of Manchester, England. This information was given in a series of lectures before the Royal College of Physicians, which have since been published in book form, entitled *On the Digestive Ferments*.

In our own country a preparation of the pancreas, called "Extractum Pancreatis," is made by Fairchild Brothers & Foster, New York City. Mr. Fairchild has published a small work on the subject, having given it a very thorough investigation. His extract is in powdered form, is easily kept, and is admirable in its results.

Dr. Horace Dobell has also contributed valuable information on the same subject; having, in fact, preceded Dr. Roberts in his publications. His experiments have been chiefly directed to the action of the pancreas on fats.* An article, which may be obtained

* The albuminoids and starch have been digested with pepsin and vegetable diastase; no other digestive agent but pancreatine has been found to emulsify fat.

ARTIFICIAL DIGESTION

in most of our large cities (prepared by Savory & Moore, of London), called "Pancreatic Emulsion"—*i.e.*, pancreatized suet, cod-liver oil, etc.—is the result of his investigations. This aliment is considered especially valuable for consumptives. (See Appendix, p. 263.)

Dr. Dobell says: "Pancreatic emulsion has proved most magical in its effects on miserable, wasted children—children who have been subjected to chronic defects in diet—for instance, when the mother's milk is poor in fat and lactine, or when the child's diet has been deficient in milk and fat elements, and the pancreas has been partly paralyzed by prolonged inactivity, causing a kind of wasting (*marasmus*)."

In the preparation of the various foods with the pancreatic extract the process of digestion is stopped a little short of completion, to prevent the formation of offensive products which full digestion would develop.

In any of the following receipts the milk or food may be more or less *peptonized*.* In some cases, especially in cases of infants, it may be better to peptonize the food partially. The degree of peptonizing is best determined by the readiness with which the food is assimilated by the patient. To check the action of the digestive ferment, the food, when sufficiently peptonized, may be placed on ice, which at once arrests all action (a commentary on the reckless habit of drinking ice-water), or it may be scalded, or brought to the boiling-point. It is afterwards kept like ordinary milk. Peptonized milk-gruel is generally preferred to the peptonized milk.

* The word *peptonized* is used as synonymous with pancreatized.

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TO PEPTONIZE MILK

In a clean quart bottle put a powder of five grains of *Extractum Pancreatis* (about a quarter of a teaspoonful), also fifteen grains of soda* (a pinch), and a gill of water (half a cupful); shake it, then add a pint of *quite fresh* milk.

Place the bottle in a pitcher of hot water, or set the bottle aside in a warm place for an hour, or an hour and a half, to keep the milk warm—at about 98°, or the natural temperature of the body. When the contents of the bottle assume a grayish-yellow color, and a slightly bitter taste, then the milk is thoroughly peptonized. When partially peptonized it has no bitter taste, and but little appearance of change. When the milk is peptonized (sufficiently for the patient), either scald or bring it to the boiling-point (to prevent further digestion), or place it on ice until used. It can be taken like ordinary milk. (See Appendix, p. 262.)

Peptonized milk may be sweetened to taste, and used for making punch, with rum, etc., or it can be made into jelly; indeed, it may well take the place of ordinary milk in any of the various dishes in which milk is used.

PEPTONIZED MILK-GRUEL

Half a pint (a cupful) of well-boiled gruel (made of barley flour, Graham flour, or granulated wheat, corn, or oatmeal) is added while still boiling hot, to half a pint of cold milk. The mixture will have a temperature of about 125°; add to this five grains (a quarter of a teaspoonful) of the *Extractum Pancreatis*, and fifteen grains of soda, and let it stand until peptonized.

* A newer preparation of the pancreatic extract comes already mixed with soda.

ARTIFICIAL DIGESTION

PEPTONIZED MILK JELLY. (Very palatable.)

Ingredients: one pint of peptonized milk heated to boiling; one quarter of a pound of sugar; half a-box of Coxe's or Nelson's gelatin; the juice and the thin yellow cuts of the rind of one lemon; the juice of one orange; three or four table-spoonfuls of Jamaica rum.

Add the sugar and the thin cuts of the rind of the lemon to the milk. Soak the gelatin for half an hour or more in enough cold water to cover it, then add a gill of boiling water, and when quite dissolved add the juices of the lemon and orange, and also the rum. Add this to the sweetened milk when it has partially cooled, and pass through a little wire milk strainer or sieve. Pour it into cups or moulds (previously wet with cold water), and set in a cold place.

This jelly may be made with any flavor, with or without wine or spirits. It is very good when flavored with lemon or orange alone, or with lemon or almond extract.

When the milk is thoroughly peptonized (brought to a point when a slight bitter taste is detected), lemon juice or acids will not curdle it.

The milk-gruels may be used, instead of milk, in making jelly.

*REMARKS ABOUT BEVERAGES AND
FOODS*

BEVERAGES

WATER

PURE water is an odorless and almost tasteless and colorless fluid. It is not in one sense a food, for it passes out of the system substantially unchanged; but it is necessary to health, and even to life. It not only serves to dilute other fluids, and to dissolve the solid elements of the body, but it assists in the actual processes of digestion and in maintaining the circulation of the blood, and is found in all the secretions of the body, forming from sixty to seventy per cent. of the tissues. From two and a half to four pints a day should generally be drunk to keep the system in good condition, but a large proportion of this is taken by most persons in the form of tea, coffee, etc.

Drinking water is rarely chemically pure. In fact, by some authorities it is considered more wholesome when it contains free carbonic-acid gas and a small quantity of carbonate of lime. It is the absence of these constituents which makes boiled and distilled water so insipid.

It is difficult for individuals to test water thoroughly; for, even when clear, sparkling, and odorless, it has been found to contain germs of typhoid and malarial

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fever, etc. Whenever it is practicable, sources of water should be frequently examined and analyzed by the municipal authorities.

In all cases, however, in judging of the purity of water, we should use taste, smell, and vision. Taste, indeed, is frequently deceptive. To be palatable, water must be thoroughly aerated, and this involves the presence of carbonic acid gas. All water contains a minute quantity of iron, but the slightest excess causes a disagreeable, flat taste. Salt in any appreciable quantity, except in mineral waters, is generally due to animal pollution.

Water which has any odor is always doubtful. If the presence of ammonia or other foreign element is suspected, fill a glass-stoppered bottle half full of water and bring it to blood heat. Shake it and remove the stopper, when, if the water is impure, the odor will be plainly perceptible.

It cannot be too often repeated that water which is clear, colorless, and sparkling is not necessarily pure. In fact, pure water has a slightly bluish tinge. To prove this, place a thin glass tumbler filled with pure water on a white paper in a good light.

Hard and soft water were formerly supposed to be equally wholesome; but very hard water is now believed by many physicians to induce calculus, dyspepsia, constipation, gout, and, in extreme cases, goitre.

In his evidence before a royal commission, M. Soyer stated that it takes more meat and more time to make soup with hard water than with soft. So, in making tea, more material is required with hard than with soft water. Hard water darkens vegetables, and, in cooking with it, it is well to add a pinch of bicarbonate of soda. The kettle in which it is boiled should be cleansed by the use of soda.

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Rain water would be the ideal water if its constituents could always be relied upon, if arrangements existed in modern houses for its collection and care, and if it was not liable to contamination from the smoke and gases in the air of cities. The first rain in a shower, however, brings down all the existing impurities in the atmosphere. It filters the air, and is itself filled with germs and spores. When enclosed in dust-proof cisterns, rain water is preserved from further contamination. Unless in constant motion, germs are developed with great rapidity in rain water.

River water, by its constant motion, is to a certain extent self-purifying, the solid particles falling to the bottom; but these are stirred up and added to by rains and floods; and river water is constantly liable to pollution from the population on its banks. Cholera and typhoid fever are disseminated in this way. A recent epidemic of typhoid fever at Maidstone, England, when there were 1897 cases within three months, was directly traced to a colony of hop-pickers that had camped for a short time on the stream from which the town was supplied with water. The purification of the water at Hamburg has completely eradicated cholera.

Distilled water is, of course, absolutely pure. It is not, however, agreeable to the taste even when aërated. An English authority, Dr. Rideal, states that a small quantity of carbonate of soda—about two grains per gallon—and two drops (diluted to about ten per cent. strength) of hydrochloric acid per gallon, will render distilled water palatable. It quickly becomes foul and germ-laden when exposed to the air. It is now possible to make distilled water at home, as small stills are manufactured for the purpose.

Water may be contaminated by the addition of

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mineral and animal substances, by vegetable growths, and by the bacteria which are the result of these causes. It may be purified, to a certain extent, by boiling and filtering. Filtering was at one time believed to be an infallible method of insuring pure water, but it is now regarded as of doubtful efficacy. Dr. Rideal, already quoted, says: "Any filter not attended to and thoroughly sterilized at proper intervals constitutes a source of danger, and *actually pollutes the water instead of purifying it.*" The ordinary sand and gravel filters are of little use until the water itself supplies a sort of film through which it passes, but on this film the impurities accumulate and add to the danger. The filters generally used have this sand or gravel incorporated in a composition which can sometimes be removed and submitted to the action of heat; but it is known that many bacilli can stand more heat than an ordinary fire can supply. In fact, some bacilli thrive in heat.

The Pasteur filter is probably the best, and claims to destroy all germs, but it is not infallible. Mason, in his book on *Water*, holds that all filters must be charged with oxygen from time to time to preserve their efficiency. A new method has been recently tried, which, if successful, will do away with many of the objections to filtered water. By this system water infected with bacteria is shaken up with finely divided particles of coke, chalk, iron filings, or charcoal, and allowed to subside for several hours. Percy Frankland, the author of these experiments, claims that practically all germs can be thus extracted—ninety-nine per cent. by the use of animal charcoal.

Boiled water can generally be furnished to the invalid without inconvenience, but its preparation requires great care. A small porcelain-lined or granite-

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iron kettle should be kept for this especial purpose, and it should be wiped out after each boiling—often with soda. It is better to boil a small quantity of water at a time, and to keep it in a closely stopped glass jar. The jar should be washed daily with boiling water and soda. When drunk by the invalid, it is as important as for coffee or tea that the water be used after “the first boil.” If very flat and unpalatable, it may be poured back and forth from glass to glass until sufficiently aerated.

Boiling does not destroy all germs, and there is reason to believe that it injuriously affects the principle in water which aids digestion. It does, as a rule, precipitate the solid particles in water. Muddy water is considered innocuous by some physicians, but others believe that much intestinal irritation is caused by the fine particles of insoluble substances which muddy water contains.

Recent experiments in Germany prove conclusively that sunlight and air are the most effectual destroyers of germs in water. Freezing, on the other hand, is not to be relied on.

Natural mineral waters are preferable to those which are manufactured. “Drinking water highly charged with lime salts,” says Mrs. Ernest Hart, “gives rise to concretions and deposits in the kidneys and bladder.” The careless and excessive use of mineral waters—even of those which are generally considered harmless—is greatly to be condemned.

ICED WATER AND ICED TEA

The digestive organs are very sensitive to temperature, the process of digestion being arrested by a temperature either too hot or too cold. This is practically tested by experimenting with the receipts

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given in this book where the pancreatic extract is employed.

Water, to be refreshing and wholesome, should not, when drunk, be above the usual temperature of fresh spring or well water. The habitual use of iced water by Americans is certainly attended with great injury; and undoubtedly this lavish use of it and the use of hot breads made with baking-powder are the chief causes of the national disease—dyspepsia.

Still more injurious is iced tea. The icing of tea serves to precipitate the tannin, and this is taken into the stomach as an insoluble substance.

HOT WATER

The drinking of simple hot water in rheumatism, gout, dyspepsia, catarrh, etc., is frequently efficacious. In these diseases there is a sporous condition—*i.e.*, an animal or vegetable growth on the coatings of the stomach or respiratory tubes. The tendency of *water* is to wash off these impurities and to carry off through the kidneys any effete matter. The tendency of *hot* water is to produce an irritation and excite an action of the mucous membranes of the tubes and stomach, which throws off or detaches diseased material.

The water should be drunk as hot as possible. It is often served in a wooden goblet. It should be taken on an empty stomach, either half an hour before a meal or two hours after. Two or three quarts a day are consumed by some persons, although ordinarily a glassful (a half-pint) is taken half an hour before breakfast, another at 11 o'clock, and another at 4 P.M.

Hot water used in this manner, as a remedial agent, is a comparatively new discovery. It was found that rheumatism, gout, etc., were cured at the Hot Springs

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of Arkansas by the patients drinking quantities of the hot water at the springs. Experiments showed that any pure hot water was as good as that from these famous springs, the diuretic effect being what was required.

A distinguished physician in New York assures the writer that the hot-water mania has been carried too far. The use of hot water sometimes produces irritation of the bronchial tubes and hoarseness, in which case it should at once be discontinued.

TEA

Tea contains three active principles—1. Theine, which supplies its stimulating and restorative effects; 2. Tannin, which causes its astringency; 3. A volatile oil which gives it its flavor. There is also some gluten, as well as a bitter principle which has as yet no name. “Green” tea, which, owing to its preparation, contains a third more tannin, and dangerous coloring matter (Prussian blue mixed with gypsum or indigo), is more injurious than “black” tea.

The occasional use of tea is not objectionable. It allays hunger and supplies a temporary stimulant in fatigue. But the invalid should regard it rather as a medicine than as a beverage. It should not be taken with milk or cream, these being rendered indigestible by the action of the astringent principle in tea and in coffee.

Pavy says: “The phenomenon produced when tea is consumed in a strong state and to a hurtful extent, shows that it is capable of acting in a powerful manner on the nervous system. Nervous agitation, muscular tremors, a sense of prostration and palpitation constitute effects familiar to medical experience. It appears to act in a sedative manner on the vascular

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system. It also possesses direct irritant properties which lead to abdominal pains and nausea. It promotes the action of the skin, and, by the astringent matter it contains, diminishes the action of the bowels." It also acts as a diuretic.

It is now generally conceded that the effect of the active principle in tea and coffee is more or less injurious to the nervous system, and the tannin contained in them acts as a constant irritant to the stomach, presenting a formidable obstacle to digestion. Slavery of body and mind to any unnatural stimulant is unfortunate, whether that stimulant be tea or coffee, alcoholic drinks or opium—all more or less beneficial as remedial agents and injurious as constant beverages.

The feeling of health and strength which makes it a luxury to live, the exhilarating sense of self-command which makes work a pleasure and success a certainty, that happy buoyancy of spirit which comes only from the taking of wholesome and assimilable food, can scarcely be appreciated by those who depend upon the ephemeral effects of stimulants.

Probably the most pleasant and innocent of drinks for a constant beverage is one at the mention of which the reader may smile incredulously; but let him first try it. It is *hot-water tea*, known in some of the New York hotels as "cambric tea," and at the South as "contentment." It consists simply of a half cupful of cream to which boiling water and sugar are added.

In the preparation of tea it should never be allowed to boil and steep. Boiling water should be poured upon the leaves, and the infusion taken in a very few minutes. The tea-leaves should never be used a second time. When tea is boiled, tannin is extracted in

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undue quantities, and the volatile *osmazome* is driven off.*

Tea is injurious in all irritable conditions of the stomach and heart; in fact, physicians recognize a distinct condition known as the "tea-drinker's heart." It also causes sleeplessness. The bad effects of tea are cumulative—*i.e.*, the injurious principle is not gotten rid of, but accumulates in the system—and while it takes longer to show its results on the patient than coffee, the recovery from its bad effects is slower.

COFFEE

Coffee contains an element which resembles tannin—a volatile oil developed in roasting, to which it owes its distinctive taste, and a characteristic principle called caffeine, which is almost identical with theine; also a considerable quantity of gluten. It contains less tannin than tea, and is probably less injurious to the digestive powers, though its powerful action on the liver may retard digestion. It is heating and stimulating, and is thus serviceable to the body under exposure to cold; but taken in immoderate quantities, it induces feverishness, tremor, palpitation, nervous anxiety, and deranged vision. Its constant use is said to cause astigmatism. It is very injurious to the complexion.

Several substitutes for coffee have been tried, such as chicory, roasted wheat, barley, etc. Probably the best substitute is the cereal coffee prepared by the Health Food Company. It is of nutritive value, and has a taste resembling coffee.

Coffee diminishes tissue-waste and the need for food

* For further remarks about tea and coffee, see Appendix, pp. 247-253.

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and sleep—thus, while its effects last, depriving the system of its ability to get rid of used-up material, and drawing on the bank in which food and sleep make deposits. The nervous reaction from its use is more immediate than in the case of tea.

It is a powerful heart-stimulant, and is sometimes useful in cases of cardiac debility. It also has anti-septic properties.

COCOA AND CHOCOLATE

Cocoa is the bean or seed of a plant called *theobroma cacao*, roasted, ground into powder, and moulded into cakes. When sweetened and flavored with vanilla or other extract it is called chocolate. Besides fats, albuminous matter, and a small proportion of starch and phosphates, it contains an alkaloid called theobromine, which is analogous to theine and caffeine. It is supplied with almost all the elements necessary for sustaining life, but its constant use is not to be recommended, as it is heavy, and in many cases difficult of digestion.

The nutritive elements of cocoa are so concentrated, and it is so rich in oily matter, that it should be taken freely only by convalescents and persons in active life.

Chocolate is frequently adulterated with starch, suet, and coloring matter. Venetian red, umber, annatto, and, in some instances, the highly poisonous metallic salts of cinnabar and red-lead, are employed.

The chocolate in common use is, therefore, of very uncertain composition. According to Dr. Hassall, the questionable article constitutes half of what is sold in England.

The best chocolate does not thicken in cooking, as does that in which there is a large admixture of flour. It requires thorough cooking to bring out its flavor.

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Condensed tea, coffee, and chocolate can now be obtained in tablets or squares. One of these dropped into a cup of boiling water provides the beverage needed without further trouble.

MILK, AND ITS PRODUCTS

The value of milk as a food cannot be exaggerated. It is a complete diet in itself, containing in proper proportion everything necessary for sustaining life.

From a sanitary point of view the world would be better off if a larger proportion of milk were taken for daily food, and the amount of animal food and of tea and coffee were correspondingly reduced. Milk is not only nourishing, but stimulating; and the natural stimulus resulting from assimilable food is the most healthful and desirable one.

Many diseases, such as rheumatism, dyspepsia, gastralgia, chronic diarrhea, consumption, etc., are relieved or cured by a diet composed partly or entirely of milk. The milk treatment as pursued in different parts of Europe has been very successful.

In perfect health, good pure milk is almost always digestible. There are, indeed, few persons with whom it disagrees. The addition of lime-water will correct it for persons inclined to acidity of the stomach. Skimmed milk will be more beneficial to those who require less fat. When milk is found to be indigestible, the difficulty is generally obviated by taking it mixed with starch or grain foods—for instance, with rice, porridge, or bread; or it may be boiled and thickened with a little barley flour, etc. The reason is explained by Dr. Eustace Smith. (See Appendix, p. 264.)

It is preferable to give milk to diabetics in the form of kumiss, which contains no sugar. In typhoid fever it should be administered either peptonized or in the

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form of fresh kumiss. This prevents the formation of curd, which is irritating to the bowels in that disease.

Milk in its acid state and buttermilk are nourishing and beneficial in febrile conditions.

Cow's milk is not always of uniform quality. That of the Alderney cow yields the largest proportion of butter. The feeding, too, influences the quality of milk; for instance, with dry food the milk is relatively richer in solids, and with good grass it abounds in fat.

Water constitutes nine-tenths of milk; the remainder consists of albuminoid or the muscle-building principle, caseine (the curd which is used in making cheese), and the carbonates or heat-producing principle (the butter and sugar). Then there is some mineral matter—the phosphates. The sugar is called lactine, and by fermentation or souring it is converted into lactic acid.

When the "milk cure" is resorted to, the patient should gradually leave off his ordinary mixed diet until he reaches an exclusively milk diet.

Dr. Mitchell formulates his method of administering milk as follows:

"My own rule, founded on considerable experience, is this: Dating from the time when the patient begins to take milk alone, I wish three weeks to elapse before anything be used save milk. After the first week of the period I direct that the milk be taken in just as large amount as the person desires, but not allowing it to fall below a limit which, for me, is determined in each case by his ceasing to lose weight. Twenty-one days of absolute milk diet having passed, with such exception as I shall presently mention, I now give a thin slice of stale bread thrice a day. After another week I allow rice once a day, about two table-spoonfuls, or a little arrowroot, or both. At the fifth week I give a chop once a day; and after the sixth week I expect

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the patient to return gradually to a diet which should consist largely of milk for some months."

Dr. Barthelow's rule is gradually to add other food after the cessation of symptoms for which the milk treatment was instituted.

Milk and animal food, or milk and acid food, should not be taken together.

Persons desiring to take a partial milk diet may take milk and farinaceous food for breakfast and for lunch or tea, and omit it at dinner, which may be a meal of meat and vegetables.

Milk should be taken by the invalid slightly warm. No doubt the natural warmth of the milk when fresh from the cow is the best.

Dr. Dobell, in his work, *Diet and Regimen*, says: "Now, the nearest approach to a pancreatic emulsion is what may be called nascent milk, by which I mean milk just secreted—milk that flows from the mammary glands as it is formed. . . . In this the emulsification is finest and most perfect, but every minute that elapses after the milk is secreted deteriorates this perfection of emulsification, until, as we know, when allowed to cool, the cream separates from the water of the milk, etc."

Milk may be kept fresh for a long time if placed in well-scalded and perfectly clean glass jars, which can be hermetically sealed by drawing patent wire clasps over the glass tops.

On a journey to Europe some acquaintances of the writer took milk and cream secured in glass jars in the way described. On the last day of the ocean voyage it seemed as fresh as when leaving New York. It was, of course, kept in the ice-closet.

Glass jars and bottles are now in general use at the best dairies.

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To make milk absolutely free from germs, it is necessary to *sterilize* it. Complete sterilization requires a temperature of 230° Fahr.; but this unfits milk for all purposes except cooking. As a rule, milk is adequately sterilized when brought to a temperature of 210° to 218° under pressure for thirty minutes, and then rapidly cooled to about 50°.

To *pasteurize* milk, another form of freeing it from germs, it should be brought to 150°–160°. To make the process effectual, the milk must be maintained at this point for some time—twenty to thirty minutes—and then rapidly cooled.

Cans and other utensils must be subjected to heat and cold in the same way, and perfect cleanliness in every respect is absolutely essential.

Pasteurization is of most avail immediately after milking, when there are fewest germs to destroy.

Pasteurized *butter* is now made in some dairies with good results.

Frames and bottles can be purchased for pasteurizing milk, and used with an ordinary kettle. The bottles should be filled within an inch of the top and stopped with antiseptic cotton, which should not be removed until the milk is used.

To *peptonize* milk, see p. 12.

BUTTERMILK

Buttermilk, like skimmed milk, contains the nourishment of the milk without the fat. It retains, however, a very small proportion of fat—less than skimmed milk. It is very beneficial in some weak conditions of the stomach, fever, etc.

Dr. Ballot, of Rotterdam, has had much to say about the value of buttermilk in the treatment of infants for

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summer complaint—cholera infantum, etc. Kumiss, or peptonized milk, might be found equally efficacious, and, in many cases, preferable.

WHEY

Whey is not very nutritious, but as a drink in febrile or inflammatory conditions it is refreshing, and often beneficial. It promotes perspiration and acts on the kidneys. It is sometimes recommended to persons who find difficulty in retaining food on the stomach. However, in such cases kumiss would generally be of greater value.

CLABBERED MILK

Set a quantity of skimmed milk away in a covered glass or china dish. When it *turns*—*i.e.*, becomes smooth, firm, and jelly-like—it is ready to serve. Do not let it stand until the whey separates from the curd, or it will become acid or tough. Set it on the ice for an hour before it is to be used. Serve from the dish in which it has turned. Cut out carefully with a large spoon, put in saucers, and eat with cream and nutmeg. This is one of the most wholesome of dishes, and those to whom it is new soon acquire a taste for it. It is generally eaten with cream and sugar, and sometimes nutmeg. Some prefer taking it as a drink, beating it up until it becomes creamy.

MALTED MILK

Malted milk is a proprietary article, composed of wheat and barley malt and of pasteurized milk. The caseine is prevented from coagulating in the stomach by some special process, and the starch is converted into soluble dextrine and maltose.

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COTTAGE CHEESE

Cottage cheese is made of the curd left after separating the whey from clabbered milk.

Tie the clabbered milk in a cloth, hang it overnight, and let the whey drain out.

Or, place a pan of clabbered milk over a kettle of boiling water until the whey becomes hot. If the pan is placed directly on the range, let the whey become merely hot and no more. The boiling-point would spoil the cheese by making it tough. The whey is then pressed from the curd, and the latter is mixed with cream or butter (or both) and salt, making the cheese rather moist, yet firm enough to mould into balls.

No other form of *cheese* can be recommended for an invalid, because of its indigestible character.

KUMISS

This nutritious beverage, made of fermented milk, has been until comparatively recently unknown in our country. It has been used for centuries in Tartary and in Asiatic Russia. It is there chiefly made of mare's milk (see Appendix). Mare's milk differs from cow's milk, the former possessing (according to Pavy) a smaller amount of nitrogenous matter and butter, and a much larger amount of sugar. By adding sugar to cow's milk a kumiss may be obtained superior in its nutritive properties to that made of mare's milk.

Kumiss contains the full nutriment of milk and the stimulating qualities of wines and liquors without their ill effects. "It is," writes Mrs. Ernest Hart, "particularly appropriate in cases where the temperature is high and the appetite impaired."

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Dr. Dobell, of London, in his valuable work on *Diet and Regimen*, says: "Kumiss, when properly prepared, is a highly refreshing, effervescent preparation of milk, obtained by a natural process of fermentation, in which the albumen and caseine are partly digested, while its abundance of free carbonic acid makes it sedative to the most irritable stomach, so that it has succeeded in numerous cases, recorded by medical practitioners, where stimulants, beef-tea, and rectal enemata, aided by the most varied pharmacopœial treatment, had alike failed.

"Its chief qualities are:

"(a.) Its agreeable, refreshing, and highly digestible character.

"(b.) Its attested and rare powers of nutrition in the most desperate cases of emaciation, chronic vomiting, dyspepsia, gastric pain, and irritability, and of debility following acute or accompanying chronic diseases.

"(c.) The avidity and pleasure with which it is drunk by children, women, and men, in health and disease, and in its remarkable success in allaying vomiting and gastralgia, and in restoring the nutrition."

Dr. Roberts Barthelow, in his *Materia Medica*, says: "Kumiss differs from whey in containing the nutritive constituents of milk, and from milk itself in the important respect that it is, in addition, an effervescing, alcoholic fluid. . . . The tolerance of the stomach to kumiss is remarkable, even in cases of gastralgia. It improves the appetite and excites the action of the kidneys. The patients experience a pleasing exhilaration, due probably to the combined action of the carbonic acid and the alcohol. It also causes somnolence during the day, and favors sleep at night, without leaving any after headache. Its most important ac-

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tion is the increase of the body nutrition. . . . Kumiss possesses great value in the treatment of consumption, chronic bronchitis, the low stages of fever, the stage of convalescence from acute diseases—in fact, in all adynamic states in which the combined effect of alcohol and nutrients may be desirable.”

Jaqielsky says that he has had patients gain as much as ten pounds a month, when no other food was taken.

Kumiss, in its administration, may be given like milk or beer. In extreme cases of feebleness of digestion, this being the only food, a glassful every two hours is sufficient. With increased facility of digestion and assimilation, from a quart to a gallon a day may be taken. When served with other food, a glassful can be drunk before or after a meal, as preferred. It is a food in itself—a solid food, like milk, containing all the elements or requisites of nutrition. It is estimated that each quart of kumiss contains four ounces of solid food.

There are two kinds of kumiss—one, quite acid, is that generally sold at pharmacies in the large cities; the imported kumiss is also acid. The venders of this kumiss say that it improves with age, that which is two or three years old being considered especially good. This acid kumiss would be indicated in cases of fever, rheumatism, etc., when acid drinks, such as buttermilk, lemonade, etc., are relished.

For a more ordinary and general drink the sweet kumiss (perhaps it can hardly be called sweet, as the flavor is pungent, not unlike beer), is preferable. This is at its best from four days to a month old.

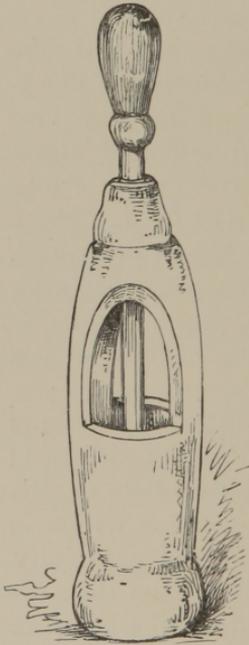
When it is desired to give kumiss to babies, they can either suck it from the end of the champagne-tap, the screw being turned very slightly, or a little ku-

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miss can be drawn into a pitcher and poured from one pitcher to another until most of the gas has escaped. The infant can then drink it as milk.

TO MAKE KUMISS

The making of kumiss is very simple. It requires perfectly fresh milk, good yeast, a little sugar, strong bottles (those used for champagne, beer, etc.), a corking-machine (price, fifty cents), a little tuition in the professional manner of tying corks in bottles, a thermometer, a funnel, and a cold, dark place in a cellar answering the purpose of a beer cave. In view of its explosive quality, a bottle of kumiss should not be opened without a champagne-tap.



CORK MACHINE

Fill a quart bottle about three-quarters full of fresh milk, and add a table-spoonful of fresh (brewer's) lager-beer yeast, and a table-spoonful of sugar-syrup (the syrup is made allowing three lumps of sugar—little squares of loaf sugar—or a table-spoonful of granulated white sugar, for each quart of milk; enough water to cover the sugar is added, and it is boiled a

couple of minutes to make the syrup, not allowing it to candy); shake the bottle well for a full minute, to thoroughly mix all the ingredients, then fill it to within two or three inches of the top; shake again, to get all well mixed. Cork it with a cork a third of a size larger than the mouth of the bottle. The corks

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must have been previously soaked for two or three hours, *immersed* in hot water over a warm stove, when they become soft; they are then pushed through the corking-machine (see cut) with a hammer—or, better, a wooden mallet; quite heavy and vigorous blows of the mallet on the handle of the machine will not break the bottle, as one might suppose. The corks are then tied. When this operation is all completed, put the bottles in a standing position in an even temperature of about 52° Fahr.,* where they should remain for two and a half days. Some closed closet or cellar in winter, or a refrigerator in summer, will generally afford this temperature. This slow fermentation is desirable. At the end of the two days to two days and a half, place the bottles *on their sides* and on the stone floor of the darkest and coolest place in the cellar—or, in default of such place, in a refrigerator. Many consider kumiss at its best when it is five or six days old, but it can be kept indefinitely if retained in a temperature not above 52°. The colder it is kept without freezing the better. The brewer's lager-beer yeast is decidedly the best for making the sweet kumiss, imparting to it a beer flavor. As the kumiss is drawn it should appear in the glass like thick whipped cream. The kumiss will become acid by long standing, or by placing it in a higher temperature.

Very good kumiss can also be made with Fleischman's Compressed Yeast. A fifth of a two-cent cake of this yeast to a quart of milk is the proper proportion. It should be well dissolved before it is added to the milk. The proportion of sugar or syrup is the same as when the other yeast is used.

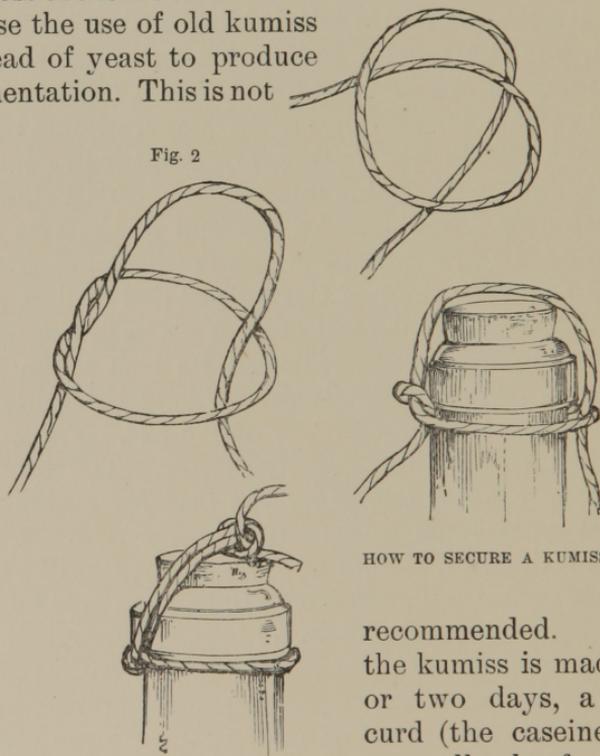
* Originally, the kumiss was left at this stage at a temperature of 62° for two and a half days, but experiment has proved that a temperature as low as 52° produces even better results.

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If the milk is quite fresh and sweet, and the bottles are perfectly clean and free from acid, there is little danger of the kumiss curdling. If it should become curdled, it can be used for cooking purposes. It makes the best of biscuits, pancakes, or anything which can be made with sour milk.

Most of the medical works advise the use of old kumiss instead of yeast to produce fermentation. This is not

Fig. 2



HOW TO SECURE A KUMISS BOTTLE

recommended. After the kumiss is made one or two days, a thick curd (the caseine) will generally be found at the top. It is advisable, although not necessary, to turn the bottles two or three times (not shaking them, for fear of explosion), so as to mix this curd with the liquid below. When the bottles are turned to the side (after the two and a half days), the caseine is

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loosened from the top, and, when the kumiss is drawn, the effervescing gas accomplishes the mixing.

To Tie the Bottles.—With a strong hemp twine make a loop as in Fig. 1, p. 34.

In Fig. 2, the twine at *a* is drawn up, and in Fig. 3 it is placed over the top of the cork. The two ends, *b, b*, are drawn as firmly as possible under the rim of the bottle, *c*, as in Fig. 3.

The ends, *b, b*, are then tied firmly over the top of the cork, Fig. 4. If the twine is not quite strong, the bottle can be doubly tied.

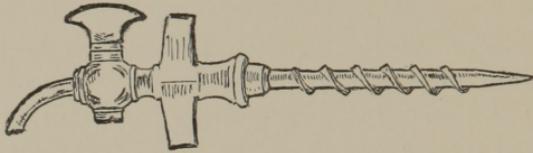
The Corks.—The corks should be obtained at a cork factory or a wholesale cork store. The directories in the larger cities will give such addresses. They there cost fifty to sixty cents a gross, instead of a cent each, as at the druggists'. The straight cork used by the Anheuser-Busch Brewing Association is of the proper size and of the best quality. The necks of champagne and beer bottles are of the same size, the same cork answering for both.

To Clean the Bottles.—If the kumiss is not acid, merely cleansing the bottles, as soon as emptied, and filling them with cold water will be sufficient. If any acid remain in the bottle, shake it well, half filled with water, with a half-teaspoonful of soda added. Pour this out, add another half-teaspoonful of soda, fill the bottle with water, and let it remain until it is wanted for use, when it should be rinsed with fresh water.

The Champagne-Tap.—It must be repeated that the kumiss bottle should never be opened except by a champagne-tap. The best one for the purpose that

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the writer has found is represented in the following cut.



After the tap is in the bottle, keep the neck of the bottle always down, to prevent the escape of gas. Keep the bottle also in a cool, dark place.

It has occurred to the writer that the making of kumiss might often afford profitable employment for women. After perfecting themselves in its manufacture, they might send notices and samples to neighboring physicians, and then sell it through the agency of druggists or grocers; the latter having generally better means for the transportation and delivery of articles. The difficulty in procuring quite fresh milk in the large cities might preclude its best manufacture there.

The above has been taken, almost unchanged, from Messrs. Harper & Brothers' *Diet for the Sick*, published in 1884. But the present writer also has seen the admirable effects of kumiss in typhoid fever in the government hospitals since the late war (in August, 1898). It was tolerated by the patients when milk was rejected, and it allayed thirst and supplied nourishment at the same time. When they were able to take it, it relieved also the extreme emaciation of the sufferers from fevers induced by exposure and starvation. (See chapter on Fevers.)

ALCOHOL

Of the physiological effects of alcohol Mrs. Ernest Hart writes: "It is one of those substances which have

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the power of producing apparently opposite results. In small quantities it stimulates the action of the heart, in large it depresses it; in small quantities it increases the action of the gastric juice, in large it destroys the pepsin and arrests digestion; in small quantities it has an exhilarating effect on the nervous system, in large it is narcotic."

Many poisons, however, administered in small quantities, raise the pulse and temperature; and the consequent stimulation of the nervous system and of all the secretions is the effort of nature to throw them off. With larger quantities, nature is drugged, and the poisons act as narcotics. When alcohol is given in illness, it should be remembered that, as a rule, the reaction is equal to the stimulation. It is sometimes greater; and then the demand on the reserve force, which is already diminished, is increased, and the patient is threatened with "physiological bankruptcy."

In illness the use of alcoholic stimulants should be surrounded with every possible precaution. The exact dose should be prescribed by the physician, and, when practicable, the intervals at which it is to be administered. As little responsibility as possible should be thrown on the nurse.

Dr. Fothergill, a distinguished English physician, sums up the question of the use of spirituous liquors as follows: "Alcohol is a good servant, but a bad master. In its use we must not forget its possible abuse." Dr. Foote, an able physician, who has for many years been at the head of an inebriate asylum in Connecticut, observes that the custom of habitually serving highly seasoned food at the home table creates an appetite for stronger stimulants, which grows and becomes morbid by continued indulgence. The stomach gradually acquires an unnatural and unheal-

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thy desire which can finally only be satisfied with fiery liquors. Pepper, Dr. Foote considers the most pernicious of spices, perhaps because it is most generally used. Tea and coffee, and all articles which tend to excite irritation or create unnatural stimulus, should, he believes, be discarded, in the treatment of inebriates. Besides the general remedies administered for febrile conditions, the chief point is to regulate their diet so that the stomach will gradually become accustomed to simple food.

In cases of illness where the craving for stimulants remains when the need for them no longer exists, a diet nourishing but with little or no meat will frequently remove this craving, which is often the result of an under-vitalized condition. Liebig says: "The use of spirits is not the cause but an effect of poverty"; and it is to be wished that those who complain of the drunkenness of the poor would more often remember this truth. In fact, when it is appreciated that drunkenness is a disease, often hereditary, to be treated by diet, change of air and scene, restoration of moral tone and will-power in the patient, and a rational course of medicine—our prisons, our lunatic asylums, and our poor-houses will lose many inmates, and the world will be the gainer in the industry and morality of those who are saved thereby.

Regarding the action and effects of alcohol when taken habitually, the writer has quoted from Professor Youmans and others. (See Appendix, p. 253.) It should be remembered by "moderate drinkers" that a habit, in their case easily relinquished, may, if indulged in and inherited by their children, become an irresistible propensity in succeeding generations.

Neither wine nor beer should be taken by an invalid unless prescribed by a physician.

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MALT EXTRACT

Several preparations of malt extract are offered which are valuable, from an alimentary point of view, as aiding in the digestion of starch or farinaceous foods. (See Malted Milk.)

Malt is made by allowing barley to germinate, and the germination is arrested at a certain temperature. As a result, a peculiar nitrogenous principle called diastase is developed, which has the power of converting starch into dextrine and sugar. An infusion of malted barley is reduced to a syrupy consistency at a low temperature without impairing the fermenting power of the diastase, and this is called malt extract.

When the digestive powers are weak the extract is often valuable, although it should be taken with or just after farinaceous food.

The malt extract is also indicated when the mouth is dry, denoting feeble action of the salivary glands. Dr. Roberts suggests that the extract should be spread upon bread and butter, or used to sweeten puddings and gruels.

GRAPE JUICE

The value of simple grape juice as a beverage has become known only of late years, principal attention heretofore having been directed to its fermentation into wine. For the invalid the simple grape juice is far preferable, the natural tonic of the grape being obtained without the inflammatory effects of alcohol. In flavor the natural bouquet of the grape is preserved. No beverage, aside from water, is more generally wholesome and palatable. In some of the hygienic institutes it is prepared in large quantities and drunk in place of tea or coffee at meals.

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Its preparation, according to Dr. Dodds, of St. Louis, is as follows: Take grapes thoroughly ripe and fresh from the vine. The Concord and Isabella are especially good, but any fresh, ripe, and juicy grape may be used. Allow one quart of water to three quarts of grapes freed from the stems. Use no sugar. Let it come slowly to a boil, and when the whole mass is boiling hot strain the juice through a cheese-cloth, flour sack, or other strong cloth. Then return the liquor to the fire, and as soon as it is at the boiling-point again pour into cans and seal.

The less the fruit or juice is cooked the brighter will be its color and the better the natural flavor of the grape will be retained. This, like all other articles to be canned, must be at the boiling-point when it is sealed. If the juice is to be used at once it should not be brought to the boiling-point a second time. Use wooden spoons in its preparation, and only glass jars for keeping it. The action of any acid substance on tin is to corrode it and thus poison the fruit.

Grape juice, as sold, is frequently not hermetically sealed—a circumstance which indicates the presence of salicylic acid or some other artificial preservative.

Before heating the grapes see that all the necessary preparations are complete—*viz.*, that the jars and covers are clean, the covers fitted, and the hot water ready for holding the jars, etc.

To avoid breaking the jars, manage them as follows: When the grape juice is nearly ready for canning, fill a large wooden tub about three-quarters full with water quite hot, but below the boiling-point. Holding the jar sidewise, roll it over quickly in the water, and then set it right side up with the water in and around it. Continue in the same manner with other jars. Place the covers also in hot water. The juice being

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ready to be canned, roll one of the jars again quickly in the hot water, empty it, place it on a tin platter, and pour into it the boiling juice, rather slowly at first. Wipe the moisture from the top of the can, adjust the rubber ring, and screw on the top (taken from the hot water and wiped dry) until it clasps the rubber tightly all around. Do it all as quickly as possible. Set this jar aside and proceed in the same way with the others. After the jars are cool enough to handle, screw down the tops again, and when entirely cold give them another twist in order that the sealing may be perfect. The best plan is to let them stand twenty-four hours and to tighten them from time to time. Last of all, wipe them clean with a damp cloth, and set them away in a *dark*, cool closet or cellar. If no dark cellar be at hand, wrap the bottles in heavy brown paper to exclude the light. The cooler they are kept without freezing the better.

FOODS

ANIMAL FOODS—MEATS

Of all the animal foods, beef is the most important. Because of its fine texture and richness in red-blood juices, it furnishes more nutriment in proportion to weight than any other meat. Like bread, it rarely palls on the appetite. The quality of beef depends much on the age and manner of feeding the ox. To be at perfection, the animal should be four years old, not worked, and partly corn-fed.

There are few diseases which are not aggravated by the excessive use of animal food. In certain conditions of the system, especially where there is a tendency to gout, inflammation, or hemorrhage, beef, or even beef-tea, is strongly to be condemned.

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Mutton and venison are regarded as the most digestible of all the meats. Mutton is popularly supposed to be a lighter food than beef, the latter being adapted to physical exercise, while mutton is rather a food for persons of sedentary habits, and for invalids. Dr. Smith, in an interesting work on *Foods*, says that Kean suited the kind of meat which he ate to the part which he was about to play, and selected mutton for lovers, beef for murderers, and pork for tyrants.

Mutton broth has less nutritive value than beef broth.

Venison.—When sufficiently hung and tender, venison outranks all meats in point of digestibility. It is also palatable and highly nutritious.

Veal and Lamb.—Although the flesh of young animals is more tender than that of old, it is less digestible and less nutritious. The tissues of young animals are more gelatinous than those of the adult, the latter containing more of fibrin and of the flavoring principle, osmazome.

Pork.—Unless it be a small, thin slice of breakfast-bacon taken as a relish, pork should be excluded from the invalid's dietary. Although it is an inexpensive meat and an appetizing one for many, and perhaps an unobjectionable one for laboring men, yet, on account of the uncertain feeding of the animal and the hardness of its muscular fibre, it is doubtful whether pork should be used at all by people of sedentary habits.

Lard and pork have seemed indispensable for frying, and for larding and seasoning. But many persons now use cotton-seed oil (which has quite the flavor of olive oil) for cooking—using it in place of lard for every purpose for which lard was formerly used.

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The table inserted below, giving the relative nutritive and other values of the five animal foods principally used, is taken from Dr. Bellows's *Philosophy of Eating*.

In one hundred parts are contained :

	Mineral matter, or food for the brain, etc.	Fibrin and albumen, or food for muscles and tissues.	Fat, or food for heat.	Water.
Veal.	4.5	16.5	16.5	62.5
Beef.	5.0	15.0	30.0	50.0
Mutton.	3.5	12.5	40.0	44.0
Lamb.	3.5	12.0	34.0	50.5
Pork.	1.5	10.0	50.0	38.5

Undoubtedly too much meat is generally eaten by persons of sedentary habits, resulting in dyspepsia, gout, etc. In cold weather, and with much physical exercise, the system demands it, but in temperate or warm weather a greater proportion of cereal food would improve the general health.

Meats should not be served to invalids cooked a second time. The flavoring principle, osmazome, is dissipated after the first cooking, and the meat must depend upon outside seasonings for flavor. The tissues are also less tender.

SALTED MEATS

On account of the toughness of fibre resulting from the curing process, these meats are difficult of digestion, and should never be used in the sick-room.

Bacon, however, is given broiled, by some physicians, to patients suffering from wasting diseases, or recovering from fevers, as it supplies fat in an appetizing form. Pavy states that pork is the only meat which is more digestible when salted.

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POULTRY

Poultry, while as nourishing as the brown meats—*i.e.*, beef, mutton, etc.—is more digestible and less stimulating, and can often be tolerated when the latter are forbidden, especially in gout and inflammatory diseases. The same may generally be said of game and of domestic and wild birds, and these also serve to vary the diet and tempt the appetite of the invalid.

FISH

Fish is a nourishing and digestible food for convalescents if served quite fresh and broiled or boiled. It affords a pleasant change of food.

OYSTERS

Oysters are nutritious and generally well borne by delicate stomachs. Dr. William Roberts, in his work *On the Digestive Ferments*, advances an interesting theory in relation to oysters as a food. He claims that the effect of cooking is to diminish their digestibility, which would make oysters the exception in this respect among the articles that furnish albuminoid matter. He explains his reasons by saying that the fawn-colored part of the oyster, containing about half its substance, is its liver, composed partly of glycogen. Associated with this, but withheld from actual contact with it during life, is its appropriate digestive ferment—diastase. Mastication mixes these constituents, and they are digested without other aid—in fact, they digest themselves. Cooking destroys the digesting properties of the diastase, and then the oyster has to be digested like other food—by the eater's own digestive power.

Other authorities question and doubt Dr. Roberts's

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theory. The excessive use of condiments—salt, pepper, lemon-juice, and vinegar—more especially pepper—combined with imperfect mastication, may possibly impair the wholesomeness of raw oysters to many persons.* The hard portion, or muscle, which fastens the oyster to the shell, should be removed in all cases when oysters are served for weak stomachs.

The author would recommend oyster soup, properly prepared (the oysters slightly cooked), as the best mode of administering oysters to an invalid. The flavor of the juice and the extra nourishment furnished by the cream or milk used, together with the advantage which foods served warm afford to digestion, would be good reasons for preferring stews or soups to other ways of serving oysters.

Dr. Bellows, in his *Philosophy of Eating*, speaking of oysters, says: "They have not, as food, the muscle-making elements of the crustacea or other active fish; and although their chemical composition indicates phosphatic salts, they are mostly salts of lime, which go to form the shell and to make bone rather than a food for the brain and nervous system. Oysters, therefore, are very unsatisfactory food for laboring men, but will do for the sedentary and for a supper to sleep on. They contain but seven and a half per cent. of solid matter, including fibrin, albumen, gelatin, mucus, and osmazome; and much of that is gelatin, which affords no nourishment, while butcher's meat contains on an average twenty-five per cent., and the poorest fishes contain fourteen per cent., of pure nitrates. The nitrates in oysters are in the form of albumen, like the white of an egg; they are, therefore, more easily

* Whatever the cause, the fact remains that many persons find raw oysters indigestible.

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digested in a raw state than when cooked, but when stewed are not indigestible."

FATS

We have heretofore too little appreciated the importance of fat in our dietaries. Without knowing why, fat has generally been considered unwholesome, tending to produce biliousness, corpulence, and heat, besides being a general clog and burden in all digestive processes. Oil has been avoided; butter on bread has been scraped down to the smallest quantity, and the fat of meat has been sedulously trimmed.

Fat is as necessary to the system as are the muscle-making elements of food. It not only serves to produce heat, but has an essential share in the tissue-forming process. It does not produce the material, but influences the assimilation of other food. It is important for the renewal of tissue in every organ of the body, and is an essential constituent of the brain and nervous system. A diet with a deficiency of fat tends to produce diseased conditions in the direction of scrofula and consumption. Cod-liver oil is not properly a medicine; it is a fatty diet given with a view of supplying what is supposed to be lacking in the system. It is affirmed that if one takes and assimilates a sufficient quantity of fat in the ordinary diet, one is not liable to have consumption or nervous diseases.

Fat constitutes a considerable proportion in foods supplying all the necessary elements for sustaining life—for instance, in milk, eggs, etc. The yolk of the egg is about one-third fat.

A recent writer observes: "If the inhabitants of the Arctic regions gorge themselves with animal fat, those of warm countries take the same thing in vegetable

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oils. In most warm climates olive-oil is taken, and in India ghee, with no inconvenience to digestion and with unmistakable benefit."

An interesting article on the subject of fats, by Dr. Radcliffe, was published in the *Popular Science Monthly* (March, 1883). It is in the form of a dialogue between a physician and a young man who had eaten a breakfast of lean meat and toast in anticipation of a hard day's rowing. The physician explains to the young man his mistake, and shows that, as force-producing agents, fat and oil are as necessary as fibrin or albumen.

He says: "I find that very many persons suffering from various chronic disorders of the nervous system have abstained from the fatty and oily articles of food, and that their state is almost invariably very much changed for the better when induced to take what they have avoided."

Because we have, perhaps, been mistaken in taking too little fat in the past, it is not recommended that too large a quantity be taken in the future. Pavy holds that the supply ought not to be less, even with inactivity, than one ounce daily, and that about two and a half ounces should constitute the average amount in the dietaries recommended for working-people.

Fresh milk supplies fat in proper proportions. Cream and butter furnish the most assimilable fat. Bread generously buttered (not too much so, however), meat with streaks of fat, and the oil dressing on salads will ordinarily afford a sufficient supply. Pork fat is the most objectionable of the fats to persons of sedentary habits.

Dobell says: "When it is necessary, for any special object,* to reduce the quantity of carbon taken in the

* For instance, to reduce corpulency.—Ed.

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aliments, this can more safely be done by diminishing the saccharine, amylaceous (sugar and starch) matters, than the fat."

Fothergill writes: "Fat-eating among adults is fortunately on the increase at the present day."

GELATIN

Jellies and blanc-mange made with gelatin are very appetizing, but cannot be relied on as furnishing nourishment. Calf's-foot jelly was once, but is no longer, regarded as a valuable dish in the sick-room. It is a very pleasant vehicle for serving wine or milk. Several years ago a committee was appointed by the French Academy of Sciences to ascertain the dietetic value of gelatin. This was on account of the fact that gelatinous extract of bones was being fed to the inmates of hospitals with apparently deleterious results. The commission, with Magentie at its head, reported gelatin to be substantially worthless as a diet.

But Pavy, writing later, states that the question of the alimentary value of gelatin is still "involved in some degree of uncertainty"; and Mattieu Williams and other recent writers contend that, by the addition of flavoring matter and of a small quantity of meat extract to gelatin, it becomes of considerable nutritive value.

EGGS

The theory that eggs contain, in proper proportion, all the elements needed for nutrition is now abandoned, but they are still regarded as among the most valuable, though not the most digestible, foods. They are largely composed of nitrogenous elements (the white being almost pure albumen), and are therefore

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undesirable for invalids suffering from Bright's disease or gout. If used for such patients, only the yolks are allowed, and those in moderation. They are more easily digested when taken raw or slightly cooked, as described for poached eggs (cooked in water below the boiling-point). Continued boiling, or cooking in any manner, toughens the albumen and renders it difficult of digestion. Indeed, a valuable cement is made by thickening the white of egg with powdered quicklime, and heating it. The whole egg can be made hard and tough enough by heating to become a cement of itself.

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RICE

RICE is very rich in starch, and poor in fat and albuminous matter. It contains less than half the muscle-supporting elements of wheat, and only one-fourth as much of those elements which sustain the brain and nerves. The deficiencies, however, can be supplied by cooking rice with milk or eggs.

It requires little more than an hour for the process of digestion. In certain conditions of the stomach and bowels it is valuable, but when the power of assimilation is defective, rice should not be administered. It apparently forms a mucilaginous coating to the stomach and intestines which diminishes appetite without supplying adequate nourishment.

Rice-water, a thin mucilage, is a drink often administered with benefit in fevers and in inflammation of the bowels.

CORN-STARCH AND ARROWROOT

Corn-starch, and arrowroot, composed chiefly of starch, are inadequate to sustain life without the addition of milk or other nutritive substances.

SAGO AND TAPIOCA

These are also starch foods, and they rank very low from an alimentary point of view. They are chiefly used as agreeable additions to custard puddings, and as a thickening for soups.

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BEANS AND PEAS

These are rich in nutritious material. Their muscle-making element is not gluten, as in the grains, but caseine, as in cheese, a substance not so easily digested as gluten, and therefore only adapted to persons with good powers of digestion.

SEA-MOSS FARINE AND SEA-MOSS

An article is sold at the grocers' called sea-moss farine. It is an excellent preparation, especially valuable for invalids, and can be made into various blanc-manges and puddings, according to directions accompanying the packages. It is an important health-food.

Sea-moss is nutritious, digestible, and wholesome. Its flavor takes one to the sea-shore, it matters not how far away. The blanc-manges made from the Irish and Iceland mosses are especially good.

VEGETABLE ACIDS AND FRUITS

TOMATOES

THE tomato, according to Dio Lewis, is a medicinal vegetable containing some amount of calomel—enough to produce a degree of salivation if used too freely. He thinks the tomato should be used moderately in cooked form, as a sauce, etc. He has known, in his practice, of patients suffering with sore mouths, tender and bleeding gums, and with loose teeth, etc., produced by the immoderate use of tomatoes.

However wholesome a certain amount of cooked fresh tomatoes may be, the physicians generally denounce the use of them when put up in tin cans. The tendency of the acid of the vegetable is to corrode the tin, and thereby, in some degree, to poison the contents.

FRUITS—GRAPES, BANANAS, ETC.

Fruits are cooling, aperient, and nutritious, and are almost as necessary to a healthful diet as the grains, especially in warm climates, supplying grateful acids and fluids. Different varieties of fruits follow each other in close succession during the season of growth, the acid fruits coming generally in the spring, when the system needs anti-bilious food after the winter dietary.

Next to the apple, the king of fruits, the grape is probably the most valuable in our climate. After

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eating the grape regularly for some time, when freshly plucked from the vine and redolent of the sun, general exhilaration is produced; the blood seems richer and a healthy color comes to the cheeks. Besides the tonic effect, the grape contains much nourishment.

They have in France, Switzerland, and Germany what are called grape-cures, where persons suffering from dyspepsia, scrofula, gout, and cutaneous diseases, and convalescents from fevers, are treated during the grape season with much success. Patients eat the grapes several times a day, and at regular intervals, generally taking nothing with them but bread-and-butter and water. Dr. Barthelow says, however: "The influence of change of air, of scenery, and of the hygienic rules enforced at these resorts should not be ignored in an estimate of the value of the method." Hot-house grapes, and the California grapes after transportation to the Eastern States, will not answer the purpose, nor take the place of the Isabella, Concord, Catawba, and other varieties grown in the open air, fully ripe and fresh from the vine.

Another nutritive fruit is the banana. It is regarded by some authorities as indigestible, probably because it is often plucked too green. It contains a large percentage of starch and sugar, and enough nitrogenous matter to make it of alimentary value. It is similar in composition to the potato. In some tropical countries it is much used as food.

For invalids, berries with hard seeds—strawberries, raspberries, etc.—are often indigestible. Many of our marketable strawberries are so very acid and devoid of flavor that they, especially, cannot be recommended to invalids.

Stewed fruits (compotes) are very wholesome and beneficial. They should be served in some form every

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day (provided a laxative diet is not at the time objectionable), except (when prepared with sugar) to gouty or diabetic patients.

When oranges—and they are especially excellent in all febrile conditions—are administered to invalids, they should be quite sweet. There seem to be as many varieties of oranges as of apples. Although a juicy, crisp, moderately sweet, and well-ripened apple is the most wholesome and digestible of fruits, there are apples which defy the ordinary stomach; so it is with some oranges, which are only fit for orangeade. The sweet, juicy, thin-skinned Florida orange, and the rougher-skinned, though juicy and sweet, Havana orange, can be judiciously given to almost any invalid, while their more common and acrid relatives should be as carefully avoided.

Baked apples served with cream and sugar are a standard dish for the sick-room. They are digestible, laxative, and wholesome.

The dried fruits, especially the California dried pears and the white apple-chips, are very refreshing and safe, and should be freely used when fresh fruits cannot be obtained.

If fruits are not quite ripe, or do not agree with the patient, cooking them with sugar increases their digestibility—except in cases of gout, when the union of vegetable acids with sugar is almost invariably injurious.

Acid fruits put up in tin cans are of exceedingly doubtful value. If they taste of the tin, they are not at all doubtful. Avoid them. Probably, in the future, tomatoes and acid fruits will be generally put up in glass jars, if something less breakable than glass, and without the objections to tin, cannot be found. Here is an opportunity for some inventor.

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A method of neutralizing the acids of fruits and of cooking them without sugar is described on p. 241.

SUGAR

It has been the fashion of late years to condemn the use of sugar. Undoubtedly it acts as a poison in some diseases—in certain forms of gout, for instance, and in diabetes. From some obscure cause the liver, in these conditions, declines to do its part, and throws the sugar back into the circulation and on the kidneys.

Sugar, however, has its distinct use as a heat-giving food, and even as a flesh-former. Recent experiments by the German Department of War prove conclusively that nothing repairs exhausted energy and braces the muscles to continued effort so effectually as sugar. It was found that the subjects of the experiments (who were ignorant of the fact that they were being experimented on) were capable of much longer and harder labor on the days when sugar was administered.

One disadvantage of taking too much sugar is believed to be that it *accumulates* in the system.

Honey, a concentrated solution of sugar, is often tolerated when sugar is not. It is slightly laxative, and has been used in insomnia with good results. Diabetin, a sugar derived from fruits, is said to be a good substitute for cane or beet sugar.

SACCHARIN

Glycerin, which was formerly given as a substitute for sugar, is now rarely used. It produces intestinal disturbances and leaves a constant sweet taste in the mouth. Its place is taken by saccharin, a product of coal-tar, which is especially serviceable in gout, rheumatism, diabetes, and in cases of obesity where the

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privation of sugar causes a craving for it. Saccharin is antiseptic. When pure, it is from two hundred and thirty to three hundred times as sweet as cane-sugar, and, if taken in reasonable quantity—not more than two grains daily—may be used for months without injurious results. A larger amount interferes with digestion.

Saccharin is a patented article, and it is asserted by the manufacturers that it develops its sweetness only when mixed with other articles of food “or diluted in proper proportion”; that it does not ferment or turn sour; and that it is a preservative of food. It is obtained in this country, for general use, in three forms: 1. As a powder, three-quarters of an ounce of which equals, in sweetening power, twenty-five pounds of sugar. 2. In tablets, in less concentrated form, one of which is the equivalent of one cube of cut loaf-sugar. 3. In tablets, also less concentrated, combined with bicarbonate of soda. These tablets are intended to be used with tea, coffee, lemonade, etc. The first—the powder—is intended for cooking purposes. It must not be brought in contact with iron or copper vessels, and porcelain-lined or earthenware saucepans should always be used for it. The dishes of which it is an ingredient should be cooked and served in glass or china.

SACCHARIN SYRUP

To dissolve the powder, add one quart of hot water and half an ounce of bicarbonate of soda to one ounce of saccharin, and put away for use. A fluid ounce of this solution equals one pound of sugar in sweetening power.

In England, tabloids of saccharin, of much greater strength, are used in cooking, dissolved in brandy.

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SALTS

Salts are necessary to regulate the density of the blood and to supply the material needed to build up the bones, nails, teeth, and hair. Vegetable salts, which exist in most fruits and in some vegetables, maintain the alkalinity of the blood, and, though of little nutritive value, are important as aiding in the digestion and assimilation of food.

Of the organic salts, chloride of sodium, or common salt, is found in every secretion of the body. It is essential to digestion. It exists in food—in milk, vegetables, meat, etc.—in almost sufficient quantities to satisfy the demands of the system; but a small additional amount is required.

Salt taken in excess causes diarrhea, eruption of the skin, irritation of the mucous membrane, and paralysis of the nerves of taste, and also imposes an undue tax on the kidneys.

HEALTH FOODS AND OTHER GRAIN PREPARATIONS

THE preparations of cereals, known as Health Foods, have produced the most gratifying results. These foods are of great value to the invalid. Indeed, they constitute a pleasant and wholesome diet in health as well as in illness.

The manufacture of foods by methods based on careful scientific investigation, specially adapted to the needs of different individuals and diseases—for instance, foods for the corpulent or the excessively lean, for infants, for diabetics and dyspeptics, and for persons generally debilitated, where serviceable treatment must be chiefly dietetic—is of especial value.

Heretofore in the treatment of diabetes, where the patient is obliged to eschew all foods containing starch or sugar (thereby depriving him of bread and all grain preparations), the physician has had much embarrassment. The “Diabetic Food,” consisting of gluten, which is nutritious and very digestible, is a boon to these sufferers.

It is known that heretofore in milling wheat the most nutritive portion of the grain, the gluten, lying next to the hull, was removed, leaving white flour, chiefly composed of starch and incapable of sustaining life.

A noted physician has said: “The farmer knows how to feed his land, his horses, his cattle, and his

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pigs; but not how to feed his children. The fine flour, containing neither food for brain nor muscle, he gives to his children, and the whole grain or the bran and coarser part, containing food for brain and muscle, he gives to his pigs.”

Formerly, in the preparation of Graham flour and cracked wheat, although the full nutriment of the grain was preserved, the hull—a woody, fibrous skin—was retained. This proved to be irritating to some delicate stomachs, although certain authorities hold that it serves a good purpose for vigorous persons—*viz.*, of promoting by a healthy irritation the secretions and motion of the bowels.

The Health-food Company obviates this, and manufactures, besides flour with its full richness of gluten, coarser preparations of the cereals, such as granulated wheat, oats, barley, corn, etc., with the silicious skin removed.

Among other of the health-food preparations are crackers made of the cold-blast flour, gluten, oats, granulated wheat, etc. The “Universal Food” is also highly recommended.

The manufacturers of what is known as the new patent-process flour claim that it also contains the full gluten of the grain. The flour is necessarily of a creamy color, gluten being light brown in appearance. This flour can be obtained of grocers in all of the large cities. If the flour sold for the “new-process” flour is quite white, it is not genuine. If the necessary amount of gluten is retained it must color it to some extent—indeed, to the extent of giving it a decidedly creamy hue.

The best oatmeal is the imported Irish oatmeal. It is more palatable than the Scotch or American oatmeal, and the grain is much larger.

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The concentrated foods so industriously advertised are not generally recommended by the best authorities. A certain amount of bulk is necessary, and the less nutritive portions of food often perform a very necessary function in the processes of digestion.

DIET FOR INFANTS

As many admirable books have been published devoted exclusively to Diet for Infants, the subject will only be briefly treated in this work.

Resort to artificial food, though sometimes necessary, is always unfortunate for the baby. Trouble then begins. The baby fortunate enough to have a healthy mother and a natural diet acquires a strength and vigor which are of incalculable value in after-life.

For the first three days of the baby's life a little sweetened water in a spoon is all-sufficient. It is desirable to adopt, as far as practicable, regular periods for nursing. Once in every three hours during the daytime and about twice at night for the first month will generally be sufficient. After the first month three times during the day and once in the night will ordinarily suffice. This may be continued until the child is six months old.

According to many and the best authorities, no farinaceous food or thickening of any kind whatever should be given to a child under six months old. (See Appendix, p. 267.) The child is until then "wholly unprovided with the physiological machinery requisite for the digestion of starchy foods." After six months the capacity for digesting starchy foods commences, and then a little gruel of sifted Graham flour, or barley, or corn-meal may be given. If the mother can nurse the child even partially, it is better to do so. If

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she cannot nurse the child at all, of course it is far better to procure a wet-nurse than to resort to cow's milk. Great care should be taken that the wet-nurse be quite healthy, and especially free from scrofulous or consumptive taint. If possible she should be of the same or nearly the same age as the mother, and her child and that of the mother should be of the same age. At nine months, or when the child has two or more teeth, it should be weaned. Not, however, during summer-time, nor unless the child be quite well.

If the baby must be fed from the bottle the difficulties are many. The milk should be quite fresh, and always from the same cow, which should be healthy and properly fed. Then if the bottles are left to nurses to be cleansed, there is constant danger that the work will be negligently or insufficiently done. It is absolutely essential that they be scalded and freed from all acid contents. The milk should be given lukewarm, or near the temperature of mother's milk. Dr. Gatchel, in his admirable little book—*What Shall I Eat?* writes: "Half the sickness from which infants suffer is produced by improper food and improper feeding." Sir C. Clark, an eminent London physician, once said: "The ignorance of mothers in feeding children is worth a thousand pounds a year to me."

Cow's milk differs from human milk in that it contains more caseine, more butter, and more saline matter, but less water and less sugar. This difference must be rectified by adding to cow's milk the necessary water and sugar. For the first month give equal parts of milk and water; say, of cow's milk one half-pint, of pure water (distilled or boiled) one half-pint, with powdered sugar of milk a teaspoonful or one lump of loaf-sugar. If the child's stomach should be

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a little acid, a teaspoonful of lime-water can be added to this quantity.

After the infant is a month old use two parts of milk, or, in some cases, cream, to one part of water with sugar as above stated. The milk should be obtained fresh twice a day. Two pans should be kept exclusively for the baby's use, and, before the milk is added, the pans, used alternately, should have been thoroughly cleansed, scalded, and dried. In summer, the milk, if in danger of becoming sour, may be scalded when first put into the pan, but it must not be boiled. If cream is used, the fresh, separated cream is the best. Glass jars are still better than tin pans for keeping milk. Always use a fresh, clean bottle every time milk is given to the baby. Several bottles should be provided, also the black thimble rubber nipples; the white are said to contain injurious ingredients. Never use the long rubber tube for the nursing-bottle, as it is almost impossible to keep it clean and free from acid.

Dr. Gatchel says: "As soon as the child has taken enough for one feeding, empty from the bottle what remains, and, without delay, scald and wash the bottle with hot water and soap. After scalding, put the bottle into a basin of clean, cold water in which a little soda has been dissolved. Let it remain in the soda bath for half an hour, then rinse it in clean water and let it dry by hanging inverted on a peg." A wire basket would be better and more convenient than the peg.

While the baby is under a month old, the usual quantity for a meal should be the ordinary feeding-bottle half full; afterwards the bottle nearly full.

In its chemical properties, goat's milk approaches nearer than any other kind to human milk. Very

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little water should be added to it—about four per cent., to make it suitable for infants.

Probably the most nearly perfect artificial substitute for human milk is Liebig's food for infants, prepared according to strict chemical principles. It is composed of malt flour, wheat flour, cow's milk, bicarbonate of potash, and water in such proportions as to imitate woman's milk as nearly as possible.

LIEBIG'S RECEIPT

Take half an ounce of wheat flour, half an ounce of malt flour, and seven and a quarter grains of crystallized bicarbonate of potash, and, after mixing them well, add one ounce of water, then five ounces of cow's milk. Warm the mixture, continually stirring, over a very slow fire, until it becomes thick. Then remove the vessel from the fire, stir again for five minutes, put it back on the fire, and let it boil well.

It is necessary that the food should form a thin and sweet liquid previous to its final boiling. Before using, it should be strained through a fine hair sieve.

Pavy says, in regard to this receipt: "To avoid the trouble of weighing, as much wheat flour as will lie on a table-spoon is an ounce, and a moderate table-spoonful of malt flour corresponds with half an ounce."

Malt made from barley should be used, and a common coffee-mill answers the purpose of grinding it into flour, which is to be cleaned from the husk by a coarse sieve. The bicarbonate of potash is added to neutralize the acid reaction of the two kinds of flour, and also to raise the amount of alkali in the food to the equivalent of the proportion of that in woman's milk.

The ferment in the malt, during its exposure to heat, converts the starch of both the flours into dex-

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trine and sugar, the latter of which gives the sweet taste that is required. The newly found products being soluble will account for the mixture being thin, and the point contended for by Liebig is, that the food in this state taxes the digestive and assimilative powers of the infant much less than starch.

PAP OR THICKENED MILK

Ingredients: One pint of milk, two even table-spoonfuls of flour, and a teaspoonful of sugar. The sugar is often omitted.

Place the milk in a double boiler; when hot, stir in the flour, wet with two table-spoonfuls of cold milk; let the water in the outer vessel boil fast for an hour. Or the pap may be cooked directly over the fire, when ten minutes' simmering will be sufficient to cook the flour. Proper care should be taken to prevent scorching. This is pap proper; but for a change, after the pap is cooked and while still hot, the white of an egg beaten to a stiff froth may be stirred in smoothly, without further cooking.

It is very desirable to use the new-process flour (in which the full amount of gluten is retained), or cold-blast flour prepared by the Health-food Company.

CRACKERS FOR BABY (OVER SIX MONTHS OLD)

Crackers may be fed to babies over six months old. Either Boston or soda crackers, health-food lactic wafers, or cold-blast biscuits, or crackers made at home (see p. 160), of new-process flour, may be used.

Pour over the cracker on a plate enough boiling water to cover it. Cover this with a saucer and let it remain in the oven for twenty minutes, or until it is quite soft and swollen. Then pour over it some hot milk or thin cream.

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BREAD JELLY, OR PANADA,

is admirable for babies ten or twelve months old.
(See p. 128).

GRUEL FOR BABIES

Any of the gruels are good for the baby. The barley gruel is excellent. If troubled with constipation a corn-meal gruel is generally better than medicine. If with summer complaint, the flour gruel or pap is advisable.

OATMEAL GRUEL (Dr. Rice, of Colorado)

Oatmeal is a very hearty food, too much so to be commended as a common diet for infants. For a change, however, it is often advisable.

Add one teacupful of oatmeal to two quarts of boiling water very slightly salted; let this cook for two hours and a half, then strain it through a sieve. When cold, add to one gill of the gruel one gill of thin cream and one teaspoonful of sugar. To this quantity add one pint of boiling water, and it is ready for use.

BEEF JUICE (Dr. Rice)

Scrape one half pound of beef, and remove all the shreds; add one half pint of water, and three drops of muriatic acid. Let it stand one hour; then strain it through a sieve, and add a very little salt.

MELLIN'S FOOD FOR INFANTS

Mellin's food for infants, an English preparation, which is said to be merely the Liebig receipt carried out perfectly, can be safely recommended.

The subject of Diet for Infants is so extended, and so many admirable books have been written on it, that it has been only briefly considered in this work.

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DYSPEPSIA

MANY conditions are requisite to insure good digestion — *viz.*: Wholesome food ; food taken at proper intervals, so that it may be digested, and the stomach allowed some repose before another repast ; sufficient sleep ; a mind free from nervous irritation, yet interested in objects outside of itself ; abstinence from stimulating beverages, condiments, and spices, and— as important as the selection of food itself—physical exercise.

Dyspepsia may be due to imperfect mastication, whereby the food is not sufficiently broken up by the teeth and thus submitted to the action of the saliva ; to inflammation of the coats of the stomach, which diminishes the secretion of gastric juice and increases the mucus ; to excessive secretion of gastric juice, causing acidity of the stomach and consequent fermentation ; to insufficient muscular action of the walls of the stomach ; and to certain nervous conditions which interfere with all secretory and assimilative action. There is probably no other disease which can be so frequently benefited and even cured by proper diet, fresh air, and the use of common-sense.

The first need of the stomach in dyspepsia is rest. The patient should never be forced to eat. It is observed by Dr. Baruch that—“ We have no reason to

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believe that the absorption (assimilation) capacity of the digestive tract is in good condition when the digestion capacity is impaired. It is more probable that both functions are alike crippled. What advantage is there, then, in relieving one of its work and depending upon the possible integrity of the other? . . . There is too much feeding done during illness."

The period required for digestion should be carefully observed, as it varies with the individual, and only such food should be administered (in moderate quantity and at regular intervals) as is necessary to sustain the strength of the patient, and as nature craves; and as little medicine as possible should be given. All stimulants and highly seasoned food should, as above indicated, be avoided. The bowels must be carefully regulated by food, and—rarely—by medicine. Different foods must be carefully tested, for what agrees with one may not agree with another. A milk diet with farinaceous foods—oatmeal porridge, cracked wheat, cornbread, etc.—acts like a charm with some, while a few persons cannot digest milk. Kumiss and peptonized milk may generally be relied on when simple milk is unsatisfactory. Raw-meat sandwiches and minced beefsteak (p. 187) are often beneficial; meat should *never* be taken at the same time with milk. Baked potatoes, mashed, with cream, poached eggs, uncooked eggs (p. 181), baked apples, and stewed fruits generally, are wholesome. A valuable article of diet for dyspeptics is Graham bread made of wheat partly or wholly denuded of its fibrous covering.

Let nothing be over-seasoned. Too much salt produces more or less inflammation and fever, and some hygienists banish it altogether, with spices and condiments. They argue that food contains already

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enough salt. Mattieu Williams, however, says: "Salt is not a condiment, but a food, simply because it supplies the blood with one of its normal and necessary constituents, chloride of sodium, without which we cannot live. A certain amount of it exists in most of our ordinary food, but not always sufficient."

Salt or smoked meats, sausages, viands recooked, pickles, canned tomatoes, and fried dishes generally should be eschewed. The dietary suitable for a healthy child is generally suitable for an adult whose digestion is enfeebled.

Any dyspeptic may better undereat than overeat. A weak stomach must not be overtaken. Some physicians say that occasional abstinence from food for a day or more, to give the organ a rest, is beneficial. If possible the dyspeptic should make up his mind to stop eating while his appetite remains not wholly satisfied.

It must be borne in mind, however, that while abstinence from food may be resorted to in special cases, dyspepsia can be brought on by fasting or by insufficient diet. The digestive functions become weak from mere inertia. The tone of the stomach, like the tone of the muscles, may be lost by want of exercise.

Undoubtedly, as a rule, we eat too much. A healthy appetite is not to be ignored, but some families erroneously consider that good living and hospitality require an excessive variety of dishes and of courses at meals.

Many physicians believe that the constant use of baking-powder in bread, cake, etc., is one cause of the prevalence of dyspepsia in the United States.

Walking, bicycling, gardening, golfing—any occupation which must be carried on in the open air—is invaluable in dyspepsia.

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When patients are unable to take out-of-door exercise, the Swedish movement, massage, or gymnastics may be used with benefit.

“Frivolous conversation” at meals is especially recommended by Dr. King Chambers; and Mrs. Ernest Hart adds: “Perhaps our forefathers had better judgment than ourselves when they enjoyed the jokes of the jester after a banquet, instead of listening to the solemn perorations of the speech-makers.”

DIARRHEA, DYSENTERY, AND CHOLERA

DIARRHEA

DIARRHEA results from some irritating constituent in the food, or from an effort of nature to throw off either an excessive quantity or a poor quality of food which cannot be digested. The digestive powers in such cases are overtaxed and weakened, and the best remedy in the first stage of an acute attack is total abstinence from food for at least a day. The stomach needs rest, and the patient will not suffer from this fasting, but will often recover by simply retaining a recumbent position and taking nothing but a little cool water, or rice-water, in small quantities at a time. For the following two or three days rice gruel will be sufficient in the way of food. If milk agrees with the patient, it can be taken mixed with lime-water (a table-spoonful of lime-water to a gobletful [half a pint] of milk), at first at intervals of one or two hours. After a time, as strength is developed, the quantity may be increased to a small glassful every three or four hours. Milk is generally an excellent diet in this trouble, and, when it can be taken, nothing else is required. Kumiss (new or freshly made) is also

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highly recommended for diarrhea. Thickened milk or flour gruel is often given. For those who cannot take milk, the alternatives are barley-water, thin oat-meal gruel (strained), oyster broth, and clam broth.

Dr. Fothergill declares positively that—"One broad rule may be laid down, and it is this—'So long as animal broths are permitted, so long will diarrhea be intractable.' Again and again has this been driven like a spike into my memory."

The patient should be extremely careful during convalescence to take only the most digestible foods—for instance, toast dipped in milk, rice pudding, tea and toast sippets (soaked in tea), the preparations from the health-foods, etc.

DYSENTERY

This disease involves inflammation and ulceration of the intestines. Consequently the patient should be kept in as tranquil a state as practicable. The food should be such as to exert the least stimulating or irritating action on the mucous membranes. An exclusive diet of milk (given as described in the preceding article) is of as great value in dysentery as in diarrhea. Toast-water, rice-water, and rice gruel are also especially recommended, as well as barley and flour gruel.

Raw eggs (p. 181), or eggs lightly poached, or eggs beaten with milk and sweetened, as described for milk-punch (without the liquor), are useful in dysentery. The pulp of raw meat is sometimes used in cases of diarrhea and dysentery, though the writer does not approve of this treatment. In preparing the pulp, the fat is all removed and the fresh beef is either scraped and divested of all fibre, or it may be cut into a pulp with a mincing-machine. This fine pulp may

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be lightly seasoned with salt and red pepper and placed between two thin slices of stale bread, forming a sandwich ; or it may be made into a thick cake and the outside merely colored by placing it in a hot saucepan ; but the inside must not be cooked.

Dr. Hall gives a table-spoonful of scraped raw beef every four hours.

Cold drinks tend to aggravate the pain and colic which accompany this disease. A band of flannel around the body diminishes the danger of taking cold in all diseases of the stomach and intestines.

CHOLERA

During the prevalence of cholera great care must be taken to keep the digestion in good order. No ice-water, stale or unripe vegetables, pickles, or any indigestible food should be taken. As the treatment of this disease is medical rather than dietetic, it is only briefly referred to by the present writer.

Dr. Gatchell, however, prescribes as follows : “ During the attack no food whatever is required. The incessant thirst from which the patient suffers it is hard to gratify, for water taken into the stomach aggravates the vomiting ; and yet the patient should receive all the water that he craves, *if he can retain it*. If this is impossible, much benefit may be derived from holding small pieces of ice in the mouth until they melt away. Injections of warm milk may be used with advantage, if nothing can be taken by the stomach.

“ After the attack no solid food should be taken until the stools are consistent and fecal. Great care must be observed during convalescence. An attack of indigestion at this time is often followed by a fatal relapse. At first only farinaceous food should be

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given, and this in small quantities, frequently repeated.

“Rice thoroughly cooked, thickened milk, and the like may first be taken. Milk, however, is to be preferred to this, and, if the patient can take it, nothing else need be sought for.”

FEVERS

Modern science ascribes fever to a microbe which multiplies in the blood, and which feeds on and consumes the different tissues of the body. In fever the consumption of albumen is especially great, and the excretion of urea and of the potash salts in the system is abnormally large. It is the object of medicine to arrest and of dietetics to supply this waste, and to keep up, meanwhile, the strength and vitality of the patient.

Dr. Beaumont's observations in the case of Alexis St. Martin (a young man whose stomach was permanently exposed by a gunshot wound) show that little gastric juice is secreted during fever. The duodenal digestion is less affected.

The rise of temperature, which is the most obvious symptom of fever, brings with it a longing for cool air, for cold water, and for acid drinks, while the diminished gastric secretion prevents the patient from craving or digesting solid food. All the pure cold water that is desired may be given; also barley and toast-water, lemonade, orangeade, tamarind and currant jelly water; and other fruit drinks, as they supply the salts which are wasted during fever.

Milk fresh from the cow is recommended by the authorities as nourishment in all fevers, except typhoid. Buttermilk may be taken when relished. Kumiss is

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especially beneficial, as it contains a mild stimulant in addition to its nourishing properties. It is sometimes digested when milk (which forms a curd in the stomach) is not tolerated. The addition of a tablespoonful of lime-water to a cup of milk will often enable the patient to retain it.

Cooling drinks and liquid food should be given frequently, at regular intervals, in small quantities. When the patient is alarmingly weak, and if stimulants are permitted, minute quantities of alcoholic liquor should be administered if prescribed by the physician. The white of an egg beaten up with lemon juice is often given, as it quenches thirst and helps to supply the wasted albumen.

When the patient has an actual aversion to food, as little as possible should be administered. Dr. Oswald says: "When coolness, sweetness, and fruity flavors cannot make a dish acceptable to the appetite, its obtrusion would do more harm than good, and it is a great mistake to suppose that even total abstinence could, in such cases, aggravate the danger of the disease."

If the invalid's mouth is furred, it may be washed out before food is given with water containing a little lime or lemon juice.

In convalescence, barley and oatmeal gruels, bread-jelly, raw eggs, and beef juice may be administered until the patient is able to digest more substantial diet. But great care should be exercised in this respect, for, if taken too early, solid food will almost surely cause a relapse.

MALARIAL FEVERS

The malarial parasite was discovered by Laveran in 1880; yet, three hundred years before the Christian

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era, as Dr. Thayer has noticed, the Latin poet Lucretius suggested that "malaria was due to living organisms in the blood."

In order to understand how this parasite acts, it is necessary to state that the blood is not a mere colored fluid. It consists of innumerable red cells or corpuscles, and of white particles called leucocytes, which are termed by physicians "the scavengers of the blood."

The malarial parasite attacks the centre of the red corpuscle, destroys it, and bursts it, and this bursting constitutes the crisis or fever of malaria. The leucocytes, meanwhile, attack the malarial parasite, and, when the blood is sufficiently rich in red corpuscles, destroy this parasite or protozoa in its turn.

There are three familiar forms of malarial fever—tertian, quartan, and aestivo-malarial fever, and three distinct groups of malarial parasites have been observed in these fevers. The question is still unanswered whether these groups are distinct types or the same type in different stages of development. The paroxysms in the first two forms of disease are more regular but less severe than those in aestivo-malarial fever.

It is still undecided how the malarial poison is spread; whether, being a germ in the soil, it is conveyed through air or through water, or in both ways. At any rate, it requires moisture, oxygen, and heat for its development. It is most severe in the tropics, but it finds its way in a modified form as far north as Siberia and Alaska. It flourishes in the low lands, yet it prevails at an elevation of 6400 feet in the Pyrenees and of 10,000 feet in Peru. It is worst where there is decaying vegetation, and in marshes liable to overflow. Cultivation and drainage are its

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successful foes. Negroes are less susceptible to it than whites.

Typhoid and malarial fevers rarely coexist. When typhoid symptoms appear the malarial conditions are for the time suspended. Typhoid develops in the small intestine, while the malarial parasite attacks through the blood, first the spleen and the marrow of the bones, then the digestive tract, the respiratory organs, and the brain. In the malarial fever imported by our soldiers from Cuba, the periodicity which has been regarded as a sure sign of this disease since the days of Hippocrates, is absent. The chill, the rise of pulse and temperature, and the succeeding perspiration do not always recur in regular order, and one or more of these symptoms may not be present at all. But there is invariably lassitude—an exhaustion approaching collapse. On account of this listlessness and of the low temperature and moderate pulse, the physician, in hospital practice, sometimes does not recognize the condition of the patient until he is practically pulseless. Great depression and apprehension of impending evil are almost invariable symptoms.

Another type of fever, only too common among our soldiers since the late war, does not exhibit the periodicity of malaria, and appears to be the direct result of exposure and starvation. A weak heart, sudden and irregular rise of temperature, collapse almost as profound as in cholera, extreme emaciation, and profuse sweating are its principal symptoms. Hippocrates observed in fevers that sweats come sometimes from “malign influences”—as in pernicious malaria and typhoid—and sometimes from prostration, as in the fever just described. He remarked also that “bodies which have been slowly emaciated

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should be slowly recruited"—a truth which should never be lost sight of in this type of illness.

Quinine, which is a specific in ordinary malarial fever, can only be given with great caution and in limited quantities in the fever induced by starvation. In both forms of disease the action of the liver should be stimulated before the quinine, which is most efficacious as a liquid, is used. The convalescence in regular malarial fever is generally rapid; that from the fever just described is a question of time and strength. In both fevers the patient is benefited by rest in bed, freedom from exposure to night air and dampness, change of surroundings, plenty of sleep in a sunny room high above the ground, and, in southern climates, by sleeping invariably under mosquito netting; for mosquitoes are believed to disseminate malaria. Dr. Koch says: "Wherever mosquitoes exist, malaria will prevail."

The writer has entered thus fully into the nature of these fevers because it is necessary carefully to observe their characteristics and differences in order to administer proper food. In ordinary malarial fever, not involving any affection of the digestive tract, a strengthening, rather stimulating regimen, including solid food, is rarely injurious; provided, of course, that no nourishment be taken during the chill and fever. Anæmia almost invariably accompanies malarial fever, and it is of the first importance to build up the red corpuscles of the blood. Beef-tea may be given as a stimulant, and chicken, beef-steak, or a mutton chop, with fresh vegetables, or any other food not making severe demands on the digestion, may be eaten. As a general rule the patient should be "fed up."

In the fever induced by starvation, on the other

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hand, no solid food should be given until the system of the patient is prepared for it. After the paroxysm of fever, kumiss or malted milk, or, when tolerated, plain milk and cream in small quantities, should be administered at brief intervals, alternating, when prescribed by the doctor, with minute doses of stimulant given, if possible, in some form of liquid nourishment. No beef-tea should be used, nor any form of meat broth, for the first few days; then partially peptonized foods—peptonized meat jellies, etc.—may be given, but these should be discontinued at the first symptom of diarrhea, and the kumiss or milk-diet resumed, the period of restricted diet varying with the constitution of the patient. Generally, within two weeks, his digestion of a tender breast of chicken or a sweetbread indicates his convalescence.

TYPHOID FEVER

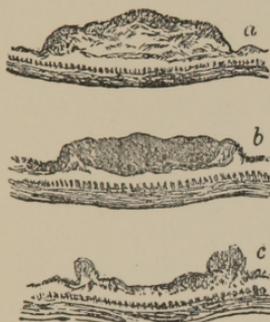
Typhoid fever is due to an ascertained bacillus, and probably also to other organisms acting on the system in the weakened condition which this bacillus induces. Nearly fifty per cent. of the persons whom it attacks are between twenty and thirty years of age—a fact which accounts for its ravages in the present year (1898) among our volunteer troops, nearly all of whom are young men.

The typhoid bacillus originates in the soil, but is disseminated in water and in milk. It is destroyed by heat; hence the importance, when its presence is suspected, of boiling the water used and pasteurizing the milk. It attacks the mesenteric* glands and the Peyer's patches and solitary glands in the small intes-

*The mesentery is the membrane to which the intestines are attached.

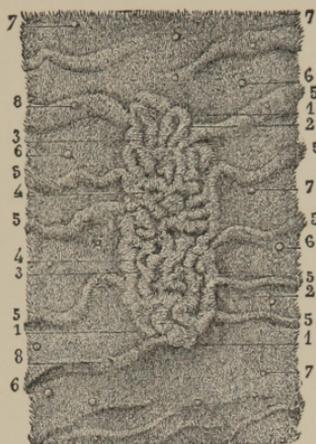
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tine, where it multiplies and produces inflammation. The glands ulcerate and slough off, as may be seen in the cuts here given, which are reproduced from Mrs. Ernest Hart's *Diet in Sickness and in Health*.



DIAGRAMMATIC REPRESENTATION OF PEYER'S PATCHES IN TYPHOID FEVER

a. Early stage with swelling of the patch; *b.* Later stage with sloughing; *c.* Ulcer with infiltrated walls (from Thierfelden).



P. LACKERBAUER D.

A PEYER'S PATCH SEEN FROM ITS FREE OR SUPERFICIAL SIDE

1, 1, 1. A folded Peyer's Patch. 2, 2. The folds which form the superficial or mucous layer of this patch. 3, 3. The grooves which separate the folds. 4, 4. Pits observed from place to place in these folds. 5, 5, 5. Valvulae conniventes. 6, 6. Solitary closed follicles situated in the space between the valvulae. 7, 7, 7. Other follicles similar to the preceding, but smaller. 8, 8. Closed follicles situated on the summit of the valvulae conniventes.

The danger in typhoid fever is from the hemorrhage which may be caused by this sloughing off, from the extension of the inflammation to the peritoneum (or membrane lining the abdomen and investing its vis-

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cera), and from the perforation of the intestine by the ulcers.

The present treatment of typhoid fever consists—first, in the disinfection by germicides of the intestinal canal; second, in constant bathing to stimulate the action of the skin and thus to eliminate the poison (the body is sometimes rubbed with oil for the same purpose); third, in perfect rest, whereby the risk of perforation of the bowel is diminished and the vital energy of the patient sustained; fourth, in keeping up the strength by nourishment, so as not only to repair the waste induced by the fever, but to enable nature to heal the wounded surface of the intestine.

The treatment consists largely, therefore, in good nursing and careful diet. There is exceedingly rapid waste in typhoid fever, and it is essential that nutritious liquid food be frequently and regularly administered. If the patient becomes unable to swallow, nutrient enemata must be resorted to. The evacuations must be carefully examined to ascertain if there are indigestible substances in the food taken, since, on account of the possibility of perforation of the intestine, it is absolutely necessary that all irritating substances be excluded from the diet of a typhoid patient. While milk is in its constituents the most complete food, there is always danger in fever of its entering the bowel as a solid curd and producing irritation. When diluted and mixed with lime-water this difficulty is often obviated, but it may be avoided by using, instead, malted milk, or kumiss. White of egg, beaten up with lemon juice, may also be administered. Whey, carefully strained, may be used freely, to allay thirst and to promote the action of the kidneys.

Beef-tea and chicken broth may be given when they do not induce the digestive inflammation caused by

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too much meat. It is very important to include also vegetable salts and acids, and Mrs. Ernest Hart suggests that this may be done by enclosing vegetables in a muslin bag, to be boiled in the broth and removed before serving. If fever persists or diarrhea reappears, the use of animal food should be stopped immediately. As soon as the intestine is thoroughly aseptized the diarrhea will cease.

The experience of Sir William Jenner in the treatment of typhoid fevers has been so extensive that his remarks on "Diet in Typhoid Fever" have been added in the Appendix (p. 274).

The convalescence from typhoid fever demands constant and intelligent vigilance, especially as to diet. Gradually some digestible thickening (the Health-food preparations are the best) may be added to the broth or gruel administered; then jellies may be given; raw oysters, raw eggs, poached eggs, and the white meat of chicken roasted and scraped or pounded may be added in succession in small quantities to the invalid's bill of fare. Finally, ten or twelve days after the fever has abated, toast, beef, and mutton may be eaten. Only a stony-hearted nurse should be employed—one who can resist the piteous pleadings and even the tears of the hungry convalescent.

It should be remembered that many months, even a year, may elapse before the health is actually re-established after typhoid fever.

GOUT AND RHEUMATISM

A tendency to deposit urate of soda in the fibrous tissue around the joints is a characteristic symptom of gout. But gout is now believed by the best authorities to show itself not only in the sore toe and enlarged

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joints, which were formerly regarded as its invariable symptoms, but in various morbid conditions of the system, and in certain forms of headache, neuralgia, rheumatism, disease of the heart, the kidneys, the skin, etc. It is generally supposed to originate in the liver, though all the organs of nutrition are involved.

When the liver is unable to transform the products of nitrogenous food into soluble urea, uric acid is formed. This is taken up by the blood, and is an active poison, showing itself, as above indicated, in various ways. Finally it passes to the kidneys, which are unable to perform the excessive work imposed on them, and they deteriorate—as in Bright's disease.

It is easier, of course, to prevent a disease than to cure it; and when any of the symptoms of gout manifest themselves it is far better to starve out the disease than to await its development.

Dr. Osler says: "Gout is evidence of an overfed, overworked, and consequently clogged, machine." Knowing this, the patient should abstain as far as possible from taxing the organs of nutrition, especially with nitrogenous food. As a rule, the diet should be as simple as possible. No beef, and little mutton or pork, should be eaten, and fat should be used in moderation. Poultry and game are less objectionable, and the strength of the patient should be sustained by these. Fish, while less nourishing, is generally allowable as a change. Cheese is of doubtful value. The lentil family—pease, beans, etc.—are admirable in chronic gout, but they are not always easy of digestion and create flatulence. Vegetables—as rhubarb, sorrel, etc.—containing oxalic acid, which is nearly allied to uric acid, do not agree with gouty people, and they should not eat eggs, containing as they do a large proportion of albumen. In dishes

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made for the gouty, where eggs are indispensable, only the yolks should be used. Food containing much gelatin is also to be avoided. Fruits—especially lemons, oranges, limes, and shaddocks—are generally recommended, though some sufferers from gout cannot take fruit acids; salads should be eaten freely.

Physicians differ as to the use of milk, with other food, in gout, though a diet of milk alone is often beneficial. There is a controversy also as to the use of sugar, which doctors generally forbid; and there are cases on record in which the use of sugar and starch in excess in the food has induced gout. For some unknown cause sugar often aggravates the disease.

There is, however, a form called "poor man's gout," caused not by excess but by imperfect assimilation of food, and before restricting the diet too much it is well to try to get rid of the cause by assisting the liver to perform its work. This can be done, often without the aid of drugs, by exercise, especially in the open air. It may be regarded as an axiom that open-air exercise, which expels the poison by increased action of the skin, and which aids every organ in destroying old and producing new tissue, is a specific in incipient gout. When the disease has become chronic, its manifestations may be diminished in frequency and severity by regular exercise. If the patient is unable to take this, massage and other forms of passive exercise, and judicious bathing, whereby the poison is excreted through the skin, are recommended. But eternal vigilance is the price of health for the gouty. As Dr. Fothergill says: "There is no nice way of having the gout, and, what is worse, there is no pleasant way of avoiding it."

There are so many forms of rheumatism, requiring different methods of treatment, that it is not consid-

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ered desirable to recommend any one system of diet in this disease. As a rule, however, sugar should be rigorously excluded from the food of a patient suffering from rheumatism.

BRIGHT'S DISEASE

Pavy observes on this subject as follows: "Physiology teaches us that the kidneys perform an eliminative office. The water which they remove in regulating the amount of fluid in the system is made the vehicle for carrying off solid matter, consisting of useless products of the metamorphosis of the food, and effete materials, resulting from the disintegration of the tissues, which poison and produce death if allowed to accumulate in the blood. In Bright's disease their eliminative capacity is interfered with.

"The amount of urinary matter to be discharged is largely dependent upon the nature of the food. The fats and carbohydrates throw no work upon the kidneys. The products of their utilization—carbonic acid and water—pass off through another channel.

"The nitrogenous ingesta, on the other hand, in great part undergo metamorphosis, and yield their nitrogen to be carried off in combination with a portion of their other elements, under the form of urinary products. In this way the kidneys become taxed by the food. So a vegetable diet should preponderate.

"In Bright's disease the kidney is contracted, and frequently the escape of albumen is insignificant, and sometimes even there is none. The mere loss of albumen is not so much to be dreaded as uremia."

A vegetable diet is also recommended by most of the authorities (Chambers being an exception), on the supposition that meat throws extra work upon the

DIET IN DIFFERENT DISEASES

kidneys. In the use of the grain foods such preparations only should be selected as contain the full nutriment of the grain (see p. 58, 256).

A diet wholly or partially of milk is recommended. Niemeyer says: "In a series of cases which have been described by Dr. Schmidt in his inaugural thesis, I have obtained most brilliant results, where all other treatment has failed, by putting the patients on an almost exclusive diet of milk."

The ordinary mixed diet should be gradually changed in favor of the milk diet, until one exclusively of milk is finally reached. This should be kept up for a month or more, or until there is a decided improvement in the patient's condition.

The patient should drink freely of pure soft water, as that carries off many of the impurities of the blood. Flax-seed tea is at times beneficial. Alcoholic and malt liquors are almost invariably prohibited. They generally act as a poison in kidney affections, and their excessive use is doubtless the provoking cause of a majority of such diseases.

DIABETES

The formation of sugar in the urine is characteristic of the disease known as diabetes. Its cure is almost entirely dietetic, and consists mainly in the patient and persistent taking of foods which contain neither sugar nor starch: the latter is converted by natural processes into sugar in the system. Fat and albuminoids are given in their place. Dr. Dobell recommends very highly the pancreatic emulsion of fat for diabetics.

The following is a partial list of dishes which are allowed and prohibited in diabetes:

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OYSTERS AND CLAMS

Raw or cooked without flour mixtures are allowed. Oysters may be rolled in egg and gluten for frying.

SOUPS

All kinds without flour, rice, or other starchy substances, and without the prohibited vegetables, may be used.

FISH

All kinds are allowed, including lobsters, crabs, sardines in oil, etc.

MEATS

Of all kinds, poultry, game, etc., may be eaten. Livers, on theoretical grounds, are prohibited.

VEGETABLES ALLOWED

Cauliflower, spinach, cabbage, string beans, cucumbers, lettuce, greens, mushrooms, young onions, and olives. Celery, asparagus, and tomatoes are questionable. Sour apples cut in quarters, dipped in egg and rolled in gluten, and fried in hot fat, make a good substitute for potatoes, and may be used moderately.

VEGETABLES PROHIBITED

Potatoes, beets, turnips, peas, beans, carrots, parsnips, rice, sago, tapioca, and others containing sugar or starch.

MILK, CHEESE, AND EGGS

Milk, in some cases; eggs, cream, butter, and buttermilk may be taken freely. Puddings and custards should be sweetened with saccharin.

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FRUITS ALLOWED

All kinds of tart fruits, with cream, but without sugar.

FRUITS PROHIBITED

All the sweet fruits—as apples, pears, plums, grapes, bananas, pineapples, raspberries, blackberries, strawberries, and peaches.

BREADS AND PASTRY

Only those are permissible which are made from wheat-gluten flour, bran, or almond meal. The ordinary flour or grains (oatmeal, corn-meal, hominy, etc.) must not be used in any form.

BEVERAGES

Kumiss, coffee with cream and saccharin, and cereal coffee may be used. Tea is objectionable. Claret, Rhine, and other acid wine, dry champagne, and brandy may be taken in great moderation; but it is better to dispense with all wines, sweet or sour, and all liquors, malt or distilled. Pure water may be drunk as freely as desired.

Plenty of exercise in the open air, tepid baths, rubbing, and abundant sleep are desirable.

CONSUMPTION

The principal object in treating consumption should be to build up, the tendency of the disease being to reduce, the recuperative power of the patient. It is important above all to arrest the formation of tubercular and diseased matter; consequently all the nourishing food which can be digested and assimilated

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should be taken. Plenty of fresh milk, if possible warm from the cow, is desirable; also buttermilk, clabbered milk, and kumiss.

Fresh meats, such as beef, mutton, and venison, roasted or broiled, and cooked rare, may be used when there is no tendency to fever. Meats and fresh milk must not be taken at the same meal, however. Fowls and fresh fish may be safely and profitably eaten. Pork, veal, and all foods difficult and slow of digestion should be avoided. All salted meats should be eschewed. Potatoes, carrots, and fresh vegetables generally are wholesome, and even necessary, when much meat is taken. Raw and slightly cooked eggs are full of nutrition and very assimilable. Nut preparations have been recommended for consumptives on account of the amount of oil which they contain and of their heat-producing qualities; but they should only be used by patients whose digestion is strong, and, as a rule, by those who take a great deal of exercise in the open air. Care should be taken to discontinue at once any article of food that disagrees with the patient, as disordered digestion is especially unfortunate in consumption.

As much fat as can be digested, whether it be in the form of cream, butter, fat of meat, or oil, should be taken. Cod-liver oil seems to be one of the great resources for supplying fat to consumptives, and the amount of evidence accumulated in its favor leaves no doubt as to its utility. The oil should be quite fresh, and should be kept well corked in a cool place. If it does not agree with the patient in its crude form, there are preparations of it in emulsion, combined with pancreatic extract, malt, hypophosphites, etc., which are considered beneficial.

Dr. Gatchell says a dose of a teaspoonful of cod-

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liver oil is sufficient to begin with, and this quantity can be increased until a table-spoonful three times a day may be safely and profitably prescribed. It must not be taken on an empty stomach, but half an hour after a meal.

The pancreatic emulsion (see pp. 11 and 263), a preparation of half-digested beef suet, is well worth a trial.

Alcoholic stimulants should be used only under the direction of a physician. They serve to give temporary strength in periods of extreme weakness or to alleviate acute pain and suffering. If the effect of alcohol is to derange and weaken the digestive powers, which are the main reliance for cure, it should at once be discontinued.

Dr. Chambers says: "As to the use of alcohol in threatened cases, and in the early stage of tubercle, I have no hesitation in pronouncing an opinion against it."

Nothing aids digestion, and consequently assimilation and health, as much as fresh air and sunshine, combined with all the physical exercise that can be borne *without fatigue*, and a life in the mountains, where the air is dry and bracing, is to be chosen if possible. Actual work, giving good exercise to the arms and chest, is especially desirable, if the patient remembers to stop short of fatigue.

Dr. Chambers observes: "The use of climate in the treatment of phthisis (consumption) may be tested by its dietetic action; if it improves the appetite it is doing good; if it injures the appetite it is doing harm."

SCROFULA

The regimen in scrofula should be the same as in consumption—a liberal diet, containing plenty of fat

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in the form of cream, fresh milk, butter, fresh animal food, cod-liver oil, etc., and also a full complement of fresh air, sunshine, and exercise. The extract of malt is generally recommended.

RICKETS

This disease is the result of imperfect nutrition, and should be treated, like consumption, by prescribing a generous diet, such as milk, cream, raw beef, and cod-liver oil. The extract of malt, which contains phosphates of lime and other salts, is especially valuable in the treatment of this disease.

DIPHTHERIA

The patient should be well nourished in diphtheria—one of the most wasting of all diseases. Give plenty of fresh new milk, or milk mixed with beaten egg (milk-punch without the liquor).

In the stage of depression some stimulant is required. Let it be eggnog, milk-punch, or raw egg beaten with a spoonful of whiskey or brandy, oat-meal caudle, or kumiss. Black coffee is also admirable as a stimulant.

If the patient can no longer swallow, he should be nourished by nutrient enemata and by rubbing the body, especially the abdomen (under cover, for fear of taking cold), several times a day with olive-oil.

GASTRITIS

In the height of the attack, when the stomach is much inflamed, no food whatever should be taken. Small pieces of ice may be held in the mouth and a portion swallowed. Fresh kumiss is excellent. Ice-cream flavored with lemon extract (no vanilla) is also valuable. If milk agrees with the patient, no other

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food is required. The gruels come next, but no meat should be eaten. Meat is digested in the stomach, and starchy food, as already stated, in the duodenum.

If nothing can be retained on the stomach, nutrient enemata and rubbing the body with oil must be resorted to.

NEURALGIA

Neuralgia may be regarded as rather a condition than a disease, and its cause and cure are arguments in favor of the maintenance of the general health by wise hygienic rules in diet, bathing, rest, and exercise; for when these are observed, and the system regains its tone, neuralgia vanishes.

Neuralgia is caused either by a poison in the blood or by a microbe. This microbe, if it exists, is probably closely allied to the bacillus of malaria, and thrives under similar conditions—*i.e.*, in the air and water of damp climates, in sewer-gas, etc. It is likewise only developed when the system is "below par." As in malaria, the red corpuscles of the blood are diminished in neuralgia, and in both cases (though this is not invariable in neuralgia) the attacks are apt to be periodic.

Romberg says, "Pain is the prayer of a nerve for healthy blood"; and another authority calls neuralgia "nerve starvation." But the nerves cry out not only for food, but also for rest. The usual treatment of neuralgia by means of a stimulating meat diet is believed by the writer to be unwise. Abstinence from undue demands on the digestive organs and the liver, small but frequent meals of non-nitrogenous food, "plenty of porridge and green vegetables, and meat once a day," says King Chambers, and some simple nourishment (prepared, if the digestion is temporarily

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weak, with pre-digested food) just before going to bed, will often avert the attacks.

The eminent New York physician, Dr. Simeon Baruch, observes that "when the patient has no appetite, food is of little advantage—provided the patient is sane and capable of judgment on this point. It should be the aim of the physician to restore the digestive functions to a normal condition by rest and other treatment."

When this disease exists in the form of facial neuralgia accompanied by aversion to food, perfect rest, with a mustard plaster at the base of the brain or on the pit of the stomach, or hot applications to the feet, will generally bring relief. The patient should not be forced to eat, but, as soon as the possibility of digestion returns, peptonized milk, and, in case of great weakness, stimulant—preferably in the form of milk-punch, or, where milk is not relished, Roman punch—should be administered. Great care should be exercised in regard to the water used by patients suffering from malaria and neuralgia, as attacks can frequently be traced to the use of impure water.

COLDS

There are said to be two ways of curing a cold when it has just begun. One, which the writer has never tried, is by absolute privation for three days of all liquids; the other by putting the patient in bed, giving some antibilious medicine, and following it with an alkaline draft, and inducing profuse perspiration by administering as much liquid food as the digestion of the patient permits. The theory is that the first method relieves the mucous membrane of all strain, and that the second, by the copious evacuations

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of the bowels and the kidneys, and the action of the pores of the skin, rids the system of the poison which causes the cold. In both cases quinine is generally added.

The old-fashioned adage, that we must feed a cold and starve a fever, has later been departed from. Very little solid food should be given in the early stages of a cold, though chicken broth, gruel, and milk with lime-water, may be frequently administered. When the cold is "broken," the diet should be as nourishing as possible, and stimulants, if advised by the physician, should be given in moderate doses. It is very important that the action of the bowels and of the kidneys be carefully watched, and if the latter show the presence of too much albumen, the supply of nitrogenous food should at once be diminished.

CORPULENCY

Fat in the body is created out of the fat of food, and also from its starch and saccharin elements. Consequently, in the treatment of corpulency, it is necessary to interdict foods that contain fat, starch, or sugar. Sugar, according to the approved authorities, is the most active of fat-forming foods.

Mr. Banting's rules were as follows :

"For breakfast, at 9 A.M., I take five or six ounces of beef, mutton, kidneys, broiled fish, or cold meat of any kind except pork and veal; a large cup of tea or coffee without milk or sugar; a little biscuit, or one ounce of dry toast.

"For dinner, at 2 P.M., five or six ounces of any kind of fish except salmon, herring, or eels; any meat except pork or veal; any vegetables except potato,

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parsnip, beet, turnip, or carrot; one ounce of dry toast; fruit out of a pudding not sweetened; any kind of poultry or game, and three or four glasses of good claret, sherry, or madeira (champagne, port, and beer forbidden).

“For tea, at 6 P.M., two or three ounces of cooked fruit, a rusk or two, and a cup of tea without milk or sugar.

“For supper, at 9 P.M., three or four ounces of meat or fish with a glass or two of claret, or sherry and water.”

The propriety of the last meal, or of the taking of sherry or madeira (heat-producing wines), or of rusks, which are sweet biscuits, is doubtful.

The following are the principal fat-producing foods—*viz.*:

Milk, cream, butter, fats, soups, puddings, pastry, sugar, candies, cake, and all sweet dishes, rice, corn-starch, and all the farinaceous foods (excepting toasted bread or bread crust), including potatoes, corn, all edible roots and vegetables grown under ground—sweet fruits, and spirituous and malt liquors.

The following are non-fat-producing foods—*viz.*:

All the meats, poultry, and game, with the exception of the fat portions thereof, oysters and shell-fish; celery, spinach, and all the greens, cabbage, onions, lettuce, squash, tomatoes, and other vegetables containing little or no starch, and all acid fruits.

Dr. Dobell thinks that a certain amount of fat should be taken with the food. On this subject he says: “On comparing the foregoing analysis of Mr. Banting’s diet for getting thin with my tables of normal diets, it will be seen that it yields less than half the normal quantity of carbon, leaving the deficiency to be obtained from the fat already stored up in the

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system, by the consumption of which the obesity is removed. The fault consists in this reduction of carbon being obtained by diminishing the hydrocarbons (fats) of the foods instead of cutting off only the carbohydrates (sugar and starch). It has happened to me to have much to do with a great number of persons who have tried Bantingism, and I do not hesitate to say that Mr. Banting has done a great deal more harm than good. Mr. Banting candidly told his readers that he was ignorant of the physiology of food.

“The facts in the case are these: 1. A certain amount of fat in the system is one of the most essential elements of health. 2. The quantity required by different individuals to maintain health differs. As much fat should be taken as the stomach likes. 3. The effects of a deficiency of the quantity actually required are most disastrous, the tissues of the body and the brain and nerves being at length disintegrated to supply the elements of fat which they contain. 4. When there is a quantity of fat in the body in excess of that necessary to health, it may be lessened with great (and needed) advantage, provided it be done slowly and without cutting off too much of the fat element of food.”

There is much to be gained by observing certain other rules, aside from the dietary. For instance, every morning a hasty cold-water sponge-bath should be taken, and the body should be well rubbed with a crash towel. And whenever the body is too warm, the cold-water sponge-bath may be repeated. The clothing should not be too warm. All the bodily exercise that can be taken without fatigue should be persistently kept up. The vibratory-motion machine is excellent for reducing fat. This machine

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makes two thousand vibrations a minute, and is made to adapt itself to different portions of the body. To those who are unable to take other and ordinary exercise this machine is especially recommended. Its action is to produce a rapid circulation of the blood, which takes up and carries off adipose and effete matter.

Mrs. Ernest Hart lays down the following: "*Dietetic Rules.* The amount of food for a large, active person would be excessive for one of small stature and indolent habits. Each case must be treated more or less on its merits, remembering also that there are certain broad principles to be followed. Decrease the total amount of food taken, and strictly limit the amount of drink; cut off all sugar, beer, and spirits; eat no potatoes, bread, puddings, or pastries; skim all milk, take no soups or fancy dishes; take a fair amount of roast or boiled meat, with fish, game, poultry, and eggs, as well as vegetables and fruit. Take steady exercise, and promote the action of the skin." With plenty of exercise there will be less need of an exacting dietary.

Effervescent drinks should be prohibited in the treatment of corpulence.

REMARKS REGARDING LONGEVITY

Before the age of eighty, it is not years that make us old. It is want of health, either inherited or brought on by our own mistakes. Health is youth. Many individuals are younger at sixty than others at twenty. The person in health is always young. The invalid is always old. There is no doubt that the natural period of human life is greatly shortened by the violation of natural laws.

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Climate has much to do with the preservation of youth, or rather health. In the extended territory of the United States many healthful situations are to be found, though our climate is marked by extremes of heat and cold. In some portions of Scotland men often retain their full vigor at eighty. The equable climate of England is especially favorable to longevity.

It is observed by Mrs. Ernest Hart that "In old age the power of fasting is not so great as in earlier life; and the meals, while being smaller, should therefore be more frequent, the intervals between them being short. A small amount of alcohol with food is also often beneficial to the aged. The long fast of the night, during which sleep is not sound, is ill borne, and a glass of milk, or a cup of beef-tea, may often be taken in the night with advantage. . . . As age increases and strength diminishes, food should be more stimulating and strengthening."

A study of the subject shows that great longevity has always been accompanied by abstemiousness in diet; also, that great eaters never live long.

The deaths of Sir Moses Montefiore at one hundred and one years, and of Sir Isaac Holden at ninety years, serve to emphasize these results. Sir Isaac attributed his long life and his active old age mainly to the use of fruits, in which he believed that a large amount of solar energy is stored. He lamented the death of his wife, "long before her time," at eighty, because she would not adopt his dietetic rules. He opposed the use of meat and of bread in old age, on account of the phosphate of lime they contain, which is only needed in growth, when the bones, etc., are forming. It is said by many authorities that, after middle life, excess in the use of bread produces ossification of the muscles of the heart, rheumatism, etc.

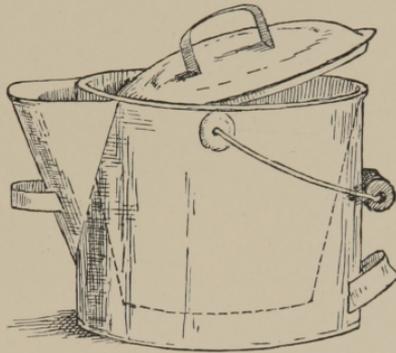
DIET IN ILLNESS AND CONVALESCENCE

“Bread,” it was declared by Sir Isaac Holden, “is the staff of life for growing human beings and prospective or nursing mothers, but poison for the elderly, clogging the arteries as if they were furred boilers.”

This subject may well be concluded by quoting the following language of Dean Farrar: “The serene old age which is secured by temperance, sobriety, and the conquest of vicious appetites and passions—the long, mellow autumn of life, in which are harvested the fruits of useful toil—is to be coveted and striven for by all.”

UTENSILS

A Double Tin Steamer with double tin cover and copper bottom is invaluable among cooking utensils, especially for making dishes for the sick. The double, tight-fitting cover, securing the heat, cannot be satisfactorily replaced by any improvised cover. The steamer is also valuable as a *bain-marie*—*i.e.*, a utensil in which any cooked dish may be kept hot. When thus used the steamer containing hot (not boiling) water is kept at the back of the range. The double cover and the hot-water lining protect soup, vegetables, sauce, oysters, or any dish placed inside. The flavor of food is almost entirely preserved when kept in this manner.



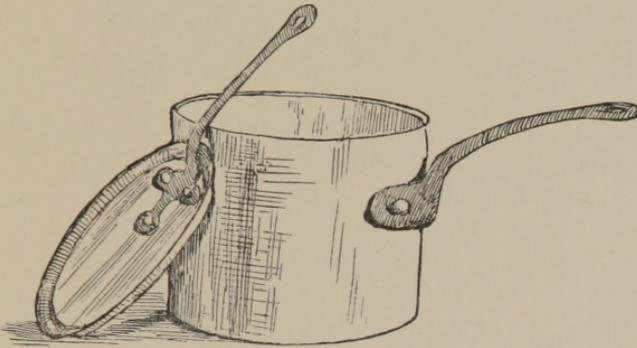
DOUBLE TIN STEAMER

This steamer is especially useful for making Boston brown bread, Graham pudding, farina pudding, custards, etc.

The Earthen Crock (see p. 166) is recommended for cooking grains (oatmeal, etc.), apple sauce, fruit compotes, etc. When this crock is heated gradually, there is little danger of its breaking.

UTENSILS

A Copper Saucepan.—This is a rather expensive utensil, but when once used it will be found indispensable; since materials which scorch readily—*viz.*, articles made with milk, cracked wheat, or any of the grains, sauces, etc., which are improved by simmering—may be cooked in it with almost no danger of burning. The same materials could be cooked in a new porcelain-lined kettle or earthen crock; but no saucepans preserve the same even, regular heat as those made



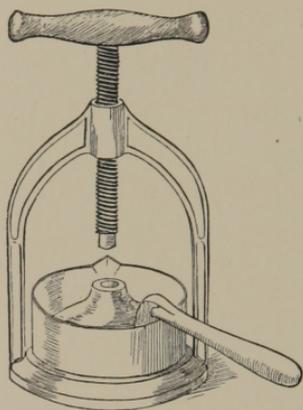
SAUCEPAN

of copper. As porcelain-lined kettles are not durable, the copper saucepans in the end are cheaper. They will last for an indefinite period. However, special care should be taken, if the copper is exposed inside, to have them at once retinned.

It is claimed that cooking utensils of aluminum possess the same merits with the added virtues of lightness and non-liability to rust, but for some unexplained reason they have not met with popular favor.

Meat-juice Press—for extracting the juice from meat. The meat—a thick steak cut from the round of beef being preferable—is broiled enough to become

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MEAT PRESS

well heated through. It is then cut into pieces an inch or less square, and put into the press, which has been previously heated by inserting both cup and cover in hot water. Juicy meat will yield nearly half its weight in liquid. An equal quantity of warm water is often added to the meat juice, and all should be very lightly seasoned. It can be reheated before giving it to the patient,

although it should not reach the boiling-point, for reasons explained on p. 130.

A *Porcelain Duck* is used for administering drinks and fluid foods to a patient in a recumbent position. The narrow neck prevents a too rapid flow of fluid



PORCELAIN DUCK

into the mouth. The duck should be warmed before hot foods are poured into it.

Glass Tubes are made for the same purpose, and are also convenient. Glass funnels are also serviceable.

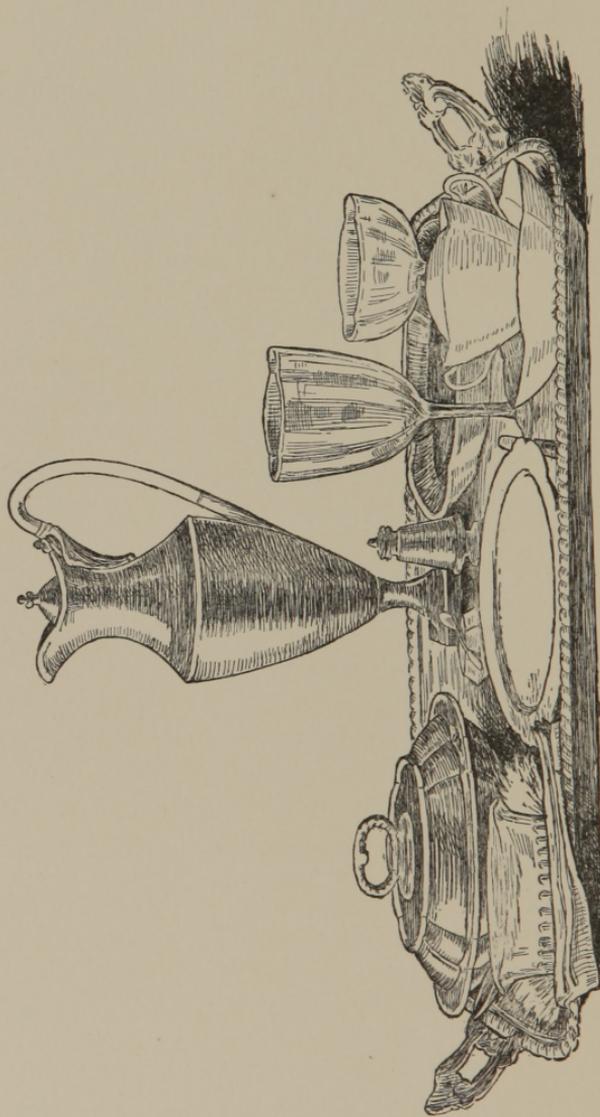
UTENSILS

Porcelain or Glass Spoons, for administering medicines, may be purchased of any druggist.

A Little Glass Dropper, for measuring medicine by drops, is essential.

A Graduated Medicine Glass is also necessary.

Asbestos Mats, which enable dishes to be kept warm without danger of burning, are always useful.



TRAY WITH DINNER SERVICE

SERVICE OF AN INVALID'S FOOD

Too much care cannot be bestowed on the mode of serving the food of an invalid. The linen must, of course, be spotless, and every essential for the tray should be used, when practicable, for its service alone, so that nothing may be forgotten or displaced. Monotony should, however, be avoided. The comfort and cheerfulness of an invalid are greatly dependent on attention to the minute details of daily life, and the appetite will often be stimulated by some pleasant surprise in the serving of a meal—a change in the decoration of the china used, a vase of fresh flowers, not too fragrant, a daintily embroidered doyley, or fruit served in its own leaves.

A cup of tea or other liquid should never be quite filled, in order that it may not be spilled on the napkin or in the saucer.

Food not intended for immediate use should not remain near the invalid, and nothing to eat should be kept in the sick-room.

It is not necessary to add that food should always be served hot or cold, as the diet may require. There are few things more discouraging to the appetite than lukewarm tea, soft butter, or half-melted ices.

The writer would also add a few suggestions with regard to the sick-room. An airy, cheerful, quiet room makes illness more endurable, and is an important element in convalescence. All superfluous hang-

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ings should be removed, and the windows should invariably be fitted with wire screens to keep out mosquitoes and flies, which are said to disseminate the germs of malarial and typhoid fever, dysentery, etc.

Above all, there should be plenty of sunshine. Not only does it add to the comfort and cheerfulness of the patient; but sunlight is known to be one of the best of disinfectants, and its absence induces catarrh and rheumatism, and aggravates many other forms of illness. In diseases of the throat and lungs a sunny room is a necessity. The Italians have a proverb—
“Where the sun does not enter, the doctor does.”

RECEIPTS FOR THE SICK AND CONVA- LESCENT

DRINKS

DISTILLED WATER (Dr. Beard)

“FOR diseases of the kidneys, etc., this, the purest of water, may be obtained by fixing a curved tin tube three or four feet long to the spout of a teakettle, and conducting its free end into a jar which should be placed in a basin of cold water. The liquid, as it drops, must be kept cool by frequently changing the water in which the jar is placed. The steam thus condensed is pure water. Distilled water is mawkish to taste, but this is easily corrected by pouring it from one vessel to another successively for ten or fifteen minutes, so as to involve in it a quantity of atmospheric air.” (See “Water,” p. 14.)

LIME-WATER

Pour over a piece of fresh unslaked lime, about an inch square, two quarts of hot water. When it is slaked stir it thoroughly. Let it settle overnight. Bottle carefully all the liquid that can be poured off in a perfectly clear state.

As water will only hold a certain amount of lime in solution, the addition of more lime will not add to its strength.

DIET IN ILLNESS AND CONVALESCENCE

Lime-water (an alkali) is generally added to milk for the purpose of neutralizing the effects of an acid stomach.

From a teaspoonful to a table-spoonful of lime-water to a half-pint of milk is usually prescribed.

BARLEY-WATER

Add to a pint of boiling water half a table-spoonful (half an ounce) of Robinson's patent barley, or the Health Food barley, rubbed smooth, with two table-spoonfuls of cold water; add also a pinch of salt and a table-spoonful of sugar. Let it boil five minutes. It is to be drunk cold. Zest—*i.e.*, the yellow rind of a lemon cut thin, or rubbed with lump-sugar to extract its oil—may be added as a flavoring; or lemonade may be made with barley-water.

Barley-water may be used temporarily instead of milk when the latter disagrees with the patient.

OATMEAL DRINK

Rub two table-spoonfuls (two ounces) of oatmeal smooth, stirring in gradually a teacupful of cold water; add a pinch of salt. Stir this into a quart of boiling water and let it boil half an hour. Strain it through a fine sieve.

TAMARIND-WATER

Stir into a glassful of water a table-spoonful of preserved tamarinds. Strain, if necessary.

CINNAMON-WATER

Add five or six sticks (half an ounce) of cinnamon to a pint of boiling water, and boil fifteen minutes. To be administered by the table-spoonful.

RECEIPTS FOR SICK AND CONVALESCENT

TOAST-WATER

Toast thoroughly thin slices of Graham-bread, and break them into a bowl. Pour over enough boiling water to cover them. When cold, strain off the water and sweeten it slightly. Serve it always freshly made.

CURRENT-JELLY WATER (for fever patients)

A teaspoonful of currant-jelly dissolved in a goblet of water, and sweetened to taste, affords a refreshing drink for invalids. Apollinaris or seltzer water makes all cold fruit drinks more palatable.

FLAXSEED TEA

Add half a cupful of flaxseed to four cupfuls, or a quart, of boiling water. Let it boil half an hour. Let it stand fifteen or twenty minutes near the fire after it has boiled. Of course the longer it stands the thicker it becomes. Strain, sweeten to taste, and add a little lemon juice if preferred.

This is a useful demulcent drink for coughs, etc.

FLAXSEED AND LICORICE TEA (for coughs, etc.)

Pour one pint of boiling water over one ounce of flaxseed, not bruised, and two drachms of licorice-root bruised, and place the covered vessel near the fire for four hours. Strain it through a sieve.

HERB TEAS

are made by pouring boiling water over one or two teaspoonfuls of the herbs; then, after covering the tin cup or bowl, allow it to steep for several minutes by the side of the fire. The tea is then poured off, and sweetened to taste. Camomile tea is used for nervousness and sleeplessness; calamus tea, for infant's

DIET IN ILLNESS AND CONVALESCENCE

colic; cinnamon tea, for hemorrhages; watermelon-seed tea, for strangury, etc.

WINE, LEMON, OR VINEGAR WHEY

When a pint of milk is brought just to a boil, pour in a gill of sherry wine. Let it again come to a boil. When the whey separates, strain and sweeten it to taste, using perhaps a teaspoonful of sugar.

Or the whey may be made in the same manner with lemon juice (free from seeds), using the juice of half a lemon instead of the wine, and sweetening to taste; or with vinegar, a table-spoonful being quite enough for a pint of milk.

From an alimentary point of view, whey is of moderate value. It is advantageous as a drink in febrile diseases, and is a good means of administering wine in small quantities.

It may be drunk either cold or warm. It possesses sudorific and diuretic properties.

SUGAR SYRUP (for sweetening drinks)

For drinks of all kinds, even tea and coffee, sugar syrup gives a better flavor than crude sugar.

To a cupful of white sugar add a quarter of a cupful of water, and let it boil one or two minutes. It must not be boiled long enough to candy. This syrup is also purer and better than most of those purchased, for eating with pancakes, etc.

SIMPLE BEVERAGES FROM FRUITS

Currant-jelly water, and any acid jelly—cranberry, plum, etc.—are generally grateful to the fever patient.

If the jelly is soft a teaspoonful is dissolved in a goblet of fresh cold water, and sweetened to taste.

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If the jelly is hard, boiling water will have to be added to dissolve it. It should be drunk cold.

The fresh fruits are, of course, to be preferred.

There is nothing more refreshing than currant-water made from fresh currants. This can be prepared by allowing a pint of water to a pint of currants (freed from the stems) and a table-spoonful of sugar. Heat slowly in a porcelain or granitized iron kettle until it boils; then let it simmer for five minutes. Strain it through a cloth, cool, and sweeten again to taste. It can be diluted with water.

If strawberries, raspberries, black raspberries, or blackberries are used, prepare them in the same manner, excepting that for each quart of berries a pint of water with a table-spoonful of sugar should be used.

These beverages should not be given to gouty patients.

GRAPE JUICE (see p. 39)

Allow one pint of water to three pints of fruit (picked from the stems). Let it simmer slowly for five minutes, then strain it through flannel or cheese cloth. It is drunk cold without sweetening, although a little sugar may be added if preferred.

APPLE-WATER

Boil a large juicy apple (pared, cored, and cut into pieces) in a pint of water in a closely-covered saucepan until the apple is stewed into a pulp. Strain the liquor, pressing all the juice from the pulp. Sweeten to taste. Sometimes these fruit-waters are made with rice or barley water. To be drunk cold.

Use the same receipt for any of the fruits — *viz.*, pears, peaches, plums, French prunes, figs, raisins, rhubarb, etc.

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APPLE WINE (German)

Wipe carefully some ripe, juicy apples; cut them up without coring or paring; allow one quart of water to every ten ounces of fruit, and boil for three-quarters of an hour.

Strain through a napkin previously wrung in cold water. Add half a cupful of sugar to every quart of liquid, also the juice of one lemon (unless the apples are very acid). Boil for half an hour, skim and strain again. Bottle and keep in a cool place.

LEMONADE

Rub loaf-sugar over the yellow rind of the lemon to extract the oil; add to the lemon juice (without seeds) the sugar, to taste. One lemon will make two glassfuls of lemonade, the remainder of the ingredients being water and a little ice chopped fine. Lemonade should not contain too much lemon juice. Sugar syrup (p. 110) is always best for sweetening drinks.

Professionals serve a couple of strawberries on top—also a couple of straws.

ALMOND MILK

Pound one quarter of a pound of sweet almonds very fine. Pour over them gradually one pint of boiling water, stirring constantly. Strain through a fine sieve, sweeten to taste, and add two table-spoonfuls of sherry. Or it may be flavored with one table-spoonful of orange-flower or rose water, or other extract.

FLAXSEED LEMONADE

(A demulcent drink for throat and lung troubles.)

Pour a pint of boiling water on two table-spoonfuls

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of whole flaxseed, cover, and let it steep for three hours. When cold, add the juice of a lemon, and sweeten with sugar or sugar syrup.

WHITE-WINE FLIP

To one bottle of sherry, champagne, or other white wine add one gill of noyau or maraschino, the juice of half a lemon, and one quart of calf's-foot or other jelly, well sweetened and made boiling hot. Serve immediately.

BLACKBERRY CORDIAL

Mash one half bushel of blackberries with a wooden spoon and put into a porcelain-lined kettle with four ounces allspice, two ounces stick cinnamon, and two ounces of cloves. Boil slowly for three hours; strain, and add to every pint of juice one half pound of loaf-sugar. Boil again for an hour and a half; skim, and, when cool, add to the whole one half gallon of good brandy.

MAY WINE

May wine is used in Germany as a spring tonic and cooling beverage. It is not generally known in this country, since the herb to which it owes its peculiar properties has only recently been found growing here. This herb—*Asperula odorata*, called in England woodroof—grows freely, among other places, in the neighborhood of Washington, D.C.

The shoots should be plucked while young, in April or May, washed, and put in a bowl. Allow ten sprigs to each bottle of Rhine wine, or Moselle, two sliced oranges (with the peel), and two and a half to three ounces of sugar. Steep, according to the maturity of

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the plant, from twenty minutes to two hours; strain and put in bottles, which should remain uncorked for two or three days.

If the plant is gathered young, immediately after rain, and kept in a covered dish for two or three days



MAY WINE

before using, the flavor will be stronger. The wine may be served in a bowl wreathed with sprigs of the *asperula*.

MILK-PUNCH

Sweeten to taste a glass three-quarters full of fresh new milk, and add to it one or two table-spoonfuls of brandy or whiskey. Grate a little nutmeg over the top.

A professional milk-punch maker would have two tin cups, as in cut, the top of the smaller cup fitting an inch below the top of the larger cup.

The punch is shaken vigorously up and down for

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two or three minutes, when it is poured into a glass with a fine froth on top.

Or the milk may be poured dexterously in a long stream from one tumbler to another to produce the froth.



EGG AND MILK PUNCH

Stir well a heaping teaspoonful of sugar and the yolk of an egg in a goblet, then add a table-spoonful of best brandy or whiskey. Fill the glass with fresh new milk until it is three-quarters full, then stir well into the mixture the white of an egg beaten to a stiff froth.

EGG-NOG

Whip well together in a bowl the yolk of an egg and a heaping teaspoonful of sugar, then stir in one or two table-spoonfuls of best brandy or whiskey. Now stir in carefully the white of the egg beaten to a stiff froth, and a half pint (one cupful) of sweet cream

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whipped also to a froth. The egg froth and the whipped cream should be quite ready before the other ingredients are mixed together.

TOM AND JERRY

Beat an egg (yolk and white) with a heaping teaspoonful of sugar until it is very light—quite a froth—then mix in one or two table-spoonfuls of rum and three-fourths of a cupful of boiling water. Turn this back and forth in two hot pitchers to mix well, then pour it into a hot glass. Grate a little nutmeg over the top and serve immediately.



EGG-NOG

MINT-JULEP (Old Virginia Receipt)

Carefully remove all bruised leaves (as they give a rank flavor) from a dozen sprigs of mint, freshly gathered, or which have been kept in a cool place with their stems in water.

Fill the larger of the cups already indicated for Milk-punch (p. 115) with finely crushed ice—the finer the better. Sprinkle over this one table-spoonful of granulated sugar, and shake in the two cups until the sugar is thoroughly dissolved. Add more fine ice, and put into a tall glass or silver goblet; add the mint, and pour over it very slowly from one to two

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table-spoonfuls of brandy, or half brandy and half whiskey, allowing it to circulate through the mint for five minutes before serving.

It was formerly the custom to pass a silver tankard



MINT-JULEP

of this julep from guest to guest in Virginia country houses, before breakfast, as it was believed to avert malarial fever.

EGG CORDIAL (Lady St. Clair, in *Dainty Dishes*)

“One table-spoonful of cream; the white of a very fresh egg; one table-spoonful of brandy. First whip the egg nearly to a froth, then add the cream, and whip both together; add the brandy by degrees, and mix well. Do not let it stand after it is made. This is very nourishing, and will stay on the stomach when

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nothing else will. The receipt was given me by the late Professor Miller, of Edinburgh.'

The present writer would suggest the addition of a teaspoonful of sugar.

EGG AND LEMON

An egg, beaten up with the juice of a lemon and a teaspoonful of sugar, is often beneficial in fever.

CLARET-CUP (No. 1)

To a quart of claret allow half a cupful of lump-sugar, four oranges, four lemons, and a cupful of black or half a cupful of green tea. Rub the sugar over the oranges and lemons to obtain their zest; squeeze the fruit, and add the juice, the sugar, and the tea, with some shreds of orange and lemon peel, to the claret. Let it stand for twelve hours, strain, and serve very cold, but with no ice in it; adding, just before serving, slices of orange, pineapple, or other fruit.

Or two table-spoonfuls of brandy may be added to the mixture given above, and the whole poured over a block of ice and served immediately.

CLARET-CUP (No. 2)

To one pint of claret add four ounces of sugar, a pint of the juice of any fruit in season, strained, a gill of curaçoa or other liqueur, and a pint of soda-water. Add strawberries, sliced pineapples, oranges, or other fruit, and pour into glasses over crushed ice.

A GLASS OF CREAM

There is no beverage more wholesome for a convalescent than a glass of fresh, sweet cream. With the addition of a cold roll, or a health-food cracker biscuit, and perhaps a baked apple, it is a meal in



TRAY WITH TEA SERVICE

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itself. It is preferable to a repast with tea or coffee. A glass of cream served at a Vienna *café* is partly whipped.

TEA

Two things are necessary to ensure good tea : first, the water should be at the boiling-point, actually bubbling (water simply hot or steaming not answering the purpose); and, secondly, the tea should be served freshly made. Tea should never be boiled, nor left standing more than three minutes after it is made, before drinking.

Scald out well a little Chinese earthen-ware teapot, then throw into it two teaspoonfuls (not heaping) of good black tea (English breakfast especially recommended). Place over the fire some clear, fresh water, and when it begins to boil, pour two cupfuls into the teapot. Water at the *first boiling* is essential to good tea.

Let the teapot then stand at the side of the fire (without boiling) a minute.

Now serve the tea. Do not attempt to pour the tea into the cup, but place the teapot on the brightest of salvers. On this have a plate and the whitest of napkins, and on this again a thin, dainty cup and saucer, with a bright teaspoon at the side. The little teapot takes another corner, with a small pitcher of hot water. A fancy dish, a leaf perhaps, contains three or four lumps of loaf-sugar, and a second miniature pitcher a few spoonfuls of cream. *Connoisseurs*, however, do not drink tea with cream or milk. On another plate is the toast, or whatever else the invalid is allowed.

By placing this salver on a little table by the side of the invalid's bed or chair, he can see the tea poured out steaming hot, while catching its pleasant aroma.

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COFFEE

The writer once watched a professional French cook making coffee in a common coffee-pot. For several reasons, it is believed, there is no better method of making it than his.

His proportions should not be taken, for the French always make coffee too strong—at least, too strong for an invalid, or any one who does not care to become one. Allow two table-spoonfuls of coffee to a pint of water. Put the coffee in the coffee-pot and pour over it about a third of a pint of boiling, bubbling water. Cover the coffee-pot and let it stand until just about to boil again, then pour in the second third; and again, when this is about to boil, pour in the remainder, letting it stand until it reaches the same point; then set it back of the range for a few moments to settle. Serve immediately.

Of course proper attention must previously have been given to the even and proper roasting of the coffee, remembering that one burned berry will ruin the flavor of the whole. Again, the coffee is much better when the berries have been freshly roasted. If they are not freshly roasted, place them a few minutes in the oven before grinding, and it will serve to revive the aroma and bring out the oil. It is a good plan when coffee is freshly roasted and still hot to mix in a little of the white of egg. It will form a very thin coating around the berries, and will keep them fresh. They should not be ground until ready for use. The egg then serves to clear the coffee. A mixture of two-thirds Java and one-third Mocha ensures the best coffee.

The flavor of the coffee will be altogether different if a table-spoonful of sweet, rich cream is served with

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it, instead of milk or boiled milk. If cream is out of the question, use hot boiled milk, diluting the coffee always with the hot milk instead of hot water; in fact, coffee made with milk instead of water is excellent. Sweeten the coffee with lump-sugar. The Vienna coffee is served with one or two table-spoonfuls of whipped cream on the coffee in the cup.

VENETIAN COFFEE

Black coffee, used in hot weather as a heart stimulant, may be made more refreshing by serving it, as in Venice, with whipped cream frozen.

CHOCOLATE

For invalids the homœopathic preparation of chocolate called "alkathrepta" is the most wholesome, for the reason that it contains no vanilla — and vanilla should never be used by an invalid. The homœopathic writers say that it is a most unwholesome, if not poisonous, flavoring for any one. Indeed, vanilla is sometimes used medicinally.

For one coffee-cupful of chocolate (half-pint cup) allow one ounce or one and a quarter table-spoonfuls of chocolate and one and a quarter cupfuls of milk. Scrape the chocolate into a tin cup and mix in by degrees the quarter cupful of cold milk; stir it carefully over the fire (taking care that it does not burn) until it is a perfectly smooth paste.

When the remaining cupful of milk is boiling, sweeten it with two lumps of loaf-sugar, and stir in the chocolate paste, adding a little of the boiling milk to it, to dilute it evenly. Let it boil a minute. Stir it into a froth with an egg-whisk, and serve immediately.

A table-spoonful of whipped cream on top of the

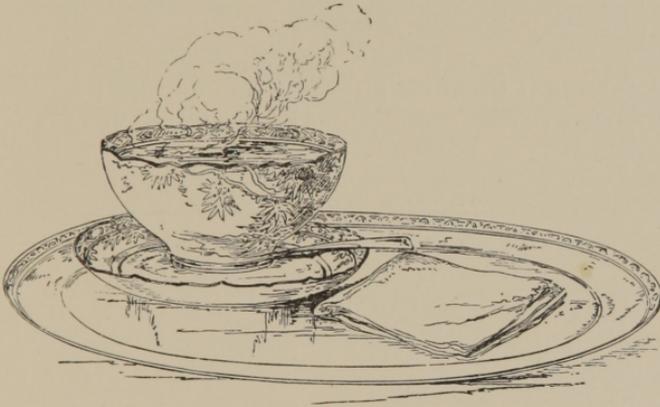
RECEIPTS FOR SICK AND CONVALESCENT

chocolate in the cup is a pleasing addition; or the cream can be put in the bottom of the cup and the chocolate poured over it.

SELTZER-WATER AND MILK

An equal quantity of milk and seltzer-water mixed is considered a desirable beverage when some nourishment and a slight aperient are required.

In the case of a friend of the writer, in New York, who was suffering from a light attack of pneumonia, a distinguished physician (Dr. Loomis) prescribed a glass half full of milk and half of seltzer-water, to be taken every four hours. At the end of the alternate two hours a half glass of vichy was to be taken. This, with a mustard-plaster and perfect rest, induced a rapid recovery.



GRUELS

The writer desires to call special attention to the barley gruel made of Robinson's patent barley flour (p. 124), as explained in the following receipt. The

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gruel is delicate and delicious in flavor and is invaluable in nearly all forms of illness.

BARLEY GRUEL

Wet, gradually (stirring it until smooth), half an ounce, or one table-spoonful, of Robinson's patent barley flour, with half a gill of cold water; stir well into it one gill of boiling water and a small pinch of salt. Let it cook over the fire for five minutes, stirring it slowly part of the time, then add half a gill of hot milk. Let it again come just to a boil, then take it off the fire, stir in a teaspoonful of sugar, and it is ready to serve. Gruels are always better when served quite freshly made and hot. This receipt will make a coffee-cupful of gruel. One gill contains nine table-spoonfuls of liquid. A delicious blanc-mange is made by adding to the preceding receipt, when just cooked, the well-beaten whites of two eggs; stir them in smoothly and let the mixture remain a minute over the fire (stirring it meanwhile) to set the egg, though not allowing it to boil. This may be moulded and eaten cold with a little cream poured over it, but it is better when served hot.

GRAHAM-FLOUR GRUEL

Ingredients: Two table-spoonfuls (one and a quarter ounces) of Graham flour, or, what is much better, the granulated wheat of the Health-food Company; one pint and a half of water; a saltspoonful of salt (not heaping). Mix the flour with a quarter of a pint of cold water, pouring in only two or three table-spoonfuls at first, and rubbing it well to keep it from lumping, then gradually add the rest; mix in also the salt; stir in the extra one pint and a quarter of water when the water is boiling.

Boil it slowly for an hour, or until reduced one half.

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OATMEAL GRUEL (No. 1)

Ingredients : One heaping table-spoonful (one ounce) of oatmeal, one pint and two table-spoonfuls of water, half a saltspoonful of salt.

Rub the oatmeal smooth with two table-spoonfuls of cold water. Add the salt to the pint of water in the saucepan, and, when it *boils*, stir in the oatmeal paste. Let it boil slowly for half an hour with the saucepan partly covered. The gruel when cooked will be reduced to half a pint.

If this gruel be made for an infant it should be passed through a sieve.

The gruel above described is that which is most frequently used. A stronger diet is made by adding one or two table-spoonfuls of cream as soon as the gruel is cooked.

When a nourishing and stimulating diet is required, the gruel can be made into what is called an "oatmeal caudle" (see below).

Oatmeal is considered too heating for gouty patients.

OATMEAL GRUEL (No. 2).—(Used in feverish conditions.)

This preparation of oatmeal is given by the United States Dispensatory as follows: "Put one ounce, or a heaping table-spoonful of oatmeal, rubbed until smooth in a little water, into three pints of boiling water, and boil it until reduced to two pints; then strain it, and let it cool and settle. When it is quite cold, pour the clear gruel from the sediment, add the juice of a lemon, and sugar to taste. If it is desired to have it warm, heat it before adding the lemon juice.

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OATMEAL CAUDLE

Take half a pint of simple gruel (as described in Oatmeal Gruel No. 1), and as soon as it has slightly cooled stir in a teaspoonful of sugar and the beaten yolk of an egg; return the gruel to the fire for half a minute to cook and to set the egg, stirring it and not allowing it to boil. Take it again from the fire and add a table-spoonful of good brandy, Jamaica rum port, or sherry.

FLOUR GRUEL, OR THICKENED MILK (No. 1)

Ingredients: One heaping table-spoonful of flour (one ounce); one pint and three table-spoonfuls of milk; salt. Rub the flour until smooth with three table-spoonfuls of cold milk, then stir it into a pint of boiling milk; add half a saltspoonful of salt, and let it simmer for five minutes. It may be flavored and sweetened by adding, when cooked, a teaspoonful of sugar and a grating of nutmeg, or a dozen raisins may be boiled in the milk, and either taken out afterwards or left in for the sake of appearances, though they are not to be eaten.

FLOUR GRUEL (No. 2)

When the Flour Gruel No. 1 is just done, take it from the fire, let it cool half a minute, then stir in the yolk of an egg, beaten well with two teaspoonfuls of sugar; return it to the fire (without allowing it to boil), and stir it until quite hot again (a half-minute), then mix in smoothly the white of the egg beaten to a stiff froth. This gruel is very nice, for a change, with the beaten white of the egg added without the yolk.

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FLOUR GRUEL, OF PREPARED FLOUR (No. 3)

To prepare the flour, knead any quantity of flour with water into a ball, and tie the whole firmly in a linen cloth; put it into an iron saucepan and cover it with boiling water. Let it boil slowly (replenishing with boiling water when necessary) for twelve hours. Place it before the fire to dry, and afterwards, when removing the cloth, separate a thick skin or rind which has formed, and again dry the ball.

Receipt: Bring a pint of milk with half a salt-spoonful of salt to a boil, and then stir in one table-spoonful (one ounce) of the prepared flour, previously rubbed smooth with three table-spoonfuls of cold milk; cook about three minutes.

An excellent diet for summer complaint.

RICE GRUEL

Ingredients: One well-filled table-spoonful (one ounce) of ground rice; one pint and three table-spoonfuls of milk or water; a pinch of salt. Mix and cook it like simple oatmeal gruel, excepting that the rice gruel is boiled fifteen minutes.

This gruel is principally used for bowel complaints. If the doctor prescribes port wine or brandy, this gruel may be made with a teaspoonful of sugar and a table-spoonful of the wine or liquor added.

FARINA GRUEL

Rub a heaping table-spoonful of farina smooth with three table-spoonfuls of milk, and add it to a pint of boiling water; add also a pinch of salt. Let it boil twenty minutes, stirring occasionally. When done, add two gills of good, sweet cream. This gruel can

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also be varied as was described for flour gruel—with sugar and egg added.

CORN-MEAL GRUEL

Ingredients: One pint of water; a little salt; six table-spoonfuls of milk; one table-spoonful (one ounce) of corn-meal flour. Mix the corn-meal smooth by adding gradually the milk; add also the salt, and stir it into a pint of boiling water. After it begins to boil let it simmer (uncovered) for forty minutes.

PANADA

Sprinkle a little salt or sugar between two large Boston soda or Graham crackers, or hard pilot biscuit; put them into a bowl; pour over just enough boiling water to soak them well; put the bowl into a vessel of boiling water, and let it remain fifteen or twenty minutes, until the crackers are quite clear and like a jelly, but not broken. Then lift them carefully, without breaking, into a hot saucer. Sprinkle on more sugar or salt if desired; it is improved by the addition of a few spoonfuls of sweet, thick cream. Never make more than enough for a patient at one time, as it is very palatable when freshly made, and quite insipid if served cold.

Toasted bread cut into thin, even slices may be served in the same way. This is also a good baby-diet for a child over seven or eight months old.

A panada gruel may be made by adding to a cupful of boiling water, in a saucepan, a half-cupful of stale bread crumbs (without the crust) and a pinch of salt. Let it simmer five or ten minutes, or until it is, when stirred, of the consistency of gruel. It may be sweetened or not. A table-spoonful of split raisins, boiled with the gruel, makes a pleasant flavor. Sprinkle

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sugar over the top when served. The raisins should not be eaten. If panada is made of the new-process flour, it is as nourishing as any of the gruels.

OATMEAL PTISAN

The only receipt given by Hippocrates is one for "oatmeal ptisan." The oatmeal must boil, he says, until the grains will swell no longer. It must be allowed to settle and then strained through a coarse colander.

BEEF-TEAS AND BROTHS

"To give beef-tea alone to a sick person," says Dr. Fothergill, "is to give him a stone when he asks for bread. Beef-tea is not a food, but a stimulant." Its albumen has become extracted by boiling, and it contains only such nitrogenous elements as add to the urea to be excreted by the kidneys.

Beef-tea is, however, a powerful stimulant, and the meat, salts, etc., which it contains are of considerable value, but it is not food, fuel, or nourishment. In some of the London hospitals, after the preparation of beef-tea, the solid meat left is dried, pounded in a mortar, freed from stringy parts, and mixed with the liquid beef-tea. This restores the meat fibrin, etc., to the fluid, and, in convalescence from acute diseases, where waste is to be repaired, it is beneficial. With the addition of some form of unbolted flour it constitutes at once nourishment and stimulant.

Dr. Holland, in his admirable little work on *Diet for the Sick*, says:

"The albuminoid or flesh-forming principle of meats is coagulated by hot water, and either remains in the meat or is skimmed off the extract (as scum). The water has taken up the mineral salts and the flavoring

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principle, but is devoid of the nutriment commonly supposed to be dissolved by it. Soups and beef-tea are stimulating in their effect."

One of our army surgeons prepared a receipt which was issued for the use of the army by a Circular Order. The receipt is as follows :

BEEF EXTRACT (see next receipt)

Put a third of a pound of fresh beef, finely minced, in fourteen ounces of cold, soft water, to which four or five drops of muriatic acid and a little salt (from ten to eighteen grains) have been added.

After digesting for an hour to an hour and a quarter, strain it through a sieve, and wash the residue with five ounces of cold water, pressing it, to remove all soluble matter. The liquor will contain the whole of the soluble constituents of the meat (albumen, creatine, etc.), and it may be drunk cold or slightly warmed. The temperature should not be raised above 100° Fahr., as at the temperature of 113° Fahr. a considerable portion of the albumen, a very important constituent, will become coagulated.

LIEBIG'S RECEIPT FOR BEEF-TEA

is nearly the same—*viz.*: Ingredients: Half a pound of finely minced raw beef (chicken or any meat may be similarly used), one pint of pure water, four drops of muriatic acid, about one-half a saltspoonful of salt. Dilute the acid and salt in three-fourths of a pint of the water, then mix well with the meat. Let it stand an hour; strain through a hair sieve, and rinse the residue with the extra quarter of a pint of water.

It may be administered in a red wineglass if the patient should become prejudiced against it on account of its red color.

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Baron Liebig adds : " The liquid thus obtained contains the juice of the meat with the albumen in an uncoagulated state, and syntonin, or muscle fibrin, which has been dissolved by the agency of the acid."

It seems strange that Baron Liebig, with so much knowledge of the subject, should have made his " beef extract " * so deficient in nutrient qualities as to be condemned by many eminent physicians. Dr. Dobell says : " It is important to bear in mind that Liebig's extract of meat and other similar preparations contain very little if any nourishment, properly so called. . . . Their principal virtues belong to the class of stimulants. . . . When mixed with water they are excellent menstrua in which to administer nutritive materials, such as eggs, oatmeal, etc. ; but without such additions they are incapable of sustaining life for any length of time. Unless these facts are borne in mind a patient may easily be starved unintentionally."

Dobell further says : " Valentine's meat juice is a most useful nutrient for the sick-room. It contains albumen in solution, and hence must not be made hot. A teaspoonful in a wineglassful of water or wine is a refreshing change from the usual list of warm foods, and is very convenient for sudden use in the sick-room."

The Valentine extract will become acid and spoiled if kept too long.

BEEF JUICE

Choose a thick slice of fresh, juicy beef without fat. A steak cut from the round (leg) contains the most juice. Broil it for only a minute, or long enough to merely heat it throughout ; cut it in many places, and

* Another preparation largely sold in market.

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press out all the juice (with the aid of a beef-juice press or a lemon-squeezer) into a warm bowl. The bowl may be placed in a basin of hot water to keep warm. If no meat-squeezer is at hand, the meat may be pressed between two hot saucers, or with a strong hand. Be careful to salt the juice very slightly. Remove the globules of fat. It may be served by the teaspoonful as ordinary beef-tea, or, if solid food can be taken, the juice may be poured on some dry, fresh-made toast.

BEEF-TEA FOR TRAVELLING

Chop two pounds of fresh, juicy beef, cut from the round, very fine; place it in a bowl, with one ounce of gelatin and a pint of cold water, and let it soak for two hours, occasionally squeezing the juice from the meat-pulp with the hand. At the end of the two hours pass all the juice through a fine sieve, again squeezing all the juice possible from the meat-pulp. Season it judiciously with salt and a little pepper. Bring this juice merely to the boiling-point, and pour it into an hermetically sealed glass jar (previously heated in hot water), and seal it immediately.

When wanted for use dissolve two or three teaspoonfuls of the jelly in half a cupful of boiling water, and give it to the patient hot.

Beef-tea may be obtained in tabloids, and also in capsules, which are preferable; but these should be kept on ice in hot weather.

A BEEF-TEA FOR CONVALESCENTS

Soak three-quarters of a pound of small-cut pieces of fresh, bright-red, lean steak (cut from the round) in a pint of cold rain-water for an hour, squeezing the beef occasionally with the hand, then place it (beef

RECEIPTS FOR SICK AND CONVALESCENT

and water) on the fire. Let it come slowly to a boil, and then let it simmer for ten minutes. Pour off the tea and remove the fat; salt it slightly, and, if allowable, add the slightest bit of red pepper; add also a spoonful of fresh and well-cooked rice, barley, oatmeal, or dried and toasted dice of bread, or wafer crackers, or a poached egg. Serve while still freshly made and hot.

TO MAKE BREAD DICE, OR CROÛTONS

Cut stale bread into dice about half an inch square, and put them in the open oven, or where they will become thoroughly dry; then toast them over the fire, or brown them in a hot oven, to a nice yellow color on all sides; place them in a dish at one side of the range, that they may remain warm until the moment of serving. By keeping them warm they will continue crisp until put into the beef-tea. These bread dice are nice in any soup. Bread dice for soups are generally fried to a light brown in a little butter, but these are not recommended for an invalid.

Or slices of bread may be cut with little fancy-shaped cutters into pretty figures before drying and toasting, and then they may be dignified with the name of *croûtons*. For convalescents it would not be amiss to butter the dice or *croûtons* slightly on one side.

CHICKEN BROTH

Cut up half a chicken (one and a half pounds) in rather small pieces, and break the bones. Do not wash it if you would save the whole juice. Put it in the cleanest of saucepans with three pints of clear, cold water and a table-spoonful of rice. Bring it slowly to a boil and let it simmer for two hours,

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closely covered. Half an hour before it is done throw in a little sprig of parsley. When done, pass the broth through a sieve into a hot bowl, pressing the rice through with a spoon. Let it stand a moment, and then skim off the fat. Salt it with care, also add a few specks of red pepper. The writer hardly dares mention the red pepper, as the broth is good enough without it, and, if any is used, a cook is sure to put in too much. Instead of rice, granulated barley or wheat may be used for a thickening.

The broth may be served with some dainty crackers, or wafers (p. 159), on a separate dish, to be broken into the broth when served, or the rice may be boiled separately and a table-spoonful of the whole grains added after the broth is in the bowl.

MUTTON BROTH

Cut up two pounds of the scrag end of the neck of mutton and place it in the soup-kettle with two quarts of cold water. Bring it slowly to a boil, and then place it on the range to simmer for two hours. Pass it through a sieve; season it carefully with salt and the smallest possible quantity of pepper (red pepper is always preferable if used carefully). If wanted immediately skim off the fat. It is better to set it away, allowing the fat to harden on top, when it can be easily removed. When needed, heat it to the boiling-point; pour just enough in a thin soup-bowl and add a table-spoonful of fresh, well-cooked rice.

The pearled barley of the Health-food Company is a valuable thickening for mutton broth. Half to three-quarters of an hour before the broth is done a table-spoonful (two ounces) of the barley may be added to the soup. When the soup is strained the barley grains may carefully be taken out with a spoon and

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returned afterwards, or the barley may be cooked in other water. For a change, bread dice, or *croûtons*, as explained on p. 133, may be added to the broth.

CLEAR BEEF BROTH WITH TAPIOCA OR SAGO

Take four pounds of lean beef and bone (two pounds each); cut up the meat and break the bone; cover it with three quarts of clear, cold water; bring it slowly to a boil, and let it simmer for four hours. The last hour add a sprig of parsley, two or three slices of onion (previously browned in a platter with a little butter), and a slice of carrot. When done, pour the broth through the sieve. There should be about a pint and a half of broth remaining. Remove the particles of fat. Return this strained broth to a perfectly clean kettle; add the white of an egg (beaten to a thin froth) and stir it well into the broth for the purpose of clearing it; bring it all to a good boil, then place the kettle one side for a few minutes. Pass the broth through the jelly bag. If the first dripping is not quite clear, return it to the bag. Season the broth carefully with salt and red pepper, remembering that it only takes the slightest quantity of the latter; add also a table-spoonful of either tapioca or sago, prepared as follows: Soak two teaspoonfuls of sago or tapioca for an hour in clear, cold water, then pour off the water and stir it into a pint of boiling water. Let it boil slowly for half an hour, pour off the water and let it steam a moment, and it is ready to be added to the broth.

Or the broth may be made one day and, when strained, set aside until the next day. The hardened fat at the top and the settleings at the bottom of the jelly may be easily removed. This broth will be tolerably clear, though not so much so as when cleared

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with the white of an egg. Sometimes a slice of lemon (without seeds) is thrown in the soup-bowl just as the broth is about to be served.

BEEF BROTH WITH A POACHED EGG

Make the broth as in the preceding receipt, and, instead of tapioca, add to the bowl when ready to serve a well-trimmed and carefully poached egg.

SOUPS

It is perhaps a little troublesome to make the cream soups, as the material has to be passed through the sieve. They are exceedingly delicate and nourishing, however, and help to furnish a pleasant variety in a limited *répertoire* of dishes. The farina cream is especially simple. The cream of oysters is particularly good. The writer first saw it at Delmonico's, and wondered what the ingredients could be, admiring more than ever the consummate skill of his cooks.

The special enigma was, how the soup could be so light, as if raised with baking-powder. In learning how to make these soups afterwards, from a most able *chef* (Louis Cuppinger), it was a matter of surprise and satisfaction to find the oyster cream so simply made, containing only the ingredients of a common oyster soup.

The potato cream (*Purée Alexandra*) is delicious, and can be made without stock. Stock, in itself, contains some nutrition, and enough might well be made at once in winter to supply an invalid for a week.

The asparagus cream soup is also especially good.

For the oyster and chicken cream soups a small pestle and mortar (inexpensive) were considered by the *chef* indispensable for pounding the meat before passing it through the sieve. It is possible that after the meat is

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chopped very fine some other means may be suggested for pounding the meat, if the pestle and mortar are not at hand.

A bowl of cream soup, with a couple of wafer crackers or a slice of Graham bread, might at times well constitute a sufficient meal for an invalid.

CREAM OF OYSTERS

Put a quart of oysters with their liquor in a porcelain kettle or a thoroughly clean saucepan over a fire. When the oysters are just about to boil, pour them into a colander (over a bowl), leaving the oysters in the colander. Chop the oysters as fine as possible, and pound them well in a mortar or thick bowl. Now make a *roux*—*i.e.*, put in a saucepan a piece of butter the size of a small egg, and, when it bubbles, throw in a generous table-spoonful of flour (one and a half ounces); stir it well with the egg whisk, to cook the flour without allowing it to color; now pour in the oyster liquor, and when well mixed over the fire add the pounded oyster pulp and a pint of good cream. Pass this all through a sieve; season it carefully with salt and cayenne pepper; return it to the fire to heat without allowing it to boil, and, just as it is about to be served, add half a cupful of fresh cream, and a piece of butter the size of a small pigeon's egg. Whisk it well with the egg-beater (keeping it hot, without boiling, over the fire) for a minute; pour into a warm tureen, and serve immediately.

The *chef* sprinkled over the top some coarse, dry bread crumbs fried in a little butter. This addition is generally made to all the cream soups. Sometimes little fancy cuts of toast, cut with tin cutters, of diamond shape, are sprinkled over the top of the soup in the tureen, instead of the fried bread crumbs. For robust

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people little drops of fried fritter batter, looking like cooked beans, are sometimes sprinkled over the top of vegetable cream soups.

CREAM OF RICE OR FARINA OR BARLEY

Put either a half-cupful of rice or three-fourths of a cupful of farina or barley into a quart of boiling clear stock, and let it cook until the grain is quite soft (about half an hour); then press it through the sieve, add two or three table-spoonfuls or more of good cream, and season carefully with red pepper and salt. Heat it again, and, just before serving, whip the soup in the tureen with the egg whisk.

CREAM OF CHICKEN

When chicken is boiled for the family dinner (a sprig of parsley and a slice of onion being put into the kettle), a breast and some soft pieces of the chicken may be appropriated for the invalid. It should be chopped as fine as possible, then pounded in a mortar, if one has it; and, if not, in a chopping-bowl. It is then moistened with a little of the chicken broth, and pressed through a wire sieve. To a generous half-cupful of this fine chicken pulp add about one cupful and a half of the chicken broth, free from fat. Thicken with a *roux*—*i.e.*, in a little saucepan place a piece of butter the size of a hickory nut, and, when it bubbles, throw in a teaspoonful of flour; let it cook without coloring; then add the chicken pulp and broth (mixed); stir well, and, when about to simmer, add a couple of table-spoonfuls of good cream, and a teaspoonful of parsley, chopped very, very fine. Season also with red pepper and salt. Whisk it with the egg-beater, before serving, keeping it hot, though not allowing it to boil.

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CREAM OF ASPARAGUS

This is one of the best of the cream soups. The receipt is given for two and one-third quarts of soup, yet, of course, a half or a third of the quantity may be made for the invalid, if more is not needed.

Ingredients: Two quarts of stock; about thirty stalks of asparagus; one half-cupful of good cream; two table-spoonfuls of flour; butter the size of a pigeon's egg.

Boil the asparagus in the stock; cut and save some of the points, to serve in the soup; the remainder press through a sieve. Make a *roux* by putting the butter in a saucepan, and, when it bubbles, throwing in the flour, which cook a minute without coloring, stirring it well with an egg whisk. Now pour in the stock and the asparagus pulp, gradually at first; let it boil a minute, then add the cream, which heat, but do not let boil, for fear of curdling. Season to taste with salt and pepper. When the soup is in the tureen, ready to serve, sprinkle the asparagus points on top.

A SIMPLE ASPARAGUS SOUP (Dr. Comstock's Soup)

Fifteen or more stalks of asparagus are boiled in a quart of milk, and the whole (excepting some of the points) is passed through a sieve. It is then thickened with a *roux*, as in the preceding receipt, with a piece of butter the size of a walnut and a heaping teaspoonful of flour. A few table-spoonfuls of good cream may then be added, or the soup is very good without it, if it is not at hand. It is then seasoned to taste with salt and pepper, and served with the asparagus points sprinkled over the top.

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CREAM OF POTATOES (*Purée Alexandra*)

Boil in water five medium-sized potatoes until they are nearly done; then pour off the water and add a scant two quarts of clear stock, made with either veal or beef. When the potatoes are thoroughly cooked, pass them, with the stock, through a wire sieve; then add the beaten yolks of two eggs and half a cupful of good, thick cream; season carefully with salt and cayenne pepper. Stir it for a minute over the fire, to cook the eggs slightly, without allowing the soup to boil; then keep it at the side of the range (it is better kept in a double kettle or *bain-marie*) until ready to serve.

At the same time that the soup is being made, prepare some vegetables for a garnish, as follows: Cut a medium-sized turnip (two ounces) into little dice, as follows—cut the turnip into slices about a quarter of an inch thick, without allowing the knife to cut quite through, so that the slices will hold together; then slice them transversely in the same manner. Now, holding the turnip firmly together, cut off the ends into little dice about a quarter of an inch square. In the same manner cut a carrot (two ounces) into little dice; provide also a table-spoonful or more of peas and some string-beans cut into quarter-inch lengths.

All or a part of these vegetables may be used as convenient; the carrots and pease, however, are desirable for their fine color and flavor. Boil the vegetables separately, in little cups of salted boiling water; drain, and place them in the soup tureen. Just before serving, place the soup over the fire without allowing it to boil, and whip it vigorously with an egg whisk for one or two minutes; then add the vegetables and serve immediately.

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Or the soup may be made without stock, boiling the potatoes in water, and adding more cream and a piece of butter the size of a small egg.

CREAM OF STRING-BEANS

Throw a quart of green string-beans in boiling water, in which there is half a table-spoonful of soda or as much carbonate of ammonia as will lie on the point of a knife, to preserve the color; drain the beans and pass them through a sieve (not colander, but sieve). There will be about a pint of pulp. Make a *roux* by placing in a saucepan butter the size of a pigeon's egg, and, when it bubbles, throwing two large, heaping table-spoonfuls of flour (two generous ounces); let it cook without taking color; then pour in a quart of clear stock (see p. 142) and the pint of string-bean pulp. Stir it well with the egg whisk, letting it cook a few minutes without boiling. It will be liable to curdle if boiled. Just before serving pour in nearly a cupful of good, thick cream; season with salt and cayenne pepper. Whip it well with an egg whisk over the fire and serve immediately.

At Delmonico's they serve, sprinkled over the soup in the tureen, imitation navy-beans, made by dropping drops of fritter batter in hot lard. These are crisp and savory, but a fritter of any kind should never be mentioned in an invalid's book.

CREAM OF CORN (No. 1)

To a pint of grated corn (the sweet part, nearest the cob, well scraped) add a quart of hot water. Boil it for an hour and press it through the sieve. Put into a saucepan butter the size of a small egg, and, when it bubbles, sprinkle in a heaping table-spoonful of sifted flour, which cook a minute without coloring,

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stirring well. Now add half of the corn pulp, and when smoothly mixed stir in the remainder of the corn; add a little cayenne pepper, salt, a scant pint of boiling milk, and a cupful of cream. Before serving, stir well with an egg whisk, to make it light.

Or an addition to the soup of the yolks of two eggs, and the soup stirred a minute over the fire, although not allowed to boil, is good.

Or a spoonful of chopped parsley may be added.

CREAM OF CORN (No. 2)

This is the *chef's* receipt. Place over the fire a pint of grated corn, with a piece of butter the size of a walnut; let it cook only a minute, then pour in a quart of veal stock, and boil it an hour, pass it then through the sieve; add about three table-spoonfuls of cream; beat it again, and as it is about to be served stir it well with an egg whisk.

STOCK FOR SOUP

A good stock may be made by simply putting fresh lean beef or veal, with some bone, into clear, cold water (a gallon of water to three pounds of meat and bone), and letting it simmer for five hours, passing it through the sieve, and seasoning it carefully with pepper and salt. It is better to make the stock the day before it is wanted, as then every particle of fat will rise to the top and form in a hard cake, which may be removed at once, and the settlings may be avoided at the bottom, leaving a clear soup. There should never be a particle of fat left in a soup.

The flavor of the soup is much improved by the addition of chicken. Occasion might be taken, at the time of making beef or veal stock, to have a boiled chicken for dinner, boiling it in the stock-pot. The

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flavor is also much improved by the addition of vegetables thrown in an hour before the stock is done. Four or five slices of onion, first fried (*sautéd*) or colored in a little dripping on a platter before adding to the soup; also, the same quantity of sliced carrot, two good sprigs of parsley, and, if convenient, a stick of celery or a teaspoonful of celery-seeds, and a couple of cloves stuck in the onion. All contribute to the quality of the soup.

In winter enough stock should be made to last a week, as it will keep that time, and longer, in a cold place. Each day a portion of the stock jelly may be reheated, and, with different accompaniments, the invalid may have many changes. For instance, the addition of a few spoonfuls of cooked macaroni will make a good macaroni soup. A spoonful of cooked peas and other vegetables, in fancy shapes, will make a spring soup (or *Julienne*); a few spoonfuls of cooked tomatoes a tomato soup; toasted bread sippets, in fanciful shapes, a *potage aux croûtons*. The stock, added to the cream soups, furnishes a dish for the most fastidious epicure, and a nutritious repast for the invalid.

In selecting the meat for soups cheap cuts from the leg and shoulder of beef are generally used. Ox-tails make good soup. Knuckles of veal, calves' heads, and tough chickens play a satisfactory *rôle* in stock.

Gouffé's receipt for stock shows the distribution of vegetables as follows:

GOUFFÉ'S RECEIPT FOR STOCK OR BOUILLON

Three pounds of beef; one pound of bone (about the quantity in that weight of meat); five and a half quarts of clear, cold water; two ounces of salt; two carrots, say ten ounces; two large onions, say ten ounces, with two cloves stuck in them; six leeks, say

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fourteen ounces; one head of celery, say one ounce; two turnips, say ten ounces; one parsnip, say two ounces.

OYSTER SOUP

To one quart, or twenty-five oysters, add half a pint of water. Put the oysters on the fire in their liquor. The moment it begins to simmer (not boil, for that would shrivel the oysters) pour it through a colander into a dish, leaving the oysters in the colander. Now put into the saucepan two ounces of butter (size of an egg); when it bubbles, sprinkle in a heaping table-spoonful (one ounce) of sifted flour; let the *roux* cook a few moments, without coloring; stirring it well with the egg whisk, add to it gradually the oyster juice and half a pint or a cupful of good cream (which has been brought to a boil in another vessel); season carefully with cayenne pepper and salt. Skim well, then add the oysters. Let it get hot without boiling, and serve immediately.

CLAM BROTH

This broth is much used of late years for invalids. Indeed, in New York it seems to be as regular a sick-room dish as beef-tea. It may often be retained on the stomach when other foods disagree with the patient, and is a valuable substitute for milk, when the latter proves unsatisfactory. It is stimulating and nutritious. It may be administered by the spoonful, like beef-tea, in cases of severe illness, or may be taken by the cupful, when, with a Graham cracker, it affords a sufficient repast.

For half a pint (a cupful) use six large hard-shelled clams. Wash them well with a brush, and place them in a kettle with two or three table-spoonfuls of water over the fire.

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The clam broth is simply the juice of the clams boiled for a minute. It does not require seasoning, as clam juice is salt enough; indeed, it has sometimes to be diluted with a little hot water to reduce the salt flavor. In pouring the juice from the kettle, avoid any particles of sand which may have settled at the bottom.

As soon as the clams are opened in the kettle they are sufficiently cooked; further cooking renders them tough. If

CLAM SOUP

is to be made, remove the clams from the shells as soon as they are open, cut off the tough parts, and place them one side in a warm place until the juice is prepared. Add about a cupful of hot milk to the juice, and thicken it with a *roux* or a little flour. Now add the soft parts of the clams; bring the soup again to the boiling-point and serve.

Placing the live clams over the fire is a very cruel way to open them. Men-cooks and fishermen open them with a knife, half a dozen in the course of half a minute.

OYSTER BROTH

may be made in the same way as clam broth. Or the liquor of the oysters may be used alone, carefully strained, adding to each pint a cup of milk, and thickening with a *roux* of butter and flour. Strain again, and add a little salt, and, if desired, pepper.

FLOUR SOUP

Put butter, the size of a large hickory nut, into a little saucepan, and, when it bubbles, throw in a heaping table-spoonful of flour (a generous ounce). Stir it well with the egg whisk, allowing it to color evenly to a

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light brown. Take care that it does not burn. Now gradually pour in a pint of warm milk, stirring it well with the egg whisk. There should be no lumps. Let it cook for a minute only, then take it from the fire and add the beaten yolk of an egg. Return it to the fire for a few moments to set the egg, stirring well, and not allowing it to boil, as the egg would then curdle. Season with salt, a suspicion of red pepper, and a half-teaspoonful of parsley chopped very fine. French cooks often add the same quantity of chopped cives, but the latter is not recommended for an invalid.

It may be served with or without little toasts of bread cut in thin slices and fanciful shapes before toasting.

The French and Germans often flavor *soupe à la farine* with a little sugar and cinnamon instead of salt, pepper, and parsley or cives.

VEGETABLE CREAM SOUP

All vegetable cream soups (not specified) may be made as follows: The vegetables are boiled until soft and passed through a sieve. To a quart of stock—or, if this is not allowed, a rather less quantity of water—is added a *roux*, composed of a teaspoonful of flour and half the quantity of butter cooked together, mixed until smooth with a little of the stock or water. Add also a cup of milk, or half a cup or more of cream. These are brought to a boil with the vegetable pulp, strained, beaten with an egg whisk while very hot, and served immediately.

VEGETABLE SOUP

Vegetable soups without milk or cream are apt to be insipid, but their flavor may be improved by the use of celery, celery-seed, tomatoes, etc. A receipt is

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given which may be varied by the use of additional vegetables.

Slice one carrot, one turnip, one head celery, one onion, and fry with one-quarter pound of butter until brown. Put into a pot with a bunch of sweet herbs, some salt and black pepper, and three pints of water. Bring to a boil and allow to simmer for two or three hours, until reduced to one quart. Strain and let stand until needed. Then pour off the clear liquor and add corn-starch, pearled barley, tapioca, or rice.

BARLEY SOUP

Cook four table-spoonfuls of barley in a pint of water until the grains swell. Add butter the size of a walnut, chopped parsley, and a little nutmeg. This soup is beneficial in cases of dyspepsia.

VEAL SOUP

Boil a knuckle of veal slowly for three hours. Let it cool; skim and strain. Add butter the size of a walnut, a cupful of cooked rice, four sprigs of cauliflower, and a dozen stalks of asparagus. Boil for an hour and strain again. Just before serving add the beaten yolks of two eggs and some sprigs of parsley.

CHICKEN-BONE SOUP

Break up and boil the bones of a chicken (with or without scraps of the chicken meat), with three tomatoes, a dozen stalks of asparagus, and a handful or more of green peas, for three hours. Strain. Soak half a cupful of sago, add to soup, and cook for one hour. Beat the yolks of two eggs and stir into soup until it thickens, but remove from the fire before it comes to a boil.

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GERMAN MILK-SOUP

The author gives one receipt, as follows, for a German milk-soup, which is very nourishing. It is something like American soft custard, but is not so sweet :

Bring one quart of milk and one quart of water to a boil ; then add a table-spoonful of corn-starch (mixed with milk), sugar to taste, half a teaspoonful of salt, and two ounces lemon-peel. Bring again to a boil, and stir in the beaten yolks of two eggs until it thickens ; but do not let it boil again. Beat the whites of the eggs stiff with a little cinnamon, mould in a teaspoon, and put on top of soup just before serving.

CHESTNUT SOUP

Boil a quart of Spanish chestnuts. Remove shells, throw nuts into cold water, and remove skin.

Put aside twelve whole ones, and place the rest in a saucepan with a quart of water, two ounces of fat pork, a saltspoonful of salt, and a little pepper. Cook slowly for an hour and a half. Take out the pork, pass the soup through a sieve, and return to the fire. Cook until soup becomes rather thick. Stir in from one to two ounces of butter, and add the whole chestnuts just before serving.

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BREADS AND GRAIN PREPARATIONS

BREAD

BREAD of whole flour contains, in the correct proportions, all the elements necessary for growth in the bones, teeth, muscles, nerves, and brain. It should be freely used therefore in youth, but more sparingly in middle life and old age.

It is very important to have wholesome, sweet, and well-made bread, especially for an invalid. The new-process flours (see p. 58) are valuable for making nutritious white bread.

As for yeast, Fleischman's yeast ensures always sweet bread. Brewer's yeast can also be relied upon. A gill of this yeast to three and a half pounds of flour is the proper proportion. In the country the home-made yeast is generally used. This is unreliable unless made by an expert.

The fermentation of yeast is peculiarly favorable to the development of germs; and for this reason bread made without yeast or baking-powder is recommended by many authorities. Nevertheless, the fermentation of yeast aids, or is in line with, the processes of digestion, through the transformation of the starchy and albuminous substances and the other chemical changes which it effects. Baking-powder does not produce these changes, and it is perhaps for this reason that it

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is less wholesome, even when chemically pure. It is ostensibly composed of bicarbonate of soda and tartaric acid, whose union produces tartrate of soda (a substance believed to be harmless) and carbonic-acid gas, which mechanically lightens the bread. It is diffused through the dough and held in the form of bubbles by the tenacious gluten of the flour, which is hardened by baking.

Tartaric acid is, however, comparatively expensive, and this fact has brought about the use in baking-powder of alum with bicarbonate of soda. The chemical compound thus formed is distinctly injurious, and is believed to be largely the cause of the dyspepsia from which so many Americans suffer.

“All authorities are agreed,” says Dr. Henry A. Mott, Jr., “that the continuous use of alum bread will produce headache, indigestion, flatulence, constipation, diarrhea, dysentery, palpitation, and urinary calculus. . . . The fatal diarrhea of infants under three years of age may also have arisen from or been aggravated by this cause.”

Cooks have become so accustomed to the use of baking-powder that in many households it cannot be entirely dispensed with; and, for this reason, the writer has used it in a few of the following receipts.

BREAD

It is difficult to give an exact receipt for making bread, as so many circumstances have to be considered—the quality of the flour, the temperature, the humidity of the atmosphere, etc.; and, even when properly made, the bread may be spoiled in the baking, which requires judgment and experience.

Flour is very sensitive to dampness, and should be kept in a dry place. If used in a damp climate, or

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after long-continued rain, it is well to sift it, several hours before using, and to put it, when sifted, in a warm—not hot—place, not far from the range.

Put two quarts of flour with a little salt into the bread-bowl, which should be larger at the top than at the bottom. Add one and a half cupfuls of liquid yeast, or from half to three-quarters of a cake of Fleischman's compressed yeast, according to the season. More is required in winter than in summer. If compressed yeast is used, dissolve it in milk, and add about a dessert-spoonful of sugar. It should be remembered that the object in bread-making is to delay the fermentation in warm and to accelerate it in cold weather. Add to the flour and yeast enough water to make a rather soft dough. The quantity varies with the state of the atmosphere and the quality of the flour. The water should be cold in summer, warm in winter, and lukewarm in spring and autumn.

Set the dough to rise. It will take from three hours in summer to ten hours in very cold weather. When risen, mix in well a table-spoonful of lard. Then add about two handfuls of flour—not too much—and knead for half an hour. The more it is worked the finer and whiter the bread will be. Put it in the bread-bowl to rise again, and, when risen, form into loaves, which are to be left to rise a third time before baking. Do not make the loaves too large. Bread should be put in a rather hot oven, which should cool gradually. When baked, allow the loaves to cool before placing them in the bread-box.

GRAHAM-BREAD (Quogue Receipt)

A good Graham-bread can be made by preparing the sponge with white flour and mixing afterwards with the Graham flour.

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Ingredients: One cupful light bread sponge (in the morning); one cupful lukewarm water; one large table-spoonful molasses; one large spoonful of lard or nice dripping; a small half-teaspoonful soda; Graham flour; a little salt.

Dissolve the soda in the water and pour it and the molasses, lard (soft), and salt into the sponge. Mix it together; then stir in as much Graham flour as you conveniently can with a spoon, making a stiff batter. Put immediately into a rectangular pan (buttered) about ten inches long, six inches wide, and four inches high. Set it in a warm place, and, when well raised (or when the pan is even full), bake it immediately for an hour.

GRAHAM-BREAD (Health-food Company)

Ingredients: One cupful bread sponge; one-half cupful warm water; two cupfuls Graham flour, or, as the Health-food Company calls it, granulated wheat; one cupful corn-meal, or, without the Indian meal, three cupfuls of granulated wheat; lard the size of an egg; one-half teaspoonful salt; one table-spoonful sugar. The ingredients are mixed together as directed in the preceding receipt.

WAFFLES (Southern Receipt)

Melt two ounces of butter; add it to one pint of milk, a saltspoonful of salt, and three beaten eggs. Stir in flour enough to make a smooth batter. Add one gill liquid yeast, or half a cake of compressed yeast. When the latter is used add a desert-spoonful of sugar. Set to rise, and bake in slightly buttered waffle-irons.

MUFFINS (Southern Receipt)

One quart of flour (under weight); one pint milk; a saltspoonful of salt; three eggs; two ounces butter;

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and a gill of liquid yeast, or half a cake of compressed yeast, with a dessert-spoonful of sugar. Set to rise, and bake in buttered rings.

BOSTON BROWN BREAD

Ingredients: Two cupfuls (one pint) milk; two cupfuls corn-meal; one cupful rye, or, if more convenient, Graham flour; a scant half-cupful New Orleans molasses; one scant teaspoonful soda; one teaspoonful salt. Steam four hours; bake twenty minutes.

Mix the corn-meal, rye flour, and salt well together; dissolve the soda evenly, first with a little of the milk, then with the whole pint. Make a little well in the flour, into which pour the molasses, then the mixed milk and soda. Stir all well together free from lumps, and pour it quickly into a double kettle (see p. 99), buttered, in which the water is already boiling. Boil it four hours, never allowing the water to stop boiling; then take out the bread and bake it for twenty minutes in the oven.

If no double kettle be at hand, pour the bread paste into a long tin pail, cover, and set in an iron pot of boiling water, the water reaching about three-fourths to the top of the pail. Cover also the iron pot, confining the steam as much as possible. As the water boils down replenish it with boiling water.

A SLICE OF BOSTON BROWN BREAD covered with cream makes a good breakfast for an invalid. A little sugar may or may not be sprinkled over it.

TOAST

Cooks generally show great carelessness and ignorance in making toast. The bread slices are generally

DIET IN ILLNESS AND CONVALESCENCE

cut too thick, the crust is not taken off, and in the hurry of preparation the slices are unevenly colored, and the centre is often a mass of hot dough. Instead of a most digestible article of diet, as it should be if properly made, it becomes the most unwholesome of breads. When well made, toast is more digestible than bread, since the additional heat in preparing it dries it, and the charred surface acts as a germ-destroyer.

The slices should be cut quite thin and even, the shapes made regular by cutting off the crust and uneven sides. The scraps of bread left may be dried and saved in a can, for bread-crumbling—*i.e.*, they are not to be wasted. The slices may be placed on a tin platter and dried for a little time in the open oven, or at the top of the range, when they will toast very quickly. The operation is not so quick without this drying process, for then the slices must be placed in the toaster and simply turned from one side to the other without coloring until the bread is thoroughly dried through; then it should receive a deep yellow color quite even and artistic. If allowed to color at first it will be difficult to dry the interior.

If the toast is to be served dry, it should be placed immediately on a warm plate; indeed, the bread should not be toasted until the person for whom it is intended is ready to eat it. If the toast is made to serve with a poached egg, a bird, or a vegetable, a little boiling water should be poured in the bottom of the plate to partly soften the toast. It should be buttered, and salted slightly, also, as soon as cooked. A prettier way of serving toast is in the form of

SIPPETS

Cut thin slices of bread into parallelogram strips; toast them carefully and evenly, without breaking,

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until they are crisp and golden. Serve them on a hot plate as soon as they come from the fire, arranged as in cut, and slightly buttered, if there be no objection.

Bread sippets are sometimes served to an invalid with the juice from roast beef or mutton poured over them. For this the bread slices need not always be toasted.



WATER TOAST

Have an artistic piece of toast made as described in the receipt for toast, and, while still hot, spread a little butter evenly over the top, also a slight sprinkling of salt; pour over it three-fourths of a cupful of boiling water. Cover the dish with a saucer and place it in the oven for a few minutes to soak up the water; then serve immediately.

CREAM TOAST

Toast the slice of bread as before explained; place it on a hot plate; pour on it boiling water, which drain off again in a few moments, allowing the bread to become partly soft; spread over a little butter and sprinkle a little salt, then pour on it three or four table-spoonfuls of fresh, sweet cream. Let it remain in the hot oven two or three minutes to swell.

MOCK-CREAM TOAST

Read over the receipt for "Toast," and while two slices of bread are drying in the oven make the sauce as follows: Put in a little saucepan a cupful (one-half pint) of milk; when it begins to boil stir in two even teaspoonfuls of flour, rubbed smooth with a table-

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spoonful of cold milk, also a pinch of salt; let it boil a minute, allowing the flour to cook thoroughly; now take it from the fire, add a piece of butter the size of a hickory-nut, and stir in the white of an egg beaten to a stiff froth; return the saucepan to the fire for a moment to set the egg, without allowing the sauce to boil. Place the saucepan at the back of the range, while you carefully toast the two slices of bread; dip them, when toasted, a moment in boiling water, then sprinkle over a little salt and the thinnest layer of butter; pour over the sauce and serve immediately.

MILK TOAST

Prepare the toast as described for "water toast," only, instead of water, pour over milk prepared as follows: Bring a cupful of milk to a boil, then stir in an even teaspoonful of flour, rubbed smooth, with a table-spoonful of cold milk; add also a pinch of salt. Let it boil a minute to cook the flour thoroughly, then take it from the fire, stir in butter the size of a hickory-nut; pour it over the toast placed in a hot dish, set it in the oven for two or three minutes to soak, then serve immediately.

PULLED BREAD

Break off irregular pieces of fresh bread about the size of an egg, and bake them in a slow oven until quite dry and slightly colored.

Pieces of stale bread or cold biscuits split in two can be made as good as new by dipping them quickly in cold water and baking them in a hot oven until the surface is crisp and the interior is well heated through.

ZWIEBACK

The German zwieback, which can be obtained of the bakers, is an excellent breakfast bread, to serve

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with a hot beverage. It is composed merely of slices of rusk dried in a very slow oven to a delicate orange color. Vienna bread slices are prepared in the same way.

The zwieback is subjected for a long time to a slow, even heat, which can be best obtained in a brick oven.

SCOTCH TOAST

This dish was well known in the days of our grandmothers. Break up six soda-crackers in a bowl; pour over them enough boiling water to make them swell and become soft but not wet. Cover and place them where they will keep hot for fifteen minutes, and, just before serving, stir in some bits of butter, a little salt, and a mere suspicion of cayenne pepper.

COFFEE CAKE

Ingredients: Two cupfuls of bread sponge; one egg; one-half cupful of sugar; lard, the size of a hickory-nut; one cupful of warm water.

Mix these ingredients together and make a dough not quite as stiff as for bread. Let it rise well (about two hours or more); roll it out about an inch thick. It will spread over a large, square platter. Let it rise again until quite light (half an hour or more). Before placing it in the oven, spread over the top one egg (both white and yolk) beaten with a teaspoonful of sugar, and again sprinkle over this about a teaspoonful of coarse, granulated sugar.

DIXIE BISCUITS

This delicious biscuit the writer has dared to recommend for convalescents for a change of bread, as it is to be eaten cold. Like the Vienna bread, made with

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the same yeast, it is better quite fresh-baked or as soon as cold.

Ingredients: Three pints of sifted flour (one and a quarter pounds); one and a half coffee-cupfuls of milk



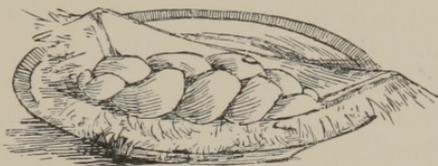
(three-quarters of a pint); lard the size of an egg; one egg; one-third of a cake of Fleischman's compressed yeast; one teaspoonful of salt; a table-spoon even full of sugar.

The measure of milk is a pint after the lard is added. Put this mixture (the milk and lard) over the fire, and just as it comes to a boil take it off and let it get lukewarm; in the mean time put the yeast-cake to dissolve in a couple of table-spoonfuls of milk, and as soon as the yeast becomes soft rub it smooth and add it to the milk and lard when the latter are lukewarm (not before). Mix the salt and flour well together; make a well in the middle, pour in the egg, well beaten, with the sugar, then the milk, lard, and yeast. Stir all well together with a spoon, put it in a moderately warm place at the side of the range. When it has risen light (in about an hour, or possibly a little longer), knead it, without adding more flour, about fifteen or twenty minutes, always stretching out the dough towards you, doubling it, and kneading on top (to form a proper grain). Cover and set it away until it has risen quite light again (in about three or four hours). Then roll it out half an inch thick; cut it neatly with a cutter about two and three-fourths inches

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in diameter; roll the smaller cuts left to about half the thickness of the other, and cut with a second cutter two inches in diameter (a kitchen pepper-box top will do for the purpose). Place the small cuts on top of the large ones in a platter, and do not place the large ones too near each other. When all are arranged set them away to rise for the third time (about an hour). When quite light, bake in a quick oven. If the biscuits are wanted for the invalid's six-o'clock tea, they should be begun about half-past ten o'clock in the morning.

Or the dough (without the egg and sugar if for a dinner or breakfast bread) may be made in the form



of braids, as shown in cut. This is easily done. Three rolls of even size are braided, the ends trimmed and turned under.

WAFER BISCUITS

Rub a piece of butter the size of a large hickory-nut into a pint of sifted flour; sprinkle over it a little salt. Mix this into a stiff, smooth paste, using therefor the white of an egg beaten to a froth, and some warm milk. Beat the paste with a rolling-pin for half an hour or longer; the more the dough is beaten the better are the biscuits. Form the dough into little round balls about the size of a pigeon's egg, then roll each of them to the size of a saucer. They should be mere wafers in thickness. Sprinkle a little flour over the tins. Bake.

These wafers are exceedingly good to serve with an invalid's soup, or with a cup of tea, or they may be

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soaked in the oven with cream or milk, as described for cream toast. When made with the new-process flour or the cold-blast flour, containing the full nutrition of the wheat, these wafers, when soaked in a nutrient liquid, constitute for the invalid not only a healthful but a sufficient meal.

Wafers of oatmeal, granulated wheat, barley-gluten, etc., or of mixtures of different grains, may be made in the same manner as the wafers described in the preceding receipt, or they may be made by simply adding a little salt and mixing with water, then beating for twenty minutes or more.

They may be varied in design; for instance, cut into diamond shape with a knife, or with a scalloped paste jagger, or in long, narrow strips four inches long and three-fourths of an inch wide, like toast sippets. However they are cut, let them be quite regular and even in shape and also baked with care.

GRAHAM WAFERS

Sift two quarts Graham flour, to remove the silicious hull, which is too irritating for an invalid. Add a very little salt, and mix well in butter the size of an egg. Stir in enough water, water and milk, or all milk to make a rather stiff dough. Roll out as thin as a wafer, and roll and fold two or three times as in making puff paste. Roll again as thin as a *thin* wafer and cut into strips with jagger. Bake carefully in a rather quick oven.

CORN-BREAD (No. 1)—(United States Hotel, Saratoga)

Ingredients: Two cupfuls flour; one cupful and a half of corn-meal; a scant half-cupful of sugar; one and two-thirds cupful sour milk; two eggs; lard or

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butter the size of an egg (one ounce); a saltspoonful of salt; one teaspoonful of soda dissolved in a quarter-cupful of hot water.

Mix the flour, corn-meal, salt, and soda and water well together; next beat together the sugar and eggs, and add them to the flour, etc., and at the same time the butter (melted) and the milk. Mix all well together and bake immediately.

CORN-BREAD (No. 2)

Ingredients: One cupful and a half of milk; one cupful of fine corn-meal, sifted; two eggs; a scant table-spoonful of butter; one teaspoonful of sugar; one teaspoonful of baking-powder. Pour the milk, boiling, on the sifted meal. When cold, add the butter (melted), the salt, sugar, baking-powder, the yolks of the eggs, and lastly the whites, well beaten separately. Bake half an hour in a hot oven.

Or the corn-bread is still better as follows: Ingredients—one pint of milk; half a pint of corn-meal (sifted); four eggs; a scant table-spoonful of butter; salt, and one teaspoonful of sugar.

This last receipt contains no baking-powder. The whites of the eggs should be well beaten to a stiff froth. The ingredients are put together exactly as described in first receipt.

CORN RICE BREAD

Ingredients: One half-pint of corn-meal (one cupful); one pint of cold boiled rice; one-half pint (one cupful) of milk; one egg; one-half teaspoonful of salt; one table-spoonful of sugar; butter, the size of a pigeon's egg; one teaspoonful of baking-powder. Mix the baking-powder, sugar, salt, and corn-meal well together. Pass the rice through the colander, and add

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it to the milk, egg, and butter (melted). Then stir in the corn-meal, etc., and put it quickly in the oven.

HOE-CAKE

Pour enough boiling water on one pint corn-meal, salted, to make the grain swell. Let it stand half an hour. Add enough milk—from half a cup to a cupful—to make it rather moist, as this ensures a brown crust. Put two or three heaping table-spoonfuls on a hot griddle greased with lard. Smooth over the surface, making a flat cake about half an inch thick and of round shape. When browned on one side, turn and brown it on the other. Serve very hot. A good breakfast cake with a savory crust.

SOUTHERN BATTER BREAD

Pour over a pint of white water-ground corn-meal enough boiling water to make a thick batter. Wait ten minutes to allow the meal to swell, and add a liberal half-pint of milk, salt, and two well-beaten eggs. This will make a thin batter. Place in baking-dish with bits of butter on top, and bake in moderately hot oven for twenty minutes.

PANCAKES (of Flour, Granulated Wheat, Corn-meal, Bread-crumbs, Oatmeal, Rice, Gluten, etc.)

Stir into two cupfuls of milk a little salt and enough of any of the flours to make a stiff batter. Beat the yolks and whites of two eggs separately and whip separately into the batter, adding the whites last. This mixture will be light enough, if cooked at once, without the addition of baking-powder.

If there is any cold boiled rice, oatmeal porridge, hominy, etc., at hand, some of any or all of these im-

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prove the pancakes very much. The pancakes are also better if the whites of the eggs are beaten to a stiff froth, and added just when the cakes are to be cooked (not before).

If sour milk is used, a scant half-teaspoonful of soda dissolved in a little warm water should be stirred in last, although more or less of soda is used, according to the acidity of the milk. If the griddle is quite hot and smooth, and is merely moistened with a little lard, the cakes will not be greasy nor very unwholesome. However, the writer will not risk recommending them for an invalid.

CURRENT SCONE (*Hygienic Cookery*)

Ingredients: Two cupfuls sifted Graham flour; two cupfuls sifted white flour; one cupful and a half of thin sweet cream—part milk will do; one cupful and a half of English currants, picked, washed, and drained; two and a half teaspoonfuls of baking-powder, or two-thirds teaspoonful of soda, and one and a half teaspoonfuls of cream of tartar. Stir together the Graham and white flour, add the soda (pulverized) and cream of tartar (or, in its place, the baking-powder), and sift two or three times. Then stir in the currants, and wet with the cream to make a tolerably stiff dough; knead as little as possible; gather up the mass lightly till it will stick together, and roll to the thickness of half or three-quarters of an inch. Prick deeply with a fork or draw shallow lines across the top, forming diamond creases. Bake.

It is excellent made of Graham flour without the white flour. It is not good the day after it is baked. For an invalid it is a palatable cake, eaten with grape juice, etc.

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HARD GRAHAM ROLLS

This is a bread much used by the hygienists, and is called "the perfect bread" by Dr. Trall. It is much relished by those who have become accustomed to it, and who crave "no spice but hunger, no stimulant but exercise."

It is made by simply mixing cold water—the colder the better—into good Graham flour until it becomes a moderately stiff dough, and kneading or pounding it, like the Southern beaten biscuit, for twenty minutes or more, until it becomes smooth and elastic to the touch, and brittle if pulled. If the dough is too stiff the biscuit will be dry and hard, and if too soft it will be wet and clammy. It will require, perhaps, two-thirds of a pint of water to mix a quart of flour, although the quantity will vary according to the grade of flour. The dough is formed into little biscuits about three inches long and not quite three-fourths of an inch wide. Make up the panful quickly, setting them a little apart; prick them with a fork, and bake in a rather quick oven. When done they should not yield to the pressure of the finger. They may be made into the form of stems of the shape of lady's-fingers.

These rolls are better fresh-baked, although if any are left from the day before they are excellent when warmed over, as follows: Break each roll into two or three pieces (do not cut them); drop them into cold water, and when soaked place them on a bread-pan in a brisk oven which will crisp without shriveling them. As soon as stiff and lightly crisped they are done.

CRACKED WHEAT

The receipt here given is one of the most important receipts in this book, for the invalid, or, indeed, for

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any one. It supplies a very palatable dish, light and wholesome enough for the most delicate stomach, and is very nourishing.

It is well to ask for the cracked wheat, double milled, at the grocer's or miller's, if you would avoid the silicious fibre which encircles the grain, and which is sometimes unwholesome for those with delicate stomachs. The preparation preferred is that of the whole grain, which is quite free from the woody skin.

Receipt.—The ingredients are: One-half cupful of cracked wheat; two and a half cupfuls of water; two and a half cupfuls of milk; one-half teaspoonful of salt.

Salt the water, and when it comes to a boil add the grits, and let it simmer, without a cover, on top of the range for an hour. The water will then be almost evaporated; then add the milk (hot), and let it cook an hour longer. Stir it occasionally to keep the wheat from sticking to the bottom, and also to mingle evenly the grains with the liquid. More stirring than this is objectionable. A copper or porcelain-lined saucepan or earthen crock is preferable for cooking this dish, as there is less danger from burning. The wheat cooked in a double kettle will not be as good, the steam puffing through the grains giving a better flavor. There is no danger of burning if it is not cooked too fast. The milk used should be perfectly fresh and sweet, or the mixture will curdle.

When done, stir it carefully, as it will be thin and the grains will be liable to sink, and pour it into cups (previously wet with cold water) about three-fourths full. Set aside to become cold and solid. Do not remove the wheat from the moulds until ready to serve. Serve with cream or milk and pulverized sugar.

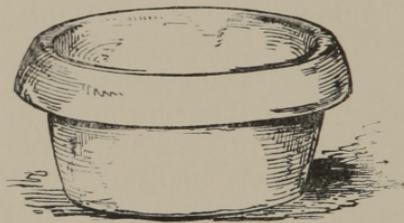
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OATMEAL PORRIDGE

It seems very simple to make oatmeal porridge, yet it is a very different dish as made by different cooks. The ingredients are: One even cupful (one-half pint) of oatmeal to one quart of boiling water, and one teaspoonful of salt. Boil forty-five minutes.

The water should be salted and boiling, when the meal is sprinkled in with one hand while it is lightly stirred with the other. When mixed it should boil slowly, uncovered, or partly uncovered, without afterwards

being stirred more than is necessary to keep it from adhering to the bottom, and to mingle the grains two or three times, that they may all be evenly cooked. If much stirred the porridge will be starchy or



EARTHEN CROCK

waxy and poor in flavor. The puffing of the steam through the grains without much stirring swells each one separately, and when done the porridge is light and palatable. This manner of cooking is applicable to all the grains. Professional cooks insist upon having copper saucepans for cooking the grains, for the reason that with them there is but little danger of burning. A common earthen crock placed on the range answers the purpose very well. Care must be taken that a cold crock is not suddenly placed on a very hot surface. Pour hot water into the crock before placing it on the range, and there will be little danger of breaking.

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CORN-MEAL MUSH

French physicians maintain that corn-meal is of great benefit in stimulating the action of the liver.

In making mush, the quantity of water required varies according to the quality of the meal, the Northern yellow meal requiring less water than the Southern white meal.

Pour one quart of boiling water over a pint of white meal with a teaspoonful of salt in it. Boil for half an hour, stirring frequently, and add a pint or less of milk just before serving.

FRIED MUSH

Prepare mush as above from twelve to twenty-four hours before it is needed. Pour while hot into a slightly buttered flat dish. Cut with a knife into slices one inch broad and three inches long, and fry in lard or butter.

Small hominy may be prepared in the same way. This is excellent, served like toast, under fried chicken or game, and is a palatable breakfast dish with or without thin slices of bacon.

CRACKER FLAKES

Soda-crackers, lightly rolled so that they form flakes rather than a powder, are very palatable, served with milk or cream, and, if allowed, powdered sugar. The alkaline cracker corrects acidity, and may even be used for a change, instead of lime-water, with milk.

POTATO FLOUR

Potato flour, while comparatively new in America, is much used in England and Continental Europe as a food for dyspeptics, on account of its digestibility and

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its soothing qualities in irritability of the stomach. It is also recommended, because of its freedom from any pronounced flavor, as a thickening in soups, blanc-manges, etc. It makes a beautifully white and light cake, and may be used generally as a substitute for flour or corn-starch.

The analysis, furnished to one of our consuls in Austria, is, exclusive of water, as follows:

Pure starch flour.....	98.98
Mineral substances.....	.40
Albumen.....	.28
Starch covers, etc.....	.34

BANANA MEAL

Of banana meal, which has recently been introduced into England, and which is likely to be an export from our new possessions in the West Indies, Henry M. Stanley, in *Darkest Africa*, writes as follows: "During my two attacks of gastritis, a light gruel of banana meal, mixed with milk, was the only matter that could be digested." He adds that it saved his life in a third illness.

The grayish color of the meal is not appetizing, but made into a kind of gruel or porridge, in the proportion of one table-spoonful of banana meal to half a pint of milk, it is said to be an exceedingly digestible and — when sugar and cream are added — agreeable preparation.

DISHES MADE WITH GLUTEN

The writer finds it a little difficult to provide very palatable dishes out of gluten, without starch. Added to rice, farina, and other starch grains (which are prohibited in some diseases), it is good when made into

FOODS

pancakes, or any of the puddings made of other grains. For thickening sauces, soups, or gravies, it is satisfactory. Gluten used instead of bread-crumbs for crumbing fish slices or fillets, oysters, sweetbreads, etc. (for frying), is also a success.

GLUTEN BREAD

Ingredients: One pint of milk; one pint of warm water; butter or lard the size of a walnut; one-half cake of any fresh, dry hop yeast, or one-fifth of a two-cent cake of compressed yeast, rubbed smooth with a little water; one egg, well beaten; a little salt.

Mix the milk, water, egg, yeast, and lard (melted), and stir in the gluten until a soft batter is formed. After it has risen (in some warm place), mix in gluten enough to form a soft dough (like biscuits), and knead well. Form into loaves, and, when risen a second time, bake. Gluten bread requires less yeast than ordinary bread, and less time in rising.

GLUTEN MUSH

Place one and a half cupfuls of water on the fire to boil. Stir smoothly either a cupful of cold milk or water into a cupful of gluten, and a half-teaspoonful of salt. When the water boils, pour in the mixture gradually and let it cook twenty minutes.

FRIED MUSH

Slices of cold gluten mush fried or *sautéd* in a little hot lard.

GLUTEN MUFFINS

Ingredients: One cupful and a half of gluten; one cupful of milk; one egg; one-fourth teaspoonful of salt; one teaspoonful of baking-powder.

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Heat the gem pans before buttering, pour in the batter, and bake fifteen minutes in a quick oven.

This quantity will make eight gems, or just fill one of the ordinary iron gem pans. Or rice may be added as follows :

GLUTEN-AND-RICE MUFFINS (not for diabetics)

Ingredients : One cupful of gluten ; one cupful and a half of cold boiled rice ; one cupful of milk ; one egg ; one-half teaspoonful of salt ; butter the size of a hickory-nut ; two teaspoonfuls of baking-powder.

Mix the baking-powder, salt, and gluten well together. Pass the rice through a colander, and stir into it the milk, egg, and butter (melted); next add the gluten mixture, and put it quickly into the oven. Or, instead of rice, the same quantity of cold boiled pearled barley or oatmeal may be substituted ; or three-fourths of a cupful of corn-meal and one cupful of gluten, with the other ingredients in the preceding receipt, make good breakfast muffins.

A GLUTEN PUDDING OR GRUEL

Ingredients : One cupful of water ; two table-spoonfuls of gluten, rubbed smooth in four table-spoonfuls of cold water ; the white of one egg ; salt.

When the cupful or half-pint of water is salted and boiling, mix in the gluten paste and let it cook ten minutes ; stir in the white of an egg beaten to a stiff froth. Let it remain a half-minute (while stirring it) to set the egg. To be eaten hot and freshly made. Or, instead of four table-spoonfuls of cold water for making the gluten paste, let it be four table-spoonfuls of cream, and the pudding may be sweetened with saccharin.

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GLUTEN PUDDING

Soak two slices of gluten bread in a little milk in which an egg, half a tabloid to a tabloid of saccharin, and a sprinkling of nutmeg have been mixed. Do not let the bread get too soft to handle. Fry the slices on a griddle in either a little hot lard or butter.

GLUTEN CREAM WAFERS

Stir gluten (crude or purified) and a little salt into sweet cream until the dough is thick enough to roll out to the thickness of pasteboard. Beat the dough with a potato-masher for fifteen minutes or more, roll out, cut into forms, and bake.

GLUTEN CHEESE-CAKES

Add to a cupful of gluten three table-spoonfuls of grated cheese, two table-spoonfuls of cream, the yolks of two eggs, a saltspoonful of salt, and a little nutmeg. Roll thin, and bake like cookies.

GLUTEN SOUFFLÉ

To a half-cupful of gluten add two table-spoonfuls of grated cheese, the beaten yolk of an egg, half a saltspoonful of salt, and three table-spoonfuls of cream. Mix this evenly together, forming a soft paste a little thicker than for pancakes. The last thing, stir in the whites of the eggs beaten to a stiff froth. Bake in patty pans, or paper cases, and serve as soon as baked. It is a very rich dish, too rich for much to be eaten at one time.

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DISHES OF MACARONI

MACARONI AU GRATIN

Ingredients: One cupful of well-boiled macaroni (macaroni added to well-salted water while boiling, and boiled about twenty minutes, or until soft, then drained); after it is chopped quite fine, add one cupful of milk, two or three sprigs of parsley (or a heaping teaspoonful after being chopped fine), a heaping teaspoonful of flour, one egg, butter the size of a black walnut. Put the butter in a little saucepan, and, when it bubbles, throw in the flour and cook it without coloring; then add the milk and the parsley; let it simmer a minute; then take it from the fire, add a little of the chopped macaroni to the egg (for the purpose of beating it more easily), then add the sauce and remainder of the macaroni. Put it into a little pint pudding-dish or *gratin* pan, sprinkle over coarse bread-crumbs which have been colored in a little butter, or place it in the oven for a few minutes to color the top, which makes it "*au gratin*."

MACARONI CROQUETTES (Louis Bertholon, *Chef*)

Throw a third of a package (one-third of a pound) of macaroni into salted boiling water, and boil it for twenty minutes; then cut it into quarter-inch lengths, forming little rings.

Prepare a sauce as follows: Make a *roux* by placing in a saucepan butter the size of a pigeon's egg; when bubbling, add a generous table-spoonful (a quarter of a cupful) of flour; let it cook a minute, and then add a cupful of stock, half a cupful of cream, two table-spoonfuls of grated cheese, one-fifth of a nutmeg (grated), salt, a little pepper, and, when all is well

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mixed and cooked for a couple of minutes, take the mixture from the fire and stir in also the beaten yolk of an egg. Return the saucepan to the fire to cook the egg slightly, but do not let it boil, as that will curdle the egg. Now mix in evenly the macaroni rings (two cupfuls), and spread the mixture about half an inch in thickness over a pan. When cold it should be made into croquette form, egged and bread-crumbed, to be fried in boiling lard.

This mixture is quite soft to handle, but with a little practice it is easily managed. Take up with a spoon enough for a croquette; shape it on the table with a knife; sprinkle over some sifted cracker crumbs, then lift it dexterously with a pancake-turner on a plate of slightly beaten egg; turn it over with the pancake-turner; then again lift it to a plate of sifted cracker crumbs. It may now be rolled without trouble.

Croquettes of all kinds are better if quite soft. They should be placed on the ice for some time before cooking.

Cheese served in this manner is not indigestible, according to Mr. Mattieu Williams, in an article on "The Chemistry of Cookery," published in the *Popular Science Monthly*. Mr. Williams asserts that cheese, although indigestible when eaten raw, is very digestible when cooked and mixed with other articles of food. The diet is so hearty and rich that, when eaten in much quantity, other food should not be taken at the same time. In this receipt the cheese may be omitted if preferred.

These croquettes are to be served with tomato sauce.

MACARONI AND TOMATO SAUCE

Put butter the size of an egg into a saucepan, and when it is at the boiling-point throw in an onion

DIET IN ILLNESS AND CONVALESCENCE

(minced), two sprigs of parsley (chopped fine), and a little pepper. Let it cook five or eight minutes; then throw in a heaping table-spoonful of flour and a little broth from the stock-pot; if there is no broth, use a little boiling water; stir this well and let it cook five to eight minutes longer. Now pour in about a coffee-cupful of tomatoes which have been stewed and strained through a colander or a sieve, and stir all together. Boil half a pound of macaroni tender in well-salted boiling water or in stock, and drain it in the colander. Place alternate layers of the macaroni and the sauce on a hot dish, pouring the sauce over the top. Put the dish into the oven two or three minutes to heat. Serve immediately.

TOMATO SAUCE (for macaroni, etc.)

Ingredients: One pint can of tomatoes; one sprig of parsley; half of a bay-leaf; two cloves; one teaspoonful of onion, or one slice; salt and pepper. Add the seasoning to the tomatoes, and let them simmer all together for fifteen minutes, stirring occasionally. Pass through a sieve, leaving out the seasoning. Place in a saucepan butter the size of a hickory-nut, and, when it bubbles, add a teaspoonful of flour. Mix and cook it well, then add the tomato pulp, stirring it until it is smooth and consistent.

The sauce may be made one or two days before it is needed, if more convenient, and reheated just before serving.

DISHES OF RICE

RICE

may be served with many dishes—for instance, in a circle around chicken, fried spring chicken or boiled;

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or cold chicken dice may be stewed, with white or brown sauce poured over both the rice and chicken; or it may be served with sweetbreads, or with stewed fruits—apples, peaches, pears, etc.

TO BOIL RICE

For a teacupful of boiled rice place a quart of clear water over the fire, and, when it boils hard, throw in two ounces, or two table-spoonfuls, of rice which has been previously well washed in cold water. Throw in also a teaspoonful of salt. Take off any scum that rises. In twenty minutes press some of the grains between the fingers, and if quite soft it is cooked enough. Do not cook the grains until they become broken. When done, pour the rice into a sieve to drain off the water; return the rice grains to the dry saucepan; cover them partly, and set them at the side of the fire to steam and dry.

TO BOIL RICE IN MILK

Bring one pint of milk to a boil, then stir in two table-spoonfuls of well-washed rice and a quarter of a teaspoonful of salt; pour it into a basin, cover it well, and place it in the oven to bake for an hour; or it may be cooked in the double saucepan. In a copper saucepan it can be boiled at the top of the range without burning, when it will be cooked in about twenty minutes.

A RICE DISH (to be served as a vegetable)

Mix carefully (not to break the grains) in a pint of boiled rice a table-spoonful of either minced parsley or cives; put a piece of butter the size of a pigeon's egg into a saucepan, and let it color a light brown; mix the rice in the butter, and serve hot as a vegetable. A

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little mound of this rice may be placed in the centre of a platter, with a row of green peas around it.

RICE AND GRAVY

Fresh-boiled rice wet with the juice from roast beef or mutton (free from fat) may be served on a piece of toast.

RICE CONES

Cook the rice in either milk or water, and while hot pour it into cups (which have previously been dipped in cold water), filling them about three-fourths



full. When cold and ready to serve, turn them out, arranging them uniformly on a platter; or, for an invalid, turn one into a small oval platter or a saucer. Scoop out a little of the rice from the top of each cone, and put in its place any kind of jelly. Pour in the bottom of the dish a hot brandy sauce (see p. 214), or hot sweet sauce of any kind, provided it is not flavored with vanilla. Or raisins, figs, or dates may be plumped by pouring boiling water over them, then drained and served around the cones.

A PLAIN RICE-PUDDING

The manner of making this delicious and plainest of puddings was taught the writer by an admirable *chef*, Louis Bertholon. The flavor is quite re-

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markable, considering that it is almost as simple as plain boiled rice.

For an invalid choose a little pudding-dish holding about a pint. Put in a heaping table-spoonful of uncooked rice, fill the dish with boiling milk, and place it in the oven. Let it cook, stirring it once or twice (to prevent lumping), for about half an hour; then take it out and mix in a table-spoonful of sugar and half a teaspoonful of essence of lemon, or the thin, yellow cuts (without any white) of the rind of half a lemon, or with *fleur d'orange*, or a sprinkling of nutmeg, or, indeed, any flavoring preferred, except vanilla; return the dish to the oven, cooking altogether two hours, or one and a half hours if the oven is quite hot. As the milk boils down, more hot milk should be added (keeping the dish always filled) by lifting the skin and pouring in the milk at the side, or by removing the skin and allowing a new one to form. The dish will require about one and a half pints of milk.

RICE-PUDDING

Another successful pudding, where every grain of rice lies in a creamy bed.

Ingredients: One cupful of boiled rice (it is better if fresh-cooked and hot); three cupfuls of milk; three-fourths of a cupful of sugar; one table-spoonful of corn-starch; two eggs; flavoring; or half these ingredients for a pint pudding-dish. Dissolve the corn-starch first with a little milk, and then stir in the remainder of the milk. Bring this to a boil, take it from the fire, and, when slightly cooled, stir in the rice and the yolks of the eggs beaten well with the sugar. Return this to the fire (there is less risk of burning in a custard kettle) and stir until it begins to thicken like boiled custard, watching it carefully not to let it boil or curdle.

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Now, again, remove it from the fire, add the flavoring (a scant teaspoonful of lemon extract), and pour it into a pudding-dish. Spread over the top the whites of the eggs, beaten to a stiff froth, with a little sugar and flavoring added. Or, with the aid of a cone of writing-paper, decorate the top with a fanciful design, *à la meringue*. Give it a delicate color in the oven. To be eaten either hot or cold.

RICE À L'IMPÉRATRICE (Louis Cuppinger)

Place over the fire one pint and a half of milk and the thin yellow zest of a lemon, and, when it boils, stir in half a teacupful of rice, and an even saltspoonful of salt. When cooked (in about twenty minutes)



stir in carefully half a cupful of sugar and a few drops of essence of lemon, or two or three spoonfuls of rum, or any preferred flavoring. The rice should be rather moist when cooked. Spread

it on a platter to get quite cold, then stir in carefully half a pint of cream, whipped to a froth, and the fourth of a box of gelatin dissolved in a scant half-cupful of water. To dissolve the gelatin, add it to the cold water, then set it for fifteen or twenty minutes in a warm place. Mould the rice. For the invalid it may be moulded in a teacup, or in one of the pretty little fancy moulds, which come in all sizes.

RICE-PUDDING À LA GUILLOD

Ingredients: A scant half-cupful of rice; one pint of water; one cupful (half-pint) of milk; butter the

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size of a hickory-nut; one table-spoonful of sugar; four eggs; salt; flavoring—a scant teaspoonful of lemon extract, or two or three table-spoonfuls of rum.

When the water (salted) is at the boiling-point add the rice, and cook it twenty-five minutes; then add the milk (hot); cook it ten minutes longer; then add the butter, sugar, lemon, and well-beaten yolks of the eggs. Stir this for a few *moments* over the fire to set the eggs, without allowing it to boil. This batter may be stirred with a spoon for the purpose of partly breaking up the grains of rice, or it may be passed through a sieve. When the batter is cold stir in dexterously the whites of the eggs beaten to a stiff froth, and put it immediately into a buttered double boiler (p. 99), or into a long tin pail which may be covered, and set it into a pot of boiling water, the water reaching about three-fourths to the top. A weight should be placed on top of the tin pail to keep it from turning. Cook about three-quarters of an hour. Turn out carefully on a platter, and serve with currant or plum jelly sauce.

This receipt was given by an excellent cook, Louise Guillod, to the writer.

CURRANT OR PLUM JELLY SAUCE (for Rice-pudding, etc.)

Stir two dessert-spoonfuls of currant jelly (a scant third of a cupful) and two table-spoonfuls of sugar into one and a half cupfuls of cold water. It is sometimes difficult to dissolve the jelly. Bring it to a boil, then add a teaspoonful of either corn-starch or flour for a thickening, first rubbed smooth in a little cold water; let it cook two or three minutes. To be served cold.

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RICE CROQUETTES (No. 1)

Boil one cupful of rice in milk. When cold, add the yolks of three eggs, a teaspoonful of salt, a table-spoonful of butter, and a little nutmeg. Put on ice for two or three hours. Form as other croquettes; roll first in bread-crumbs, then in egg, then in bread-crumbs again, and fry in boiling lard.

RICE CROQUETTES (No. 2)

Boil six table-spoonfuls of rice in milk until soft, with a salt-spoonful of salt and a little lemon peel. Remove peel, and when the rice is cold add a table-spoonful of butter, four table-spoonfuls of granulated sugar, the beaten yolks of three eggs, and, if not too indigestible, twelve macaroons, crushed and rolled. Place on the ice for three hours, and mould and cook croquettes as usual.

EGGS

The egg, as we have already stated, is one of the most valuable, though not always the most digestible of foods for the invalid. Dr. Fothergill, the eminent English authority on dietetics, writes as follows: "The egg is certainly a fluid food until its albumen is consolidated by heat. An egg, beaten up with coffee, is a drink relished by many. Others prefer it with sherry. Some like it with milk and brandy. With a pinch of pepper and salt, and a little vinegar, an egg forms a 'prairie oyster.' The white of an egg, added to home-made lemonade, enables it to be frothed up. This is a pleasant and nutritive drink. Under other circumstances the yolk is the part preferred. It can

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be taken with wine, or milk and brandy. The yolk of an egg is a constituent factor of the 'rum and milk' so famous in the treatment of phthisis. Half a pint of milk, the newer and fresher the better, the yolk of an egg, a teaspoonful of sugar, a suspicion of nutmeg, and a spoonful (the size varies) of rum, all beaten together and taken the first thing in the morning, has been credited with the cure of many cases of consumption. Taken early, it will often prevent the exhausting sweats which accompany the morning doze."

A RAW EGG

Beat well the yolk with a teaspoonful of sugar in a goblet; then stir in one or two teaspoonfuls of brandy, sherry, or port wine; add to this mixture the white of the egg, beaten to a stiff froth. If properly beaten it should fill a goblet to overflowing. Carefully stir all together. If wine is not desired, flavor the egg with nutmeg. It is very palatable without flavoring at all, using only the sugar.



BOILED EGGS

Eggs are generally boiled by placing them in boiling water and boiling them two and three-quarter minutes. It is better to put the eggs in a saucepan of *cold* water, half a pint to each egg. Set it over a fire hot enough to make the water boil in three or four minutes. As soon as the water boils, remove the saucepan from the fire and let the eggs remain in the water one minute.

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POACHED EGGS

This is probably the best mode of serving eggs for an invalid, unless served uncooked, as described in a preceding receipt.



POACHED EGGS

Poached eggs are generally wretchedly cooked by non-professional cooks. They are either thrown into rapidly boiling water and torn into pieces, or are overdone. If overdone they are indigestible, since the albumen or white of the egg shrinks and becomes hard and tough.

The white of an egg, properly poached, should be white, but of a soft, semi-transparent, jelly-like consistency. It should be tender and delicate, evenly cooked throughout, no part being hard while another is half raw. To prepare it in this manner, the water in which it is cooked should not reach the boiling-point.

The easiest way is to slip the egg (previously broken into a saucer) carefully into salted water which is simmering. Then immediately set the saucepan at the side of the range (to prevent the water from boiling) and let the egg remain about ten minutes.*

* Mr. Mattieu Williams, in *The Chemistry of Cooking*, says the

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Let the water be about two inches high in a low saucepan. Each egg should be broken separately into a saucer and slipped very carefully into the water. When cooked just enough, take out the egg with a perforated ladle (there should be nothing to trim) and slip it on a thin, buttered, and slightly salted square piece of toast which has previously been partly moistened by pouring a little boiling water into the bottom of the platter, and allowing the toast to soak it. As soon as cooked, sprinkle salt and a little pepper over the egg tops. Any substance absorbs more readily the flavor of seasoning when it is hot rather than when lukewarm or cold.

Eggs may also be poached in milk, and a little of the milk added to moisten the toast.

To poach eggs in *ball shape*: When the water is boiling fast, stir briskly until a small circle is formed and drop eggs to be poached in the centre. Or the Raquette egg-poacher may be used, giving to eggs the form of wild roses, daisies, etc.

Poached eggs are very good introduced into beef broth. Delmonico serves poached eggs on toast with sorrel sprinkled over the tops. Fine water-cresses make a pretty garnish.

PLAIN OMELET

This omelet is of course too large for one, or even two persons, but the proportions used are those which are most easily subdivided.

Separate the yolks and whites of six eggs. Beat the whites until stiff; add the yolks and beat the two thoroughly together. Add a teaspoonful of salt and

perfection of egg-poaching is to keep the egg in water at the temperature of 160° for half an hour.

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a little pepper, a table-spoonful of milk, and some scraps of butter—say half an ounce.

Melt in a pan three ounces of butter. When very hot, throw in the eggs. Cook rapidly and prick from time to time with a fork to avoid bubbles. Turn out and fold on a dish. The addition of parsley, chives, or other herbs constitutes an *omelette aux fines herbes*.

MACARONI OMELET

Sprinkle a little grated cheese, salt, and cayenne pepper over one cupful of cooked macaroni. Beat three eggs as for a plain omelet, stir in the macaroni, cook quickly, fold and serve immediately. Or the omelet may be made plain and the macaroni folded in just before serving.

OTHER OMELETS

Asparagus tips, peas, tomatoes, mushrooms, chopped ham, etc., are excellent additions to an omelet prepared in the same way as a macaroni omelet.

SCRAMBLED EGGS WITH ASPARAGUS TIPS

Boil a bunch of asparagus in salted water. Cut off the tips and put over them, while hot, two ounces of butter. Scramble four eggs, adding the asparagus tips; pepper and salt, and serve on toast moistened with the water in which the asparagus was boiled. This dish is especially beneficial to diabetics if gluten bread is used.

DISHES OF MEAT, GAME, AND FISH

The receipts for preparing beefsteaks and mutton chops, given below, are intended rather for the convalescent than the invalid, while chickens and game

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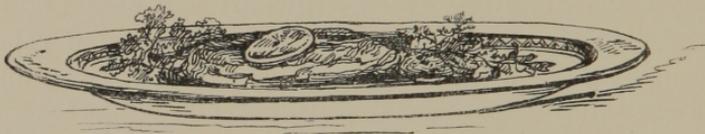
are generally acceptable to both. Many of the "made dishes" are relished by the invalid, not merely because of the nourishment which they contain, but because they are presented in tempting form and are a change from the ordinary diet of the sick-room. These dishes should be daintily prepared and served, and generally in small portions; for it should be remembered that most "made dishes" contain a variety of ingredients, some of which may disagree with the patient, and their effects therefore should be carefully watched. Whenever practicable, a vegetable should be served with meat. A potato, for instance, baked in its jacket, and the inside removed and mashed perfectly smooth, and seasoned with butter or cream and salt, and passed through a colander to look like vermicelli, may be served around a beefsteak. Or the beefsteak may be garnished with parsley and slices of lemon, and served with peas, string beans, or stuffed tomatoes. Asparagus tips are excellent served with sweetbreads; rice croquettes with chicken; celery salad with game, etc.

A BEEFSTEAK

Cut out the tender part of the beef from the porterhouse or tenderloin steak. Let it be three-quarters of an inch thick. Do not pound it. A well-shaped piece cut from the round or sirloin steak is not to be despised, as it contains more juice than the tenderloin. A cut from a round steak should not be as thick as a tenderloin cut, and, if tough, may be pounded a little. Have the gridiron quite hot and well greased with pork or beef suet. Put on the steak over a hot, clear fire, and cover it with a baking-pan. A wood or charcoal fire is preferable to hard coal for broiling. In a few moments, when the steak is colored, turn it

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over; watch it constantly, turning it when it gets a little brown. Do not stick a fork into it, as that will let out the juice, and do not place anything over it which can touch the top, as that will prevent the steak from swelling. Do not put on the pepper and salt before the steak is cooked, as it is calculated to harden the fibres. If the steak is very thick, either the fire must not be too brisk or it should be turned very often. However, the quicker any article to be broiled is cooked, the better. When cooked enough (from five to ten minutes), it should be rare or pink in the centre, though not raw. Place it on a hot platter,



BEEFSTEAK À LA MAÎTRE D'HÔTEL

sprinkle it with pepper and salt, and spread over it some sweet, fresh butter; set the platter in the oven for a few moments so that the butter may soak a little into the steak, then serve immediately. A steak is much improved by a simple addition called *à la maître d'hôtel*, as follows:

When the steak is cooked and placed on a hot platter it receives first a sprinkling of pepper and salt; then a sprinkling of very finely minced parsley; then some drops of lemon juice; lastly, small pieces of butter are carefully spread over it. The steak is then placed in the oven for a few moments for the butter to become melted and soak into it.

A tomato sauce (p. 174) is an excellent accompaniment for a beefsteak.

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CHOPPED BEEFSTEAK

From Miss Juliet Corson's very valuable receipts for the sick, published in HARPER'S BAZAR :

“Trim the fat from a pound of round or sirloin steak, cut the meat in inch pieces, put it into a meat-chopper or mincing-machine, and chop it for five minutes; then take from the top of the meat the fine pulp which rises during the operation of chopping; continue to chop and to remove the pulp until only the fibre of the meat remains. Press the pulp into a round, flat cake, and broil it over a very hot fire for about five minutes on each side; season it lightly with salt and cayenne pepper and a little butter, and serve it hot.*

“In selecting beefsteak for invalids some persons choose the *filet*, or tenderloin, because it seems most tender; it is hardly more digestible on that account, for its looseness of fibre does not favor complete mastication; and it is less nutritious than sirloin or round steaks, because its muscular tissue is not so well nourished as that of the last-named cuts. Beef for the use of invalids should either be broiled quickly over a very hot fire, and lightly seasoned with salt and cayenne pepper, roasted at an open fire, or baked in a very hot oven without any water in the pan; if the inside of beef is purple, it is not sufficiently cooked to be easily digested; the color of properly cooked beef is pinkish-red. The inner cuts are the most digestible.”

A BEEF SANDWICH

Scrape very fine two or three table-spoonfuls of fresh, juicy, tender, uncooked beef; season it slightly

* This steak is often served almost entirely uncooked. The pulp is slightly seasoned before it is formed into cakes, then merely heated through, although colored a light brown on the outside.

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with pepper and salt; spread it between two thin slices of slightly buttered bread, cut it neatly into little diamonds, and serve.

A VENISON STEAK

A venison steak should be cooked in the same manner as a beefsteak. A little melted currant jelly is a pleasant addition. It is sometimes made in the form of a sauce by diluting the jelly

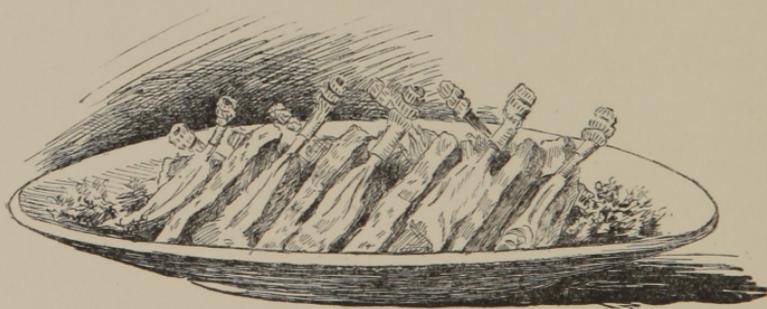


A VENISON STEAK

with water and thickening it with a little corn-starch or flour.

A MUTTON-CHOP

A cut from the loin is best. One containing a large tenderloin could be chosen for an invalid. Let it be cut thick and leave on it plenty of the fat. Broil as



CHOPS AND TOAST

described for beefsteak. Serve with mashed potatoes or other vegetables, and decorate it artistically. Chops may be served around the dish, with slices of

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toast between them, and a bouquet of parsley in the centre.

BREAST OF CHICKEN

For an invalid a chicken fricassee or a bit of boiled chicken is most desirable. The breast of a tender chicken, seasoned and rubbed with butter, and thrown on some burning charcoal which is not too hot, is very savory. If skilfully cooked the surface will be very little charred, and the inside will be tender and juicy. When done, season again with butter, pepper, and salt.

Another mode of cooking the breast of a spring chicken is to stick the leg-bone into the end (giving it the form of a cutlet), rub it with butter, and broil it carefully. The second joint of the leg of a chicken contains more juice and has more flavor than the breast.

A FRICASSEE OF CHICKEN

Cut two chickens into pieces. Reserve all the white meat and the best pieces; the remainder use to make the gravy. Put the latter pieces into a porcelain kettle with a quart of cold water, one clove, pepper, salt, a small onion, a little bunch of parsley, and a small piece of pork; let it simmer for half an hour, and then throw in the pieces for the fricassee; let them boil slowly until they are quite done, take them out then, and keep them in a hot place. Now strain the gravy, take off all the fat, and add it to a *roux* of half a cupful of flour and a small piece of butter. Let this boil a few moments, then take it off the fire and stir in the yolks of three eggs, mixed with two or three table-spoonfuls of cream and the juice of half a lemon. Do not let it boil after the eggs are in or they will curdle. Stir it well, keeping it hot a moment; then pour it

DIET IN ILLNESS AND CONVALESCENCE.

over the chicken and serve. Some of the fricassees with long and formidable names are not much more than wine or mushrooms, or both, added to this receipt.

CHICKEN CROQUETTES (Philadelphia Cooking-school)

To every pint of cold cooked chicken, chopped very, very fine, allow half a pint of cream or milk, one table-spoonful of butter, two table-spoonfuls of flour, one table-spoonful each of parsley and onion, chopped also very fine, a little nutmeg, salt, and cayenne pepper to taste.

Place the butter in a saucepan, and when it bubbles throw in the onion, parsley, and flour, and let them



CHICKEN CROQUETTES

cook a minute without taking color; then pour in the milk, stirring it well with an egg whisk until the mixture is quite even and smooth. Let it boil another minute to cook the flour thoroughly, then stir in the chicken pulp and seasoning. When cool, form into croquettes, roll in beaten egg and sifted cracker crumbs, put on ice for three hours, and fry by immersion in boiling lard. The paste will be rather soft to handle, but a cook can easily manage it with a little practice. Of course, the softer the paste the more creamy and soft will be the croquettes when cooked.

Croquettes are very good made with finely minced cold roast (not boiled) veal, instead of chicken. They resemble the chicken croquettes in flavor.

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Or they may be made of cold roast beef, roast lamb, mutton, cold cooked sweetbreads, cold fish, etc., instead of chicken. In case sweetbreads are used they are cut into dice rather than minced.

Chicken croquettes are much improved when served with brown, white, or tomato sauce. They are sometimes served with peas, etc.

CHICKEN WITH MACARONI OR WITH RICE

Cut the chicken into pieces; fry or *sauté* them in a little hot dripping, or in butter the size of an egg; when nearly done put the pieces into another saucepan; add a heaping teaspoonful of flour to the hot dripping, and brown it. Add a little cold or lukewarm water to the *roux*; when smooth add a quart or more of boiling water. Pour this over the chicken in the saucepan, add a chopped sprig of parsley, a couple of slices of onion, pepper, and salt. Let the chicken boil half or three-quarters of an hour, or until it is thoroughly done; then take out the pieces of chicken. Pass the sauce through a sieve, and remove all the fat. Have ready some macaroni which has been boiled in salted water, and let it come to a boil in this sauce. Arrange the pieces of chicken tastefully on a dish, pour the macaroni and sauce over them, and serve. Or, instead of macaroni, use boiled rice, which may be prepared in the same way as the macaroni.

PLAIN BOILED CHICKEN

Throw the chicken, cut into pieces, in plenty of boiling water (enough to have some left, after the boiling is over, for sauce). Boil slowly until the chicken is very tender, even if it takes all day. Thicken the gravy with flour, first rubbed smooth with a little cold water. Season with pepper and salt. A pot-pie addi-

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tion is generally made to this dish. Or the chicker may be served in the centre of a mound of boiled rice, garnished with slices of hard-boiled egg and parsley, and with the gravy poured over all.

FRIED SPRING CHICKEN

The excellence of spring chickens depends as much on their feeding as on their cooking. All chickens should be drawn as soon as killed, and are better if killed a day before cooking. Do not wash them. Several hours before cooking the chicken dismember it,



FRIED SPRING CHICKEN

and dip each piece hastily in a bowl of water; spread on the table, sprinkle pepper and salt over all, then turn and season also the other side. Roll each piece separately, while still wet, in flour. When ready to cook have two or three spoonfuls of lard in a *sauté* pan or spider quite hot, in which fry, or rather *sauté*, the chickens, covering them and watching that they do not burn. The quicker they are cooked without scorching the better. When done, arrange them on a hot dish, pour out the lard from the spider, leaving what will stick at the bottom. Pour in one or two cupfuls of milk, thicken it with a little flour (rubbed smooth with a little cold milk), season with pepper and salt, pass it through the gravy strainer, pour it over the chicken. Minced parsley is often added to the gravy. A circle of boiled rice or cauliflower around

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the chicken, with the white sauce poured over both, is very nice. Decorate with parsley.

CHICKEN TIMBALES

Cut off the white meat of a tender chicken, carefully remove skin, fat, and gristle, and pound in a mortar. Add the beaten white of an egg and strain through a fine sieve.

Open a can (sold for 90 cents) of truffles, and drain off the liquor. Add this to the chicken, with an equal quantity of strong white veal or chicken stock, and, if the latter is used, a very little gelatin dissolved in warm water; also the crumb of a white roll soaked in milk, and a little salt, pepper, and nutmeg. Strain again through a fine sieve, and stir in the white of a beaten egg and a gill of whipped cream. This may be done with an egg whisk.

Grease the timbale moulds thoroughly with butter, and decorate with the truffles sliced very thin and cut into shapes. Put in the chicken mixture carefully, pressing it against the decorations to keep them in place. Cover the moulds with greased paper and put in a slow oven, in a pan of hot water, for twenty minutes, or until the mixture is firm. Turn out and serve with white sauce in which the remains of the truffles have been chopped up.

This dish is far too rich for the average invalid, but it may be given in the last stage of convalescence. It would be much more wholesome and almost as good without the truffles.

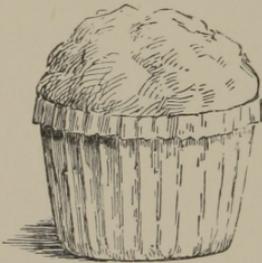
CHICKEN SOUFFLÉ

Chop half a pound of cold cooked chicken (freed from skin and bone) as fine as possible; pound it in the chopping-bowl—or, better, in a mortar; then rub it

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through a sieve with the edge of a large spoon. The white meat, although it has not the flavor of the dark meat, is better suited to this purpose.

Now make a *roux* in a saucepan, as follows: Place in it butter of the size of a pigeon's egg, and, when it bubbles, stir in with an egg whisk a dessert-spoonful of flour; when evenly blended stir in three-quarters of a cupful of hot water, and let it cook a few moments, stirring it smoothly together with the egg whisk; then stir in the chicken pulp and season it with salt and a little red pepper. Let the paste get entirely cold (covering it so that it will not get hard), then mix into it lightly, first the yolks of



CHICKEN SOUFFLÉ

two eggs beaten to a cream, then the whites of three eggs beaten to a stiff froth. Put it immediately into little paper soufflé cases, or silver scallop shells, or into a little pudding-dish. Bake about fifteen minutes in the oven, and serve immediately.

A SIMPLE ASPIC JELLY

Soak three-quarters of a box of gelatin for an hour, and add to one quart of very rich consommé two table-spoonfuls lemon juice, one wineglass Madeira, and salt and cayenne pepper to taste. Strain and clear with the shells and whites of two eggs.

CHICKEN JELLY

An invalid will often relish chicken jelly when neither broth nor meat will tempt him.

Cut a young fowl in half. Put one-half, cut up, with the broken bones, into two quarts of water, and

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simmer until the liquid is reduced to one-half. At the end of this time add a small slice of onion, a stick of celery, a dessert-spoonful of salt, and a little white pepper. Simmer for an hour or two longer. Place in an uncovered earthen-ware bowl to cool. When cold remove grease and clarify. If this is not stiff enough, add veal stock or a little gelatin. The meat of the remaining half-chicken may be broiled and served in this jelly.

A BIRD

broiled, as described for beefsteak, and served on toast, is good for an invalid who is convalescent, provided the bird is quite tender. It is not to be given to one whose digestion is weak.

BREAST OF PRAIRIE-CHICKEN

A breast of prairie-chicken broiled and served on toast is most digestible if tender. If not very tender it should be parboiled before broiling. Sometimes it is boiled with a little onion and parsley added to the water, and when done the gravy is strained and freed from fat, thickened with a *roux* (flour and butter), and seasoned with claret or sherry.

BROILED FISH

For this purpose a white fish from the lakes or a bass is generally used. The two sides of the fish are spread open by cutting partly through the back. It is seasoned with pepper and salt and sprinkled well with flour. The inside of the fish is first presented to the fire on a gridiron, well greased with lard or pork. As the fish can only be turned once, it must be watched carefully to avoid burning. Before turning, loosen the fish carefully from the gridiron with a knife or pancake-turner. If large, place a platter over the top, and in

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turning the gridiron the fish is left in the platter, whence it may be easily slid to the gridiron again for the purpose of cooking the other side.

When cooked, serve the inside of the fish uppermost on the platter, sprinkle over pepper and salt; add butter, minced parsley, and a little lemon juice. Place it in the oven for a few moments to soak in the butter, etc. Garnish with lemon slices and parsley.

BOILED FISH

The fish should be immersed, before cooking, in cold, salted water. It is generally served with a drawn-butter sauce, with an addition of chopped hard-boiled eggs or minced parsley, etc. Sometimes the fish is cut transversely into pieces about an inch and a half long and cooked *en matelote*, as follows: Sprinkle salt on them and let them remain while you boil two or three onions (sliced) in a little water. Pour off this water when the onions are cooked, and add to them a little pepper, about a teacupful of hot water, and a teacupful of wine, if it is claret or white wine, and two or three table-spoonfuls if it is sherry or port; now add the fish; when it begins to simmer throw in some bits of butter which have been rolled in flour. When the fish is thoroughly cooked (in about fifteen minutes) serve it very hot. Stewed fish is much better cooked with wine, but is very good without it, in which case add a little parsley. Decorate the dish with fancy cuts of toasted bread.

BASS À L'ESPAGNOLE

Cut a bass or a flounder into *filets* as follows: Lay the fish on the table, and with a thin, sharp-bladed knife cut down to the bone in the centre of the fish, following the course of the backbone from the head

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to the tail. Insert the knife in the cut already made and cut towards the fin, keeping the knife pressed close against the bone, taking off the whole side-piece, or *filet*. Take care not to mangle the flesh. Cut off all four of the side-pieces of the fish in the same way, and lay them with the skins downward on the table; holding the end of a *filet* with the fingers of the left hand, lay the blade of the knife flat on the table between the skin and meat, cutting from you. If the end is held firmly, and the knife laid flat, the whole *filet* can be cut from the skin without mangling it.

Broil the *filets* on an oiled gridiron over a moderate fire, spreading a little butter, pepper, and salt over them as they are cooking. Lay them on a hot dish and pour over them a sauce made as follows: Fry the slices of a quarter of an onion, partly coloring them in a little hot butter; at the same time a teaspoonful of flour may be thrown in to receive a little color. Pour in now a cupful of stock and a cupful of canned tomatoes, season with cayenne pepper and salt, and when it has boiled a couple of minutes, and is slightly thickened, pour it over the cooked *filets* without straining. Over the top of the dish sprinkle very finely minced parsley. Professional cooks sometimes add, also, minced mushrooms to the sauce.

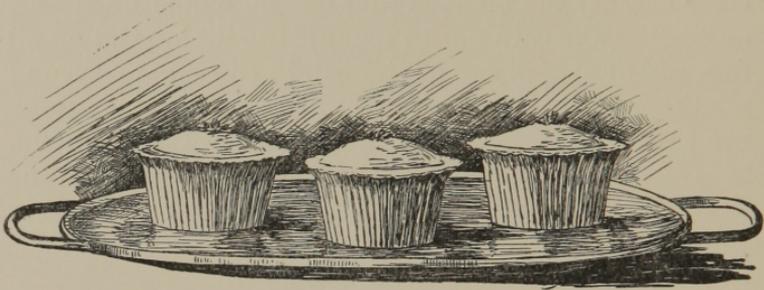
FISH À LA CRÈME

Boil one pint of rich milk. Mix two table-spoonfuls of flour with the same quantity of butter, and add to the milk, with a teaspoonful of salt, a little cayenne pepper, half a small onion chopped fine, a little parsley, the juice of half a lemon, and two table-spoonfuls of sherry.

Boil and flake one pound of some white fish. Put in a buttered baking-dish a layer of sauce, then a layer

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of fish alternately, finishing with sauce on top. Add sifted bread-crumbs, and bake from twenty minutes



FISH À LA CRÈME

to half an hour. Or it may be baked and served in individual dishes. This quantity will fill ten of these.

SOUFFLÉ OF SHAD ROE

Parboil, in salted water, half the roe of a shad. If large, take two-thirds of this quantity. Remove skin and separate with a fork. Stir in, while hot, two to three table-spoonfuls of butter, two beaten eggs, a tea-spoonful of salt and a little cayenne pepper, and set to cool. Half an hour before serving stir in lightly two table-spoonfuls of sherry, a gill of cream, whipped, and the beaten whites of two eggs. Cook covered for ten minutes and uncovered for ten minutes or longer, and serve immediately, with lemon and fried parsley.

SWEETBREADS

Professional cooks generally soak sweetbreads for an hour in cold water before cooking, for the purpose of making them white. The flavor is better, however, if they are thrown immediately into boiling salted water and cooked rapidly until thoroughly done (about twenty minutes). Remove, then, the skin and

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little pipes, sprinkle over pepper and salt, roll them in egg, peppered and salted, and then in fine sifted cracker-crumbs. Fry by immersion in hot lard, first testing it by throwing in a bit of bread, to see if hot enough. Serve immediately with either tomato sauce (p. 174) or a plain white sauce (see next receipt). A circle of rice (boiled in milk) or boiled macaroni, or some flowerets of cauliflower, with the white sauce poured over both, is very good. Sweetbreads are often served with peas. The flavor of sweetbreads is much better if they are cooked to completion when once begun. It is not so well to parboil and allow them to get cold before frying.

SWEETBREADS, WITH CREAM DRESSING, ON TOAST

Boil a pair of sweetbreads as indicated in the last receipt, and, when they have been skinned and the pipes have been removed, cut them into good-sized dice. Then mix them with a sauce made as follows: Place in a little saucepan butter of the size of a black walnut, and when it bubbles throw in a dessert-spoonful (half an ounce) of flour; let it cook without coloring, then pour in gradually, stirring with an egg whisk, one and a half cupfuls of milk, or half milk and half cream; season it with salt and a suspicion of red pepper. This is seasoning enough for any invalid, yet sometimes a little nutmeg and sometimes grated cheese is also added. When the sauce is smooth mix in the sweetbread dice, and when all is thoroughly hot serve the sweetbread immediately, poured over buttered toast, partially moistened with hot water. Decorate the dish with parsley or small leaves, or asparagus or cauliflower may be placed around the sweetbreads.

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OYSTERS IN SHELLS OR PAPER CASES

Oysters may be served in paper cases, or in shells, if convenient.

Put one quart of oysters (about twenty-five) on the fire in their own liquor. The moment they begin to boil, turn them into a hot dish through a colander, leaving the oysters in the colander. Put into the saucepan two ounces of butter (the size of an egg), and when it bubbles sprinkle in one ounce (a table-spoonful) of sifted flour; let it cook a minute without taking color, stirring it well with a wire egg whisk, then add, mixing well, a cupful of the oyster liquor. Remove from the fire and mix in the yolks of two eggs, a little salt, a very little cayenne pepper, one teaspoonful of lemon juice, and one or two gratings of nutmeg. Beat it well; then return it to the fire to set the eggs, without allowing it to boil. Put in the oysters, place in cases or shells, sprinkle over bread-crumbs, and brown slightly with a salamander or hot shovel.

OYSTER CROQUETTES

Place a pint of oysters (the measure nearly solid with oysters) over a fire, with a quantity of their own liquor; when they begin to simmer drain them quite dry from their liquor (through the colander), and cut them into large dice. If the oysters are small, cutting them into three or four pieces each will be sufficient.

Next, place butter the size of a black walnut in a little saucepan, and, when it bubbles, throw in a dessert-spoonful of onion, minced fine; let it fry a couple of minutes without taking color; then add a table-spoonful (quarter of a cupful) of flour; let it cook a few moments without taking color; then pour in half

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a cupful of cream or milk, and half a cupful of the oyster liquor; season with salt, cayenne pepper (very carefully), and a few dashes of nutmeg. When it is evenly mixed and the flour is thoroughly cooked (a couple of minutes), take it from the fire, stir in the oysters, and set it away to get cold. Mould the croquettes, roll in egg (slightly seasoned with pepper and salt) and sifted cracker-crumbs, and fry them by immersion in boiling lard.

They may be served with or without any of the sauces which are suitable for fish or meat; for instance, drawn-butter sauce, with either chopped hard-boiled eggs or capers mixed in, bechamel sauce, the simple brown sauce, etc.

Serve them hot, directly from the fire.

OYSTERS ON TOAST

Put into a chafing-dish a table-spoonful of butter, a dozen large oysters (with the muscular portion removed), a saltspoonful of salt, a little pepper, and a dash of nutmeg. When thoroughly heated, stir in a gill and a half of cream. Pour over hot buttered toast and serve immediately.

This may be varied by the addition of a glass of sherry to the above receipt; or, when the oysters are thoroughly heated, the beaten yolks of two eggs may be added and one gill of cream.

This dish is recommended for diabetics, if toast made of gluten bread is used.

ANGELS ON HORSEBACK

This receipt is well known in England, but is probably new to most American readers.

Cut the rind from three very thin slices of bacon. Extract the large muscle from three oysters, place

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one on each slice of bacon, and add two or three drops of lemon juice and a very little cayenne pepper. Roll the bacon tightly around the oyster, place it on a skewer, fry, and serve each oyster on a small slice of toast. They should be served very hot. Or they may be left on the skewer and served with hot toasted soda-crackers.

VEGETABLES

“The sure guide of man and animals,” says Liebig, “has taught us how to counteract the deficiencies in alkalis of veal, fish, and eggs by the addition of vegetables, potatoes, or salad. Kitchen vegetables, in this point of view, fill up many blanks.” The salts contained in vegetables are also very useful in the assimilation of food.

A BAKED POTATO

A potato baked, when properly prepared, is probably the most digestible form in which it can be served. The excellence of a baked potato depends much upon its being served *immediately* when cooked to a turn. A moment underdone and it is indigestible and worthless; a moment overdone and it has begun to dry. It requires about an hour to bake a large potato in a hot oven. When served and mashed, the addition of some cream and a little salt is an improvement.

TO BOIL POTATOES

Choose those of equal size. Take off a very thin peeling, as the best of the potato lies nearest the skin. Put them into enough well-salted cold water to cover them; let them boil till thoroughly done, and do not let them remain a moment longer. Drain off the

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water, cover them closely, and set the vessel at the side of the fire, to allow them to steam for several minutes. Keep the potatoes covered while steaming, for the purpose of retaining heat enough to draw out the moisture. The escaping moisture, though covered, will not return to the potatoes. Sprinkle over some salt as soon as they are fully steamed. It requires about thirty-five minutes to boil medium-sized potatoes.

A copper saucepan, or an iron pot retaining an even heat, should be used for boiling potatoes—never a tin saucepan.

POTATOES À LA CRÈME

Cut cold boiled potatoes into little square bits or dice a third of an inch square; mix them with enough white sauce to moisten them, made as follows: Place a table-spoonful of butter in a small saucepan, and when it bubbles throw in a table-spoonful of flour; cook it a minute without coloring, then add a pint of milk (or half milk and half cream); season with a level teaspoonful of salt, a pinch of pepper, and a little nutmeg. This will make a pint of cream sauce, and will be sufficient for a quart of potatoes.

Place a little butter or dripping in a frying-pan (or *sauté* pan), and, when hot, put in the moistened potatoes; color them on one side, loosen them from the pan with a pancake-turner, turn them like an omelet on a platter, and serve.

POTATOES À LA CRÈME, AU GRATIN

Delmonico serves potatoes as prepared in the preceding receipt, and, instead of *sautéing* (or frying) them, they are placed in a basin or pudding-dish, sprinkled over with cracker-dust and a little grated

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cheese, and then colored in the oven. It is perhaps better after they are thoroughly heated in the oven to color them with a salamander or hot shovel, leaving no chance for the potatoes to become dry by too long a process of heating.

A PRETTY SPINACH DISH

In picking over the spinach separate the thick stalks from the leaves. A bright green color is given to it by throwing it into plenty of well-salted water when it is boiling very fast. It should be taken out the



A SPINACH SUNFLOWER

moment it is soft, for allowing it to remain too long will impair its color. Drain it well, and do as you please about putting it through a colander. Just before serving, reheat it on the top of the range, adding a little butter, pepper, and salt. Serve enough for one person on a small square piece of toast, flatten the top, and decorate it with some finely chopped hard-boiled egg, the yolk thickly sprinkled in the centre and a circle of white around. This will resemble a sunflower.

SPINACH SOUFFLÉ

Boil a quarter of a peck of spinach, with a saltspoonful of bicarbonate of soda to keep it green, and a saltspoonful of salt. Squeeze very dry. When cold beat it into the beaten yolks of two eggs, with two table-spoonfuls of sherry, a little cayenne pepper, a dash of nutmeg, if desired, and a gill of whipped cream. Twenty-five minutes before serving whip in the beaten yolks of four eggs, put a little butter on top, and sift

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over it a small teaspoonful of granulated sugar. Bake from eight to ten minutes covered, and ten minutes uncovered. Serve immediately.

BEETS OR CARROTS À LA CRÈME

Boiled beets or carrots, sliced, are mixed in cream sauce as described for potatoes *à la crème*, except that in the place of nutmeg a table-spoonful of finely minced parsley is added. The appearance of the vegetables is improved by cutting them with fancy vegetable cutters. There must not be too much sauce—only a soft coating around each slice of beet or carrot.

CAULIFLOWER À LA CRÈME

Cauliflower and the other plants of the cabbage family are generally indigestible. They contain, however, valuable salts.

The boiled cauliflower, cut into flowerets, is mixed with cream sauce (to which a little of the water in which the cauliflower was boiled has been added), as described for potatoes *à la crème*, and, when placed in a dish for serving, the top is sprinkled over with rather coarse bread-crumbs, which have been colored (*sautéé*) in a little butter.

Sometimes the top is sprinkled with sifted cracker-crumbs and grated cheese, and is then colored with a red-hot shovel. Served in shells or paper cases, the dish is especially attractive. Sometimes the sauce is finished by stirring in the beaten white of an egg just before it is taken from the fire. It makes also a good sauce for asparagus, using for this the water in which the asparagus was cooked.

PEAS

Green peas contain little or no sugar, and may therefore be used freely by almost all invalids. They

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should be shelled and boiled in salted water (in which the pods have been previously boiled) until tender, drained, and served with a little butter, cream, pepper, and salt. They are excellent cooked and served, as in France, with young spring onions, adding a little sugar—one table-spoonful to a quart—and melted butter. The English cook them with lettuce leaves, mint, and a little sugar.

When canned green peas are used, they should be drained in a sieve as soon as the can is opened, rinsed in warm water, and placed in a saucepan to heat thoroughly. They do not require cooking. Add, before serving, butter, a little salt, and, if desired, pepper and chopped parsley.

DRIED PEAS

Dried peas are not very digestible, but may be served prepared as follows: Soak one pint of dried peas, and boil in salted water until soft; strain; add, while hot, one cupful hot water, a little stock, two ounces butter, a saltspoonful of salt, and some pepper. The mixture should be rather highly seasoned to be palatable. It may be passed through a colander (to look like vermicelli) or through a pastry bag, and used as a garnish.

STUFFED TOMATOES (*Chef Cuppinger*)

For eight tomatoes make a stuffing as follows: Ingredients—butter, the size of an egg; half an onion cut fine; three-fourths of a cupful of either chicken livers or cold cooked chicken, or meat of any kind, chopped fine; three sprigs of parsley chopped fine; one and a half cupfuls of bread-crumbs, after they have been soaked in water and squeezed dry by wringing in a clean towel; one large tomato cut fine; one

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egg; half a saltspoonful of thyme; a pinch of cayenne pepper; salt.

Place the butter in a saucepan, and when it bubbles add the minced onion. When it has colored slightly add the meat, bread-crumbs, and all the other ingredients.

Fill the tomatoes (with the tops cut off and interior partly removed) with this mixture, letting it rise from half an inch to an inch above the tomato.

Place the stuffed tomatoes in a little baking-pan, sprinkle cracker-crumbs, also a bit of butter, over each one. Bake them in the oven about fifteen or twenty minutes. Tomatoes should never be cooked or allowed to stand in a tin, copper, or iron vessel.

They should be served with a brown sauce made as follows:

BROWN SAUCE

This is made with little trouble, although there are many kinds of brown sauce which are not so simple.

In a small saucepan place butter the size of a walnut, and when it bubbles throw in a table-spoonful of minced onion; when beginning to color add a table-spoonful of flour, which allow to color also. Now add one and a half or two cupfuls of stock if you have it, and, if not, water, and two or three sprigs of parsley. Let it cook a couple of minutes, season with a little pepper and salt, pass it through the gravy-strainer, and add one or two table-spoonfuls of almost any kind of wine—sherry being generally used.

STUFFED PEPPERS (*Chef Cuppinger*)

This is an especially nice dish. As a course for a luncheon or dinner it may be better than for the invalid. Yet, as an appetizer, it would not be unfit

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sometimes for the latter. Use the green or red peppers of round shape; cut them lengthwise, and remove the interior, seeds and partitions; cover them with cold water and parboil them five minutes. Now proceed with them as for stuffed tomatoes, serving them also with the brown sauce.

Care must be taken not to have too much cayenne pepper in the stuffing for the peppers.

CORN CUSTARD

Strip the husk and silk from six ears of corn, put in boiling water (unsalted), and boil for ten minutes, or until tender. Slit the rows of grains on the ears lengthwise with a sharp knife, and then pass the back of the knife down the rows, removing the inside and leaving the outer hull on the cob. Add one tablespoonful of flour, a saltspoonful of salt, and a little pepper. Beat the yolks and whites of four eggs separately. Beat into the yolks one-half pint milk, then add the whites, and finally the corn. Put bits of butter on top, and bake for half an hour.

CORN SOUFFLÉ

Grate the corn from six ears. Add a teaspoonful of salt, a little cayenne pepper, and a table-spoonful of flour. Beat the yolks of four eggs; beat in the corn and a pint of cream whipped. At the last moment add the beaten whites of four eggs. Put bits of butter on top, and bake from twelve to twenty minutes. Serve immediately.

ASPARAGUS

Asparagus is especially recommended for diabetics. It should be scraped, the stalks cut even, tied together, placed upright in a saucepan of boiling water, and

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cooked until tender. It may be served on a folded napkin, or on toast which has been slightly buttered and moistened with the water in which the asparagus was boiled. This water should be used also in making the white sauce, which is served separately; or plain melted butter may be used instead.

The tips of the asparagus, not more than an inch and a half long, boiled tender in salted water, are often relished by invalids, served with chicken, game, etc.

CELERY

Celery is not always digestible in its raw state, but it is a nerve tonic and is appetizing. It should not be kept in water, but on ice, and every stalk must be carefully wiped before serving.

Split and curled, it forms a dainty garnish for birds, etc., and it makes an excellent salad.

Celery may also be parboiled and stewed, and served with a brown sauce, using in its preparation the water in which the celery was boiled, which will be found to contain much of the flavor and essence of the vegetable.

ONIONS

These may be boiled or fried, but should be used with caution where there is a tendency to inflammation or fever.

SALADS

Salads are recommended for invalids who are able to digest them. It should always be remembered that some digestions will not tolerate uncooked fruit or vegetables. The virtues of salads consist in the fact that they are grateful to the palate, thereby stimulating the appetite, and also that they are generally cooling to the blood.

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The constant serving of mayonnaise dressing should not be encouraged, but its occasional use, as well as the constant use of French dressing, is rarely injurious. In preparing all vegetables having considerable pulp—



A CAULIFLOWER SALAD

like tomatoes, cauliflowers, etc.—care should be taken to marinate them—*i.e.*, to sprinkle them with vinegar and salt, and to keep them on the ice for some time before serving.

Meat, lobster, and fish salads should not be offered to the invalid, as they are almost invariably indigestible.

Lettuce, tomatoes, cauliflowers, asparagus, string-beans, cucumbers, beets, celery, and potatoes make excellent salads, alone or in combination. Several of these vegetables may be combined, marinated, mixed with mayonnaise, and placed in the centre of a mould of chicken jelly (p. 194), to which a table-spoonful of lemon juice or tarragon vinegar, and, if allowed, a claret-glass of Madeira, have been added.

Salads may be garnished with lettuce, cresses, olives, etc. A pretty addition is a wreath of nasturtiums, whose seeds add an agreeable pungent flavor.

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MAYONNAISE DRESSING

Ingredients: The yolk of one egg; half a teaspoonful of salt; a little cayenne pepper; a teaspoonful and a half of vinegar or lemon juice and a gill of olive oil.

Carefully separate the yolk and white of one egg, which has been on the ice for an hour. Put the yolk in a bowl, which in warm weather should stand in a larger bowl of cracked ice.

Beat the egg moderately, and stir in the salt, a dash of cayenne pepper, and, if preferred, a teaspoonful of mustard. Some cooks add the yolk of a hard-boiled egg, to prevent curdling. Work well together, then add, drop by drop, a little oil, alternating, as the mixture thickens, with a few drops of vinegar. If too much is added at once the mayonnaise will curdle. If it does, beat in the yolk of another egg, with salt.

The secret of making good mayonnaise is to have the yolk entirely free from the white of egg (which makes it watery), to have the ingredients cold, and to mix in the oil slowly. Mayonnaise may be colored green with spinach juice, red with the coral of lobster, etc., but such fanciful decorations are rarely demanded in dishes for an invalid.

To make mayonnaise without eggs, put a little melted aspic jelly (p. 194) in a bowl surrounded by ice, whip until light, and add oil, etc., as for a regular mayonnaise.

Mayonnaise may also be made with cream instead of oil.

Sauce Tartare is prepared by adding to mayonnaise dressing a table-spoonful of capers, a few olives (sliced or chopped), two small green pickled cucumbers, and, if desired, a little spinach coloring. This may be strain-

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ed before or after the olives and capers are added. If used for fish, a little onion juice may be beaten into the mayonnaise.

FRENCH DRESSING

Ingredients: Three table-spoonfuls of olive oil; one table-spoonful of vinegar (a little less if the vinegar is very strong); a saltspoonful of salt; half a saltspoonful of pepper; and, if preferred, an even teaspoonful of onion minced very fine. The salt, pepper, and vinegar are first mixed together; then the oil is mixed in by degrees, and lastly the vinegar.

ASPARAGUS JELLY

Ingredients: One pint clear veal stock, in which the stalks of one bunch of asparagus have been boiled; one-half box gelatin dissolved in half a cupful of cold water; the tips of one bunch of asparagus parboiled and marinated; and a little mayonnaise dressing.

Mix stock, while hot, with dissolved gelatin; strain at once through a jelly-bag.

Pour into a mould, previously wet with cold water, enough jelly to coat the sides. While still half firm, arrange the asparagus tips in the mould, with a little mayonnaise dressing. Let it harden; then fill with more stock, and put on the ice until quite firm.

The mould should be placed for an instant in hot water before serving, so that the jelly may turn out without difficulty.

Aspic jelly (p. 194) may be used instead of veal stock. It is more highly flavored, but not quite so delicate.

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TOMATO JELLY

Ingredients : One can tomatoes ; half a box of gelatin soaked for an hour in half a pint of water ; a teaspoonful of salt ; and some cayenne pepper (of which more than a dash is required).

Bring tomatoes, with salt and pepper, to a boil ;



TOMATO JELLY

strain through a colander, and, while hot, add gelatin. Pass through a jelly-bag, and pour into a mould which has been filled with cold water.

This is a beautiful and delicious dish, prepared in a ring mould, garnished with nasturtiums and their leaves, and the centre filled with mayonnaise dressing.

PUDDINGS, ETC.

CORN COTTAGE - PUDDING

Ingredients : One cupful of corn-meal ; half a cupful of sugar ; one cupful of milk ; one table-spoonful of lard (the size of a small egg) ; three eggs ; one teaspoonful of baking-powder ; a little salt.

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Mix the baking-powder and salt well into the meal; then add the sugar and yolks of the eggs, well beaten together, the lard (melted), the milk, and the whites of the eggs, which have been beaten to a stiff froth. Mix this smoothly, pour it immediately into a buttered tin, and bake about twenty minutes. Take care to have the pudding baked just in time to be served. It is to be eaten hot with a liquid sauce. The following is a simple one:

PLAIN PUDDING SAUCE

Ingredients: One pint of water (two cupfuls); three-fourths of a cupful of sugar; a piece of butter the size of a walnut; a table-spoonful of corn-starch or flour; flavoring of brandy, rum, lemon, or wine (with or without a little nutmeg), or of zest and cinnamon.

When the water boils, stir in the corn-starch or flour (rubbed smooth with a little cold water) and the sugar. Boil for four or five minutes, to cook the corn-starch or flour thoroughly. Take it from the fire, and stir in the butter and flavoring.

This is a good, plain sauce; it is improved, however, by adding the well-beaten whites of one or two eggs, and stirring with the egg whisk for a minute over the fire to set the egg and make the sauce quite smooth.

GRAHAM - FLOUR PUDDING

Ingredients: One and a half cupfuls of Graham flour; half a cupful of molasses; a fourth of a cupful of butter; half a cupful of sweet milk; one egg; an even teaspoonful of soda; three-quarters of a cupful of English currants or raisins (or both), lightly dusted with flour.

Pour into the flour the molasses, the butter partly melted, the egg (beaten), and the fruit. Mix all evenly

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together, then add the soda, dissolved in the milk. Steam two and a half or three hours.

A double tin pail (see cut, p. 99) is best adapted for steaming. The water in it should be boiling when the pudding is first placed in it, and, when it needs replenishing, *boiling* water should be added, so that it should at no time cease boiling. Serve with plain sauce (see p. 214).

FARINA PUDDING

Ingredients: One pint of milk; three-quarters of a coffee-cupful of farina; half a cupful of sugar; butter the size of an egg; the thin yellow rind of a lemon; four eggs.

When the milk is just boiling add the farina, and after it has cooked for a few minutes stir in the sugar, lemon peel, and butter; let it cook slowly for half an hour, then take it from the fire, and, when slightly cooled, stir in smoothly the yolks of two eggs. Take out the lemon strips. When the mixture is *quite cold*, stir in lightly the whites of the four eggs, beaten to a stiff froth, and put it in a high mould or long tin pail, prepared as follows: Butter the inside with a glazing brush, throw in a handful of sugar, and leave in the mould all the sugar that will stick to the sides; then add the pudding, and place the mould in a basin of water, the water more than half the height of the mould. Let it cook (*au bain-marie*) on the top of the range for ten minutes; then put all (including basin of water) in the oven to bake for an hour. Serve immediately with currant-jelly sauce, or Sauce Burke (p. 216).

QUOGUE PUDDING

Ingredients: Five Boston soda-crackers, or three-fourths of a cupful when rolled; a quarter of a cup-

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ful of flour; two eggs; a generous half-cupful of milk.

Roll the crackers, stir in the milk, then the flour and eggs (beaten separately). Cover it tightly in a mould or small tin pail, and boil it half an hour in a large vessel of boiling water. Serve with a hard sauce of butter and sugar rubbed to a cream with nutmeg sprinkled over, or with Sauce Burke or a currant-jelly sauce, or any of the pudding sauces.

MACARONI PUDDING

is merely a baked custard pudding (p. 227) with one-quarter the quantity of fresh-boiled macaroni added—of course before the custard is baked.

FINE GRANULATED WHEAT PUDDING

Ingredients: A scant half-cupful of the wheat; one cupful of milk; two eggs; butter the size of a small hickory nut; a pinch of salt.

Bring the milk to a boil, then add the wheat and salt, and cook about five minutes. Take it from the fire, and add the beaten yolks and the butter. Let it get cold, then add the whites of the eggs, beaten to a stiff froth. Place it immediately in the oven, and cook about twenty minutes.

In cooking all *soufflé* puddings, the oven should be hot, and for the first two or three minutes after the pudding is put in, the oven door should be slightly open, so that the pudding may become heated through before it begins to rise. This pudding may be served with or without a sauce.

SAUCE BURKE

Bring a pint of milk to the boiling-point, and then stir in a generous teaspoonful of corn-starch (previ-

FOODS

ously rubbed smooth with a little of the cold milk) and a table-spoonful of sugar. Let it boil for two or three minutes, to cook the starch thoroughly, and let the mixture get cold. Flavor it with sherry or any of the flavorings, and just before serving stir in evenly the whites of two eggs beaten to a stiff froth. As the egg froth is not cooked, the sauce should be served within half an hour. This is a delicious pudding sauce.

SAUCE GUILLOD

Whip the whites of two eggs to a very stiff froth; the froth of one egg should more than fill a goblet if properly whipped. In a small saucepan put two table-spoonfuls of granulated sugar, with two table-spoonfuls of water; let it cook without stirring for three or four minutes, or until it forms a syrup, not quite thick enough to candy. It must be watched carefully. Stir in the egg froth with an egg whisk vigorously for a minute at the side of the fire. Stirring will give the froth a fine grain. Take it from the range and add enough fresh lemon juice to take away the excessive sweetness of the *mêringue*.

OTHER SOUFFLÉ OR PUFFED PUDDINGS

The last-named pudding (fine granulated wheat) may be made as well with rice, farina, granulated oats, granulated barley, etc. It is especially good made with crushed barley. The barley must be boiled in water for twenty minutes before it is added to the milk, etc.

BARLEY PUDDING (simple)

Ingredients: Two cupfuls hot milk; half a cupful of barley; one table-spoonful sugar and a little salt. Into the pint of hot milk stir the barley. Season with

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a pinch of salt; add a table-spoonful of sugar, and place the mixture in the oven for about twenty minutes; stir it occasionally until the barley has swelled, then add half a cupful of hot milk and bake slowly for an hour.

ORANGE PUDDINGS À LA MUTREUX

Soak a cupful of stale bread in half a cupful of milk until it can be beaten to a pulp; mix with it the grated rind of one orange, the juice of two, sugar to taste, and the yolks of two raw eggs; butter six small cups, and set them in a pan of hot water; then beat the whites of two eggs to a stiff froth, mix them lightly with the other ingredients, partly fill the cups; and bake the puddings, until the egg is cooked, in a moderate oven. About fifteen or twenty minutes will be required. Serve the puddings hot.

LEMON (health-food) PIE OR PUDDING

For two pies, rub until smooth two heaping table-spoonfuls of granulated wheat or barley and one table-spoonful of corn-starch (a scant three-quarters of a cupful altogether) with six table-spoonfuls (a scant half-cupful) of cold water. Add to this two cupfuls of boiling water, and let it simmer over the fire three or four minutes, until the flour is thoroughly cooked. Take it off the fire, and when partly cooled add the yolks of three eggs (beaten, with one and a half cupfuls of sugar, to a froth), a piece of butter the size of a black walnut, and the grated rind and juice of a large lemon. Bake with under crusts, and when done spread over the top the beaten whites of three eggs, with a heaping teaspoonful of sugar added (after they are beaten); color in the oven.

The pie is much more attractive if the *meringue* is

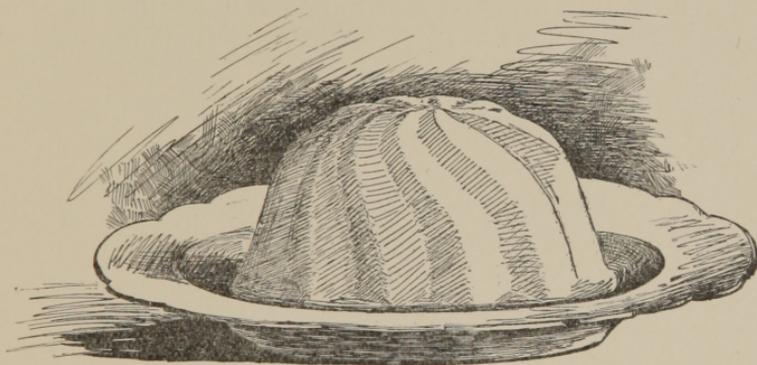
FOODS

put on in a fancy design, with a paper funnel, made with thick writing-paper and a pin, or with the *mé-ri-ningue* decorator used by professional cooks. The egg froth should be slightly sweetened, and flavored by stirring in the yellow cuts of lemon peel, which are afterwards removed. The lemon peel gives delicate flavor as well as color to the *mé-ri-ningue*.

The pie-paste may be made with half Graham flour (sifted) and half white flour, a little baking-powder, and mixed with cream. The crust may be rubbed over with the beaten white of an egg before the custard is added, which will prevent it from soaking into the crust. The custard may be baked in a little pudding-dish without pie-crust; this is preferable, as pie-crust rarely suits the digestion of an invalid.

GRAHAM SPONGE-CAKE

Ingredients: Six eggs; three cupfuls sugar; four cupfuls flour (sifted Graham flour recommended); one



GRAHAM SPONGE-CAKE

cupful of cold water; two teaspoonfuls of baking-powder; juice and grated rind of half a lemon; a little salt.

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Mix the yeast powder and salt well into the flour, sifting it twice; stir the yolks and sugar to a froth; add first to the flour, etc., the yolks and sugar, then the whites (beaten to a stiff froth), and then the lemon and water. The materials should be all ready—*viz.*, the pans buttered, the flour and sugar sifted, the lemon grated, strained, etc.—so that no time will be lost in mixing them together and getting them quickly into the oven.

A sponge-cake is often covered with a wafer thickness of icing, made by stirring a heaping cupful of pulverized sugar into the white of an egg (not previously beaten), and flavored with lemon, orange, or rum, etc. This receipt cannot be recommended for an invalid whose digestion is weak, on account of the amount of baking-powder which it contains.

DISHES OF ALMOND FLOUR AND MEAL (for diabetics)

The writer, after repeated efforts, has failed to procure almond flour in this country. It is made in England, and was prepared several years ago by the Health-food Company. But the writer is informed that as it did not keep—*i.e.*, quickly became rancid—it is no longer manufactured here.

Almond meal, a different preparation, may be obtained in bottles from the Battle Creek Health-food Company, Michigan, and in bulk from certain grocers. The writer finds that it may be used for many of the receipts in which white water-ground corn-meal is indicated, since it is very nearly of the same consistency.

The following receipts, for patients suffering from diabetes, will often prevent the craving for forbidden sweets, which is one of the characteristics of that disease.

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ALMOND PUDDING

This receipt is adapted from Mrs. Ernest Hart's *Diet in Health and Disease*, London, 1894, p. 141.

Ingredients: Three eggs; a quarter of a pound of butter; a quarter of a pound of almond flour; a little salt; two and a half tabloids of saccharin (dissolved in a table-spoonful of brandy); essence of lemon to taste.

Beat the yolks; beat in the almond flour, the butter (warmed), the essence of lemon, and, finally, the stiffly frothed whites of the eggs.

Put into buttered individual moulds, or into a single buttered mould, and bake in a quick oven.

Serve with a hot sauce, made of dry sherry and saccharin.

ALMOND BREAD

Beat to a froth the yolks of three eggs. Add gradually two to two and a half ounces of almond meal and a little salt. Finally, beat in the whites of three eggs, stiffly frothed, and bake immediately in a rather tall, square, buttered mould.

Allow to cool; cut in slices half an inch thick; place these crosswise on a flat plate; and put in a quick oven until colored a light brown. Or the almond bread may be sliced and toasted and served with butter. If sweetened, use one-quarter of an ounce of saccharin syrup (see p. 56); this makes an excellent cake. The receipt may be varied by using two ounces of almond meal and half an ounce of aniseed.

ALMOND MACAROONS

Beat to a froth, separately, the yolks and whites of two eggs. Beat gradually into the yolks four ounces

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of almond meal and a little salt. Add a quarter of an ounce of saccharin syrup (see p. 56), and beat in, finally, the whites of the eggs. Allow a table-spoonful of the mixture for each macaroon, and bake immediately on buttered paper in a quick oven.

JELLIES

In hot weather all dishes made with gelatin require more of this ingredient than these receipts call for. Gelatin dissolves quickly in a warm temperature. The boiling water used should always be "on the first boil."

The flannel jelly-bag should be wrung out in boiling water, just before and after using. If the jelly is not clear the first time it is strained, wring out the bag in boiling water and strain again.

Jelly moulds should be filled for an hour with cold water, which should be poured out just before they are required to be used. Jelly hardens much more effectually if the mould is placed, while it is warm, on the ice. The mould should be dipped in hot water, or surrounded with a hot cloth for an instant before serving, in order that the contents may turn out readily.

Fruit juices may be strained through filter-paper before using, so that they may not cloud the jelly.

The writer gives several receipts for *colored* jellies, as, if daintily prepared and served, they sometimes stimulate not only the appetite but the interest of the patient; and this is especially desirable in cases of chronic illness, when it is essential to avoid monotony in diet.

Like plain wine jelly, colored jelly may be served in a ring-mould, with whipped cream in the centre; also

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in individual moulds, representing fruits in their appropriate coloring, and surrounded with natural leaves; in flower-moulds, etc., etc. These arrangements are decorative, and, as a novelty, may attract the invalid.

There are several American coloring preparations which are recommended, and the French *Couleurs Breton* are guaranteed to be harmless. The writer finds it impossible to obtain in New York Michie's flavoring extracts, made in Toronto, Canada, which are transparent and especially suitable for jellies.

As the quantity required varies with the different makes, the amount used is not specified.

ASPIC JELLY (see p. 194).

CHICKEN JELLY (see p. 194).

TOMATO JELLY (see p. 213).

ASPARAGUS JELLY (see p. 212).

WINE JELLY (No. 1)

Ingredients: One box gelatin dissolved in a half-pint of cold water; one pint sherry; the strained juice and thin shreds of the rind of three lemons; one and a quarter pounds (or less) of cut loaf-sugar; the well-beaten whites and the shells of two eggs; a small stick of cinnamon, and a quart of boiling water.

Pour the boiling water over the dissolved gelatin, stirring well. Add the sugar, cinnamon, lemon juice, and shreds of lemon peel; or the lemon zest may be obtained by rubbing the lumps of sugar on the lemon.

Put the jelly in a porcelain-lined kettle, and bring to a boil without stirring. Add shells and beaten whites of eggs. Remove from the fire, leave for half a minute to settle, and then skim. Add the wine. If the wine is not perfectly clear it may be poured in before the white of eggs and shells, but it loses strength

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if so added. Pass the jelly through the bag while warm, into moulds, and place on ice.

WINE JELLY (No. 2)—(without cooking)

Ingredients: One pint sherry, Madeira, port, or champagne; one pound sugar; half a package of gelatin dissolved in half a cupful of cold water; one pint boiling water; and the strained juice and shreds of peel, or zest, of two lemons.

Add the sugar to the boiling water and stir in the dissolved gelatin. Add the lemon juice and wine, and strain through a jelly-bag. Mould and put on the ice.

Wine jelly whipped until it is a white froth, and placed on the ice until very cold, is often relished, as it is cooling and refreshing.

MARASCHINO JELLY

Jelly of maraschino, brandy, noyau, or other liqueur may be made by the last receipt, using, instead of the wine, a little over half as much liqueur.

COFFEE JELLY (*Chef* Cuppinger)

Soak three-quarters of a box of gelatin (or ten sheets of the common gelatin) in a half-pint of cold water until dissolved; then add a pint of boiling water, two cupfuls of sugar, and one pint of clear, *strong* (so the *chef* said) coffee. But the coffee need not be so very strong. Mould it. Surround coffee jelly, when on the platter ready to be served, with whipped cream. The sugar may be omitted from the jelly, and the cream sweetened.

CURRANT JELLY

Pick out the leaves from the currants, but not all the stems. Mash the currants with a potato-masher,

FOODS

and cook them enough to free the juice, without adding any water. Strain the juice, and allow one pound of sugar to one pound of juice. Boil the juice fifteen minutes after measuring it, and then take it from the fire and add the sugar, allowing it to dissolve without further boiling or cooking of the juice. When the sugar is well dissolved and mixed with the juice, pour it into glasses. Fasten the covers when the jelly has hardened.

Currants should not be plucked just after a rain.

EMERALD JELLY

To one pint of Rhine wine add one pound of sugar, half a package of gelatin (previously dissolved in half a cupful of cold water), one pint of boiling water, and the juice and zest of two lemons, strained through filter-paper. Prepare like Wine Jelly (No. 2), and add, in straining through the jelly-bag, enough green coloring to produce an emerald green. This jelly, served in a ring-mould, with strawberries or other berries in the centre, makes a really beautiful dish.

RUBY JELLY

This is prepared in the same manner as emerald jelly (see above), except that claret or Burgundy is used instead of Rhine wine. It is pretty when served in a mould with whipped cream around it. A paler red jelly may be made by the use of white wine with a little carmine coloring extract. Pink jelly made with the pink gelatin is charming moulded in the form of roses.

AMETHYST JELLY

To one pint of Sauterne add one pound of sugar, half a package of gelatin (previously dissolved in cold water), and one pint of boiling water.

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Amethyst jelly is prepared like emerald jelly (see above), using Sauterne instead of Rhine wine; adding violet instead of green coloring extract. It should be deeper in color than violet jelly (see below), and differs from it, of course, in flavor.

ROSE JELLY

To two cupfuls granulated sugar add a scant cupful of cold water and let it stand for an hour. Then put it on a hot part of the range (it is well to place it on an asbestos mat), where it can boil without burning. *Do not stir it.* Let it boil about twenty minutes, or until a teaspoonful dropped into a glass of water falls to the bottom in little lumps. It must be tested to ensure accuracy. When cooked, add one teaspoonful of strained lemon juice, and allow to cool.

Bring to a boil again and mix in immediately two handfuls of fresh, highly perfumed rose petals. Remove from the fire, cover, and infuse for from fifteen minutes to half an hour. Strain through a fine sieve.

Dissolve one-third of a box of gelatin or pink isinglass in a gill of cold water. Add to the syrup half a pint of orange juice and half a pint of lemon juice, strained through filter-paper, and three table-spoonfuls of good brandy. Pass again through a fine sieve, pour into mould (previously wet with cold water), and place on the ice for three hours.

This jelly may be decorated with candied rose leaves (petals); or a rose and its leaves may be moulded in it. (See Violet Jelly, below.) Rose jelly is not very difficult to make, and is worth the trouble.

VIOLET JELLY

Violet jelly may be made in the same manner, carefully removing the stalks of the violets, and infusing

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the flowers for half an hour. Violets may be moulded in the jelly, by placing in the mould a thin layer of jelly, to which a few drops of violet coloring have been added; then arranging the flowers (which must be perfectly fresh) in place, adding a little more jelly to set them, and, when the jelly is hardened, gradually filling the mould. It may be decorated with fresh or candied violets and leaves of angelica.

CUSTARDS

PLAIN BAKED CUSTARD

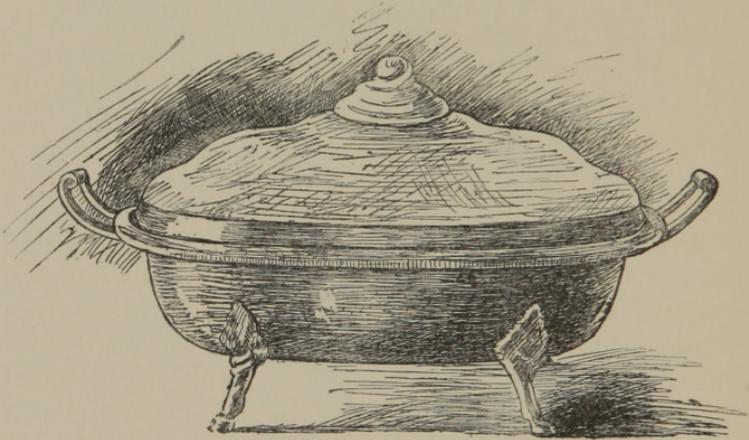
A very good custard may be made with a pint of milk, two whole eggs, or the yolks of three eggs, and a couple of table-spoonfuls of sugar. It may be flavored with a little nutmeg or extract of lemon. It is palatable without flavoring. The eggs and sugar are well beaten together before the milk is added. It is poured into a small pudding-dish or basin, and this is set in a larger basin containing hot water, which reaches three-fourths to the top of the pudding-dish. The two vessels, one in the other, are then placed in the oven until the custard is set (about twenty minutes). As soon as it is *set* it is done, and the whey should not be allowed to separate. This is the best way to bake custards.

CUSTARD À LA MORRISON

Make a boiled custard with a pint of milk, the yolks of three eggs (if small), and a table-spoonful of sugar. The yolks and sugar are beaten together, the milk added when warm, and the whole cooked in the double boiler. It must be stirred constantly while cooking, and the instant noted when it is of exactly

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the right thickness, resembling rather thick cream. If allowed to remain a moment too long it curdles and is spoiled. A *chef* tells the writer, however, that if a custard or *purée* soup begins to curdle it can be stopped by pouring in quickly a little cold milk or water, and stirring very regularly for a few minutes. When



CUSTARD À LA MORRISON

the smooth boiled custard is *cold*, and flavored, the whites of the eggs, beaten to a stiff froth, are mixed in smoothly with the egg whisk.

The top of the custard may be decorated with a little of the egg froth mixed with a little bright red jelly, with the aid of a paper funnel or *meringue* decorator, or the white, for decorating, may be stirred with zest, or thin slices of lemon peel (without white), and slightly sweetened. This will give a delicate green color to the *meringue* as well as a delicious flavor. The lemon strips are to be removed. The custard should be served soon after the beaten white

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of the egg is mixed in, as the egg froth is not cooked, and is therefore liable to fall.

TAPIOCA OR SAGO CUSTARD

is merely an addition to a plain custard (before it is baked) of more or less tapioca or sago after it has been soaked an hour or more in hot water.

The two following are from Gouffé's *Receipts for the Sick*, called by him "*Petit pot de crème, au café*," and "*au chocolat*." It may not taste as well under the common name of

A CUP OF COFFEE CUSTARD

Beat well in a coffee-cup or small fancy pudding-dish the yolks of two fresh eggs and a teaspoonful of sugar. Then add four table-spoonfuls each of fresh-made, clear coffee, and of milk. Set the cup into a basin of hot water so that the water will reach nearly to the top of the cup; put this into the oven and cook about fifteen minutes, or until the custard is set without curdling. To be served hot or cold.

A CUP OF CHOCOLATE CUSTARD

Stir a heaping teaspoonful of grated chocolate and two table-spoonfuls of milk over the fire until perfectly smooth; then add six table-spoonfuls of rich milk, and the yolks of two eggs which have been well beaten, with a teaspoonful of sugar. Cook as coffee custard, and serve either hot or cold.

GRANULATED OR CRUSHED BARLEY, OAT, OR WHEAT CUSTARD

The grain is thrown into salted boiling water and cooked fifteen or twenty minutes, or until thoroughly

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done. It is then drained, and a few table-spoonfuls (not too much) are added to a plain baked custard (p. 227) before it is baked. Or the cooked grain may be substituted for rice in rice-pudding (p. 177).

RENNET CUSTARD

A very palatable and digestible dish for an invalid. Sweeten some milk to taste; place it over the fire until lukewarm; remove it from the fire and mix in it thoroughly some liquid rennet (it comes prepared for custards, and may be purchased at the druggist's), in the proportion of a table-spoonful of rennet to a quart of milk—perhaps a very little more rennet in winter. Let the milk stand lukewarm until a consistent curd is formed, then put it in a cold place until served.

The milk should be prepared in the dish in which it is to be served; for, if it is disturbed, the whey will separate, which must be avoided. It is served with a little cream, or whipped cream poured over it, and may be garnished with a few preserved strawberries.

The milk may be flavored with a very little brandy, rum, curaçoa, or maraschino before the rennet is added. In making junket for the diabetic, if saccharin be added to the milk, the rennet will not make curds.

CARAMEL CUSTARD

Make the caramel by putting two table-spoonfuls of brown sugar and a teaspoonful of water over the fire and stirring it until it becomes dark brown—not black; then add a dessert-spoonful of water. It will make a thick syrup. Pour this into the bottom of two cups or little fancy moulds, and turn it around until it covers the bottom and sides.

For the custard, beat well three eggs (yolks and whites), with a teaspoonful of white sugar and some

FOODS

very thin shreds of lemon peel; then stir in a cupful of milk or thin cream which has been brought to the scalding, not boiling, point over the fire.

Fill the cups or moulds (previously lined with the caramel) with the custard; place them in a basin of hot water, the water reaching nearly to the top of the moulds, and bake them in the oven until the custard is *set*, or feels firm to the finger—no longer. They will set in twelve or fifteen minutes. The custards may be served either hot or cold—although they are generally served cold—turned from the mould when just ready to be served.

CHARLOTTE-RUSSE

Bring a cupful, or half a pint, of milk almost to the boiling-point, and stir in the yolks of four eggs, previously well beaten, with three table-spoonfuls of sugar. Stir this carefully over the fire (in a double kettle), making a boiled custard. Care must be taken that it does not curdle or become too thick. Take it from the fire and add to it a quarter of a boxful of gelatin, previously dissolved, in a warm place, in enough milk to cover it. Add, when the custard is a little cooled, two or three table-spoonfuls of best sherry wine. Set this custard on ice, or in a cold place, until partly congealed, and then stir into it, evenly and carefully, a quart of cream whipped to a stiff froth.

This may be poured into a charlotte pan, into little paper cases lined with lady's-fingers, or into a pretty glass dish with a row of lady's-fingers around the sides, and served in the same dish.

If sponge-cake is objectionable to the invalid, the creamy custard may be served alone, in the paper cases.

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BLANC-MANGE

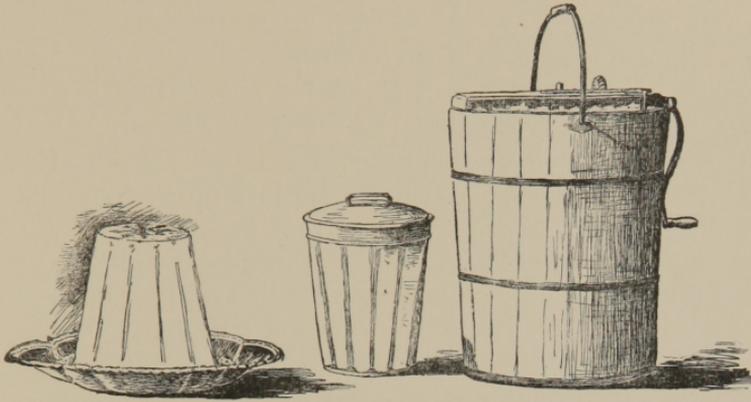
SEA-MOSS BLANC-MANGE

Wash one and a half ounces of Iceland or Irish moss in cold water, then place it over the fire in a cupful (one-half pint) of fresh, cold water. Stir it occasionally until soft; add then one and a half cupfuls of warm milk and three lumps of sugar. Place the little saucepan containing these ingredients in a second larger saucepan half filled with boiling water, and let the water boil until the moss is entirely dissolved. Pour this into teacups or little moulds previously wet with cold water. Turn them from the moulds when hardened and ready to serve, and serve each mould with three or four table-spoonfuls of cream poured around it, and perhaps a preserved strawberry half buried on top; or a fruit compote of any kind may be poured around the blanc-mange.

CORN-STARCH BLANC-MANGE

Allow three table-spoonfuls, or three-quarters of a cupful, of Duryea's corn-starch to a quart of milk. Stir enough of the cold milk into the corn-starch to make a soft, smooth paste; bring the remainder of the milk to the boiling-point, stir in the paste, and boil it about three minutes, taking care that it does not burn. Pour it into cups or moulds previously wet with cold water, and set it in a cold place to harden. Serve with sweetened cream or a little soft-boiled custard, and preserved strawberries for a garnish.

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ICE-CREAM FREEZER AND MOULD

ICES, MOUSSES, AND PARFAITS

ICES

Ices are not difficult to make, and there are many excellent patent freezers, which diminish the trouble of the freezing.

The preparation of the mould, however, requires great care. When the cream has been poured into the mould, lay over the top a sheet of tissue-paper, and put on the cover, which should fit tightly. Then rub butter around all the edges wherever it is possible for the salt to enter.

Pack the mould in ice and salt. The ice should be pounded rather fine—the finer the ice the more quickly the cream will freeze. If for ice-cream, put in the ice in alternate layers with rock-salt, in the proportion of about one part of salt to three of ice, packing as solidly as possible. Mousses and parfaits take two parts of ice to one of salt. Freeze slowly or fast as

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the receipt requires. Cream, frozen slowly, has a finer grain.

When the ice-cream is frozen, pack in ice and salt; cover with a cloth, and leave for some time before serving, taking care that the melted ice does not rise above the opening of the mould. The bung near the bottom of the ice pail should be left open, to allow the water to escape.

In removing cream, wipe the mould carefully with a damp cloth, going over it twice to avoid all danger from the salt. If warm water is employed to unmould ice-cream, use it quickly, to avoid melting the cream. It should not be used with mousses or parfaits, as their texture is too delicate to admit of it. If the mould when removed from the freezer is wiped with cold water and allowed to stand for a few minutes, mousses and parfaits will generally turn out without difficulty.

In making ices, sugar syrup instead of sugar should always be used, except in mousses, where finely powdered or confectioner's sugar is required.

Mousses are made of frozen whipped cream, with the addition of flavoring, fruit-pulp, etc. They should not be stirred while freezing. The secret of success in their preparation lies in having the whipped cream very dry, the sugar very fine, and in freezing them not too long (though, as their texture is closer, they require longer freezing than parfaits), and in using a great deal of salt in proportion to the ice.

Parfaits are made by the addition of sugar-syrup to the yolks of eggs, cooked until they form a thick cream, and then whipped until they are cold. Drained whipped cream and flavoring are then added, and the light, spongy mixture is placed in a mould (the joints thoroughly protected with butter), packed in ice and

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salt (in the same proportion as for mousses), covered with a cloth, and left for an hour or longer, according to the size of the mould.

It is a mistake to leave mousses and parfaits in the ice too long.

Rahnhofer, an authority on this subject, says that mousses should be packed in ice in the proportion of one hour for each quart. Parfaits a little less—one hour and a half for two quarts.

FROZEN WHIPPED CREAM

There is no more agreeable or nutritious dessert for an invalid than whipped cream, either served simply with wafer biscuits or some very thin slices of sponge-cake placed around it, to form a charlotte-russe; or in a ring-mould with a stewed pear, peach, apple, or some wine-jelly, for a centre.

The double cream is preferable, as it whips more readily and leaves no liquid residue. The cream (thick) is sweetened and flavored with any of the flavoring extracts (except vanilla), or any of the sweet wines or liqueurs. It is delicious merely sweetened. The cream froths more readily when quite cold. The cream-whipper is recommended, though vigorous whipping with a silver fork will accomplish the same result. Place the cream froth, as soon as whipped, on the ice, to remain until served; or add a little more sugar and freeze.

ICE-CREAM (No. 1)

Ice-cream will sometimes be acceptable to an invalid suffering from fever or inflammation of the stomach when no other nourishment can be tolerated. In such cases it is best to use pure cream, without flavoring, and either unsweetened or with very little sugar.

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The simplest and richest ice-cream is pure cream sweetened to taste, and flavored with *fleur d'orange*, extract of lemon, or a very little sherry, and frozen. It is still better to whip it and freeze the whipped cream. If it is desirable that the cream be not so rich, a simple frozen boiled custard is very good.

The custard is made by adding the yolks of two or three eggs, well beaten, with a table-spoonful of sugar, to a pint of fresh milk. This is stirred in a double boiler, or in a tin pail placed in a second vessel containing boiling water, until it just begins to thicken. It is then removed at once (to prevent curdling), and seasoned as described for whipped cream. The iced custard is improved by stirring in it, when partly congealed in the freezer, more or less whipped cream. This, however, adds to its richness.

ICE-CREAM (No. 2)

Beat well together the yolks of five eggs and half a cup of sugar or maple syrup. Cook *au bain-marie*, or in a vessel inside of another vessel filled with boiling water, stirring all the time until it is a soft custard—not longer.

Let it get cold. Flavor with two table-spoonfuls of maraschino or noyau, with fruit, or with almond extract; or add a cupful of boiled rice with four table-spoonfuls of sherry; or use any flavoring except vanilla.

Stir slightly into this mixture a quart of double cream whipped. Put into mould and freeze.

FROZEN PEACHES

A mixture of sweetened fresh peaches, pared, stoned, and quartered, with or without cream mixed with them, and frozen in a mould (without stirring the

FOODS

mixture), is a delicious dish. Canned peaches or pears may also be frozen in this way.

LEMON (and other) ICES

Ingredients: Three pints water; one pound sugar; the juice of seven lemons; the thin yellow rind of four lemons; and the whites of four eggs.

Boil three pints of water and a pound of sugar until they are reduced to a scant quart. Skim and allow to cool.

Add the lemon juice and peel and infuse for one hour. Strain into the freezer and begin to freeze. When the mixture commences to set, stir in lightly but thoroughly the whites of the eggs. Freeze and pack.

Almost all water ices are made as above; the lemon being often retained, and strawberries, raspberries, pineapples, or oranges added.

ROMAN PUNCH

Roman punch, which is made by adding two gills of rum to a quart of lemon or pineapple ice, is admirable for restoring the tone of the stomach after fever, etc.; but care should be taken that grated lemon peel has not been used in making the ice.

MOUSSES

MOUSSE OF STRAWBERRIES À LA GABRIELLE

Pass one quart of strawberries through a fine sieve, and sprinkle with pulverized sugar. Whip one quart of double cream until it is a stiff froth. Add strawberry pulp, put in mould, and pack in ice for an hour and a half to two hours.

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Two table-spoonfuls of liqueur may be added to this mousse.

MOUSSE OF CHOCOLATE

Prepare as above, using one ounce of chocolate made into a paste with cream, and sugar to taste. To a pint of double cream, whipped, add the chocolate paste. Freeze as above.

MOUSSE AU KIRSCH

Whip a pint of double cream very stiff. Whip in lightly four table-spoonfuls of confectioner's sugar and two table-spoonfuls of kirsch. Turn into a mould, which may be first decorated with candied cherries and with their leaves (in angelica), and pack in ice and salt for an hour to an hour and a half.

MOUSSES OF FRUIT

may be made (by the first receipt given above) of raspberries, apricots, peaches, pineapples, etc.

PARFAITS

PARFAIT OF TEA

Put the yolks of six eggs in a saucepan and add slowly one gill of strong tea, with an equal quantity of thick sugar syrup. Stir constantly over a gentle fire until the mixture becomes smooth and foamy.

Remove from the fire and beat with an egg whisk until cold. Then add a quart of double cream thoroughly whipped. Turn into mould, close joints with butter, surround and cover with ice and salt—two parts of ice to one of salt. Put a cloth over the whole and let it freeze from an hour and a half to two hours. There is not much tea in this parfait, but it should only be administered occasionally to an invalid.

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PARFAIT OF COFFEE

is made by the last receipt, using, instead of the tea, four table-spoonfuls of black coffee, and a smaller quantity—a pint to a pint and a half—of double cream, whipped dry. Freeze as above.

PARFAIT OF CHOCOLATE

requires two ounces of unsweetened chocolate and a pint and a half of cream.

Parfaits may be made by the first receipt, using chestnuts, macaroons (rolled tolerably fine), or the juice of fresh fruits instead of the tea.

FRUITS

Nothing is more simple, wholesome, and palatable than a baked apple served with cream and sugar. The canned peaches are generally heavy for an invalid. Tin-canned tomatoes and acid fruits are forbidden entirely by many physicians, the tin having a deleterious effect on the acid of the vegetable or fruit.

BAKED APPLES

Baked apples are prepared as follows: With a sharp-pointed knife, or an apple-corer, remove the cores without breaking the apples. Set them in a pan just large enough to hold them. Fill the apertures with sugar, and a small stick of cinnamon, or thin yellow slices of lemon rind may be inserted also. Pour a half-cupful of water into the pan and bake the apples until tender. They are oftener cooked uncovered, yet are very good covered with a basin and al-

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lowed to cook in the steam. For a change the apples may be pared. Serve with cream and sugar.

Baked apples and stewed prunes are probably the most wholesome sweetmeats for an invalid, and may be served at any meal.

APPLE SAUCE

Pare and core apples (pippins preferred); neatly and evenly quarter them; place in a porcelain pan with enough cold water to barely cover them. Sugar to taste is added, and perhaps raisins, slices of lemon, and sometimes a few sticks of cinnamon may also be added. Cook them slowly, and the moment the apple quarters are tender when pierced with a fork they are done, ready to be poured into some pretty glass dish, and allowed to get cold before serving.

Sometimes the apple is stirred into a half *purée*, or pulp, and sometimes it is passed through a sieve.

A good apple sauce is made by adding to the apple which has been passed through the sieve, and sweetened to taste, the beaten whites of eggs just before it is served—say the whites of two eggs, stiffly beaten, to a pint of apple pulp.

PEAR (OR OTHER Fruit) COMPOTE

A compote is merely the fruit (pear, peach, apple, plum, etc.) boiled whole with only enough water to cover it, and sweetened to taste. The fruit is only cooked until tender. Pears are generally selected for compotes when not quite ripe.

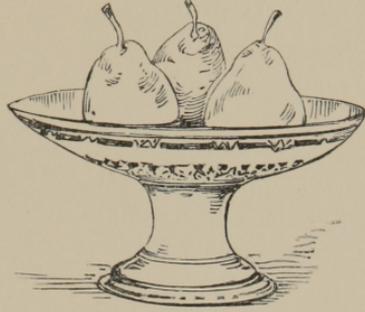
The California dried pears, stewed until tender, and sweetened to taste, are excellent for an invalid when the fresh pears cannot be obtained.

FOODS

Compotes are often served in a circle of rice (boiled in milk), or the rice may be placed in the centre and the fruit around it.

These may be prepared without sugar.

In cases where sugar is injurious, Dr. Fothergill recommends, for cooked fruit, that the fruit be placed in the oven without sugar, and that as much bicarbonate of soda, or (in cases of gout) bicarbonate of potash, as will cover a quarter of a dollar, be added to each pound of fruit. This will neutralize the acid of the fruit.



COMPOTE OF PEARS

PRESERVED FRUITS

ORANGE MARMALADE

This marmalade furnishes one of the best and cheapest confitures which can be made in the large cities, and a very little of it, used for garnishing a blanc-mange, etc., or for spreading on bread-and-butter, is not unwholesome for a convalescent. It is made in January or February, when oranges are cheap, and the expense will not be over fifteen or twenty cents a glass.

Allow one lemon to six oranges. Squeeze all the juice possible from the fruit. Quarter the skins, and boil them slowly two hours and a half; then scrape out the soft pulp from the inside, to be thrown away, and cut the outside skin into shreds. Weigh the

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juice and skin-shreds together, and allow three-fourths of a pound of sugar to a pound of fruit. When the fruit and sugar are mixed, let them simmer for an hour. If preferred, the whole pulp of the fruit may also be added. It does not make so clear a preserve, yet it is added in the Dundee marmalade.

STRAWBERRY PRESERVES

Allow three-fourths of a pound of sugar to a pound of fruit. Let the sugar simmer twenty minutes, adding perhaps a table-spoonful of water to start it; then add the strawberries; let them come merely to a boil; then cover, and place them at the back of the range to steam five minutes. Put them into glass jars while still scalding hot, and seal them hermetically.

CURRANT PRESERVES

Allow one pound of sugar to one pound of currants. Free the currants from the stems, and cook them fifteen minutes; then add the sugar and a few raisins, and, as soon as the preserve comes to the boiling-point again, pour into glass jars and seal tightly.

These receipts for preserved fruits are given because those made at home are less adulterated, and therefore less injurious, than those obtained elsewhere; but they are not recommended for the use of an invalid, being generally indigestible. Compotes and similar preparations of fresh fruit are, as a rule, more wholesome.

BILLS OF FARE FOR CONVALESCENTS

THE following bills of fare are given as suggestions, although the diet is suitable only for patients taking a certain amount of exercise and requiring generous fare.

An invalid confined to his bed should live as simply as possible, partaking of few sweets, very little meat, and only the more digestible of the dishes here indicated.

BREAKFAST (at 8 o'clock)

Mould of Cracked Wheat and Cream.

Bread Sippets.

A Cup of "Cambric Tea"—*i. e.*, Hot Water with Sugar and Cream.

DINNER (at 1 or 2 o'clock)

Barley Soup.

Chicken Timbale with Asparagus Tips.

A Chocolate Custard

TEA (at 6 o'clock)

Rice Cone with Hot Sauce.

Graham-bread.

Stewed Apples.

Grape Juice.

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BREAKFAST

- A Slice of Boston Brown Bread with Cream poured
over it.
A Poached Egg on Toast.
An Orange.
A Glass of Milk.

DINNER

- A Fricassee of Chicken, Potatoes *à la Crème*.
Lettuce dressed with the Sauce of the Fricassee and
a Few Drops of Vinegar.
Graham-flour Pudding, Sauce Burke.

TEA

- A Macaroni Omelet.
A Pear Compote.
Almond Milk.
-

BREAKFAST

- Oatmeal Porridge.
Oysters on Toast.
A Baked Apple.
A Cup of Hot Water.

DINNER

- Chestnut Soup.
A Lamb or Mutton Chop with Baked Potatoes.
A Spinach Soufflé.
Wine Jelly.

TEA

- Rice Croquettes (No. 1).
Prune-pudding.
Barley Gruel.

BILLS OF FARE FOR CONVALESCENTS

BREAKFAST

A Chicken Croquette with Peas.
Graham Wafers.
Cambric Tea.

DINNER

Cream of Asparagus Soup.
Boiled Fish. Stuffed Tomatoes.
Cauliflower Salad.
A Banana.

TEA

Barley-pudding, Sauce Burke.
A Cup of Chocolate.

BREAKFAST

A Sweetbread with Boiled Rice, Cream Sauce.
Graham-bread.
Fruit.
A Cup of Hot Water.

DINNER

Veal Soup.
Boiled Chicken and Macaroni.
Cauliflower *au gratin*.
A Mousse of Strawberries.

TEA

Oysters on Toast.
Rice-pudding.
Farina Gruel.

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BREAKFAST

Boiled Eggs.
Batter Bread.
Baked Apple and Cream.
A Cup of Cereal Coffee.

DINNER

Chicken-bone Soup.
A Breast of Prairie-chicken. Mashed Potatoes.
Corn Custard.
Coffee Jelly.

TEA

Asparagus Jelly.
Caramel Custard.
A Glass of Milk.

APPENDIX

Extract from an Article on the Effects of Tea and Coffee on the System, also on Count Rumford's Substitute for Tea, by Mr. Mattieu Williams.

(Published in *Knowledge*; republished in the *Popular Science Monthly* of December, 1884.)

“TAKE eight parts by weight (say ounces) of meal (Rumford says ‘wheat or rye meal,’ and I add, or oatmeal) and one part of butter. Melt the butter in a clean *iron* frying-pan, and when thus melted sprinkle the meal into it; stir the whole briskly with a broad wooden spoon or spatula till the butter has disappeared and the meal is of a uniform brown color like roasted coffee, great care being taken to prevent burning on the bottom of the pan. About half an ounce of this roasted meal, boiled in a pint of water, and seasoned with salt, pepper, and vinegar, forms ‘burned soup,’ much used by the wood-cutters of Bavaria, who work in the mountains far away from any habitations. . . . The rye bread, which, eaten alone or with cold water, would be very hard fare, is rendered palatable and satisfactory, Count Rumford thinks also more wholesome and nutritious, by the help of a bowl of hot soup, so easily prepared from the roasted meal. He tells us that this is not only used by the wood-cutters, but that it is also the common breakfast of the Bavarian peasant, and adds that ‘it is infinitely preferable, in all

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respects, to that most pernicious wash, *tea*, with which the lower classes of the inhabitants of Great Britain drench their stomachs and ruin their constitutions.' He adds that, 'when tea is taken with a sufficient quantity of sugar and good cream, and with a large quantity of bread and butter, or with toast and boiled eggs, and, above all, *when it is not drunk too hot*, it is certainly less unwholesome ; but a simple infusion of this drug, drunk boiling hot, as the poor usually take it, is certainly a poison, which, though it is sometimes slow in its operation, never fails to produce fatal effects, even in the strongest constitutions, where the free use of it is continued for a considerable length of time.'

"This may appear to many a very strong condemnation of their favorite beverage ; nevertheless, I am satisfied that it is perfectly sound. This is not an opinion hastily adopted, but a conclusion based upon many observations, extending over a long period of years, and confirmed by experiments made upon myself.

"The *Pall Mall Gazette* of August 7th says : 'There is balm for tea-drinkers in one of Mr. Mattien Williams's "Science Notes" in the *Gentleman's Magazine*.' This is true to a certain extent. I referred to the Chinese as habitual drinkers of boiled water, and suggest that this may explain their comparative immunity from cholera, where all the other conditions for a raging epidemic are fulfilled. It is the boiling of the water, not the infusion of tea-leaves therein, to which I attribute the destruction of the germs of infection.

"In the note which follows, I proposed an infusion of fried or toasted bread-crumbs, oatmeal, maize, wheat, barley, malt, etc., as a substitute for the tea, the deep color of the infusion (poured off from the grounds in this case) serving to certify the boiling of the water. Rumford's burned soup, taken habitually at breakfast or other meals, would answer the same purpose, with the further advantage to poor people of being, to a certain extent, a

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nutritious soup as well as a beverage. All that is nutritious in porter is in this, minus the alcoholic drug and its vile companion, the fusel-oil.

“The experience of every confirmed tea-drinker, when soundly interpreted, supplies condemnation of the beverage; the plea commonly and blindly urged on its behalf being, when understood, an eloquent expression of such condemnation. ‘It is so refreshing’; ‘I am fit for nothing when tea-time comes round until I have had my tea, and then I am fit for anything.’ The ‘fit-for-nothing’ state comes on at 5 P.M., when the drug is taken at the orthodox time, or even in the early morning, in the case of those who are accustomed to have a cup of tea brought to their bedside before rising. With blindness still more profound, some will plead for tea by telling that by its aid one can sit up all night long at brain-work without feeling sleepy, provided ample supplies of the infusion are taken from time to time.

“It is unquestionably true that such may be done; that the tea-drinker is languid and weary at tea-time, whatever be the hour, and that the refreshment produced by ‘the cup that cheers’ and is *said* not to inebriate, is almost instantaneous.

“What is the true significance of these facts?

“The refreshment is certainly not due to nutrition, not to the rebuilding of any worn-out or exhausted organic tissue. The total quantity of material conveyed from the tea-leaves into the water is ridiculously too small for the performance of any such nutritive function; and, besides this, the action is far too rapid, there is not sufficient time for the conversion of even that minute quantity into organized working tissue. The action cannot be that of a food, but is purely and simply that of a stimulating or irritant drug, acting directly and abnormally on the nervous system.

“The five-o’clock lassitude and craving are neither more nor less than the reaction induced by the habitual

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abnormal stimulation; or otherwise, and quite fairly, stated, it is the outward symptom of a diseased condition of brain produced by the action of a drug; it may be but a mild form of disease, but it is truly a disease nevertheless.

“The active principle which produces this result is the crystalline alkaloid, the *theine*, a compound belonging to the same class as strychnine and a number of similar vegetable poisons. These, when diluted, act medicinally, that is, produce disturbance of normal functions as the tea does, and, like theine, most of them act specially on the nervous system; when concentrated they are dreadful poisons, very small doses producing death.

“The non-tea-drinker does not suffer any of these five-o'clock symptoms, and, if otherwise in sound health, remains in steady working condition until his day's work is ended and the time for rest and sleep arrives. But the habitual victim of any kind of drug or disturber of normal functions acquires a diseased condition, displayed by the loss of vitality or other deviation from normal condition, which is temporarily relieved by the usual dose of the drug, but only in such wise as to generate a renewed craving. I include in this general statement all the vice-drugs (to coin a general name), such as alcohol, opium, tobacco (whether smoked, chewed, or snuffed), arsenic, hashish, betel-nut, coca-leaf, thorn-apple, Siberian fungus, maté, etc., all of which are excessively 'refreshing' to their victims, and of which the use may be, and has been, defended by the same arguments as those used by the advocates of habitual tea-drinking.

“Speaking generally, the reaction or residual effect of these on the system is nearly the opposite of that of their immediate effect, and thus larger and larger doses are demanded to bring the system to its normal condition. The non-tea-drinker, or moderate drinker, is kept awake by a cup of tea or coffee taken late at night, while the

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hard drinker of these beverages scarcely feels any effect, especially if accustomed to take it at that time.

“The practice of taking tea or coffee by students, in order to work at night, is downright madness, especially when preparing for an examination. More than half of the cases of break-down, loss of memory, fainting, etc., which occur during severe examinations, and far more frequently than is commonly known, are due to this.

“I frequently hear of promising students who have thus failed, and, on inquiry, have learned—in almost every instance—that the victim has previously drugged himself with tea or coffee. Sleep is the rest of the brain; to rob the hard-worked brain of its necessary rest is cerebral suicide.

“My old friend, the late Thomas Wright, was a victim of this terrible folly. He undertook the translation of the *Life of Julius Cæsar*, by Napoleon III., and to do it in a cruelly short time. He fulfilled his contract by sitting up several nights successively by the aid of strong tea or coffee (I forget which). I saw him shortly afterwards. In a few weeks he had aged alarmingly, and had become quite bald; his brain gave way and never recovered. There was but little difference between his age and mine, and but for this dreadful cerebral strain, rendered possible only by the alkaloid (for otherwise he would have fallen to sleep over his work, and thereby saved his life), he might still be amusing and instructing thousands of readers by fresh volumes of popularized archæological research.

“I need scarcely add that all I have said above applies to coffee as to tea, though not so seriously in this country [England]. The active alkaloid is the same in both, but tea contains, weight for weight, about three times as much as coffee. In this country we commonly use about fifty per cent. more coffee than tea to each given measure of water, and thus get about half as much alkaloid. On the Continent they use about double our quantity

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(this is the true secret of 'coffee as in France'), and thus produce as potent an infusion as our tea.

"The above remarks are exclusively applied to the *habitual* use of these stimulants. As medicines, used occasionally and judiciously, they are invaluable, provided always that they are not used as ordinary beverages. In Italy, Greece, and some parts of the East, it is customary when anybody feels ill with indefinite symptoms to send to the druggist for a dose of tea. From what I have seen of its action on non-tea-drinkers, it appears to be specially potent in arresting the premonitory symptoms of fever, the fever headache, etc.

"It is strange that any physiologist should claim this diminution of the normal waste and renewal of tissue as a merit, seeing that life itself is the product of such a change, and death the result of its cessation. But, in the eagerness that has been displayed to justify existing indulgences, this claim has been extensively made by men who ought to know better than admit such a plea.

"I speak, of course, of the *habitual* use of such drugs, not of their occasional medicinal use. The waste of the body may be going on with killing rapidity, as in fever, and then such medicines may save life, provided always that the body has not become 'tolerant' of or partially insensible to them by daily usage. I once watched a dangerous case of typhoid fever. Acting under the instructions of skilful medical attendants, and aided by a clinical thermometer and a seconds-watch, I so applied small doses of brandy at short intervals as to keep down both pulse and temperature within the limits of fatal combustion. The patient had scarcely tasted alcohol before this, and therefore it exerted its maximum efficacy. I was surprised at the certain response of both pulse and temperature to this most valuable medicine and most pernicious beverage.

"The argument that has been the most industriously urged in favor of all the vice-drugs, and each in its turn,

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is that miserable apology that has been made for every folly, every vice, every political abuse, every social crime (such as slavery, polygamy, etc.), when the time has arrived for reformation. I cannot condescend to seriously argue against it, but merely state the fact that the widely diffused practice of using some kind of stimulating drug has been claimed as a sufficient proof of the necessity or advantage of such practice. I leave my readers to bestow on such a plea the treatment they may think it deserves. Those who believe that a rational being should have rational grounds for his conduct will treat this customary refuge of blind conservatism as I do."

Mr. Williams, in his article, proceeds to give the views of certain scientists who have defended the use of the alkaloids. He speaks of Liebig's, or rather Nehmen's, theory, which was that the use of tea and coffee retarded the waste of the tissues of the body; also, Johnston's theory, in his *Chemistry of Common Life*, that if waste be lessened by the use of tea, less food is required.

Mr. Williams says, regarding these theories: "All the popular stimulants and refreshing drugs have two distinct and opposite actions: an immediate exaltation, which lasts for a certain period, varying with the drug and the constitution of its victim, and a subsequent depression proportionate to the primary exaltation, but, as I believe, always exceeding it either in duration or intensity, or both, thus giving as a net or mean result a loss of vitality."

Remarks on the Influence of Alcoholic Liquors, by Professor Edward L. Youmans, in "Household Science," and others.

“STIMULATING EFFECT OF ALCOHOLIC BEVERAGES.
—They produce general stimulation; the heart's action is increased, the circulation quickened, the secretions

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augmented, the system glows with unusual warmth, and there is a general heightening of the functions. Organs usually below par from debility are brought up to the normal tone, while those which are strong and healthy are raised above it. Thus the stomach, if feeble, for example, from deficient gastric secretion, may be aided to pour out a more copious solvent, which promotes digestion; or, if it be in full health, it may thus be made to digest more than the body requires. The life of the system is exalted above its standard, which takes place, not by conferring additional vitality, but by plying the nervous system with a fiery irritant, which provokes the vital functions to a higher rate of action. This is the secret of the fatal fascination of alcohol, and the source of its evil. The excitement it produces is transient, and is followed by a corresponding depression and dragging of all the bodily movements. It enables us to live at an accelerated speed to-day, but it is only plundering to-morrow. By its means we crowd into a short period of intense exhilaration the feelings, emotions, thoughts, and experiences which the Author of our nature designed should be distributed more equally through the passing time. We cannot doubt that God has graduated the flow of these life-currents in accordance with the profoundest harmonies of being and the highest results of beneficence. By habitually resorting to this potent stimulant, man violates the providential order of his constitution, loses the voluntary regulation and control of his conduct, inaugurates the reign of appetite and passion, and reaps the penal consequences in multiform suffering and sorrow—for nature always vindicates herself at last."

Professor Youmans also says, in answer to the question, Is the use of alcohol physiologically economical?—"The apologists for the general and moderate use of alcoholic beverages cannot agree among themselves upon any philosophy to suit the case. Dr. Moleshott says, 'Alcohol

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may be considered a savings-box of the tissues. He who eats little and drinks a moderate quantity of spirits retains as much in the blood and tissues as a person who eats proportionally more without drinking any beer, wine, or spirits. Clearly, then, it is hard to rob the laborer who, in the sweat of his brow, eats but a slender meal, of a means by which his deficient food is made to last him a longer time.' Upon which Dr. Chambers justly remarks: 'This is going rather too far. When alcohol limits the consumption of tissue, and so the requirements of the system, while at the same time a man goes on working, it is right to inquire, whence comes his new strength? It is supplied by something which is not decomposition of tissue; by what, then?' Dr. Liebig points out the consequences of that peculiar economy by which the laboring man saves his tissue and the food necessary to repair it by the use of liquors: 'Spirits, by their action on the nerves, enable the laborer to make up for deficient power (from insufficient food) *at the expense of his body*; to consume to-day that quantity which ought naturally to have been employed a day later. He draws, so to speak, a bill on his health which must be always renewed, because, for want of means, he cannot take it up; he consumes his capital instead of his interest, and the result is the inevitable bankruptcy of his body.'

"Dr. Moleshott further says: 'When, by habit, the stimulant has become a necessity, an enervating relaxation infallibly follows, as is sometimes mournfully illustrated by less prudent literary men. The stimulant ceases to excite; the debilitated organs have already been indebted to it for all the activity it can give. In this case the victim continues to seek his refuge until dangerous diseases of the stomach cripple the digestive organs, the formation of blood and nutrition are disturbed; and with the digestion vanish clearness of thought, acuteness of the senses, and the elasticity of the muscles.'"

DIET IN ILLNESS AND CONVALESCENCE

On the Tendency of Common Wheat Flour to Produce Bright's Disease, Diabetes, etc.

“It is claimed by the health-food manufacturers that ‘the starch portion of wheat may be compared to the fat of meat, and the gluten portion to the lean meat. This comparison is not wanting in scientific accuracy, inasmuch as starch is carbon and fat is carbon, while animal albumen and gluten, or vegetable albumen, are nearly identical nitrogenous substances. If, then, we were to attempt to exist upon the fat, or carbon, to the exclusion of the lean, or nitrogen, of meat, we should presently discern, by our waning bodily and mental vigor, that we were very imperfectly nourished. The same lack of vital force comes from an excessive use of the vegetable carbons. The disuse of the fat of grain—the starch—demands more earnest consideration from the physiologist, because the refined taste instinctively shrinks from the copious use of animal fats, while education, custom, habit, all encourage the increasing and unlimited use of the starch form of carbon. It is not claimed that our ordinary bread-flour is as pure a carbon, as free from nitrogen, as the clear fat of meat. The ordinary milling processes cannot exclude all the nitrogenous elements from the white flour; that they do withhold the greater part, as well as all but the merest trace of the organized mineral constituents, is a simple chemical fact. We know that the gluten contains phosphorus . . . we know that the starch contains no phosphorus. We know that the starch-interior of the wheat-berry is nearly barren of minerals, containing considerably less than one-half of one per cent., while the gluten is found to contain over eleven per cent. The mineral matter is nearly half phosphoric acid, nearly one-third potassa, more than one-tenth magnesia, with smaller proportions of soda, lime, iron, chloride of sodium, sulphuric acid, and silica.

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These elements are all demanded in the blood-making processes. . . . In the use of starch-bread the stomach is greatly overtaxed in its effort to digest an immense amount of starch, containing an insignificant portion of nitrogenous and mineral elements. The use of starch in excess is the rule in America. If assimilated, it is very liable to induce fatty degeneration of the tissues, and such diseases as depend upon this state. Atheroma of the cerebral arteries, with the attendant fat-globules, the weakened muscular coats, and the tendency to rupture and apoplexy, are all concomitants of the starchy diathesis. The essential feature of Bright's disease is fatty infiltration of the kidneys; while diabetes finds its chief allies in bread and potatoes. These formidable diseases may be guarded against by appropriate alimentary substances containing the needed proportions of all nutritive elements.

“ ‘But starch undigested is nearly as potent for evil as starch digested. The liver, burdened with white bread and potatoes, seems presently to be deprived of its power, etc.’ ”

Kumiss

In the *Medical Record* is an article by Dr. E. F. Brush, of New York, in which he says: “Historically the study of kumiss is very interesting. Homer speaks of the kumiss-making Hippomolgi; Herodotus tells us that the Scythians deprived their slaves of sight in order to keep secret the process of making a drink from mare's milk. . . . Marco Polo, the great Venetian traveller, writing a few years later, speaks of kumiss as a common drink, wholesome, nutritious, and possessing important medical properties. . . . Pallas, who was sent by the Empress Catherine II. to visit the less-known portions of her dominions, gave considerable attention to the question of

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kumiss. Speaking of the Tartar tribes, he says : ‘ Their wealth consists in herds of mares, the milk of which cannot be manufactured into cheese or butter, and which, owing to the large quantity of sugar it contains, ferments spontaneously. This they undoubtedly discovered by attempting to preserve the milk for a day or two in skin bags. From this step it is a short one to discover that the longer it was kept the more pleasant it became.’ Mrs. Guthrie, who visited the Crimea in 1795, writes : ‘ On stopping at a village the hospitable Tartars brought us a wooden dish of their favorite kumiss. The kumiss has a sourish-sweet taste, by no means unpleasant to my palate.’ Pallas tells us that he met a horde of Tartars who possessed the secret of turning cow’s milk into vinous fermentation, or, in other words, into kumiss. Atkinson, in his *Oriental and Western Siberia*, writes : ‘ On entering a Kirghis yourt in summer, a Chinese bowl holding three pints of kumiss is presented to each guest. It is considered impolite to return the vessel before emptying it, and a good Kirghis is never guilty of this impropriety. They begin to make kumiss in April. The mares are milked into large leathern pails, which are immediately taken into the yourt, and the milk poured into the kumiss bag. The first fourteen days after they begin making this beverage very little of it is drunk, but, with fermentation and agitation, it is considered by this time in perfection, when it is drunk in great quantities by the wealthy Kirghis.’

“In an official report to the Russian government in 1840, Dr. Dahl, after describing the method of manufacturing kumiss, continues : ‘ Peculiar as is the taste of kumiss, one soon becomes accustomed to it, especially if one tastes it for the first time when thirsty, or after violent exercise. It is then the most pleasant and refreshing of all drinks. . . . It is very refreshing and hunger-stilling, without being surfeiting. It only allays hunger without destroying the appetite. One can, without any

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fear, drink as much as he will—an inconceivable amount—and yet always feel light and well. If one were to drink half the quantity of water, beer, or anything else, especially during the burning heat when one is forced to be on horseback, one would feel over-full and heavy. But every cup of kumiss gives new courage and strength. An intoxication such as is produced by wine never takes place after drinking kumiss, in whatever quantities you may; the result is a scarcely noticeable exhilaration, and this only when it is taken in very considerable quantities, or in delicate persons, when it produces an inclination to a refreshing sleep. . . . Kumiss is, among the nomads, the drink of all children from the suckling upward, the refreshment of the old and sick, the nourishment and greatest luxury of every one. The effect of kumiss shows itself in less than a week in a good nourishment of the whole body, an increase in strength and spirits, and a general feeling of health. The respiration is easier, the voice freer, the complexion brighter. . . . The diseases in which kumiss is beneficial are those where the body must be well nourished without loading the digestive organs. It seems, too, that kumiss is specially useful in diseases of the lungs, bronchia, and larynx; I will not assert that it can cure consumption and phthisis, but it suits these conditions better than any other nourishment. It is certain that among the Kirghis consumption and phthisis are very rare—so, too, pneumonia, senile asthma, and dropsy of the chest. Of tubercular consumption, and other phthisis, I have seen no example among the Kirghis.'

“Dr. Neftel, who, twenty-three years after the visit of Dr. Dahl, was also sent by the Russian government to the Kirghis Steppe, confirms the observations of his predecessor. ‘Scrofulosis and rachitis are quite unknown among them; and, what is still more remarkable, I had opportunity to observe not one single case of lung tuberculosis, although I sought for such cases with great

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attention.' To avoid repetition, I will simply cite one case given by Dr. Neftel relating to kumiss treatment. 'The patient, twenty-five years old, had always lived in St. Petersburg. Her physician there, a distinguished diagnostician, found tubercular infiltrations in both superior lobes of the lungs. During two years she coughed continually, with a muco-prurient expectoration often tinged with blood, and she became very emaciated. All other physicians consulted by the patient confirmed this diagnosis. . . . The presence of cavities was clearly demonstrated, and a hectic fever set in. In this condition the patient, by my advice, left the city, passed the whole summer in the steppe, in a *kibitka*, and was methodically treated with kumiss. Her general condition gradually improved; she returned to the city in the autumn, and the ensuing spring she again commenced the kumiss treatment, and I have lately received here at Würzburg a letter from her husband, in which he informs me that his wife is completely cured, and coughs no longer.'"

Dr. Brush further calls attention to an article on kumiss written by Dr. Campbell, of Mount Vernon, N. Y., in the *American Journal of Obstetrics*, October, 1880. His observations are limited to the study of kumiss in cholera infantum. He reasons as follows: "In a severe case of choleraic diarrhea we derive but little aid from medication, the primary cause of the disorder being the food put into the child's stomach. These cases occur almost exclusively among fed children. Our aim is chiefly directed to finding something on which the infant can be nourished and which will not increase the trouble already existing. In kumiss we have a food which children with high temperature not only take kindly, but crave, its slightly acid taste being grateful to their parched tongues. It is an absolutely non-putrefactive food, is free from sugar, and is rarely ejected even by the most irritable stomach. . . . I can say of it that

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it has never failed me in any case of cholera infantum, except where well - marked brain symptoms already existed, before it was administered, to such a degree as to preclude the possibility of a recovery. Even in these cases it is an advantage, for we are giving a food which will not be vomited, and which will satisfy thirst."

As a food for diabetics, the author would refer to p. 87.

Remarks by Dr. T. Griswold Comstock on the Use of Kumiss

"Regarding kumiss, from a large experience in its use during the past nine years, I can recommend it with the greatest confidence. It fills a desideratum which the medical practitioner has long desired. One fact bearing upon its nutritious value should be borne in mind: *one pint of it contains more than two ounces of solid food*, so that it is especially indicated in constitutional diseases or systemic affections. According to the most recent authorities it is regarded by practitioners as acting in cold weather as a diuretic, and in warm weather as a diaphoretic. From these physiological stand-points we can prescribe it rationally in a variety of ailments. It is valuable in pulmonary catarrh, in pulmonary tuberculosis, in chronic diarrhea, in diabetes, in Bright's disease, in diphtheria, in the paralysis the sequel of diphtheria, in summer complaint, in the chronic intestinal and gastric catarrhs of children or adults, and especially in dyspepsia and flatulence. It will be found peculiarly beneficial in cases of incurable disease, such as cancer. I have prescribed it in pernicious anæmia, puerperal anæmia, in typhoid fever, in puerperal fever; in fact, in almost any affection attended with emaciation. At first it may be given in small quantities, and gradually the ration may be increased until it constitutes the sole food of the patient. As it is in reality a wine-milk, or rather

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a champagne-milk, it acts something like an alcoholic stimulant, and most patients feel revived at once after taking it. It is especially indicated for the infirmities of old age, in cases of palsy, paralysis, impending or real mental affections, etc."

From Dr. Roberts's Book, "The Digestive Ferments"

"My own efforts to produce a palatable peptonized food have been chiefly directed to the pancreatic method. The pancreas excels the stomach as a digestive organ, in that it has the power to digest the two great alimentary principles, starch and proteids; and an extract of the gland is possessed of similar properties. . . . My attention was first turned to the artificial digestion of milk. . . . Milk contains all the elements of a perfect food, adjusted in their due proportions for the nutrition of the body. Two out of three of its organic constituents—namely, the sugar and the fat—exist already in the most favorable condition for absorption, and require little, if any, assistance from the digestive ferments. It is therefore obvious that if we could change the caseine of milk into peptone without materially altering the flavor and appearance of the milk, such a result would go far towards solving the problem of supplying an artificially digested food for the use of the sick."

PEPTONIZED MILK-GRUEL.—Dr. Roberts further says: "This is the preparation of which I have had the most experience, and with which I have obtained the most satisfactory results. It may be regarded as an artificially digested bread-and-milk, and as forming by itself a complete and highly nutritious food for weak digestion. . . . I find, however, that some persons fail to peptonize milk-gruel so as to make it palatable. This is entirely due to allowing the peptonizing process to go on

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too far. Artificial digestion, like cooking, must be regulated as to its degree. If the *liquor pancreaticus* is very active, the slight bitterness, whereby it is known that the process has been carried far enough, is developed in an hour or less, but if the preparation is not so active, two or three hours may be required to reach the same point. The practical rule for guidance is to allow the process to go on until a perceptible bitterness is developed, and not longer. The milk-gruel should be raised to the boiling-point to put a stop to further changes."

PANCREATIC EMULSION OF FATS.—Dr. Dobell, in his work on *Loss of Weight, Blood-spitting, and Lung Disease*, says: "Oil when it agrees and passes into the blood does not completely represent the solid fats of the natural food, and cannot therefore permanently take their place. As a temporary substitute for natural fat it answers admirably, but sooner or later, in some cases very soon indeed, the portal system becomes choked and refuses to absorb more oil; the oil disagrees with the stomach, it rises, spoils the appetite, and thus not only ceases to do good, but does positive harm, by preventing the patient from taking as much food as the stomach might otherwise call for and digest. None of these disadvantages occur with well-made pancreatic emulsions of solid fat. The consequence is that an artificial supply of natural fat by the natural route can be kept up for an indefinite time if required, while the appetite is usually improved and the digestion also; and at the same time a very large quantity of amylaceous* food is rapidly converted into dextrine and sugar by the pancreatic action of the emulsion, and thus a most important assistance in the economy of fat is given by the increased supply of carbon from the carbohydrates† at the same time that fat is being thrown into the blood by the emulsion.

* Pertaining to starch.

† Sugar and starch.

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“From the date of its first introduction in 1863 up to 1872, at the Royal Chest Hospital alone, I had prescribed the emulsion in over six thousand cases. . . . The general results of my thus extended experience have been confirmatory of my opinion. . . . I am informed on good authority that as much as sixty thousand pounds of the emulsion (made in London) have been consumed in a single year. While there are certainly a few persons who cannot possibly take or assimilate the emulsion, although able to take cod-liver oil, they are but very few indeed, now that the emulsion has been made so perfect a preparation ; whereas the number of persons who can take and assimilate the emulsion, but not cod-liver oil, is very large. In either case, it is necessary not to be too easily persuaded by our patients from prescribing the remedy. I frequently find that patients who assert that they cannot possibly, and never could, keep down the oil, will manage to do so when informed that it is the only thing that will stay the progress of the disease.”

Food for Infants

Remarks of Dr. Eustace Smith, Physician to the King of the Belgians, in the *Sanitary Record* :

“The mortality among children under the age of twelve months is enormous, and of these deaths a large proportion might be prevented by a wider diffusion of knowledge of one of the most simple of subjects. . . . The great principle at the bottom of all successful feeding—*viz.*, that an infant is nourished in proportion to his power of digesting the food with which he is supplied, and not in proportion to the quantity of nutritive material which he may be induced to swallow—is so obviously true that an apology might almost seem necessary for stating so self-evident a proposition ; but experience shows that this simple truth is one which, in practice, is

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constantly lost sight of. That that child thrives best who is most largely fed, and that the more solid the food the greater its nutritive power, are two articles of faith so firmly settled in the minds of many persons that it is very difficult indeed to persuade them to the contrary. To them wasting in an infant merely suggests a larger supply of more solid food ; every cry means hunger, and must be quieted by an additional meal. To take a common case : A child, weakly, perhaps, to begin with, is filled with a quantity of solid food which he has no power of digesting. His stomach and bowels revolt against the burden imposed upon them, and endeavor to get rid of the offending matter by vomiting and diarrhea ; a gastrointestinal catarrh is set up, which still further reduces the strength ; every meal causes a return of the sickness ; the bowels are filled with fermenting matter, which excites violent griping pains, so that the child rests neither night nor day ; after a longer or shorter time he sinks, worn out by pain or exhaustion, and is then said to have died from 'consumption of the bowels.'

“Cases such as the above are but too common, and must be painfully familiar to every physician who has much experience of the diseases of children.

“The food we select for the diet of an infant should be nutritious in itself, but it should also be given in a form in which the child is capable of digesting it ; otherwise we may fill him with food without in any way contributing to his nutrition, and actually starve the body while we load the stomach to repletion. No food can be considered suitable to the requirements of the infant unless it not only possess heat-giving and fat-producing properties, but also contains material to supply the waste of the nitrogenous tissues ; therefore, a merely starchy substance, such as arrowroot, which enters so largely into the diet of children, especially among the poor, is a very undesirable food for infants, unless given in very small quantities and mixed largely with milk.

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“The most perfect food for children—the only one, indeed, which can be trusted to supply in itself all the necessary elements of nutrition in the most digestible form—is milk. In it are contained nitrogenous matter in the curd, fat in the cream, besides sugar, and the salts which are so essential to perfect nutrition. The milk of different animals varies to a certain extent in the proportion of the several constituents, some containing more curd, others more cream and sugar; but the milk of the cow, which is always readily obtainable, is the one to which recourse is usually had, and, when properly made, this is perfectly efficient for the purpose required. Cow’s milk contains a larger proportion of curd and cream, but less sugar, than is found in human milk, and these differences can be immediately remedied by dilution with water and the addition of cane or milk-sugar in sufficient quantity to supply the necessary sweetness. But there is another and more important difference between the two fluids which must not be lost sight of. If we take two children, the one fed on cow’s milk and water, the other nursed at his mother’s breast, and produce vomiting after a meal by friction over the abdomen, we notice a remarkable difference in the matters ejected. In the first case we see the curd of the milk coagulated into a firm, dense lump; while in the second the curd appears in the form of minute, flocculent, loosely connected granules. The demand made upon the digestive powers in these two cases is very different, and the experiment explains the difficulty often experienced by infants in digesting cow’s milk, however diluted it may be; for the addition of water alone will not hinder the firm clotting of the curd. In order to make such milk satisfactory as a food for new-born infants, further preparation is required; and there are two ways in which the difficulty may be overcome.

“Although any thickening matter will have the mechanical effect desired of separating the particles of

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curd, yet it is not immaterial what substance is chosen. The question of the farinaceous feeding of infants is a very important one, for it is to an excess of this diet that so many of their derangements may often be attributed. Owing to a mistaken notion that such foods are peculiarly light and digestible—a notion so widely prevalent that the phrase ‘food for infants’ has become almost synonymous with farinaceous matter—young babies are often fed as soon as they are born with large quantities of corn-flour or arrowroot, mixed sometimes with milk, but often with water alone. Now, starch, of which all the farinas so largely consist, is digested principally by the saliva, aided by the secretion from the pancreas, which converts the starch into dextrine and grape-sugar previous to absorption. But the amount of saliva formed in the newborn infant is excessively scanty, and it is not until the fourth month that the secretion becomes fully established. Again, according to the experiments of Korowin, of St. Petersburg, the pancreatic juice is almost absent in a child of a month old; even in the second month its secretion is very limited, and has little action upon starch. It is only at the end of the third month that its action upon starch becomes sufficiently powerful to furnish material for a quantitative estimation of the sugar formed. Therefore, before the age of three months a farinaceous diet is not to be recommended—is even to be strongly deprecated, unless the starchy substance be given with great caution and in very small quantities. If administered recklessly, as it too often is, the food lies undigested in the bowels, ferments, and sets up a state of acid indigestion which, in so young and feeble a being, may lead to the most disastrous consequences. In fact, the deaths of so many children under two or three months old can be often attributed to no other cause than a purely functional abdominal derangement, excited and maintained by too liberal feeding with farinaceous foods. There is, however, one form of food which, although

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farinaceous, is yet well digested, even by young infants, if given in moderate quantities. This is barley-water. The starch it contains is small in amount and is held in a state of very fine division. When barley-water is mixed with milk in equal proportions it ensures a fine separation of the curd, and is at the same time a harmless addition to the diet. Isinglass or gelatin, in the proportion of a teaspoonful to the bottleful of milk and water, may also be made use of, and will be found to answer the purpose well. Farinaceous foods in general are, as has been said, injurious to young babies on account of the deficiency during the first months of life of the secretions necessary for the conversion of the starch into the dextrine and grape-sugar, a preliminary process which is indispensable to absorption. If, however, we can make such an addition to the food as will ensure the necessary chemical change, farinaceous matter ceases to be injurious. It has been found that, by adding to it malt in certain proportions, the same change is excited in the starch artificially as is produced naturally by the salivary and pancreatic secretions during the process of digestion. The employment of malt for this purpose was first suggested by Mialhe, in a paper read before the French Academy in 1845, and the suggestion was put into practice by Liebig, fifteen years later.

“‘Liebig’s Food for Infants’ contains wheat flour, malt, and a little carbonate of potash, and has gained a well-deserved celebrity as a food for babies during the first few months of life. The best form with which I am acquainted is that made by Mr. Mellin, under the name of ‘Mellin’s Extract for Preparing Liebig’s Food for Infants.’ In this preparation, owing to the careful way in which it is manufactured, the whole of the starch is converted into dextrine and grape-sugar, so that the greater part of the work of digestion is performed before the food reaches the stomach of the child. Mixed with equal parts of milk and water this food is as perfect a

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substitute for mother's milk as can be produced, and is readily digested by the youngest infants. It very rarely, indeed, happens that it is found to disagree.

“In all cases, then, where a child is brought up by hand, milk should enter largely into his diet; and during the first few months of life he should be fed upon it almost entirely. If he can digest plain milk and water, there is no reason for making any other addition than that of a little milk, sugar, and cream; but in cases where, as often happens, the heavy curd taxes the gastric powers too severely, the milk may be thickened by an equal proportion of thin barley-water, or by adding to each bottleful of milk and water a teaspoonful of isinglass or of Mellin's Extract.”

ONE MONTH

“Having fixed upon the kind of food which is suitable to the child, we must next be careful that it is not given in too large quantities, or that the meals are not repeated too frequently. If the stomach be kept constantly overloaded, even with a digestible diet, the effect is almost as injurious as if the child were fed upon a less digestible food in more reasonable quantities. A healthy infant passes the greater part of his time asleep, waking at intervals to take nourishment. These intervals must not be allowed to be too short, and it is a great mistake to accustom the child to take food whenever it cries. From three to four ounces of liquid will be a sufficient quantity during the first six weeks of life; and of this only a half or even a third part should consist of milk, according to the child's powers of digestion. After such a meal the infant should sleep quietly for at least two hours. Fretfulness and irritability in a very young baby almost always indicate indigestion and flatulence; and if a child cries and whines uneasily, twisting about its body and jerking its limbs, a fresh meal given instantly, although it may quiet it for the moment, will, after a short time, only increase the child's discomfort.”

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TWO MONTHS

“During the first six weeks or two months, two hours will be a sufficient interval between the meals; afterwards this interval can be lengthened, and at the same time a larger quantity may be given at each time of feeding. No more food should be prepared at once than is required for the particular meal. The position of the child as it takes food should be half reclining, as when taking food from the mother’s breast, and the food should be given from a feeding-bottle. When the contents of the bottle are exhausted the child should not be allowed to continue sucking at an empty vessel, as by this means air is swallowed which might afterwards be a source of great discomfort.”

SIX MONTHS

“At the age of six months farinaceous food may be given in small quantities with safety, if it be desired to do so; and in some cases the addition of a small proportion of wheaten flour to the diet is found to be attended with advantage. The best form in which this can be given is the preparation of wheat known as ‘Chapman’s Entire Wheaten Flour.’ This is superior for the purpose to the ordinary flour, as it contains the inner husk of the wheat finely ground, and is therefore rich in phosphates and in a peculiar body called cerealine, which has the diastatic property of changing starchy matters into dextrine.”

EIGHT MONTHS

“After the eighth month a little thin mutton or chicken broth or veal tea may be given, carefully freed from all grease. After

TWELVE MONTHS

the child may begin to take light puddings, well-mashed potatoes with gravy, or the lightly boiled yolk of an egg; but no meat should be allowed until the child be at least

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sixteen months old. Every new article of food should be given cautiously and in small quantities at first; and any sign of indigestion should be noted, and a return be made at once to a simpler method of feeding."

Feeding the Baby

Dr. C. E. Page, in a very admirable little book, *How to Feed the Baby*, thinks babies are generally overfed. He thinks three meals a day and nothing at night, for an infant from its birth, is quite enough; that the stomach of an infant needs rest like that of an adult; that the stomach should be allowed to clear itself and rest before the next meal is taken; that "the stomach is generally forced to go to work again too soon, and later this excessive labor exhausts the muscular power of the stomach; the supply of gastric juice is not enough to digest unneeded food, which, if not thrown up, remains to putrefy and poison the blood." Dr. Page relates his experience with his own children (also others under his charge), who were brought up on the three-meals-a-day plan. He says they slept all night like older people. At the same time due attention was paid to ventilation. A little dropping of the upper window always kept the room well aired; no swaddling clothes pinched the vital organs.

He says: "If the child be fed and dressed properly, and is otherwise rationally managed, there will be no midnight orgies, no sleepless nights on baby's account, and it will soon—indeed, in a very few days—become so regular in habit that the bundled, pinned-up squares, so sweltering and injurious, can be entirely dispensed with at night, and during its naps by day, and it may be safely laid down after supper for its ten or twelve hours of solid sleep."

What Dr. Page considers a sufficient amount of diet

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is as follows: "No definite rule can be given for the amount of food necessary for a hand-fed babe at any given age. It will not, however, vary much from one pint for an infant of six months. This amount, divided into three meals—at 6 A.M., 12 M., and 6 P.M.—has, in my experience, always ensured the best results."

This seems very little, yet undoubtedly babies are generally overfed.

He also says: "During hot weather the child does not need as much food as in winter. . . . The baby should be allowed water frequently in summer."

Dr. Dawson, of New York, discussing the same subject, says: "When treating vomiting, constipation, or diarrhea in children, the stomach is given rest by cutting off all but a small quantity of food. Will we gain any benefit, I ask, from ejected or undigested food, even if it causes no severer disturbance?"

Again he says: "Constipation, too, so common in otherwise healthy infants, is generally due to excessive and too frequent feeding. The explanation is quite simple. The stomach being overburdened with food, and consequently overtaxed with work, each supply of milk, instead of being coagulated into fine and soft coagula, which are readily acted upon by the secreted pepsin, comes into contact with the semi-digested acid coagula of the preceding meal, and, in consequence, is coagulated more rapidly than it should be normally, the coagula being larger and harder. Such masses, if not ejected, pass into the intestinal canal but little or not at all changed by the digestive process, will impact together on contact, and from their size and dryness are with difficulty passed along the bowels, thus giving rise to constipation, colic, etc."

Professor Huxley says: "But, whatever the circumstances, if the quantity of food taken exceeds the demands of the system, evil consequences are sure to follow. The immediate results of overeating are lethargy,

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heaviness, and tendency to sleep. Overtaxing the digestive organs soon deranges their functions, and is a common and efficient cause of dyspepsia. If the food is not absorbed from the digestive apparatus into the system, it rapidly undergoes chemical decomposition in the alimentary canal, and often putrefies. Large quantities of gas are thus generated, which give rise to flatulence, and colicky pains. Dyspepsia, constipation, and intestinal irritation causing diarrhea are produced. If digestion be strong, and its products are absorbed, an excess of nutriment is thrown into the blood and the circulation is overloaded. If food is not expended in force, the natural alternative is its accumulation in the system, producing plethora and abnormal increase of tissue. This is accompanied by congestion of important organs, mal-assimilation of nutritive material, and increased proneness to derangement and diseased action."

Dr. Dawson says: "The ejection of milk after nursing, which is ignorantly considered by many to be the sign of a healthy child, denotes overfeeding, and is the effect of reflex action. . . . As my experience has taught me, most infants who thus throw up after eating suffer sooner or later from enteralgia and constipation, and other symptoms of indigestion, which later are only relieved when the greed of the child is restricted."

Dr. Page says: "One cause of excessive feeding exists in the desire of parents to have a *fat* baby. . . . The excessive fat, so generally regarded as a sign of a healthy babe, is as truly a state of actual disease as when it occurs at adult age. Not only are the muscles enveloped with fat, they are mixed with it throughout, and so are the vital organs—the kidneys, liver, heart, etc. Dissection in these cases often discloses the fact that these organs are enlarged and degenerated with fat; the liver, for example, is often double the normal size. The disease finally culminates in one of two things—a consider-

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able period of non-growth, or a violent sickness, which strips them of fat, if not of life."

Dr. Page further says: "It is not the large quantity swallowed, but the *right* quantity, properly digested and perfectly assimilated, that alone can ensure the best results with either children or adults."

Diet for Typhoid Fever

Extract from an address on the "Treatment of Typhoid Fever," delivered before the Midland Medical Society, 1879, by Sir William Jenner:

"From the first they should be restricted to a liquid diet with farinaceous food and bread in fine form, if the appetite should require it. It is better to vary the broths, and to add to them some strong essence of vegetables. Sometimes a little strained fruit juice is taken with advantage, but skins and seeds of fruits and particles of the pulp are frequent sources of irritation to the bowels. Grapes are always dangerous, from the difficulty of preventing seeds slipping down the throat. The value of milk as an article of diet is generally admitted, but it requires to be given with caution. The indiscriminate employment of milk in almost unlimited quantities as diet in fever has led to serious troubles. Milk contains a large amount of solid animal food. The caseine of the milk has to pass into a solid form before digestion can take place. Curds form in the stomach. Patients suffering from typhoid fever should be allowed an unlimited supply of pure water. When pure water is freely absorbed it passes away by the kidneys, skin, lungs, etc., and is of much service as a depurating agent. If it be possible even that the poison of the fever was conveyed into the patient by the drinking-water or the milk of the district in which he is ill, then these fluids should be boiled until a different supply is obtained. . . . The fever

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is thus met by rest, quiet, fresh air, mixed liquid food, and bland diluents, and the exclusion of fresh doses of poison; the intestinal lesion by careful exclusion from the diet of all hard and irritating substances, and the removal from the bowels of any local irritant.

“The chief causes of diarrhea in excess of that due to the intestinal changes in typhoid fever are, first, errors in diet; second, the use of solid food—the presence of undigested food in the bowels, the abuse of milk and animal broths. My own experience has not satisfied me that one animal broth is more prone to produce diarrhea than another. Excess of fluid, when there is irritability to absorb the quantity drank, passes through the bowels, and so stimulates excessive secretion from the intestinal mucous membrane.

“Alcohol in fit doses improves the nerve energy. . . . When blood in ever so small a quantity is observed in the secretions, the patient is to be kept in a recumbent position. He should not be allowed to make any effort whatever. All movement of the bowels should be restrained as far as possible and for as long as possible. . . . It is a point of the greatest moment to keep the bowels empty, and therefore nourishment should be given in the most concentrated and absorbable form—*i.e.*, essence of meat in table-spoonful doses, frequently repeated. Lumps of ice should be sucked, and all essence of meat iced.

“In a disease which runs a limited course, like typhoid fever, the greatest possible care should be taken to preserve the powers of the stomach, as the life of the patient may depend on his power to digest nourishment towards the end of his disease. . . . To avert death from failure of heart-power, alcohol is the great remedy. Over defective cardiac action—due altogether to changes in the muscular tissue, when once established, or in the circulation of poisoned blood through its vessels—alcohol exerts comparatively little influence; but when the weakness and frequency of cardiac action are due to nerve influ-

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ence, in part or altogether, then alcohol exerts a singularly beneficial effect on the rapidity and feebleness of the heart's action. . . . I may sum up my experience in regard to the use of alcohol in the treatment of typhoid fever thus : Its influence is exerted primarily in the nervous system, and through it on the several organs and processes ; for example, the heart and the general nutritive processes — changes on which the rise and fall of temperature depend. In judiciously selected cases it lowers temperature, increases the force and diminishes the frequency of the heart-beats ; it calms and soothes the patient, diminishes the tremor ; it quiets delirium, and induces sleep. It should never be given in the early stage of the disease, or with the hope of anticipating and so preventing the occurrence of prostration and debility, but should be prescribed only when the severity of special symptoms, or the general state of prostration, indicates its use. Hence a large number of cases of typhoid fever end favorably without alcohol being prescribed at all. It should not be prescribed when a sudden gush of blood has induced faintness, unless the faintness is so great as to threaten life immediately. Nor should it be given when, after the first few drops, the temperature rises, the heart's action becomes more frequent, or more feeble, delirium increases, sleeplessness supervenes, or drowsiness deepens, so as to threaten to pass into coma. When the urine contains a certain amount of albumen, alcohol should not be prescribed unless absolutely necessary for the relief of some symptom immediately threatening life, and then it should be given with the greatest caution, and its effects on temperature and the circulation be carefully and frequently noted. The quantity of alcohol prescribed should be as much only as may be necessary to effect the object for which it is prescribed. In the fourth week, to tide the patient over the concluding days of the disease, it may, as a rule, be given more freely than in the second, or the beginning of the third,

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week of the disease ; but it is in exceptional cases only that more than twelve ounces of brandy in the twenty-four hours can be taken without inducing the worst symptoms of prostration. Nearly all the good effects of alcohol, when its use is indicated, are obtained by four, six, or eight ounces of brandy in twenty-four hours. Taken in excess, even when in smaller quantities, it would do the patient no good ; it dries the tongue, muddles the mind. . . . When there is a question of a larger or a smaller dose, I, as a rule, give the smaller. The reverse of the rule I laid down for myself in the treatment of typhus fever.”

Fresh Air and Diet for Colds and Catarrh

Extracts from *The Remedies of Nature*, by Dr. Felix L. Oswald :

Dr. Oswald says : “That colds or catarrhal affections are so very common—more frequent than all other diseases taken together—is mainly due to the fact that the cause of no other disorder of the human organism is so generally misunderstood . . . the cause is taken for a cure, and the most effective cure for the cause of the disease. If we inquire after that cause, ninety-nine patients out of a hundred . . . would answer, ‘Cold weather,’ ‘Raw March winds,’ . . . in other words, outdoor air of a low temperature. If we inquire after the best cure, the answer would be, ‘Warmth and protection against cold draughts’—*i.e.*, warm, stagnant, in-door air. Now, I maintain that it can be proved . . . that warm, vitiated in-door air is the cause, and cold out-door air the best cure for catarrhs. . . . In all the civilized countries of the colder latitudes catarrhs are frequent in winter and early spring, and less frequent in midwinter, hence the inference. . . . No kind of warm weather will mitigate a catarrh while the patient persists in doing

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what thousands never cease to do the year round—namely, to expose their lungs night after night to the vitiated, sickening atmosphere of an unventilated bedroom. Colds are, indeed, less frequent in midwinter than at the beginning of spring. Frost is such a powerful disinfectant that in very cold nights the lung-poisoning atmosphere of few houses can resist its purifying influence; in spite of padded doors, weatherstrips, and double windows, it reduces the in-door temperature enough to paralyze the floating disease germs.

. . . All Arctic travellers agree that among the natives of Iceland, Greenland, and Labrador pulmonary diseases are actually unknown. Protracted cold weather thus prevents epidemic catarrhs, but during the first thaw nature succumbs to art, . . . the incubatory influence of the first moist heat is brought to bear on the lethargized catarrh germs. . . . Smouldering stove fires add their fumes to the effluvia of the dormitory; superstition triumphs; the lung-poison operates, and the next morning a snuffling, coughing, and red-nosed family discuss the cause of their affliction. . . . The summer season brings relief; . . . the windows are partially opened. The long warm days offer increased opportunities for out-door rambles. . . . No man can freeze himself into a catarrh. In cold weather the hospitals of our northern cities sometimes receive patients with both feet and both hands frozen, . . . but without a trace of catarrhal affection. Duck-hunters may wade all day in a frozen swamp without affecting the functions of their respiratory organs. Ice-cutters not rarely come in for an involuntary plunge-bath, and are obliged to let their clothes dry on their backs; it may result in a bowel complaint, but no catarrh. . . . Cold is a tonic that invigorates the respiratory organs when all other stimulants fail, and, combined with arm exercise and certain dietetic alteratives, fresh cold air is the best remedy for all the disorders of the lungs and upper air passages. . . . If the

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fight is to be strong and decisive (for breaking up a cold), the resources of the adversary must be diminished by a strict fast. . . . But, aided by exercise, out-door air of any temperature will accomplish the same result. In two days a resolute pedestrian can *walk away* from a summer catarrh of that malignant type that is apt to defy half-open windows. But the specific of the movement-cure is *arm exercise*—a dumb-bell swinging, grapple-swing practice, and wood-chopping. On a cold morning (for, after all, there are ten winter catarrhs to one in summer), a woodshed *matinée* seems to reach the seat of disease by an air-line. As the chest begins to heave under the stimulus of the exercise, respiration becomes freer as it becomes deeper and fuller . . . mucus is discharged *en masse*, as if the system had only waited for that amount of encouragement to rid itself of the incubus. A catarrh can thus be broken up in a single day. For the next half week the diet should be frugal and cooling. Fruit, light bread (?), and a little milk, is the best catarrh diet. A fast-day is still better. Fasting effects in a perfectly safe way what the old-school practitioners tried to accomplish by bleeding; it reduces the semi-febrile condition which accompanies every severe cold. There is no doubt but that by exercise alone a catarrh can gradually be ‘worked off.’ . . . A combination of the three specifics—exercise, abstinence, and fresh air—will cure the most obstinate cold.”

This admirable article of Dr. Oswald’s, published in the *Popular Science Monthly*, has undoubtedly done much to shake what he calls “the night-air superstition.” Dr. Oswald sleeps with window wide open the year round, and he never has a cold. It would undoubtedly be indiscreet, however, to change a habit too suddenly.

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Something More about the Pancreatic Extract for Artificial Digestion

As to the receipts which the writer has given for the digestion of certain foods (pp. 12 and 13), Dr. Benjamin T. Fairchild (the inventor of the "Pancreatic Extract" as prepared by Fairchild Brothers) is of opinion that too long a time is allowed for the digestive process, which renders the food less palatable. It is more satisfactory, he says, to digest the milk food but half an hour. If not taken immediately by the patient, the food is, after the half hour, placed on ice. This arrests digestion, and when the patient takes the food into the stomach, the digestion is there completed. As it is desirable to give the food to the patient warm, it can be slightly heated (a little more than lukewarm) just before it is administered. The boiling of the food kills the digestive principle of the extract used. Yet it is sometimes, in the absence of ice, desirable to boil it in order to keep it. The digestive function is not destroyed by cold temperature—only arrested.

The writer does not understand why it would not be as satisfactory to mix the pancreatic extract with the food just before eating, and allow the entire digestive process to be carried on in the stomach, and merely gives the advice of others who ought to know more about it than herself.

She will also add that pancreatized barley-gruel (made without sugar) is the most palatable of the pancreatized gruels, and subjoins the following new receipt for a pancreatized food which is now much used.

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Pancreatized Oysters

Chop half a dozen raw oysters as fine as possible, also pound them.

Bring two cupfuls (one pint) of the oyster liquor (it may be part water if there is not oyster liquor enough) to a boil, then thicken it with half a cupful of barley-flour, rubbed smooth with half a cupful of water. Let it boil three or four minutes to cook the barley, then add the oyster pulp, and a seasoning of salt and very little pepper. When it comes to the boiling-point again, take it from the fire, and when the temperature is reduced to blood heat, mix in a fourth of a teaspoonful of pancreatic powder, and half a saltspoonful of soda. Pour it into a glass jar or bottle, and put this into water so hot that the whole hand can be held in without discomfort for a minute. Let it stand an hour as described for milk. It takes a little longer to digest oysters than milk.

The dish is most palatable served immediately. It is liable to curdle when brought to the boiling-point again. It can either be placed on ice, or brought to the boiling-point for the purpose of keeping.

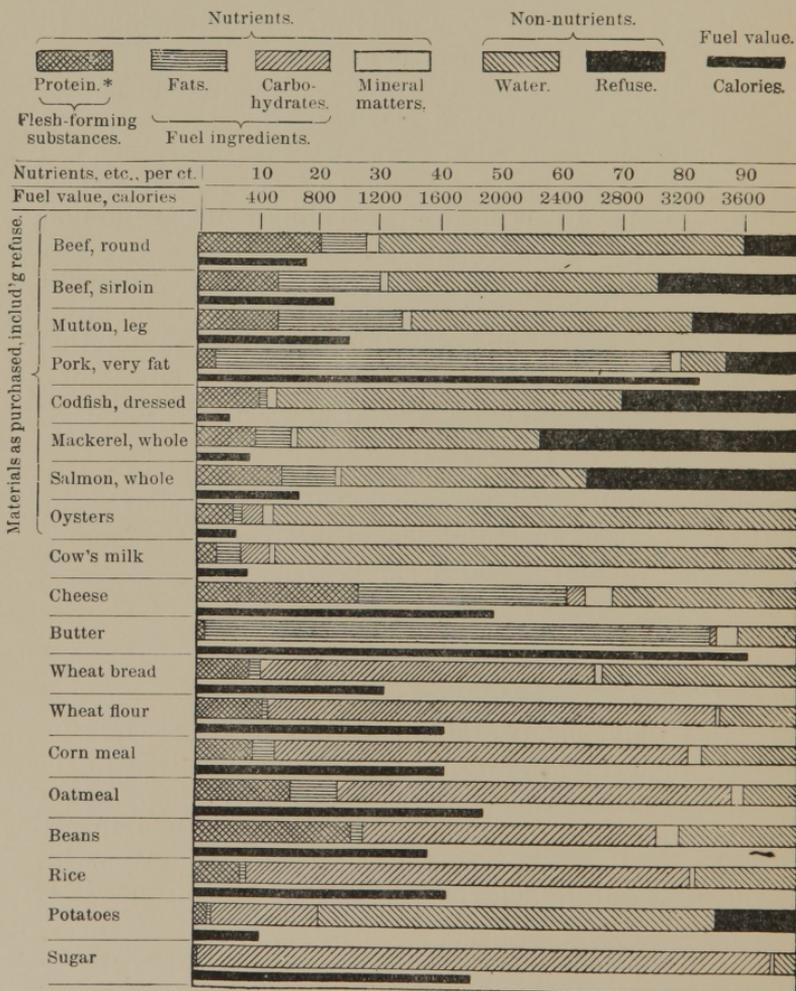
Chart of Food Materials

An abridgment is reproduced of a chart prepared for the United States government, giving an analysis of the articles of food in general use, their nutritive ingredients, refuse, and fuel value. The latter is expressed in calories—*i.e.*, the degrees of the calorimeter, an instrument which measures energy, or the heat-producing power of food.

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COMPOSITION OF FOOD MATERIALS

Nutritive ingredients, refuse, and fuel value.



* Or nitrogenous constituents.

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