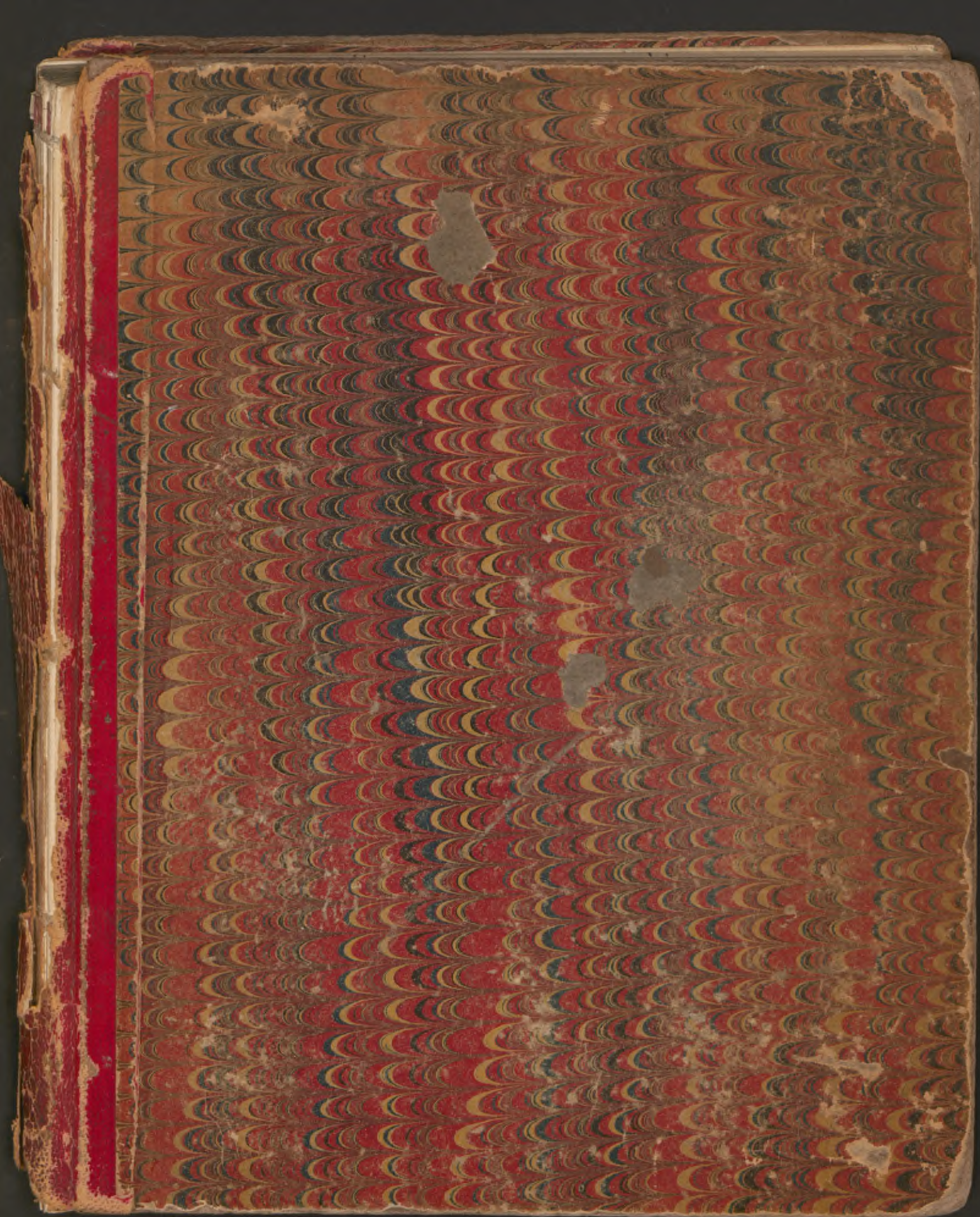
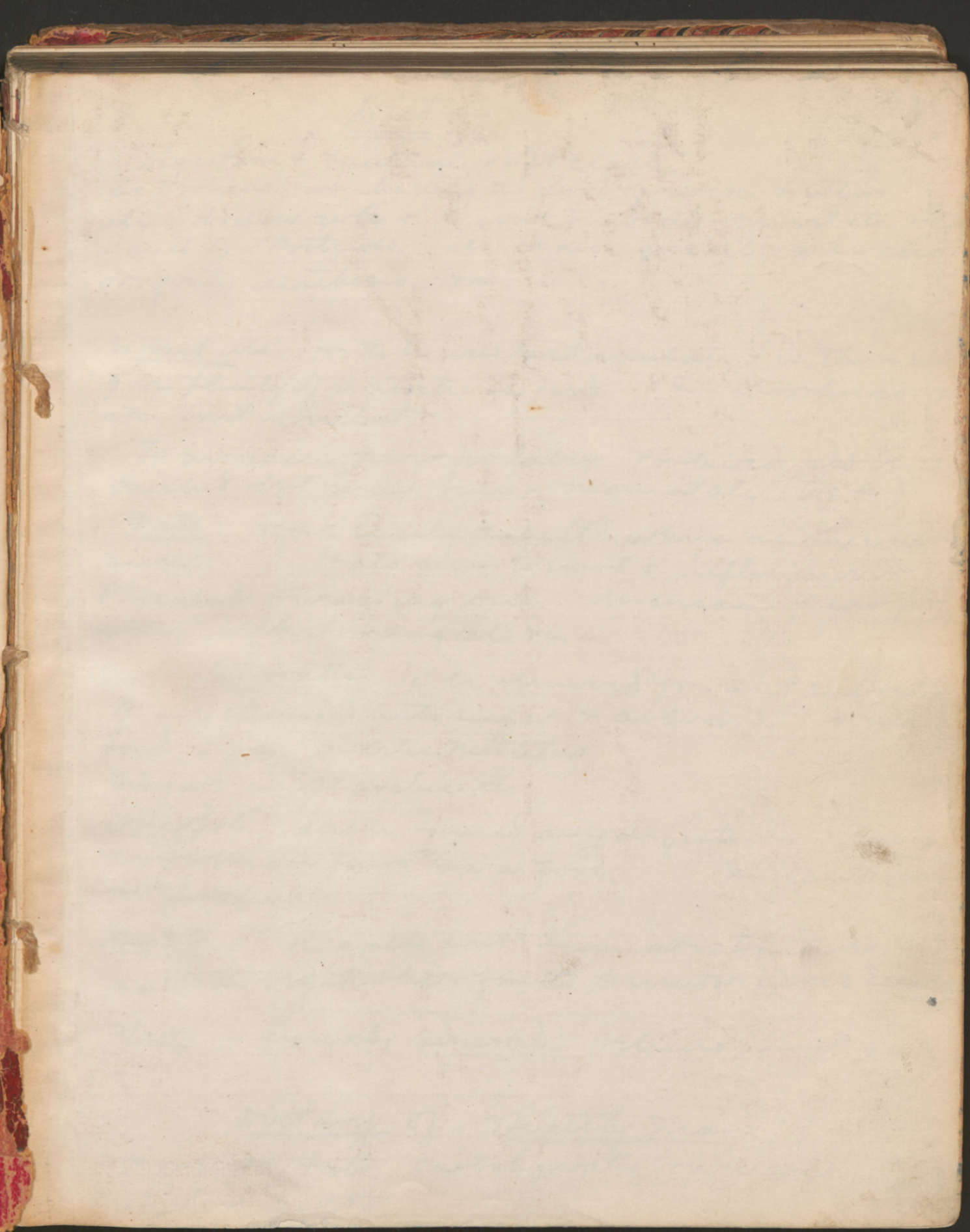
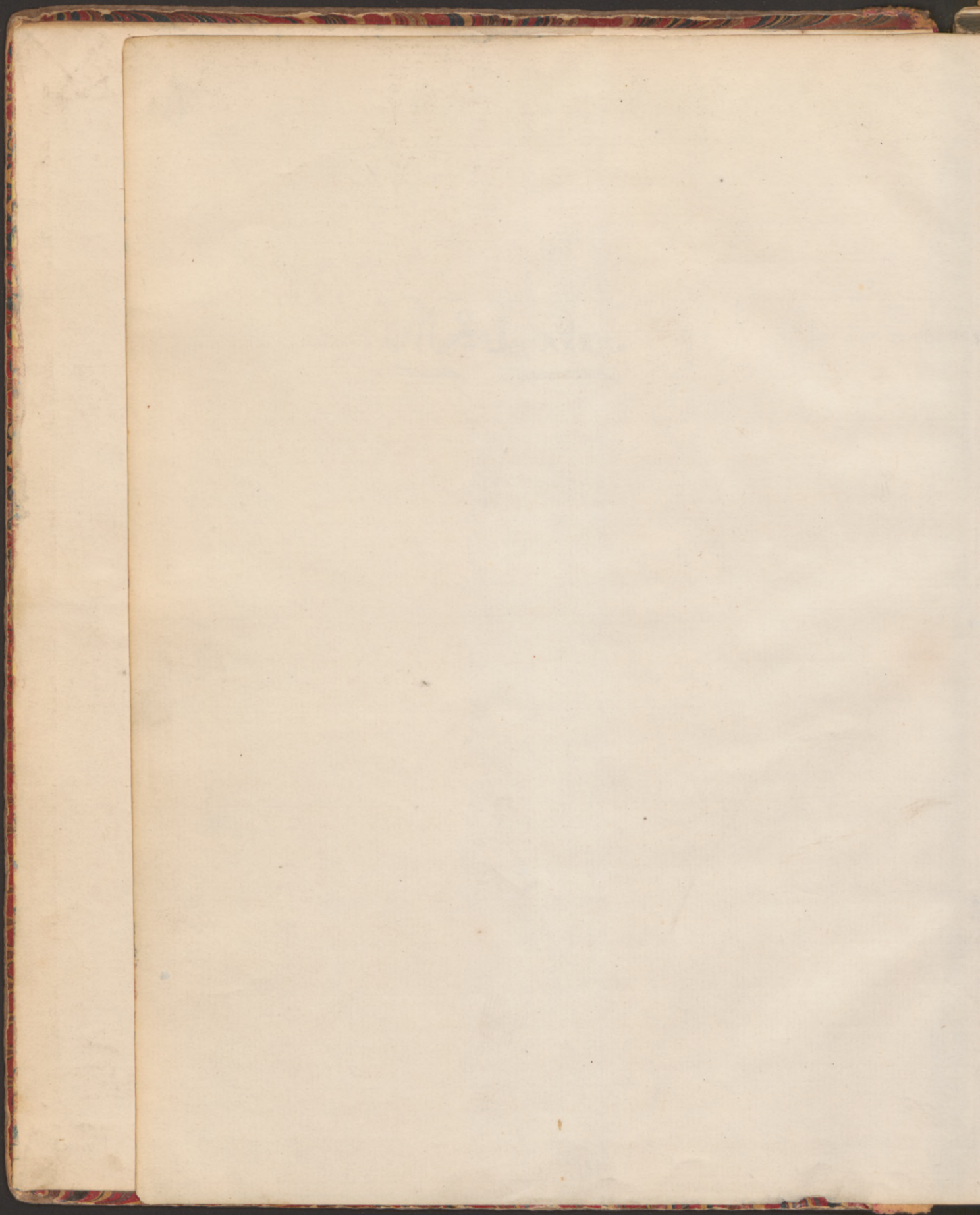




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Mc ^c_{uu} L AREY.





Diet

1

digestion & function & of clash.
as Proteids. wh. leading to. prod of urica. & other
solid bodies wh. r. < irrit. to body. must etc. stop
- ant of Proteids. i.e. c. dis. gravel. uric acid
or gouty diathesis. &c.

Extract ins. r. to be used to stimulate & w. then sld
give plenty of nutritious food. In diarrhoeas &c.
etc. irrit - irritat.

To increase power for labor. Proteids. sld be
furnished but may run - man stall. (Too <)

Fats. r < < easily digested when as an emul-
sion. Fats seem to exert v. influence over
typical & wasting dis. increase power for
work with standing cold &c.

Carbohydrates c. be removed fr. diet entirely
R. all changed into sugar. & absorbed. & may
prod. - dis. diabetes mellitus.

Sugar. - starches &c.

Alcohol. does n. cause any digestion. ... may
be given in form^{re} as a food. In acute & chronic
is poisonous.

Salts. R. salts cont^d in meat & extract ins
salts in vegetables & fruits for fruit & curd & Scurvy

H₂O. is quickly absorbed. relieves thirst &c.

Dietary of a Healthy Man.
Proteids. Fats. Carbohydrates (r.n. necess.)
Salt & Salts.

- appetite tells us what we need.
- overdistension of S. & relief - craving of appetite S. Pts. have idiosyncrasies.

PT. shd. n. do any arduous labor before breakfast
 Prim. meal dinner shd. be taken at noon. Unless
 they take a good square lunch.
 Dinner 1 1/2 hr. for 1st sitting down until again
 commencing work again

For 9

milk. next, bread & butter & egg. do n. make a diet too ^{more} monotonous
 - 9 needs < meals than 8. 4.

Dyspepsia. if caused by overloading - S. & intestines with a mass
 of indigestible food. Then evacuate - S. with mild cathartics
chronic dyspepsia which may last for years.

Fluid or semi fluid
 "Peptonized" Foods.

Milk.

Meat derivatives (soups, teas & clear)

Jelly

Egg.

Gruel of arrowroot; Barley Wheat
Solid.

Raw oysters.

White fish (except cod)

Poultry & game

Veal, mutton, Beef. (fresh & rare)

Bread & butter

Potatoes

Rice

Crossed tender fruits & vegetables.

Meals shd. be regular. & of a proper variety.
 dyspepsia may be aggravated by a too nutritious fluid
 food & n. enough bulk.

when - dyspepsia - a tendency to fermentation acid S.
made worse. espy. Pastry. surt. starchy & all
fatty masses.

Foods distinctly.

Constipating.

Milk
Hard boiled Egg.
Lean meat
White bread
Rice. - Arrow root.

Laxative

Fats
Molasses
Brown Bread
Rye & Indian & Oat meal
Fruits nuts olives
Succulent vegetables.

Errors of feeding & - < liable to der. work - & di-
gestion th. Teething. espy. in warm weather
∴ great care about diet to & w. bowel disorders.
change milk. Pancreatize - food &c.

In wasting diarrhoea of & give raw meat. aft.
mincing & pounding. macerate & strain. if - & dis-
turb + sugar. diluted w. barley st. v. orange st. v.
breath & stools & v. disagreeable.

when - digestion functions & low for furs &c. use
- fluid. Ins. fo. Lef. to v. &c. if P disagrees. also.

In furs of & don feed to often.

In obesity. cut out - fats carbohydrates & also.
give potulids vegetables. &c.

In - opposite condit. espy when P condit. feeds furs
to Phth. - cod liver oil. cream. also.

In well condit. Pts. fat w Phth. - cod liver oil does n.
do - o. good.

shd avoid. sugars. surtured.
 farinaceous. snaw luscious. fasting sago rice
 soups. w. flour. breads. fried. food.

Acidities afflicting Chemical Trac.

Alkalizing. alkaline + alkali-gener compounds of
 Potassium calcium
 Sodium magnesium
 Lithium ammonium

alkalies. rumer gree. - check an alkaline sec.
 is exzema.

Internally stimulate - food of gastric juice.

Neutralizes a. in - syst. (firing re.)

M. & B. acts on urine. stops. alk. sec. urine.
 stimulates - food of acid.

1. Antidotes to acids.

Lithium Carb.

magnesium Carb.

Lime S.O.

Calcium Carb.

2. Digestion anti acid.

Sodium Carb. (H / red.)

Lithium "

mag. carb. } of P.T. or
 " } constipat.

Calcium Carb. } of P.T. has
 " } diarrhoea.

Ammonia } aft. debauch.

3. Systemic antacid.

Potassium carb.

" Citrate

" acetate

" & Sod. Tart.

Sodium carbonate

Lith. carbonate

" Citrate

3. Gout. Rheumat. s. skin diss.

uric acid gravel.

for Gout.

Acidifying.

Sulphuric acid
 nitric acid
 hydrochloric acid
 Nitrohydrochloric
 Hydrobromic
 Phosphoric.

acetic acid
 Lactic acid
 Tartaric "
 Citric. "
 Benzoic acid.

exty. stops sweating but as good as Bella

Intly. prevent sour & stimulates saliva
 ∴ alays thirst. On n. line alkalies tend to
 acidify - system but really no diss. dependg
 on an alk. audit of - sy st.

In alkaline decays of urine in syphilis
 acts v. well. probly as it is a germ sterilizer.
 may use acids to neut. alk. fix ons.

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Potassia is - of penetrating - forms dog.
 K. w lime vinosa fasti.
 agn. v limited superficial.

Astringents used to control hum.
 on catarrhs. morbid m. m.
 " abnormally relaxed m. m. prolapsed anus.
 spongy gums. relaxed vagina.
 Cold. m. = irrit. - salts. down to Pb v. quite irrit.
 Pb. v. cry alum. v. irritant.
 H₂SO₄ internally might curate.
 Tannin v astring. v. irrit.
 oil of Turpentine in hum.
 ∴ > irrit. Pb. alum. + Tannic acid.

Emetics.

1 By increasing matter to be exerted
H₂O & Potassium salts.

2 By menace of arterial tension
Squill Foxglove Caffeine
convallaria Sassy.

3 By irritation of - Es.

is to be used,
in cases of
where it is
essential.

Function of Ferric chloride
also.
spirit of nitrous ether
aromatic vol oils & resins.
Squill
Ipecac.

Review. suppress. w. ac. & dis. H₂O. K.
salts. & particularly digitalis.
when a c. dis. is subsistent may use s. of mild or
irritant emetics.

In c. dis. a 2nd class. big. w. squill is good
eliminates, & purges.

For. spt into either w. cit of K

Agents affecting - Secretion of Saliva

Promoting -
apertising Savors. Mercury.
Acids Jabouard's.
Bitters.

By checking -
Belladonna (gr. p.) Fear

Agents affecting - secretion of Gastric Juice
- stimulating -
Aesculus quinine irritants.

- checking -
all harsh irritants

Agents affectg. - secretion of Bile.

7

Promoting.

Purgatives

Sodic phosphate
Walver group
Podophyllum
Jalap.
Rhubarb
Aloes
Colocynth. { in 11 NTS.

non Purgatives

Mercuric chloride
Ammoniac phosphate
D-Trolydrochloric a.
Benzoin
Salicylate
Opium
Sanguinaria
Hydrastis. —

Sud acetate

most. Intestinal irritants

Agents affecting - secretion of Milk.

Promoting.

serumity

General diet.

Suberandi.

Ricini leaf poultice.

checking.

Worry.

Belladonna group.

Agents affectg. - menstrual flow.

Promoting.

General Nutrition.

Local Irritation.

Aloes.

acid vol. oils & Resins.

me. saim. tansy

checking.

no specific

as shown in 9 cases

Agents affecting, - Bodily Temperature

By abstraction assuming.

Cold.

By direct inhibition

alcohol. (= used for oth effects. food stim etc)

Phenols.

arom. acids. esp salicy.

Vol. oils,

Eucalyptus & Gaultheria.

v. good.

but.

Salicine

Quinine type of alkaloids.

By complex method

Vascular Sedation.

By titrating.

that
exercise

vascular excitants.

Laxatives + Purgativesstools faecal + mucous.)

Rye: Maize: Oats.

Wheat Bran

Molasses

Manna

Fruit

Olive oil

Lined oil

Sulphur

Mag. + carb.

Blue Pill

Wahoo group.

Castor oil

Sassafras bark

Calomel

Turbarb

Aloes.

Purgatives(in full dosage, stools watery)

Sodic phosphate

Rochelle salt

Magnesic Citrate

Potassic bitartrate

Magnesium sulph.

Senna

Jalap.

Scammony.

Carp. cath. pill

Podophyllum

Colocynthis

[Gamboge]

Croton oil

Elatium

• sharp purges. but given just aft rising
slow in going to bed.

• & easily purged & slow. but n. rarely so.
in long y. slow get a sum action.
act. worse in hot climates
also. drink. only have diarrhoea.

Purgative Eucema. acts on almost all,
"intest.
Cold stool acts well. mixed w. oils. Oj - Cj

10 nozzle sld. be warmed & oiled. & sld. not try to
force it up during a fit of crying.
pass upward & backward. Inject slowly
pts. sld. not get in a habit of H scind. & not be used
in habitual constipation.

This image shows a single sheet of off-white or cream-colored paper. It features horizontal blue lines spaced evenly down its length. Two vertical red lines are drawn parallel to each other, creating margins on either side of the central writing area. The paper appears slightly aged or used, with some minor discoloration and faint smudges visible. There is no handwriting or printed text on the page.

[illegible]

Table.Mercury.1 Metallic Mercury (mild)Mercurous Compds. "

2. Oxide. (Black O.)

3 Chloride (mild & calomel)

4 Iodide. (green ?)

Mercuric Compds (init)

5 Oxide - (red. yellow)

6 Chloride (s) - (corrosive)

7 Iodide - (Red ?)

8 Cyanide. (s)

9. Sulphide. (red s. ^{bar} cinnabar)

10 Sulphate basic. (yellow s)

11 Nitrate (s in HNO_3)

12 Oleate

13 Mercurium ammonium chloride (ammoniated Hg - white ppt.)

Review of Hg. Compds.For mercurializationBy the mouth

1 Blue pill

1 Hg w. chalc

3 Calomel

4 Green Iodide

6 Corrosive sub.

7 Red Iodide

8 Cyanide

By Fumigation

2 Black oxide

3 Calomel

9 Red sulphide

By Inunction

1 Mercurial oint.

12 Oleate

By Hypodermic injec.

6 Corrosive sub.

For Digestion disorders

1 Blue pill

1. Mercury w chalc

3. Calomel

6 Corrosive sub.

For Dressings.

1 Mercurial oint.

2 Black oxide.

3 Calomel

5 Red & Yellow oxide

6. Corrosive sub.

7 Red Iodide

8 cyanide

11 Ointment of Nitrate

12 Oleate

13 ammoniated

To Kill Parasites

1 Mercurial oint.

6. Corrosive sub.

11 Ointment of Nitrate

12 Oleate

13 Ammoniated

To Cauterize

11 Sol. of Nitrate

To vomit.

11 Sol. of Nitrate.

To Purge

3. Calomel

The quietest way to mercurialize - syst. is by fumigation or inunction. latter - easiest. For fumig. calomel - best. inunction oleate quietest & elegant. but Hg oint. cheapest.

By mouth 1. 1. 3 & 4 r - miles

7 shd be used when kept up

for a long time. Gr. S. is prob. used & it where ²⁴ ~~it~~ well
also much used. The Brit Sty is comf. prod.

sty effects sooner than milder & before salivation.

Sty. best when out of use of suppl. is on & sury or m. p.
& for deep seated out breaks nervous K.S. is best or
sty best in 1st & 2nd stage & K.S. in 3rd but sty
is often a good adjunct in 3rd stage.

When calomel is given in large dose to purge & it
does not act. another agent should be given
or a sty. will prod. its constitutional effects.

Sty. in doses of 5 to 10 gr. or. highly diluted for
day is often good in diarrhoea.

Sty. is good in almost all skin diseases.

For dressings. 1 Least Brit. = Black ox. & sty. cl.
7.1 < irrit. sty. oint. 3. Then < Red ox. Yellow ox.
most rest.

For Lice The oleate is probably best. & good
plan to add a. ether about 1/2 part to 5% oleate.

Antimony.

antimonius emps.

Oxide
Sulphate
Potassium tartrate (s)

antimonials.

Soluble. - 1-12-15 ^{old} H₂O
antimonii Potassii Tartras
Insoluble.
antimonii Sulphide ^{used to}
" oxide ^{mass}
" oxy sulphuratum ^{selton}
antimonium " ^{used.}

All other preparations & made for sulphide
The Tartar emetic. is < at imp. - white powder

9.1 - H₂O salts decompose spontaneously.

incompat. w/ free acids & alkalis.

When rubbed on skin causes eruptions & a
like small pox.

It is a poison. Has nervous effect - as an emetic &c. In small doses gr. $\frac{1}{2}$ small effect on heart & increases secretory functions.

Lowers bowels & increases mucus in air passages &c. In large doses gr. $\frac{1}{2}$ acts as an emetic.

Sea sickness best type of nausea. Pt. turns pale. pulse lessens. - muscular debility & relaxation. It has a tendency to increase cutaneous perspiration &c.

Fustar emetic not only produces vomiting but also all effects of nausea. It produces its effects also when injected. Many of its actions disagreeable. The muscular relaxation is got. The vomiting ceasing after a storm is empty.

If gr. $\frac{1}{2}$ - if then will be poison. got musc. relaxation - depression of $\heartsuit$ &c. its pain in - storm & bowels.

Poison effects.

The symptoms of Poison & similar to cholera morbus. If death occurs it will be in a day or two. S.M. shows inflam. redness along alimentary canal - brain & lungs also affected congested.

The poisonous dose is n. a fixed quant. $\frac{1}{2}$ gr.

Antidote stomach pump. Tannic acid or something containing tannic acid. Strong tea is v. good. also cinchona - Galls &c.

Formerly used to slow $\heartsuit$ in large doses. also used in inflammatory affect not now account being used instead.

St. 1 dose repeated & given to produce chronic poisoning. Then have repeated attacks similar to cholera morbus.

Fustar emetic - is disagreeable. slow and when it begins it lasts $\frac{1}{2}$ too long. Has a depressing effect. Little used now as an emetic.

Used in skin as a counter-irritant. but bad.

1 lb. Produces an effect in slowing the pulse. etc. used in robust persons. not as much used as formerly. acetic etc. used instead.

Bf. anesthetic Tart. emet. was given to relax muscles in dislocations and 2d joint. given in catarrh of air passages when they are dry as in early stage. often is benefit.

It is given in 1 lb. in cough mixtures etc. also in affections of lungs. Pneumonia etc. I claim that it brings about resolution of a dis. also given in fever draughts. etc. Tart. emet. given up to point of nausea in spasms. i.e. false croup (*Corynebacterium stridulus*) given repeatedly in 1 lb. & stop when desired effect prod.

Wine of Sb. is a favorite way of giving

Tartar. emet. goes to Sherry f 37.

Ointment of Sb. used as counter. irrit. { 1 part Tart. emet
4 " " Lard

Plaster of Sb.

Better to give Sb in solution than in pill form. For a pill dissolving prod. full action on one part

Arsenic.

Resembles effect of heavy metal altho it is non metal

Arsenious Compounds.

Arsenide (5)

Chloride (5)

Potassic arsenite (5)

Iodide (5)

Arsenic compounds.

Sodic arsenate.

when pushed beyond certain pt prod chronic poisoning effect. Also in " do acute irrit. " " all - prospo. gives " do effect.

As & O. form an acid instead of a base.

Arsenious Acid. As_2O_3 acidum arseniosum

H is cd. in shops simply arsenic & is what is
generally known as arsenic.

~~freely sol in H₂O - 2 pts. in 100 & sol in hot H₂O~~
~~or no taste - white powder~~

Do. abt same as corrosive sublimate gr $\frac{1}{8}$ - $\frac{1}{10}$
when as given internally & compd is too irrit. we
generally use soltn. of some as salt.

Fowler's soltn.

Potassic arsenite (S). There is also a soltn. of S.
Liquor Potassii Arsenitis cd also Fowler's soltn.
Compd spirits of Savender added to give color
& taste to soltn. masking & safe by dist it fr
pure H₂O. Light brown color

It conts 4 grs. - $\frac{1}{3}$ of soltn. Do. ac v. after
meals.
Incompat w lime & cinchona.

In giving as it is well not to mix w anything
Chloride soltn. 1 used. Liq. arsenici chloridi.
A duplicate of Fowler's in strength & effect.

Pearson's solut.

Sodic arseniate not much used.
also an official soltn. Sig. sodii arseniatis
Iodide. - when I & as unite directly forming
a brown colored crystalline powder. volatile
cd in Pharm. arsenici iodidum. 1 used

Sonovans soltn.

except to masce a soltn. of Hg as I. called
Sonovans soltn. colored like Fowler's - light brown
all as compd has antiseptic propts. persons
dying fr as poisoning often keep a long time
b.f. decomposing.

On some skin as has
no effect, but applied to m.m. or divided sup.
will prod a strong irritant effect. & I have died
by its own strangulation & thus caustic.
Sls. it is absorbed. H & apt to occur w weak
th. w strong soltns.

Internally. In r. i. do. acts as mild irrit.
increasing appetite &c.

$\frac{10}{11}$ as. good in dyspepsia when as given

as. Poisoning.

continually ur & aft. to get chronic poisoning
 Gently as Poising. apt to show itself in conjunctivitis
 w a. oedema soon after & Pt. w suffer from
 easiness in stomach in soreness nausea &c.

st. & stom. is affected before & eyes &
 when it occurs reduce dose or stop entirely
 when such serious symptoms occur w. haer as
 much effect as can be obt. It is as.

when given w. Tart. emet. it seems to prod a
 tolerance for & as in fruiting & as.

If as. is inhaled may have chron. as Poising.
 w may occur fr inhaling green fr wall paper &c
 (Chicks & Paris green). Diff. Pts in 3 room may
 be affected differently.

If either a discomfort of stomach. or congest
 & oedema of conjunctiva in Pt. we shd examine
 & paper of sleeping room.

When much as is inhaled then will likely
 to gastro-intestinal congest. st. cornea. & st. an
 eruption on skin. st. salivation (like Hg).

Acute as poisoning is usually irritant poisoning
 but not corrosive like Stg. Corros.

In as poisoning may have convulsions; paralysis
 & s. Pts die w. P. symps alone. as is st. given to
 cure dis-nervs.

The death is not greatly speedy
 The pois'n dose not fixed. Smallest gr if arsenosa.

Treatment

First evacuate stomach as vomiting will
 not clear stomach entirely. better to pump in
 warm H₂O & then pump out
 & antidote Freshly pptd. Ferric oxide, fr.
 any ferric salt and NH₄HO

R Aqua ammonia f 3XX

Aqua

Oij

Fer sulphate firm

Oij

Aqua

Oij

M.

strain & wash & ppt. & then make a soln w
 $1\frac{1}{2}$ parts H_2O Give $\frac{1}{2}$ in 7 a.m. & p.m. After repeated
 it is not always effectual.

If we do not have above use Sub Carb. of Fe
 If do not have it use dialysed Fe. If no Fe be
 present magnesia is good

To cure & inflame. of stomach use Barley H_2O
 mucilaginous solution & castor oil & chlo. & chlo.

If a going to cure & nervous greatly slow.

Therapeutics. always given in 1 d. used in certain skin
 The class of solid diseases & st amenable & af-
 fectus of epidermis. Not to be given during
 acute stages of a dis. Give & remedy continually
 st. a dis. seems to grow worse for a few days
 to skin dis & greatly chronic & apt to recur
 therefore & as shd. be continued after apparent
 recovery. Rule. as many mos. as a dis. has lasted yrs.
 S. think better to give 1 d. long cent's others say
 give 1 d. at once.

In s. malarial cases Quin. fails & then we fail
 back on as. Quin. is < st. effect. in early cases
 as has advantage of being much cheaper than Quin
 and practically tasteless.

as. d. s.

average dose $\frac{1}{4}$ - $\frac{1}{2}$ drops Fowler's solution.

Neuralgia is often cured by as. such neur. being
 greatly of a malarial origin. Give pretty 1 d. s.

Chorea (St. vitus dance) is greatly benefited by 1 d. s. of as.

Asthma is st. cured.

Nervous affections of stomach benefited by as in
 1 d. s. m. j. of Fowler's. 2-3 times a day

Chronic ulcer & in

Gastritis of druncards as. is good.

simple vomiting due to nervous affections.

as. shd. greatly be taken after meals.

Preps. of as

acidum arseniosum

Siquor Potassii arsenitis griv - f 3 j

" arsenici chloridi. " " " "

Sodii arsenias.

Siquor Iodidum.

Liq arsenici et Hydrargyri Iodidi.

SilverSilverargentie compds.

Oxide ; Nitrate (s)

argenti nitras

" Oxidum. —

a cyanide is in a Plume but now used in Medicine
and used in making other preps.

In 100 long curts. constitutional effects & prod's.

In " " w^l bear poisons.

aq. when given for long time is apt to become fixed
in tissues, turning bluish, gives a Pt an
indelible blue color. ss. aq. shd be stopped
as soon as a blue color appears. Its peculiar
color appears 1st in m.m. then in skin.

" — when a Pt. is taking aq. shd be kept out of
sun light as much as possible.

The Oxide stains skin > its. a Nitrate.

aq. Poisoning is similar to that of other heavy met.
with a tendency to produce Paralysis.

aq no₃

Nitrate of aq. called (humor caustic) occurs in
colorless crystals. wh may be melted and run into
any shape, — like pencils of AgNO₃ sticks.

2 kinds. Argent nitras. & Argent nitras fusa.

aq no₃ v sol. decomposed instantly by any chloride
forming a white ppt. It is a v delicate test.

In making an aq no₃ sol. always ^{use} dest. H₂O
as comm. H₂O has < or > cl. in it.

Has a disagreeable metallic taste.

aq no₃ decompd. by almost all organic subs. when

" stains s. & removed by a sol. cyanide < or >

aq NO_2 cuts

conveniently w. Potass. Cyanide. as CN is a powerful poison & irritant it shd be used w care. If stains hold & much expd to light KCN will remove it.

If tase plate put d. on w & then wash - hurt stained. Wash plate hands etc well after using fr compd formed is r explosion.

If tase sticks of aq NO_2 moisten & applied to skin or var surf. aq nites, w albumen & thus is caust. But albat. of aq is n r sol. so CN caustic, c.n. got very deep. & shd be removed when w wnt to cauterise m.m. hard tissues, &c.

The upper pt. of nose, larynx, & trachea, resp 8 & r sensitive & aq NO_2 sticks. Food, great pain But if applied to m.m. of mouth & vulva &c. r pain experienced. a sol. of > th 10% is gently r caust. but it will be astringent & irrit.

Astring. action where parts & vessels condensed shrivelled & anaemic in appearance. Irrit nearly op-

posite fr example gr. of sand on conjunctiva. aq NO_2 has both their properties. as if a mod. strong soltn. be used it is at 1st astring & then irrit.

Internally aq NO_2 irrit to stomach acc. to amt taken If 1 ss. increases appetite. larger ds. nausea, faint & a r ds may prod. Paralysis.

If aq NO_2 given in pill it is decomposed as fast as dissolved. white liq. sol. act immedi. Gently but to give impet from

In poisoning - evacuate - stom. by emet. or pump - and give sol. Chloride. as NaCl. also sol albumen. Egg ^{milk}

Argentic Oxide. Brownish black powder. Dissol. in H_2O so. tasteless. not as likely to stain skin

Local effects on top of goul. - aq NO_2 is limited as a caustic. To destroy tissue it is limited b.c. its action is superficial - But it is useful at times esp b.c. it is limited to surface.

Surgeon uses aq sticks to remove exuberant granulations. But it does not remove all granulations.

Poisoning.
antidote

Therapeutics

simply destroys a superficial layer & causes absorp-
 or vital process of absorption. a growth was re-
 moved fr. a corn by touching & lightly & so causing absorp-
 of AgNO_3 useful in granular growths on nose.

In use of AgNO_3 we do not burn off, but cause absorption
 $\therefore$ touch lightly. When applied to wound where
 vitality is low we may use strong application
 In delicate use of AgNO_3 we 1st apply weak soln &
 then wash lightly w. NaCl. sol.

Mitigated sticks. caustic sticks made w AgNO_3
 & other sub. to weaken it & KNO_3 gently used.

In great irritability & action of AgNO_3 is < active &
 in delicate tissue as of urethra 1st delay irritation
 as by anodyne b.f. applying AgNO_3

AgNO_3 causes resolution of catarrhal affections
 if used of proper strength. It may be used at 1st
 to cause an absorp'n. of AgNO_3 . It causes gter.
 action fr. a time wh. may then get well quicker
 But it is a hit or miss treat must be. It will make
 a dis worse for a while, & may get well sooner or
 may be prolonged.

But AgNO_3 is given after a dis has gone a certain
 length. It is useful in V way after 1st surr-
 pain has subsided (if in throat, gonorrhoea etc).
 cannot always tell a right time to apply, so experiment.

Objections AgNO_3 stains parts & is obj. to apply
 where a clothes touch. In mouth gives a
 disagreeable metallic taste.

Symptoms by wh we recognize a severe irritant
 action of AgNO_3 has passed. The secretions &
 diminished & part has a shiny appearance
 Pus begins to appear.

16/11 - Soltns may be applied to catarrhal surfaces
 by atomizer.

The strength of a solt. has diff. advocates, am-
 physicians 10-20 grs to f 3 & at com. strength
 for Pharynx Larynx & Vagina.

The soltn. shd. be v. weak fr. urethra 2grs $\frac{f}{3}$
 But in urethral catarrh as gonorrhoea we may
 need a stronger soltn. to overcome a discharge.

(When a purulent dis-
 charge has set in.)

AgNO_3 not really necessary in catarrh unless & severe.
" Formerly used in diphtheria & erysipelas
but < sth done away w now.

also given in Epilepsy.
Chorea. (Zn better)
Daco. atax. supd to
as s. good.

AgNO_3 also used in stomach, seems to have s what
same control over nervous affections here as as
i.e. in Gastralgia, Gastritis. & ds. shd be $\frac{1}{2}$ gr
May be given in chron. dysentery, but shd be
avoided in acute —
when ^{nit.} given internally " ds. is $\frac{1}{6}$ - $\frac{1}{4}$ gr.
ds. oxide = $\frac{1}{2}$ - 1 gr. Better, to give in pill form

Copper

Copper

Same genl. properties as heavy metals.
Local effects of diff. Cu. Compds differ & ,
 CuSO_4 also cd blue stone, blue vitrol Cu_2O & Cu_2S
soluble in H_2O . Has a harsh disagreeable taste.

Sub acetate of Copper. Blue crystals, & used now
locally applied produces a strong irrit. effect
like AgNO_3 but < tendency to more & grtr. irritation
a valuable emetic. ds. 3-5 grs.

It is not followed by depressing effect of Tart. Emet.
It is kind of a mechanical emetic. When taken
in a ds. we have symptoms of poison.

Antidote. albumen as egg &c. has an anti-n & action
If long continued we may get constitl. poisoning. wh.
may occur in persons working in Cu.
Solid application of CuSO_4 may be used as lunar
caustic. but < as an absorbent. St. an affected
part gets used to one drug & we have to change
 CuSO_4 is painful.

The principal internal use of Cu. is an emet. ds. 2-3 grs.
good to dissolve in H_2O & then giving in i. ds. until
we get action. - If a CuSO_4 dose n. cause an emesis
& then throw off. we must get rid of Cu. by another
emetic or pump. It is a hard disagreeable
tasting emetic & vomiting is gaily scilicet. If
get haste necessary we may use CuSO_4 . but
if simply to get rid of too large a meal CuSO_4
would be too severe.

Zinc

allied closely to copper. But it is greatly weaker
~~Zincum oxidum~~. White powder. - looks like
 powdered chalk - If applied to surface it acts
 simply as a dry powder unless in cont. w acid.

Ointment of Zn Oxide.

Zinc carbonate - The Pharm. calls. ~~ppd~~ carb of Zn
 carbonate Zinc carbonate.

Zinc chloride (s) r. deliquescent has a strong
 affinity for albumen. & passes easily & rapidly
 th. animal membrane.

Very useful caustic. n. as superficial as AgNO_3 . ^{Painful}

Zinc sulphate (s) cd white vitrol. sol in H_2O
 has a disagreeable styptic taste.

Zinc acetate r closely allied to sulphate

Zinc Valerianate (s) milder astring & th. others.

$\frac{1}{11}$ - Larger dose of Zn can be used than of other
 heavy metals. - Zn chloride is corrosive - 10 to 20 gr of Zn
 to 2 or 5 grs of Cer. for an emetic.

Zn acetic Pres. in. by sol. Zn compounds give albumen
 as in L. st. heavy metals.

Therapeutics not as good in solid as liquid caust.
 but when AgNO_3 fails, it may be tried. ^{by part. y. of time}
 It is useful in catarrhal affections. ^{old catarrh.}
^{afflictions.}
^{trans. lids.}

Dried ZnSO_4 & chloride & caustic, when we don't want
 to go deep nor wide Zn SO_4 good. good to taste
 3 pts. Zn SO_4 - 1 pt. glycerine or
 4 " " " " " " " "

The Zn chloride is a powerful caustic. & made
 up in a paste cd Zn Paste.

2 - 5 Parts Flour - 1 pt. Zn chloride & abt 15 drops
 of H_2O to Zn mixture.

Do not remove Zn chloride by any fine instrument
 for it corrodes steel.

Liquor Zinc Chloride It is quite strong & may
 be freely diluted. It is st. put in pills &c.
 st. applied to fétid ulcers &c. in 1% strength.

Oxide & carbonate of Zn n. being sol. do n. act
 as irritants or caustics. They r applied as
 absorbents, whenever a skin is raw &c. & <
 irritant. Part < med of oxide or carb

as emetic.
 & vomit easily.
 < > Th. & dw. dis.

Prim. use. Caust.
 maybe " & as a
 disinfectant.

Zinc. contd. Unquantum zinc oxide - v useful for aloe applics.
The $ZnSO_4$ is used as an emetic. n. as bad tasted as
Cu SO_4 - The emet. ds. of $ZnSO_4$ = 15-30 grs.

new Phars.
Bromide. τ
Iodide.

Zn Oxide is st. good in infant diarrhoea ds 2-5 grs.
Zinc compds. used in chronic asthma &
nervous dis but n. v strong.

Valerianate of Zn . ds. .06 - .12 gr

Nitrate of Zinc n. yet officinal - but much
used. It is run into sticks like $AgNO_3$ but
sloughs does not appear as soon or as self limited as $AgNO_3$.

Cadmium

Cadmium Sulphate of cadmium. v similar to $ZnSO_4$ but it is $\frac{1}{2}$
powerful & expensive. Principal use is in
conjunctivitis in solution of 1-2 grs to f 3 also to
absorb opaque spots on cornea.

Bismuth

Bismuth

Basic Nitrate | Basic Carbonate

cd by pharm sub-nitrate & sub-carb of Bi.

Bismuthi subnitras. - white insol. powder
they are bland soothing both to raw ext. & int. surfs.
In quite large ds. St. poisoning occurs b.c.

Bi has n. been fully purified of As.

Bi. good in vomiting catarrh, gastritis, ulcer,
cancer &c of stomach. (Purely mechanical.)

Many forms of dyspepsia due to acidity &c.

The sub carb. is good as counteracting .. of stom.
useful in diarrhoea.

It is necessary to give Bi
in pretty n. ds. It is relf. indicated when int. &
& irritated.

Catarrh of nose (cold) may be
benefited by a salt of Bi - w a. gum arabic to
make it stick. & Morphine to allay pain.

Rx Bismuthi subnitrat	$\mathcal{Z}$ $\overline{ij}$	12	00
Morphiae acetatis	gr $\overline{j}$	0	06
Pulveris acaciae.	$\mathcal{Z}$ $\overline{i}$	4	00
℞ Fiat Pulvis.			

Sig. One $\frac{1}{2}$ of above to be used in one day.

CeriumCerium

Cerous oxalate. smooth white powder -
good in disturbance of stomach. a. lise Bi.
Ant & expulsive.
Especially useful in vomiting of pregnancy
It is said to be good in cough of Phthisis etc. when
it does cure a cough it does not affect stomach
In cough it may be given in 10 grs. The ef-
fect may not appear for 2 or 3 days. - best to give
on dry tongue & empty stomach at 1 or 2 o'clock
& last before going to bed.

LeadLead

Monoxide. - PbO - white powder - used principally
to form basis of Plaster.
Carbonate - white lead.
Iodide - yellow crystals.
Nitrate - white "
acetate - st. ed. sugar of Pb. It looks a. like
sugar & has a sweetish taste

The sub acetate is only used in soltn.

Liquor plumbi subacetatis.
" " " dilutus.

The former is ed. Goulard's ext. & latter Goulard's lotion
The sol. compds of Pb have of peculiar effects of
heavy metals - some we have astring effects
but irrit. eff. & mild & in 1. ds. it is now soothing
The Insol. CO_3 when applied to skin does not produce
any effect at 1st but it will be absorbed producing
constitutional Pb poisoning.

Antidote

For Pb. Poisoning - give s. sol. Salts as $MgSO_4$ - &
also evacuate - stomach
we also have chron. Pb poisoning (as in plumbago)
Family may be affected by Pb pipes for H₂O etc.
& is likely to occur when it contains sol. chlorides & nitrates
but if H₂O contains soluble sulphates & carbonate
of Cl. & NO_3

Symptoms

Many of the hair dyes cosmetics contain Pb, which poison.
Gradual derangement of digestion. St. is vom-
iting. Teeth not kept clean & Tartar

on teeth where they join gums will be black, b.c.
 Pb unites w sulphide - sweetish taste in mouth
 Indurness & swelling of gums follow shortly
 usual. St. 30 per mi.
 Then comes Pb colic a severe. The abdomen
 often is & much retracted. w. & often bear vomiting
 Constipation. & seldom bear food
 greatly opposite. Cramps in legs &c. 3 mus. &
 paralysed. & especially extensor muscles
 of hand.



St. & Pb. paralysis, must pass away.
 To disting fr paraplegia.

History. Intellect n. impaired diff in kind
 of paralysis, in paraplegia muscs. tightened
 in Pb. Poising not - colic &c

St. in Pb. Png then may be convulsions -
 Prog. nosis depends much on advance & disbas
 made. - when palsy sets in prog. good unless
 muscles & innervated. When cerebral sympt
 appear prog. bad.

Gout & Pb. Png. seem to act on each other - Pb poising
 may lead to gout & vice versa. In both, urica
 diminishes in urine & appears in blood.

Death fr Pb poising is comparatively rare
 P.M. shows degeneration of tissue

Treatment

Remove Pb fr source of Pb. poising. Eliminate Pb
 fr system by H.P. (S. adim Hg) will to begin w small
 ds. 30 gr At o. time give purgation.

Take bath in a wooden tub, containing sol. sulphide
 as H_2SO_4 3 or 4 in several gals of H₂O.

For colic, treat as any other colic. bring only
 severe. Best drug fr it is Opium.

To relieve severe constip. St. Opium & Png. & Goul.
 is a case when muscular contraction was cause
 when actual constip. give mild & severe purgatives
 St. alum good in colic & constipation.

Proventive treatment fr persons who must work in Pb
 absolute cleanliness & room shd be thoroughly ventilated

solid in 15 or 20 minutes.

It is a powerful caustic, applied w glass rod, To prevent spreading limit w sticking plaster or by smearing oil around spot to be cauterized.

Mn.

Manganese

Some what irritant - also poisonous said to paralyze. ♥

Black Ox of Mn has: Med. use
Manganese sulphate (8) also of Med use (2-3 grs if given)
Potassic Permanganas. sol. in H_2O , turn. as in chr. a. we have a compd that give up its O. readily used as a disinfectant. Foul drinking H_2O may be profitably safe. add - Pot. permn. as long as color disappears but when a v faint color remains then stop. also good to remove odor as for hands after dissecting.

23/11 - K. permn. also of use in foul bad smelling sores. also useful in ball sores to remove ^{raw} surface. It shd not be used too strong 1/5 up to 4% solns.

al.

Aluminium (oxide & salt)

Has all the metallic props. it is v light - It is caustic. & n. irritable has n metallic taste in compds. & its compds. r colorless.

Aluminium sulphate (8) in app. like $ZnSO_4$.

Alum NH_4 - K. sulph. (was formerly) alum - NH_4 - used making a compd & much alike sol. in cold H_2O & r sol in hot H_2O .

In alum we have a strong ast. w. r. i. irritation used locally simply as ast. in catarrhal affcts. In i. ds. we get ast. effect in alimentary canal in " do. it acts as an emetic.

The dried alum is a styptic Epistaxis may be stopped by injecting into nose a 4 or 6% soln. or may snuff up powder - also used in bee bites. St. given in diarrhoea. Phys. claim good effect on air passages - in whooping cough &c. St. used in cough in pretty n ds. 3 ij - iij repeated ^{action} until ds when not taken as emetic is 5-10 grs - given w sugar & a cinnamon. Dried alum is a mild caustic astringent.

Aluminium & Potassium sulphates.

Preparations of Silver.
 aq Nitras. — aq Oxidum — aq Nitras fusa.

Preparations of Cu.
 Irritant. less irritant.
 c. sulphas. c. ammoniatum.
 c. subacetate

Preps. of Zinc.
 Irritant. mild.
 Z Chloridum Z Oxidum
 (Liq. Z Chloridi) (Ung. Z Oxidi)
 Z Sulphas. Z Carbonas f.p.d.
 Z acetas. Cerate Z Carbonas.
 Z Valerianus.

Zinc.
 Oxide-Carbonate — chloride (S)
 Sulphate — acetate — valerianate.

Cadmium — Sulphate (S)

Bismuth. Bismuthous compounds.
 Basic Nitrate / Basic Carb.

Cerium Cerous Oxalate

Lead.

Monoxide Nitrate (S)
 Carbonate acetate (S)
 Iodide (S) " basic (S)
 Chromium Trioxide. (Chromic acid) (S)
 Potass dichromate (S)

Preparations of Bismuth.
 Bisubnitras — Bi subcarbonas.

Preps of Lead.

Soluble.	Cerate P subacetatis
Pb acetate	P Nitras
Suppositaria Pb	<u>Slightly Soluble</u>
" Pb et opii.	P Iodidum
Liq P. subacetatis	Ung. P Iod.
" " "	dilutis
Liniment P subacetatis.	

Insoluble P & cereps

P carbonas - Mug. P. carb.

P Oxidum - Emplast P.

Manganese (L.)Soluble
in sulphuric

as Base

Insoluble
in Oxidum Nigrum

as acid.

Potassi PermanganateAluminium (a)

alumen a. et Pot. Sulphas.

" Exsiccatum A. Sulphas.

Manganese

manganum sulphate (s) - M. Niox. - K. permang.

Aluminium (b)

ammonio Sulph. (s) S. Sulph. (s) Sulphate (s)

Heavy metals.Noxious.

Hg. - Sb

as - aq - Cu.

Zn - Cd. - Pb

Chr - Mn - Al

Cesium.

Innocent

Fe - Bi.

astringent.

Ferrous Sulphate

Ferric

" Chloride & Nitrate

Soluble aq - Cu - Zn -

Cd - Pb - all salts.

Irritant.

astringents

mercuric cereps.

Sb. as. Chr. & Mn.

Heavy metals.To affect system

Fe

Hg

Sb

As

Ag

Zn

To stop diarrhea

mercuric chloride

Hg w. chalk

Bi

Pb.

& astringents

To quiet stomach

Hg.

as

aq

Zn

Bi &

Cerium.

To Purge

Calomel Blue pill

To destroy Tissue

Sol. mercuric Nitrate

arsenious acid

Silver Nitrate

Zinc Chloride

Dried Zn Sulphate

Chromic Acid

Dried Alum.

To Dissolve

Sol. aq salts

" Cu "

" Zn "

" Co "

" Pb "

" Al "

To Vomit.~~mercuric sub sulph~~

Fartar emetic.

sol Cu salts

" Zn "

alum.

To disinfect

Ferrous sulphate

Zn Chloride

Potass Permangan.

To Stop bleeding

astringent salts

Dried Alum.

Other metallic

astringents.

To Irritate

mercurials - Resolvents

To Soothe

Insol Zn compounds

" Bi "

" Pb "

weak Pb lotions.

Light Metals - Not as pois'nous as heavy & given in n or ds. when joined w an acid. its properties may be overcome in K. w den. discuss all K compds under its name. as st. & other ingredient proportionate. But K always has < or > effect.

Potassium K. is at a head of light metals - has constitutional effect. They irrit. but n as got. as heavy mts. K. causes a H_2O secretion in alimentary canal thus causing a diarrhea or H_2O purgative. It is n. an astringent. K salts tend to change functional action in & - slowing its action & if continued may stop it. may cause a slight fall of temp. we know by Lab. K. salts hasten oxidation - we infer & it takes place in a body, & we infer it for a fact that ~~that~~ solid ingredients of urine is increased & amt of H_2O part of urine is also increased to keep urine w. certain limits of sp. gr. we may prod. motor paralysis when given in poisonous ds. It is esp. fact in lower animals but seldom in man. If n ds. given continually - it tends to interfere w. nutrition. The above & genl. effects for all K. compds. & K (also) Potassium (" " + alkali.)

Potassa (K_2O) (high diffusibility)

P. Carb. " " "

P. Bicarbonate " " "

Neutral: Alkaligenous.

P. acetas. High diffusibility

P. citras. " " "

P. et Sodii Tartrate. High diffusibility

P. Tartras " " "

Permanent Neutral or acid.

P. Bitrartas low diff. power.

P. Sulphas.

P. Nitras

P. Chloras

high

"

"

"

"

"

The oxide of - light metal often strongly alkaline heavy metal oxides gently insol. - light metal oxides v. sol.

Potassa caustica, having a strong affinity for H₂O is strongly

the alk. compds. tend to neutralize acids. w. with fatty acids. K. compds. form soaps.

Thus - fatty dried up parts or sores can be removed by K. soap being formed.

It tends to increase a secretion of m. m. of a opposite reaction (acid) if it decreases secretions.

S. of K. salts pass through animal m. easily & thus easily absorbed in body others do n. pass easily.

(In a table those of "high diff. power" pass easily) One of " " "

n. likely to cause diarr. b.c. it passes the canal so fast.

Potassa.

Potassa white, sol. caustic intensely alkaline (strong) & strong affin. for H₂O. a v. wide, & deep.

spreading caustic. The strength prod'd is brown - w. slimy soapy feel.

Intensely corrosive poison. St. used to cauterizing char. ears. dog bites &c. On m. m. & c. makes a slight touch w. it. - effect will n. be immediate but will appear next day - avoid.

contin. rubbing w. it. or it. may go to bone. We may limit by hole in sticking plaster or by acid around - i.e. vinegar lemon juice &c.

Potassa cum calce, (= parts vinnapaste) when using do n. mix w. H₂O but w. alcohol.

Liquor Potassae.

about 6% sol. has an oily feel. strongly alk. may be used internally. In sour stom. or burning pain due to excess of acid. = brown.

also when colic due to acid
 excess of uric acid could be relieved by Liq. Pot.
 Gout & Rheumatism. prob due to excess of acid
 & hence Liq. Pot. good.

In gonorrhea, & acid of urine irritates; same
 when bladder is inflamed. Then give Pot. also.
 Many skin dis. & due to a secretion then "good."
 For nettle rash clear out alimentary canal
 & then give also. For effect on O.

Furuncles to Boils st. cured by alkali.
 Ague also st. favorably effected by K. Liq.
 Formerly, alkaline treatment for acute rheumat
 & when salicylate of Na. fails we may try also
 alkalis st. useful in eczema.

Often beneficial in stings
 Liq. K. not but K. alkaline to take internally.
 dose. 160 - 4/

Liq. Pot. may be useful externally st. in eczema.
 St. poisoning occurs. bring caustic, burning pain in
 mouth, stom. &c. blood vomiting occurs &c.
 P. m. shows brownish color. The intestines &
 seldom effected. K. rarely occurs but
 esophagus may be irritated & narrow.
 Treat ment. evacuate stomach & give a
 harmless acid i.e. vinegar.

antidote.

Pot. Carbonate
 a form of Liq. Pot. & impure & simply K.
 Granular white powder, salt. sol. in H_2O , w.
 strongly alk. taste.

30// — Pot. Bicarbonate sol. in H_2O not as
 unpleasant tasting as K. Carb.
 Both above have an alkaline taste. K. strong.
 The therapeutic props. of both K. similar to K. Liq.
 Often good to remove scales &c. of skin disease
 of treating. Itching relieved by $\frac{1}{2}$ - 1% sol.
 Internally they are disagreeable. so while ef-
 ficient we usually use O. other alkali.

Dose. Pot carb. gr 10-20.
 " Bi " " 15-30.

They shd be dissol. in H₂O. taken either
 aqua pura or aromatic H₂O.

Pot. Citrate + neutral list when taken in D. & c. a CO₂
 & compd made by dissolving Bicarb. of K in Citric a.
 & compd is n. disagreeable to taste
 sol. in H₂O + somewhat deliquescent - when pre-
 scribed, always giving in sol.

We have 2 such preparations,

Mistura Citratæ. - & Liquor Citratæ.

" " is made fr lemon juice or rather C is
 druggists add K. Bi carb. to Lemon j. until an acid
 is neutralized or he takes a 6% of C instead of
 Lemon j. He can flavor w. a couple of drops of
 oil of lemon.

We may prescribe separately & let Pt. mix &
 so get it while observing - Take Table
 spoon of lemon j. or 6% sol. of C " "

" of H₂O & T.C. of ^{KCO₃} 6-9% Bicarb. of Pot.

Pot a & r deliquescent is n. as agreeable to taste
 as Citrate. Cit. taken when efferves-
 is & agreeable & tends to allay irrit. of stnd.
 always nausea. - useful in fever.

They & of use in gout & Rheumatism.

Cit. & acetate. & used as diuretics.

They cause oxidation of body & tends to incre-
 ase H₂O St. & urine will n. be increased.

We give when abnormal scanty of urine, this
 is case in fever.

When - is an accumulation of serum - dropsy in
 pinto num &c. If we can cause sudden
 increase of flow of urine - dropsy will be rid.
 It is pleasant to Pt. to get rid of drop. by rice-
 turation th by purgine or sweating.

Dropsy caused by organic dis. of v. & r - re-
 tarded circulation due to dis. of v. & r or dis.
 of chronic a dis we may use diuretics

will n. set up irrit. of - D's. s. in acute form
~~the K compounds cause flood of urine w.o. settling up~~
 irrit. on. but as they r n. certain or usually
 prescribe s other as infusion of digitalis
 Juniper &c.
 may be given internally in skin deb. act. gr X in H₂O.
 Pot Sodiu Tartras } low diff. power.

" Tartras
 also alive tend to prod. purging. but in Δ of high diff.
 power they r absorbed so soon $\rightarrow$ purging. to
 n. prod. The K Na Tartr. & K Tartr. being of
 low diff. power. can purge.
 P compounds. tend to prod. purg up & soon (2-3 hrs.)
 after being taken. & it soon turns to body dis-
 charge. The pulse falls & Pt feels debilitated
 due to fact $\rightarrow$ alimentary canal is empty.
 & Pt. is naly starved. after V. Pt. is us-
 ually constipated. V is n. then a nat. movement
 set up. P salts do prod. body secretion as
 shown by experiments on dogs &c. ~~...~~

Pot & Na. tart. is a handsome translucent ^{crystals}
 sol. cd. Rochelle salts.

use as a purge. $\frac{3}{4}$ - ss. - $\frac{3}{4}$ if
 P compd does n. cause griping as stronger salts.
 Fr. gout &c. to prod. abs. effect ds. $\frac{3}{4}$ highly
 diluted so as n. to purge.

Effluvia powders - To be taken while deliquescent
 we may add aromatic as cinnamon or
 rose H₂O. one powder is a mild purge.
 official name Pulvis effervescentis apientis
 Bicarb Na. gr 40 } one
 { K. & Na Tartrate " 100 } super. Tartaric acid gr 35.

Pot Tartras sol. cd sol. tartar, r similar to
 Rochelle salts. but, used on acct of its
 bitter taste. dose. $\frac{1}{2}$ - ss. - K. & Na. tart.

The following Pot. compounds have no alkaline properties & give effects of K. alone.

Pot. Bitartrate also cd. Pot. super tartrate, quite insol. in H₂O. Cream of Tartar. sol. in 16 parts of hot H₂O. Occurs in grapes. Taste v. disagreeable.

cream of tartar apt to prod. quite amt of CO₂ & is griping most efficient hydragogue. & n ds. may cause poisoning. In 1 ds. may be absorbed & act as K. can be used as Cit rate in fevers.

Pot. Bitart. given in fevers in 1 ds.

R Pot. Bitart. $\mathfrak{Z}\mathfrak{ss}$.

slice of lemon

Sugar

Hot water

$\mathfrak{Z}\mathfrak{iv}$

OT

let this mix cool, and ice, makes a pleasant drink.

in fevers.

Diuretic dose $\mathfrak{Z}\mathfrak{i}$ - $\mathfrak{ij}$ given diluted.

Pot. Sulphate cd vitrio tartar Low diff. power one & it poisons. irrit. K compounds. sol in H₂O. Rarely used

Pot Nitras. High diff. power com. salt. Found in nature cd Nitre & salt Peter occurs in large prismatic crystals. sol. in 400-pts. H₂O. Has a sharp bitter taste & a cooling sensation felt afterward. - Irrit & poisonous in full dose.

$\frac{1}{2}$ - The P. Sulphas. Nitras. chloras & irrit. poisons in full doses $\mathfrak{Z}\mathfrak{ss}$ of Nitre prod & dang. ^{in full} Nitre is rapidly absorbed & rapidly absorbed & rapidly eliminated. It can be given in 1 ds. of Nitro effects to lower V's action. Diaphoretic increases urine a little.

The urine P. will not coagulate as quicor.

Nitre is comparatively used now It is often combined w fever potions.

It is one of possible diuretics but it is an irrit. & so may sudanger & cd's. when a diuretic

depends on dis of - 00.

~~Nitr is used in spasmodic asthma to relieve~~
~~of spasm but does not cure a dis.~~
~~Soak paper w nitr then dry & burn. - but do~~
~~not use paper & carts. wood.~~ Filter paper is
good or use a dry paper already impd. by Ammonia
If allowed to melt in mouth it relieves husse-
iness - but is not as powerful as Perax
dose of Nitr. gr x - xx - xxx. dissolved in 1 H₂O

Potass Chlorate sol. 1 ft in 16. Resembles Nitr
to a certain extent. St. produces poisoning
It tends to start secretion of mucus of mouth & throat
∴ used in ulcers diphtheria &c. Good plan to use
as a gargle but better given inter. for as a garg
effect is only temporary when taken inter
" " contin. dose of P Chlor. gr x - xxx.

Sodium

Sodium

Soda Alkaline
Soda - High diff. Power.
" Carbonas " " "
" Bi " - " " "
" Boras - " " "

Neutral alkaline.

S. acetate High diff. Power.
" Tartras " " "

Permanently neutral.

S. Nitras High diff. Power
" Sulphas Low " "
" Phosphas " " "

Na & closely resembles K. compds.

Na > powerful base th " ∴ less irrit & poisons
th K. It does n. have diuretic effect neither
does it lower action of V to any extent.

Na of compounds alkaline & have s. effects as K. Alk. compounds.

Soda (Na_2O) & hydrated oxide of Na metal may be run into streaks & may have caustic wh. is v. burn not & deliquescent. Liquor sodii n. used v. much

& Carbonas. at 1st crystals but soon b.c. granular & Bicarbonate { commercial
{ simply.

Latter cd. S. Bicarb. - usually kept as a white powder - sol. in H₂O.

Soda Bicarbonate cd simply "Borax" effloresces easily & taste is { disagreeable th. & clear crystals The soda borate is feebly alkaline.

For reg. Voice 3 above may be used for alkaline effect as in scind diseases &c. Borax is v. useful to restore voice of singers speakers &c.

When voice is husky let s. borax crystals dissolve in mouth 15 min or so before speaking

Internally they exert alkaline effect & v. useful 1 ds. of alk. will keep appetite & digest. If given b.f. meals it increases gastric juice (acid) but it shd. n. be given continually not longer th. a week or 2. useful in acidity. Some dyspepsia. & Bicarb of Na. < sly used for H

The Na Carb. & used in acid poisoning; b.c. they can be given in almost unlimited quantities.

The Carb & Bicarb. food. alk. efft. on system but n. as effective as K compounds.

& Bicarb of Na. is used inter often th. Carb or ds. of Bicarb. gr X - 3℥. or 4. c. be given in symptoms

S. Acetas. - 1 used. is n. as deliquescent as K Acetas.

" Tartar & " in its own form. but when Na powder given Tartarate of Na. formed by decomposition of Bicarb. of soda & Tartaric acid.

Soda powders or efflorescing powders Bicarb Na. gr XXV
Tartaric acid. gr XXV

Perm. Neutral in med.

S. Nitras - sol. in H₂O. v. used

S. Sulphas. - sol in H₂O. cd Glauber's Salts has a r disagreeable taste - formerly used as a purge seldom used now. D. as purge $\overline{3}$ ss. - $\overline{f}$.

Purge for Phosphas. (s) Has < taste of simple salt. It is mild saline purge. good for Children Dose. $\overline{3}$ $\overline{i}$ - $\overline{ii}$. for adults D. $\overline{3}$ $\overline{j}$ or $\overline{k}$.

Lithium

Lit Linn

L. Carbonas. (alca) — L Citras (neut)

L. Carb. n. r. sol. but partly sol. in carbonic acid.

L Citras. (s) neut. lcs also in Blood.

These 2 used simply for their alca. effects.

They r expensive + Lith. is neutralized by enacid. a.

" were introduced bc. of high saturating power + their supposed tendency to dissolve substances in uric acid. But it is n. carried out by experience

L. Carb. gr 3-6 = D.

" Citras " 10 "

Potassium is just as good. but has to be used in larger ds. - It is much cheaper.

Magnesium

mg.

Magnesia (alca)

Mg Citras (neut)

Mg Carbonas "

" Sulphas "

The mg comds act as purges + alkaline No. mg effect
Insol. in H₂O + fluid. sol. in acids.

Magnesium } alkaline } Mg Carb. made by
M Carbon } insol. } hpt Mg SO₄ w NaCO₃

Prescribed as heavy + light lit - former probably best.
St. Mg carb. comes in form of sg. blwoss.

Milks of Mg. not off. - sold by Pharmacutists.
as cd. P. c. lvsalike milks & taste n. r diff.

It is a comb. of Mg SO₄ + caustic soda - It is a
v. good way to give Mg.

Used internally as mild purge + also for its alk.
effect $\therefore$ in stomach w constipation

Mg or Mg carb. good esp w. p. V useful in
acid poisng. - as large doses can be given.

Mg 165 } dose as antacid. when used
Mg carb. 130 } as purge about 2. as much.

miles of Mg. - table spoon. as antacid also gentle laxative.

$\frac{1}{2}$ - Liqueur Mg Citratiss. - always put up in bottles
made by dissolving Mg. in citric acid. add
syrup - oil of lemon + just of. cerasing + R. Bicarb.
It is a mild cathartic - used as a purg
draught. + in weak stom.

After opening it spoils in abt 2 ds. It is a good
plan to keep effervescing liquids in bottles $\square$ which
are.

Epsom Salts

Mg. Sulphate ed Epsom Salts.

Has a bitter saline nauseous taste soluble.
Dissolved by free alkalis. Being of low diff.
power is most potent saline purgative.

Poisng. has occurred fr over doses.

St. a mild diuresis may occur when given. But it
is never used as diuretic. In 1 ds. for gastric catarrh.

Advantage, is very cheap. To avoid taste

give in ice cold carbonic water or aromatic H₂O.

D. 3 ss - Best effect when given on empty stom.

It has a tendency to prevent griping of vegetable
purgatives. The taste may be disguised by

drawing in breath swallow Mg CO₃ + of. breathing
again take a draught of CO₂ H₂O or some pleasant drink.

Calcium. -

Ca.

Calx (alk)

C Carbonas. (alk)

C. Phosphas (neut)

Ca SO₄ = Plaster of Paris.

Calx as. tr } not sol.
C. Carbonas }

Lime in Pharm. means quicklime CaO. - has a
strong affinity for H₂O. resists a dry powder.

It is a powerful caustic but seldom used - when
used its action shd. be controlled by plaster which it
But it is used in Vienna Paste (Potassa cum Calce)

we may take - hydrate of lime, used in med. & put
it in H₂O. a v. 1 is dissolved. - & it is cd Liqueur Calcis
or commonly lime water. This lime H₂O when
exposed has a tendency to take up CO₂ & form CaCO₃
(marble) but it is v. similar to lime & does no harm
Calcic Carbonate

cd. chalc. or prepared chalc. wh. is purified -
Creta preparata. we may get CaCO₃ by adding calc.
to Na₂CO₃ + CaCO₃ pptd. It is cd Pptd. Calcic Carb.
may be prepared fr oyster shells, wh. is n. quite as
pure & is cd. Fista. This was introduced. w
- relief = stercus. wld. treat v. form better bring
a comb. of animal w. organic matter & v. prob. so
r. i. absorbed & constit. efft. Used for alk.
efft. inter & extery. powdered chalc. is good to
dust over tender skin.

The lime H₂O w oil forms soap wh. is good for burns
to heal & relieve pain cd. Linimentum Calcis.
also cd. Carrou oil. fr iron wounds.

Lime H₂O used as an alk. gargle.
It is said that false m. of lime put in lime
H₂O is disintegrated. St. Phys. spray a false m.
of syphilis. Others keep lime slaking in room
Lime H₂O also used in ^{mineral} acid poisoning. bc. it c. by gum
in unlimited quantities. esp in H₂SO₄ & Oxalic.
used as powder on angry sores.

when sour stom. is dissolved, lime compd &
indicated as CaH₂O or prep. of chalc.
Mistura Cortae - gum arabic in solution. w
glycerine & cinnamon H₂O added & chalc. is held in sol.
It is of the gum to q. v. often used as a basis of
R in diarrhoea. of q. & if pain, opium may be added.

R Fincturae Kino $\frac{40}{100}$ gm. or
Misturae Cortae $\frac{160}{100}$ gm. or
Fincturae Kino f 3 ip.
Misturae Cortae q.s. ad-
3 viij

R for diarrhoea

Lime H_2O + milk. in = quans. ice cold in 1 quantities is
 r. good for nausea. Pt. shd. take nothing else at
 the time while Lime shd allays irrit & milks as-
 sist to support Pt.

diff. kinds of milk curdles in diff. ways. when taken
 in stomach. When c.n. take human milk. Lime
 H_2O added to curd milk curdles it in 2 ways as
 human milk for 7.3.f. of lime H_2O = gently enough
 for 3 y. bottle.

C. Phosphorus. - white powder insol. (what forms part
 of bone) Probably has o. good effect in rachitic
 But it shd be given in 1 ds. for it is no use to give 11
 quantities for only a 1 quans. will be absorbed.

Nitrogen
 NH_3

$\frac{1}{2}$ (table in p. 68.) Nitrogen ammonia mixture sh. to form
 ammonia gas. It holds a place bet. metals & non-
 metals It is an alkaline but it is used for
 characteristic effect of NH_3 . It is a colorless gas.
 w characteristic smell - sol. in H_2O & aloe.

4 & 2 soltms. w H_2O one having sp. gr. 900 other 960
 Latter ed stronger $NH_3 + H_2O$ = "Aqua ammonia
 fortior"

The weaker - ae. Water of ammonia.
 Both too strong to take internally w.o. diluting.
 Spirits of ammonia. st. aromat. oil & d. & o. sol ed
 aromatic spits. of ammonia.

Ammonia carbonate. - dry powder (2) in H_2O .
 used as smelling salts. all above have alk. prop. &
 irrit effect. If stronger H_2O is applied locally
 it will cause a blister & if long continued may cause
 sloughing Used as a rubefacient.

When taken NH_3 has a tendency to B. & causes cer-
 ebral disturbances giddiness &c.

It hastens action of Δ & also increases a respiration
 Therapeutics. - used to prod blister - as about joints
 or to make surf. raw & then to apply morphia & o. by

Therapeutics

rubbing. dip. piece of muslin cloth in a str. H₂O of NH₃ & place over oil sils. - watch glass or pill box - leave only few minutes. remove when redness begins to appear - It is a painful blister.

To prod. subfacient effect. - Liniment of NH₃ & cō volatile liniment is good. It is made by mixing aqua ammonia w. olive oil.

NH₃ being also. & volatile it is good for insect bites & wh. ~~to~~ ^{acid} ~~from~~ - When str. H₂O of NH₃ used (too strong) a good combination.

Olive oil } a.a.
Sandalum }
Str. Aqua Ammo. }

NH₃ compds & n. used in acid poisoning. useful for venting. sour Stom. & in 1. do. to allay irrit. - aromatic spirits of NH₃ in 1/2 to teaspoon.

The Am. Compds n. used as much internally for also effects as for action on & & respira. do n. apply vapors too long to nose in fainting or on acct of irrit. properties.

Opisng. by Chloroform alcohol formic acid acetic & c. NH₃ used to promote action of &.

Am. seems to be good in snake bites.

Fascia inter. often good in spasmodic dis. as in hiccup^{ing} aromatic spirits or simple spirits & n. prep. given inter. Dose of aromatic spirits 1 to 2 t. sp. f. water of Am. 20 - 30 drops. both larger diluted - The salt loses strength by keeping.

Am. Carb. used in dis. of respiratory passages. Bronchitis & c. useful in Typhoid fever & c. Dose. 1 - 4 grs. best to give in mucilaginous. prep. sugar - Give in 1 do. ft. repeated t.c. if given in 1 do. may prod. nausea & vomiting.

Ammonia acetate take dilute a & add am carb. until t.c. neutral. known as ^{liquor} sol. of ammonia acetate cō. Spirit Mindererus n. an alcoholic soln.

used pt. in sicc Quadrach good in s. cases. v.
Dose of am a. on T. s.f.

- Review -

Rarius of
K. Na. NH_3 etc.

The oxide compds. & gaily. caustics.
Magnesia & Mg. Carb. used in sero stum ^{stip} w. carb.
Lime H₂O & Carb. used in sero stum w. diarrhea.

as systemic antacid that is when acid absorb'd in B.
we do not use lime or Mg. on acct of low diff. ferr.

The Potas. Citrate &c. Compds. w. acids & used as systemic
antacids. b.c. a salt is decomposed in stum & we
get also. effect on system & salts & easily take.

Potass. Bitart. is a mild watery purge. often used
to get rid of serum effusions. but prods gripping
& certain extent.

Caustic, Ammon. might be used as a caustic but it has
irritant effects.

Anti emetic to relieve nausea.

Diuretics to prod. flow of urine. Flu K & much
better th. a Na. compds. for P.

Fibrifuge.

In oral Catarrhs.

Potas. Chlorate - prob. best

Na Borate.

Nitrogen

Nitrogen w. Oxygen.

Nitrogen monoxide (Nitrous oxide, ^{N₂O} laughing gas)
entirely colorless odorless & tasteless, unless
perhaps a v. sweetish. Dissolve in H₂O - (sol.
in cold th. warm H₂O).

Put up in 2 ways compressed either in n vessels
or liquefied & in many galls. in a cylinder.
will support combust if started at high temp.
as match burning &c.

If persons inhale it (& they c. do it w.o. suffering
b.c. of its props.) The effect is same as if O. be
withheld. i.e. asphyxia comes on.

$\frac{1}{2}$ - Symptoms of Poisoning for N₂O.

1 Exhaustion 2 coma. may take
as long as 2-3 or < minutes. When N₂O
given & Pt. unconscious then a face b.c. dusky

bird color rolling of eyes. & twitching of muscles. - Muscs. & n. as much relaxed as w either ether or chloroform. NO_2 for a short time is n. dangerous - It is simply asphyxia for want of oxygen - used for momentary operations as pulling abscess, pulling teeth &c. To give gas fit. a rubber bag w/ hastube & mouth piece - gas shd be perfectly pure another use of NO_2 - when given w O_2 & Pt b.c. & exhilarated. & it is claimed & effect has a permanent good efft. in nervous dis. as melancholia. & like also hysteria.

Nitric acid.

Nitric acid.

More most ab. nitric w. n. By acid mean sudden blue litmus - sour & form salts w base. Sour acids possess strong irrit. effts. & caustic It applies to a. secreting glands. secretion is stopped & increase flow for ab. secreting glands.

Acidum nitricum.

(a strong a. only surpassed by H_2SO_4) When pure colorless - sour taste strong pungent odor - It is corrosive & tends to spread & go deep - when swallowed. of course produces fatal corrod. Foris ag. w. pain & w/ vomit ng. voice to be changed or suppressed - due to acid attacking pharynx. The color of slough - yellowish tint.

Rising.

Can detect foris ag. for strong a. by test of vomit w litmus.

Antidote

Magnesia clavata lime chalk. & also effect is n. & got. damage is done moment of swallowing is stomach pump is n. indicated in corrosive pois. sweet as bitter - demulcent soothing drinks, better. H_2O used as a caust. for pts. shd be limited. wash for queating - skin dis - Itching &c. For later use - Carb. M. gives dilute form. easier through glass tube wash teeth w Na.

Acidum nitricum dilutum.

str as. Foris ag. for musty changes & causes sour stone. Being of high diff. power.

they pass rapidly into B. & changes also to A.
 when given for severe stom. shd be given b.f. meals.
 Given for alk. urine. St. & Pt. has nausea w alk.
 react. then acid good after meals.
 acid good in ^{after} dry mouth & thirst to allay
 thirst & so helps morbid sympt. as urasi-
 mias - sleeplessness &c.
 H₂NO₂ St. seems to have effect on diarrhoea when
 due to acid products. For such efft. shd be given
 b.f. meals. Formerly given in syph &
 malaria but n. used now for ∞ purpose.
 Dilute H₂NO₂ dose X - XXV. drops. Largely ~~used~~
 diluted & taken the tube &c. & A. has bad effect on

Nitrite of Amyl.

For a long time a Physical effect was believed to be due to base
 amyl. But it was shown in W. Pa. (80.) Lab. = that
 nitrites have a effect. One effect is due to amyl.
 it belongs to class of alcohol & ethers & has high
 diffusion power of alcohols & ethers.
 Amyl Nitrite is fluid, of greenish color & volatile
 has distinct ~~faint~~ smell. n. thing describe imagine
 the Therapeutic effects & v. rapid. & may get efft.
 by inhalation. By putting 2 or 3 drops on hand-
 scar chief & smell in 40 sec. or > & acts rapidly
 & acts strongly against chest & St. irregular
 blushing. It soon passes away & leaving a
 dizziness - & St. sweat breaks out. It has been
 shown by experiment that it lowers a spinal
 tension & also lowers a fall in temp.
 In animals. Toxic as. effect - motor syst & vol-
 untary muscles & paralyzed. Circumv. disturbed.
 hurried & rapid breathing
 Local application to muscles or nervous parts
 causes depression. (paralyzing them)
 It acts on v. motor nerves & so vessels distend
 face be flushed for capillary conjct. In Paving by
 amyl. Nitrite or lower a power of haemoglobin to take
 up O. interfered w.

Therapeutics

(Clinical data)

V. good in s. cases of Angine pectoris, & others.
 In Anger Nitrite - s. an. & good in Spasmodic
 asthma. By careful & habitual taking of Anger
 attacks & oft. delayed or relieved.

Anger good in many affections of V. to incite its action
 also good when V. is. but as in syncope. .. good
 in the syncope of chloroform. It is stronger than Nit.
 when epileptic fits occur slowly in Pt. is smelling
 of Anger Blue aborts & attacks.

Good but dangerous in cerebral convulsions.
 dangerous bc. it causes - B. to relax & enlarge
 and we may hear almost uncontrollable times.
 Do n. give Anger when we hear fine B. vs.

Convulsions of Stryclonia passing, broken by Anger.
 Taking of Anger is pleasant The Dr. is for 2-5 drs
 of Pt. carries Anger. may use a small bottle
 or better, 1 glass wafers, cutting 2-3 or 5 inps.
 wh. can be broken on a handkerchief. They r.
 ed. Pearls of Magn. Nitrite.

Potassium Nitrite Experiment on animals shows.
 = It has s. efft. as Anger - but differs in a diffng.
 so = it is n. sudden & it lasts for s. time steady.
 It suggests itself for a med. when we do n.
 want sudden but continued efft.

The Max. dose - 7 gr.

It has n. ever yet used as a med.

Oxygen -

O.

Essential gas of atmosphere highly diluted.
 Pure O. is irritant. if stream thrown on surf. Pt.
 does n. good. extraordinary action on body when
 inhaled pure. bc. a haemoglobin c. only takes
 so much O. & it gets it from normal breathing
 The O. may cause irritation of lungs. &c.
 It is useful in s. cases of dyspnoea where Pt.
 does n. get enough O. as in asthma &c. St. 2.
 B. falls. & time her day - by rubbing, like the

(Table on p. 70)

S.

Sulphur occurs in sticks - brimstone - yellowish.
 Finest powder is used in 3 kinds.

1. Sublimed Sulphur Sulphur^m Sublimatum.
 If we wash it to take out H_2SO_4 then it still
 remains a powder & cd. washed Sulphur

S. lotum may be prepared also by ppt a sulphide
 by any acid & cd. fpts S. Sulphur precipitatum
 Insol. in H_2O - but sol. in alcohol ether oils &c.

S. is a laxative taking fr 6-8 hrs to act & w. r. griping.
 If long continued it may set up chronic catarrh of
 intestinal canal.

Therap.

Low animal organisms, easily destroyed by S.
 used to destroy parasites in itch. for & purpose we
 use ointment of Sulphur. Shd not cover too
 large an area of skin at once.

In pills - we oft wish to make stools soft so S.
 given as a laxative ʒi. - ʒij

Potassic Sulphide. st cd Liq of Sulphur.
 It is < act in (S) may be used for itch &
 chronic skin Dis. In bath several ʒ - ʒi (1 lb).
 & bath used in bad poisoning.

So.

Sulphur dioxide, SO_2 sharp pungent smelling
 gas produced when match strikes. Fatal to all
 forms of life - & is believed to destroy noxious prin-
 ciples of dis & so often used as a disinfectant.
 S. don't exists as to its power. But experimental
 tests have lately been made. Vaccine virus
 was exposed to SO_2 vapors & found that when
 treated so. it could n. be inoculated $\therefore$ disinfectant.
 $1\frac{1}{2}$ - 3 gro. per cu. ft. hrs. will do in a tight box - but
 in a room wh. hases &c. It is better to use abt
 2 lbs. per 1000 cu. ft. It may be done by
 placing sublimed Sulphur on shovel & pour
 bris in a tub w. H_2O half way up. bris
 may turn S by giving access out light. or
 mix w. powdered charcoal.

 H_2SO_4

Sulphurous acid When SO_2 mixes w. H_2O
 it has a disagreeable odor like burning match

used also to destroy animal life. It is one of our most powerful antiseptics - used to destroy fetor from its healing effect in s. wounds of some. -

It is used as spray in s. affections of air passages used in s. forms of dyspepsia w. flatulence &c.

Sodic } Sulphite Sodic hyposulphite.
Potassic }

used especially in dyspepsias dependg. on fermentation. Dose - from gr. to $\mathfrak{ss}$.

Sulphuric acid

H₂SO₄

The most powerful acid we have at 1st class but on standing bc. smoky - extremely sour & corrosive. The sludge is dark colored.

In forming by H₂SO₄ we employ alkalis & esp. lime.

$\frac{1}{2}$ - when swallowed accidentally a few serious symptoms. - Burning pain, corroded mouth & diarrhoea - vomiting of B. mucus &c. & some symptoms of collapse. Do not use Stom. pump - but mild emetics. Caustic - as such seldom used.

We have a weaker sol. - $\mathfrak{z}\mathfrak{j}$ by wgt w. Oj - H₂O.

Aromatic spirits of H₂SO₄ = Ginger cinnamon & H₂SO₄ Dose. $\frac{1}{2}$ teaspoon full. highly diluted.

Compound infusion of Rhus made w. H₂SO₄ but so highly diluted - it c. is given in T. & J. doses.

H₂SO₄ is astringent. It is used in bleeding fr. Stom. Astringents used in 2nd stage of diarrhoea & H₂CO₃ is one of our drugs we may use.

Used to suppress excessive sweating & to acids suppress acids of body. Aromatic H₂SO₄ it checks it when taken internally - but also calms of Belladonna better.

Phosphorous - (Table on p 70)

P.

One of our most powerful poisons. Has many properties of As. - As & P. hold a middle ground bet. Heavy & light metals.

Insol in H₂O - sparingly sol. in ether. Fixed oils.

& absolute alcohol - But quite sol. in chloroform.
 when P. given in medical dose, we expect no vis. effect.
 But taken in v. large dose it acts as corrosive irrit.
 poison, but this may n. appear for sev. hrs.
 St. in a few hours & anyway in a day & Pt. be.
 jaundiced &c. & P. attacks liver & causes
 fatty degeneration. & D. l. black &c.
 Death occurs n. imme. but fr. 5-17 days after.
 6 days is abt. average. & Fatal dose varies.
 The smallest recorded is $\frac{1}{2}$ gr. S. Pts. & r. suscep.
 to P. poisoning. When giving poison look out for
 pain in epigastrium. vomiting. Dysuria.

antid. Alb. unpurified turpentine. Aug (3), compound
 of copper - It is better to give Cu. 1st 2 or 3
 grs. CuSO₄ is good. - Oil of turpentine may be
 given afterward.

Persons working in P. & r. f. is no. in a diff. way
 Necrosis esp. of lower jaw. Was & cern. in
 making matches - but now a diff. kind of P. is
 used so the poisoning not so cern.

P. when given as med. shd be given in 10s.
 when excessive brain work - then r. & Phosphates
 in urine & P. shd be given to supply waste fr
 - brain. P. is good in many nervous dis.

when nervous syst is worn out fr. excessive coitus.
 Paralysis following diphtheria.

St. epilepsy benefited. P. is a nerve restorative as
 Fr is a B. rest. Many forms of skin dis.

P. oft. has marked effect in neuralgia - & useful
 in late than old chronic cases. P. if it to have
 any effect. ought to show little soon after commencing.
 Unless P. be given so allfully it may have n. effect.
 Ought n. to begin w a dose larger than $\frac{1}{20}$ gr.

P. must be given as such & n. as Phosphates.
 P in solid form is excessively irrit. corrosive & so
 it must be given in sol. as P. has a strong
 affinity for C., & b.c. useless, ∴ P. sol. shd be carefully used.
 St. given by dissolving P. in melted cocoa butter
 & then made into pills. But a P. of pills is
 likely to become oxidized.

St. given in sol. w. amyl oil but has a bad
 Dr. Squibb mixes P. with cod liver oil.

The best is a following devised by Thompson of Eng.

Best soln. Take P. grj & dissolve in ab. alcohol f 3v.
 heated a little (The alcohol must be absolute)
 Then make a soln of Glycerine f 3ss. Alcohol f 3ij
 first cool then mix, then add Sts. Peppermint mxxl

R Phosphorus grj "Thompson's soln."
 absolute alcohol f 3v ss. one t.s.f. (wh.
 Glycerine f 3ij. contains 30 gr) Tascum
 alcohol f 3ij after meals.
 Spirits of Peppermint mxxl.

The soln of P. has n. met w. extra favor.
 So compounds have been tried Phosphide of Zn.
 - tastes & w. i. acid it is decomposed. so P.
 probably liberated in stone. It shd be given in
 do. 5 times as n. as of P. It is n. as good as Thompson's
 several hypophosphites (Official)

K	"	all white powders, (3)
Na	"	in sol - almost tasteless
lime	"	& n. irrit.
Iron	"	

as they c. be given in such n.s. w.o. physiological
 effects. Curious thing is it prob. ∴ it is not impos.
 to get therapeutic effects.

Hypo P. ites has a reputation aside fr substitute
 for P. It was used in consumption but is given
 up now dose a few grs - 30.

Higuer Ac. of P = Phosphoric a. wh is a white powder
 made by burning P in air.

$\frac{1}{2}$ - Phosphoric acid dissolved in H₂O - there is only one (officinal) namely dilute Phos. a. It is a most agreeable of all acids. Dose few drops - 3 fs. highly diluted.

cl. Bo. & 9.

Chlorine Bromine & Iodine closely allied all volatile & intensely irritating.

Chlorine Table

Chlorine gas (soln of)	
Chlorinated lime	Chlorinated Soda.
Sodic chloride	Calcic chloride
	Ammonic chloride

Hydrochloric acid | Nitrohydrochloric acid.

Chlorine. - a gas of light greenish shade - Has. powerful affinity for H. forming HCl. & affinity is so great - it brase up H₂O multiplies w. H & liberates O in a nascent condition - then has powerful oxidizing properties. Then danger of act sub may be oxidized in presence of chlorine.

Cl. ∴ acts as a disinfectant - bleaches.

Cl. is an irrit poison. Irritating even to unbroken skin. Poison internally - antidote is albumen. dissolved in H₂O we get chlorine water.

Chlorinated lime (Chalk chlorinata)

made for bleaching lime & saturated w Cl. probably 2 salts formed $CaCl_2$ & hypochlorite. W. H. we have a round about way of getting free Cl.

Solution of Chlorinated Soda

Liquor Sodae Chlorinatae - "Sabarrague's" soln. a decided poison.

All above c. is used as disinfectants. prob. lime Cl. most used.

To destroy ground take salt 16 parts - black MnO₂ 15 pts. then pour H₂O & H₂SO₄ on Cl. Gas is evolved - H₂SO₄ used in Hospital wards &c.

These disinfectants may be used on foul surfaces. Sabarrague's sol. oft. used in 5 or 10 pts of H₂O.

Chlorinated lime used in poisoning of sewer gas when workmen brought out in faint & let them smell gas to chlor lime.

st. used in dyspepsia due to fermentation
 Labarraque's soln & ss. highly diluted.

Chlorinated lime 1-6 grs.

In chlorides of heavy metals - properties of heavy metals preponderate. In chlorides of light metals chlorine preponderates.

Sodic chloride common salt slightly irrit. & so acid digestion

Calcic chloride - " colorless crystals - v. sol. in H₂O - deliquescent.

Sol. Calcic chloride. of diff. strength official. Irritating poison in " ds.

Medical ds. - seems to have a beneficial effect in scrofulous affections. Has st. as good an effect as K. I. Dose $\text{m} \frac{30}{30}$ - $\text{gr} \frac{30}{30}$ best given in milk.

Ammonic chloride also ed.

{ Muriate of ammonia " "

{ Sal ammoniac.

Occurs in crystals - disagreeable saline taste causes local irritation. Taken internally, a feeling of warmth - excites secretion & esp. bronchial mucus.

Therap. Has peculiar effect on mucous membranes -

In ds. used wherever wish to increase mucus of ^{bronchi}.

Finds to bring about mucus.

Finds as Ca Cl₂ to bring about resolution of glandular enlargement &c. (scrofulides)

When one set of muscles used continually as in sewing & blacksmith &c. neur. of nks for pain prod. (neuralgia)

Ammon. chloride. useful in catarrhal affections when mucus thick. It is useful in almost all bronchial affections 40 grs to pint of H₂O.

In ammonorrhoea. Ammon. cl.

Muri of Ammon. used to promote resolu. of inflamed process &c. In Ger. st. used for stg.

Dose. gr 5-10.

Has a disagreeable taste & old regimen in s. thing else. Glycyrrhiza. is v. good

HCl. Hydrochloric acid also cl. Muriatic acid. n. quitra
 strong a HNO_3 st. used as a moderate caustic
 in med. use Dilute HCl. > harsh th $HNO_3 + H_2SO_4$
 & > irritating to stomach Dose. few drops - 3 ss.
 used in sour dyspepsia. also as sour drips in
 furor must be taken through a quill.
 Nitro HCl. also ed Aqua Regia. Is n. a stable
 compd apt to decompose on sleeping
 Best to present a strong compd & then dilute.
 Has curative effect in many org. affects of liver.
 Oxaluria oft cured by Nitro HCl. quiesces it by
 any other drug
 Internally dose of strong a. - 4-5 drops highly dilute

Bromine

Br. Potassic Bromide. } ammoniac Bromide
 Hydrobromic acid.

Fluid & analogous to Cl. < intense - & bad smell
 exceedingly irrit. poison. Slightly (2) in HCl
 (8) in KBr. solution.

It is a r. searching caustic spreads.
 Br. is a possible disinfectant but it has a disagreeable
 smell - & dangerous & expensive.
 Br. has effect on system esp. in Bromides.
 Potassic Bromide. - white crystals taste
 s. thing like salt. In 11 drs. get a efft of K.
 measure of urine.

¹⁶/₁₂ - The effect of Br is to make Pt feel lazy - n.
 easily disturbed - i.e. by crying & c. but no
 tendency to sleep as w. Opium.
 Pt. although lazy & c. do any physical or mental
 work necessary - may give Pt. sleep by
 removing all irritation when he needs sleep
 The a full dose of KBr. blunts a sensibility
 - but st. does not. In 11 drs. in animals
 all special senses & c. abrogated. May
 stop a action of V
 Oft. in therapy we have to give 1 dr. of HCl
 & continued. S.t. Br. is produced, we will
 have blunting of reflex action & shine

(no reflex action in Pharynx no gagging when touched.) Pt. feels dull heavy mentally & lazy physically - an eruption breaks out in abt. $\frac{2}{3}$ of cases on face. Eruption leaves no scars - Increased flow of saliva w. peculiar odor. Edema of pharynx - diarrhoea. If KBr is pushed Pt. may get dull & can worse himself to worse. Pt. can never warm as well, may stagger in his walk. Sexual orgs. can be used. V's action slow & laborious. Change in voice - hoarser & emaciation, c.n. speak aloud. When dangerous symptoms begin to appear diminish or discontinue. Produce chemico-dynamic effect on nervous system. Not due to anaemia.

Therapy. KBr. useful when sleeplessness persists when Pt. not worried worried etc. In using drug for wakefulness if due to worn out condition, in v. old persons do not use KBr. Useful in delirium tremens - also delir. of fever. For reflex excitability. ∴ good to give dr. before examining throat. KBr. for over excitability of sexual organs unless due to exhaustion. v. good in vomiting after administration of ether & chloroform in dose of 3 ss. - j. Not v. good to allay pain. Off. useful in feelings of cold, formation etc. But KBr esp. useful in certain spasmodic attacks. It has excellence & remedy for epilepsy the form of dis. which follows true type full syncope, coma etc. then KBr v. useful. Better than in Grand mal th. in petit mal. As long as KBr is in a D. fits & n. v. apt to come on. But KBr v. diffusible so it shd be given several times (3-4) per day in 1 dr. & last dose at night shd. be larger than others dose required may be 90 gr. - 100 per day - & n. < the 120 gr. per day. Hooping cough may be alleviated.

false croup st. benefited & may be cured.
 Spasmodic asthma benefited to a extent.
 Sore jaw st. benefited but n. as good as ^{others}
 but when combined w chloral & others it assists
 F Medicines.

Dose. of K Br. for sleeplessness gr-xx. But for
 full dose grs xxx. up to 3i. Better given
 dissolved in H₂O may flavor w aromatic.
 Put dose in 1/2 glass of richy H₂O v. good.
 an alkali is good to disguise taste.
 20-30 grs. of Sod. Bicarb. in 1/2 glass of H₂O.
 Ammonie Borate.

Hydrobromic Acid Has a strong affinity for
 H. is n. yet officin. & ∴ no standard strength
 below 40% soltn. simply irrit. sour &c.
 above 40% caustic. St. & Br salts affect
 digestion when H Br acid does not
 The buzzing &c of Quinia may oft. be stopped
 by combining w. H Br acid.
 Usually in 2 shops. a 3 cents. 10 gr. Br.

— Iodine —

I.

Iodine (Sol. of) | Sulphur iodide
 Potassic iodide | Ammonie "

solid metallic appearance but lig. bl. easily
 volatilized w. violet colored fumes. not sol. in
 H₂O but sol. in alc. & Eth. Dissolves easily in
 H₂O & sol. of K I. - NaCl. &c. sol. in alc & oils &c.
 Comp. Soltn of Iodine (also ed) "Lugol's soltn"

I. applied to skin colors it causing tingling
 feeling & may blister.

Antidote for I. poisoning is starch.

¹ Tinct. I. mild. counter irrit. pain of. relieved by
 painting w. I. St. used over enlarged lymphatic ^{lands}
 oft. w. o. effect. Tinct. I. useful in parasitic
 skin dis. as ring worm &c. St. used as a
 injection for radicle can of hydrocele.
 Pure carbonic acid. accord. to Otis.

when used but to use compd time. for it can
be mixed w. H₂O - as H₂O c.n. is added to
simple time. w.o. causing ppt. one or two
of compd. time to pint of H₂O. of strong mucop.
Tinc. of I. It. used in catarrhal affections of air passgs.
 $\frac{1}{2}$ - Sulphur Iodide - only effect is - of I.
sol. in 6 pts of Glycerine.
used & only in official ointment.

Potassic Iodide. has some white cubical ^{crystals}
sol in H₂O & alc. - sharp saline taste

Ammonic Iodide both of P latter has high
diff. point. When given repeatedly we have
symptoms of catarrhal affections of the head
& truly feeling of cold in head s. headache. St.
cracking out on skin. Iodidism like Bism.
starts in mouth may swell & catarrh may
reach alimentary canal which will be marked
by nausea - watery diarrhea.
Or it may affect O.R. by making him feel list-
less &c. P symptoms disappear as soon as
K.I. is stopped.

This Iodide is no dangerous.

Thyroid Goitre at 1st Mount ofenge was used w effect
but now it is shown - a superficial ppt. was
due to a I. Good to faint & part w time of I
give 6 drops comp. Tinc. I. in wine glass of H₂O
I. is used to promote resolution absorb. of new growths
& inflammatory results. But range is limited &
seems to work best in specific ill. as rep in
tertiary stage of syph. In using iodine
for P purpose it must be given in 11 ds. i.e. 3 p. 3 t. ds.
Also st. used in gent. Has been found useful
in o. cases of scrofula for P give compd of I.
Inflame of cord, brain &c. of g. got by crushed by
bone, gr X - 3 ss. given in aromatic H₂O

24/2

Some mineral acids. (view)

Preparations of Iodine.

Internal usemild.

Potassii Iodidum.

Ammonii "

Irritant.Liq I. comp. $\text{I. } \frac{\text{vj}}{\text{ss}}$ $\text{K I. } \frac{\text{ss}}{\text{ss}}$ $\text{H}_2\text{O } \frac{\text{oj}}{\text{ss}}$ Finc. I. " $\text{I. } \frac{\text{ss}}{\text{ss}}$ $\text{K I. } \frac{\text{ss}}{\text{ss}}$ alev. $\frac{\text{oj}}{\text{ss}}$ External useFinc Iodine $\frac{\text{ss}}{\text{ss}}$ alev. $\frac{\text{oj}}{\text{ss}}$

Unguent I

 I gr XX K I gr IV lard $\frac{\text{ss}}{\text{ss}}$

Unguent I comp.

 I gr XX $\text{K I } \frac{\text{ss}}{\text{ss}}$ " "

Some mineral acids.

 $\text{H}_2\text{SO}_4 \rightarrow \text{HNO}_3 \rightarrow$ Nitrohydrochloric. $\text{HCl} \rightarrow$ Phosphoric & Hydrobromic. H_2SO_4 strongest next Nitro HCl . Then HNO_3 last HCl .all min acids, & caustic HNO_3 used most as min. caustic. st. HCl & seldom any others as acid lotions. - and may be used - for morbid sweating.Nitro HCl . used in oxaluria. HBr . acid used in diuretic step in quinquina.

Boric -

Boric acid - solid hard some crystals quite insol in H_2O but sol. in hot H_2O but when H_2O cold it is pptd. It is acid bc. it plays part of an acid in compds.

Not irritant or caustic. Taken inter. it has effect. It is a fairly powerful antiseptic may be added to milk &c. It is used as an antiseptic in wounds bc. it has irrit. effect. But it is not as powerful an antiseptic.

as carbonic acid.

Givenly applied by massing a warm saturated (s).

— Carbon —

C.

Carbonic dioxide : - carbonic acid.

& all so called "organic compounds"

Charcoal is a form of C. In Lat. Carbo - omis.

" may be prep'd for bones & is cd animal

" & when purified cd Carbo animalis purificatus.

May also be prep'd for wood cd. Carbo liqui.

Charcoal - insol & practically inert - But used b.c. it has high absorbing power for gases.

∴ may be used to hold noxious gases.

It also has property of holding other substs. in its meshes & ∴ it used in fixing ty. also alcohols but it must be given in " do. & early.

Used in sloughing wounds &c.

The wood char. used in dyspep. when gases generated may be given in symp amount 40 dose few grs. - 3 ss. May be used in Pueris &c.

Carbonic acid. CO_2 formed by burning C in air. H_2CO_3 is n. an acid - It was cd a. b.c. it unites w H_2O & forms an a. - Under pressure H_2O takes up much CO_2 & we have.

Aqua acidi carbonici. Useful as a fruit drink. Useful in nausea &c. & for disagreeable tasting meds.

Carbon in all so called organic compounds.

Table for 18
Nitrogen

Nitrogen " compounds.

n with H.

Ammonia gas (sol 8)

Ammoniac carbonate.

Ammonio acetate (sol 8)

n w O.

Nit. monoxide. Nitrous oxide
Nitric Acid.

amyl nitrite Potassium Nit
Oxygen gas.

Review.

Alkalies & Salts.

Antidote for Acids.

Li. Carbonate
Magnesia
" Carb.
Lime water
Calcium Carb.

Digestion Antacids.

Na Carbonate
lime "
Magnesia
" Carb.
Lime water
Calcium Carb.
Ammonia.

Alkaline lotions.

Potas Carbonate
Sodium "
" Berate.
Lime water.

Systemic Antacid.

Potas Carbonate
" Citrate
" Acetate
" et sod. Tartrate
Na Carbonate
Li "
" Citrate

Alkalies & Salts.

Purgent.

watering no irritant.

Potas Bitartrate
" et sodii Tartrate
Sodium Phosphate
Mg. Citrate
" Sulphate
" Carbonate
Magnesia

Caustic.

Potassa
Soda
Lime

Anti emetic

Potas Citrate
Lime water & Ammon. Nit.

Diuretic.

Potas Bitartrate
" et sod. "
" Acetate
" Citrate
" Carbonate
" Nitrate
" Iodide

Ferrifuge.

Potas Citrate
" Nitrate

Ammon. Acetate
Mucous Catarrh

Pot. Cl. & Na Berate

Special Properties. Boor for Hiccups.
 Lime for diarrhea. Nitroglycerine for asthma
 Potassium for depressing P.

Sulphur.

Sulphur. 1 Potassic sulphide.
 sulphur dioxide | Sulphurous acid.
 sodic sulphite | Potassic sulphite
 sodic hyposulphite.
 Sulphuric acid.

Phosphorus.

Phos. 1 Zn phosphide.
 sodic hyphosphite | Calcic hyphosphite
 Potassic " | Ferric "
 Phosphoric acid.

Organic Carbon Compounds.

II Fatty Group.

Hydrocarbons.

Paraffin, Vaseline, Cerumline.

II Fatty Group - of Org. compds. Formed fr. $\text{CH}_2, \text{C}_2\text{H}_4$
 when all the elements w. C. & H. then it is called a paraffin.
 what is cd. Paraffin looks like spermaceti used
 for ointments, esters, &c. Insol in H_2O . melts w. heat.
Vaseline & Cerumline belong to P group. has yel-
 lowish color. soft consistency of lard - does n. b.
 rancid - does n. b. hard or fluid - used as
 basis of many ointments - n. yet official.
 In CH_4 we may replace a H. by other elements.

$\frac{23}{12}$ H-C≡H. azo paraffins. (cyanides)

Prussic A. Hydrogen cyanide = Hydrocyanic acid. cd Prussic A.
 sour. n. & corrosive. v. poisonous a 2% sol. cd.
 dilute Hydrocyanic acid - it is only one used

in med. - perfectly colorless w peculiar odor
 sitting like peach seeds. - It undergoes a slow
 decomposition. ∴ a sol. varies in strength w.
 diff. drug stores. av. require w. 1 dr. & go up.

Incompatible w. Fe & Hg.

In persons doses of it falls over in a few minutes
 has convulsions of masticatory muscles. Fringing at mouth
 & rapidly fails - skin cold & clammy. It usually
 dies w. in a half hour. & st. dies in a few seconds.
 It is an poison to plants. It has a tendency
 as nitrite of amyl in all cases to remove condition.
 But it has o. other prop? wh cause death. T. N. V. will.

antid. In case of poisoning we have no chance. Antid. all are e.
 do is to sup & crating - give atropine - But gently.
 w. c. do. N₂ also good for respir. & V.
 alternate apply. of hot & cold H₂O.

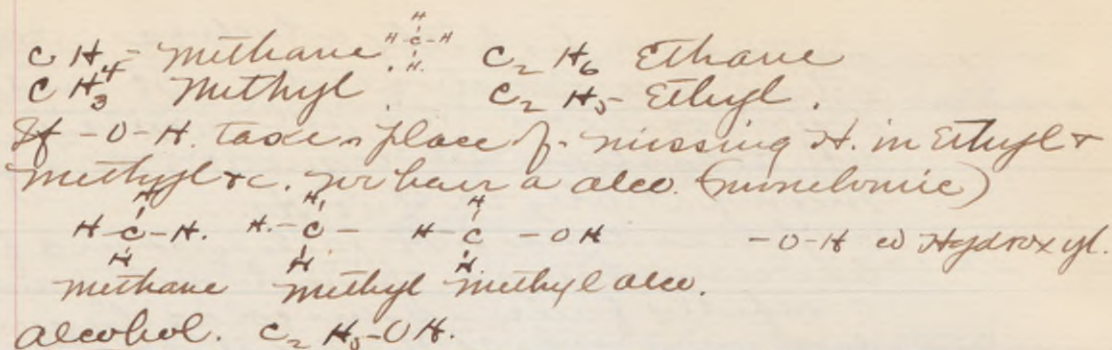
Therapy. In one case 36 drops of n. d. (2) caused death.
 as we have to give 1 dr. at 1st we have v. 1. effect.
 It is used in nervous irritability. esp of air passage
 & ∴ useful as a cough med.
 Allays irrit. of stn. & is an antiemetic.
 also used in irritabil of skin.
 dose internally 2 - 8 m.

Potassic Cyanide. K-CN.
 It is given in such 1 dr. - we get none for K
 effect - It is a solid (2) in H₂O - dose gr 1/8.
 Oil of Bitter almonds. oleum Amygdalae Amar.
 contains much HCN. & 1 dr. is only 1/4 - 1/2 drop -
 It is to be disting. fr expressed oil of almonds. wh is
 perfectly bland.

Water of Bitter almond - has peculiar smell
 of HCN. is b. - it may require in 7.5. dr. - It is
 used (st simply as a flavor for B.
Mercuric Cyanide.

Minerale, alcohols & ethers.

volatile Ethyl alcohol = "Cem. Alco."
 " Oxide. = "Ether"
 " Nitrate = Nitrous ether
 Amyl nitrite



In experiments it has been found & as a caution 3188. in 24 hrs. we saw special effects - Alco. is H. given off by breath but what we smell is a volatile ether in air.

A single full dose of alco. has 2 effects. 1st on Stom. - 2nd. varies on amt. taken, as alco. is highly diff. & 2nd varies on time over which a cert. amt. is spread & how highly d. Concentrated alco. is irrit. & causes nausea etc. Diluted it quickens appetite improving digestion by gentle irrit. Strong dose changes albumen elements of gastric juice.

23 1/2 - In certain constitutional dis. v. n. d. s. c. b. taken Const. effts. of alco. cause fall in temp. & urica. In laboratory alco. + d. to B. will stop amboid movements of protoplasm.

If intoxicating doses given temp. may fall considerably. Good in fevers to lower temp. & > in amt. of urica. Alco. gives feeling of warmth but actually lowers °. Sensation comes from skin. It may feel cool while B. is hot but sensation is & B. has no skin & passes in. So in giving alco. it dilates & cap. of skin & tends to cause a flow of B. to skin when sensation of warmth, although ° of B. is >. Alco. tends to suppress oxidation in Dept & diminishes amt. of urica.

In fever & Pt. may be dying fr. excessive ^{destructive} oxidation in system & alco. is good to stop oxidation & to furnish fuel for body.

In dangerous inflam. when white B. corpus. & r. active alco. is given but it is n. yet known how effective. Alco. coags. alb. & hardly dissolves fat.

alcohol invigorates & is in healthy persons - pulsations & stronger & faster - But in low fever & when it is feeble & rapid it tends to strengthen & pulsations and lessen no. of time.

By experiment it was found - 37. Brandy distributed over a day increased heart's action 13%.

The contraction is strengthened & lengthened.

alco. useful in persons either physically or mentally tired - by sending new B. to all parts of body & work may be done - But in excessively ill persons tendency is to paralyze - anæsthetic.

In & at drugs which increase heart's action tend to increase contractility of arteries, but this is only true in alco to a limited extent. The capillaries dilated & B. tends to flow into them & face often becomes flushed for liquor.

There is an effect on sweat glands which varies in warm weather a glass of beer may cause sweating or not.

Cerebral Perturbations. - The brain has functions of reason, i.e. emotional faculties, judgment &c. Alco. in intoxicating doses tends to subvert & pervert & blunts & latter. i.e. all brain is affected - after a time even emotional functions become blunted. If drinks continue. Pt. will lose all sensation (etherized).

Indications of intoxication - loss of power of coordination - talks thick, staggers &c.

Persons naturally nervous, excitable emotional, & are easily affected. Continual drinks does harm not only by drunkenness but by soaking & B. of O, liver, &c. w. alco.

Climate has much to do w. disturbance of cerebral intox. In cold damp climates of Eng. & New C. drinks less than in our dry bracing climate. i.e. drinks Persons in active Musc. require less drinks & w. O.

In severe wasting fever & ill persons may be given w. O. intox. on.

'Dead drunk' very like full anaesthesia by ether but former is a dangerous condition.

diagnosis of dead drunk often judge by breath.
but if do smell alcoh. n. a positive sign b.c.
PT may have drunk a glass & then had apoplec-
tic fit. - pupils genuly dilated & dead drun-
guly. preceded by excitement.

Forat w. stone pump - Then cold douche.
n. faradization &c. to excite flagging heart.
a person who has taken poison does may
die in few minutes or days.

82. 4/1 Effects of alcoh. beverages - chronic gastritis
crawling for st. irritating. - Liver affected most
often - O's. also affected nervous lesions.
- delirium tremens &c. Its use lessens
power to resist disease.

It is not a central stimulant.
If persons take abt. tea spoon of pure alcoh. 5%
in 9 times H_2O he will experience simply
a warm glow. & more genly. c. take v. ds.
several times per day. n. taking < the $\frac{3}{4}$ ss
w.o. any special noticeable effect.

Alcoh. c.n. is explained by any one word as stimulant
It is colorless. volatile inflammable.

Has strong chemic affinity & will dissolve
many things - H_2O will not. It also
prevents putrefaction.

It has a strong affinity for H_2O :: diff. to sep. abso. but
absolute alcoh. is n. official.

3 grades.

Strongest alcohol cuts 8%.

in wgt of H_2O - Sp Gr. 817.

Alcohol. genly used cuts

15% H_2O . Sp Gr. 835-

Dilute alcoh. 50% Sp. Gr. 941

In Lat alcoh. is n 3rd inclusion. ^{fortius.} ~~dilutum.~~

Rectified spirit - spirit of wine = our
simple alcoh. Proof spirit = dilute

Distilled Liquors.

Official. Spiritus vini gallici = Brandy
 " fermenti = Whisky
 Brandy is genly. 1st to P. alth. s. P. lye.
 P. dilute alev w. str & a flavor.

Shun not Official. - Gin Rum &c.

Gin has juice of juniper berries added.

Wines (official) Vinum xericum = Sherry
 " Portense = Port.

w. har in grapes. - Sugar. Nitrogenous sub.
 Organic acids - & some cont. coloring matter
 - Tannic acid.

The wine may be made
 by expressing a juice & allowing it to ferment
 when it will be light colored. or some
 suds pulp &c. may ferment together & form
 a dark colored wine.

It is a compo ethere = gin & flavor

Persons affected w diabetes sld n. drink
 wines contng. Sugar.

Sugar & alev. together & prejudicial to gent as
 strong wines & champagne.

Wines contng volatile ethere & agreeable
 to a stom. & have a stimulating effect on it.

Malt Liquors ale Porter & Beers.

made of Barley. - afterwards a diastase is
 boiled w hops then strained & yeast + & ferment.

Grapes c. w used to revive a & action.

It is a stimulant, useful in s. forms of
 spasmodic affections. It has a tendency

to drive P to skin. ∴ when Pt has been ex-
 posed to cold & liable to chill alev is good.

But a person who expects to be exposed to cold for a
 day or some time sld n. drink alev for by so
 doing he lowers a temp of vital organs.

St. used to lower temp. in fever, but n. often

useful to support life when Pt. can take or
 digest food - In low fever. in w. cond. it

lowers a temp increases a & action ^{allays} restlessness.

Persons who are perfectly healthy do n. need & sld
 n. take alev.

Old persons with feeble circulat. &c & benefit only

given in 1 ds. if not apt to do harm.

In chronic dis. *Serofula ricci* etc of a good indication is a depression of aut. fontanelle.

Opinions differ as to benefit in in *Phthisis*, ^{consumption}

Ether

Ethyl Oxide. Lat. Aether. - is. (M.) $H-\overset{+}{C}-\overset{+}{C}-O-\overset{+}{C}-\overset{+}{C}-H$

not v. sol. in H_2O - but b in alcoh. oils etc.

Two mols. of ethyl united by an atom of O.

Is a limpid colorless liquid w pungent odor & volatile & inflam. than alcoh. & even a vapor takes fire & goes at for care in using near fire or cautery.

The official (& at used) is known as stronger ether aether fortior - than is an impure form known as simple ether. It shd n. be given. & all ether shd. be tested if long kept.

When impure it often gives acid reac. test w lit mus. shd. n. b. acid. When shaken w H_2O it shd take up $\frac{1}{8}$ of its vol.

" Put on plate & allowed to evaporate it shd. leave no stain & a last shd have a peculiar odor. W. broxington. If put in a glass & held in hand it shd boil & will unless too much alcoh. be present.

$\frac{1}{4}$ - When inhaled 1st effect is irritation of larynx many of its effts. = to alcoh. intus. but much swifter. $\heartsuit$ action increased. - tingling sensation exhilaration even in early stages. sensation is dull.

The Pt. takes things & if allowed will stagger about face b.c. congested - sweat appears on brow - thro continued & cerebral effects similar to v. n. ds. of alcoh.

Then is a secretion of saliva - Musc. contraction comes on - when arm etc. v. rigid. & st. muscles or inspiration contract & breathing interfered w.

By & time & st of parts & insensible except eye. ends of fingers arms & genitals. - after w muscs. be. flabby & insensible in all parts - when stertorous breathing appears let Pt. have fr. air. The return to consciousness is v. similar to a recovery fr a drunk.

Pt. quies. has a rocking head ach - gaily nausea often vomiting - morbid restlessness etc. muscles

Therapy Ether used to avoid pain in operations. To relax, in obstetrics only a few whiffs & given

Practical details in giving ether. Pt. must have as nearly as possible an empty stomach. - To avoid nausea 2nd Large parts of undigested food may stop in Larynx in attempt to vomit - & Pt. takes ether better on an empty stomach. Good time to operate early in afternoon, or better b'f. breakfast. See - & dress is loose abt. neck & chest so th. Pt. c. breath freely. & oft. have v. vivid lascivious dreams & will charge phys. w. taking liberties. ∴ always have s. of her friends present. better & friends.

To make apparatus for giving ether - may be cone or cylinder latter easiest made. best to use a towel w.o. fringe.

Cone - Better for operations abt. eyes & neck - lay towel on paper wh. sold to encase the towel.

" Lining 1st towel folded twice - then roll paper bring out side. Put a sponge inside. It shd. be " enough so as to come up over nose n. over eyes & down under chin.

When beginning give slowly & gently until Pt. gets used to it. Start w. abt. ½ oz. of ether & more as is needed. Sit behind Pt. Shd. have assistants one for each arm & shoulder & one for knees strap will do for latter. Do n. press until Pt. struggles & then if he resists v. much it is well to let him come to & explain th. he must suffer. When Pt. has spasm of gasping. press below chest ∴ making kind of artificial respiration.

Have a basin at hand when giving ether & a towel around his neck & one to wipe mouth w.

When Pt. coming to aft. to be pale & pulse feeble due to nausea. When given at night have a lamp w. chimney wh. protects flame & do n. have it more th. 3 ft.

A few whiffs will benefit spasm neuralgia/pain, Trismus by stone. it is a stimulant. But it is v. disagree. to take. Dose 3 ss. - j ss. in H₂O may be sweeten^d or given in emulsion.

It may be used as spray to freeze parts in minor operations - lancing felonae, &c. or freezing first a stinging pain.

compd. spirits of ether - spiritus aetheris Compositus
also cd. Hoffmanns anodyne. composed of also. of
ether of. & ethereal oil 3vj dose 3ss-ij.
It is an anodyne & antispasmodic & stimulant.

Ethyl Nitrite. "Nitrous ether" $\text{H}-\overset{\text{N}}{\underset{\text{O}}{\text{C}}}-\overset{\text{N}}{\underset{\text{O}}{\text{C}}}-\text{H}$
Has a. what same effect as Amyl nitrite in pure
state - but it is changed & cd.

Spiritus Aetheris Nitrosi also cd. Sweet spt of ^{ether} Nitric
volatile inflamm. & sweetish to taste.
Has tendency to relieve nausea. If Pt kept
warm acts as a diaphoretic, if cold as a diuretic.
Considerably used in fever. It is given to aid
diuretics or diaphoretics.

Febriifuge dose $\text{m} \times \text{X} - \text{XXX}$. diuretic dose 3i.
Sld be given in st20.

Haloide Ethers -

Methyl Chloride = 'Chloroform'

" Iodide = Iodoform.

Dichloromethane Methylene Dichloride

Methyl chloride - chloroform. $\text{H}-\overset{\text{C}}{\underset{\text{Cl}}{\text{Cl}}}$

monobromide ethyl bromide. $\text{H}-\overset{\text{C}}{\underset{\text{Br}}{\text{Cl}}}$

Chloroform Commercial chloroform - In former article we is prepd

forms Chloroform - limpid colorless heavier
th ether or H_2O - as an anesthetic it is inflammable
Insol. in H_2O - Fragrant aromat. odor Taste
hot & pungent. must be pure if used as anesthetic
Test for purity when shaken wth H_2SO_4 sld turn color
sld n. give acid reac. If waft. sld n. leave stain.
It is < irritng. th ether has high diff. power. when
some subs. dissolved in chloroform their diffusi-
bility is increased.

When given as an anesthetic. train of phenomena
v.r. similar. In giving sld. n. be given as
ether in highly concentrated form - but n. strgt th 4%
It is < agreeable to Pt.

The intox on. is n. as marked & et. none. Not such
a marked tendency to excitation of face ^{saliva} sweating.
The muscular rigidity is n. as marked as w. ether.
There is a. stertorous breathing " " " " "
< like natural sleep. Recovery < rapid.
But chlo. kills by action on a. & sudden paralysis of a.

chlo. may kill by asphyxia. when $\heartsuit$'s action stopped if ft. cn. is revived chlo. shd. never be given concentrated - But deaths do occur when $\text{grt care}^{\text{taken}}$ Ether cn. to give r. will in tropical countries be. it boils at 96° Chlo. is easily carried as a quon. is all $\approx$ is necessary.

In giving chlo. a towel simply doubled up. $\heartsuit$ $\heartsuit$ The $\heartsuit$ may stop at any time during $\heartsuit$ administration early or late - but grvly it is early. It is $\heartsuit$ apt to occur in $\heartsuit$ in highest $\heartsuit$ of heat (sunning) But $\heartsuit$ dis $\heartsuit$ danger. th. other, is, old drunkards. uraemic - nervousness &c. when $\text{pt. comes w grt dread}$ - danger after a shock + bf. he has recd. $\heartsuit$ fatty degeneration of $\heartsuit$

Chlo. pretty safe in children & obstet. rice. $\heartsuit$ surgeons use $\heartsuit$ drug along w. chlo. to suit $\heartsuit$ $\text{morphia gr } \frac{1}{6} - \frac{1}{4}$. Cyphodermically soon after tr- giving $\heartsuit$ administration. Good to use a mixture. Amyl Nitrite $\heartsuit$ $\heartsuit$ - chloroform $\heartsuit$ $\heartsuit$ $\heartsuit$

$\heartsuit$ surgeons make $\heartsuit$ pt drunk $\heartsuit$ $\heartsuit$ giving chlo. Signs of danger. $\text{pt. b.c. suddenly pale}$ & pulse fluttering. If $\text{pt. struggles much}$ it is better to stop $\heartsuit$ administration. Always keep finger on pulse. Let them smell NH_3 or Amyl Nitrite latter best & often $\heartsuit$ good.

To restore $\heartsuit$'s action do it indirectly by start $\heartsuit$ trathing , one way is to hold $\heartsuit$ pt up by heels or use artificial respiration. May dash cold H_2O in face, but will hardly do $\heartsuit$ good for $\heartsuit$ $\heartsuit$ of sensibility $\heartsuit$ anesthetized. It is well during artificial respiration to place warm applications over $\heartsuit$ $\heartsuit$ even if pt ap- parently dead - keep up respiration $\text{fr } \frac{1}{2} - \frac{3}{4}$ of an hr. Rub $\heartsuit$ limbs towards $\heartsuit$ heart.

Chlo. is a good anodyne also $\heartsuit$ good antispasmodic die given in a few whiffs. It is used in Obstetrics. Do not allow $\text{pt. to give Chlo. to themselves}$ & resp. when lying on $\heartsuit$ back

12/ Intestinal colic of 1 q oft relieved by 1 ss. of chlo.
when other drugs have failed - a few drops.
dose for adult Mx^{XXX} . 7 drops r. r. 1.

Best given in mixture good w glycerine. from being irrit.

Mixture of chlo. chlo. Camphor 3 ss.
yolk of egg. - 4 ss.

Spirit of chlo. chlor. & alco.

useful in itching &c in form of an ointment.

Liniment of chlo. chlo. 3 parts.
Olive oil. 4 "

Methyl Iodide. $\text{C}_2\text{H}_5\text{I}$. Iodoform. $\text{H}-\text{C}-\text{I}$.

volatile crystalline solid having a peculiar odor $\frac{1}{2}$ to
many disagreeable - N. pungent but searching & persistent.
N. 6) in H_2O . (3) in ether & fixed oils. S. say (3)
in alco. but Curtis says it is a mistake.

It is an anæsthetic esp. locally & it is irritant as
chlo. when applied to ulcers & few scars. & Iodine
also acts w its tendency to resolution.

Internally in 1 ss. of few grs. no special effect.
But in 1 ss. gives something like chlo.

Therapeutically we do n. use it to prod. anæsthesia.

It has a healing action esp of syphilitic sores.

May be applied to chancres - & useful in m. patches
of syph. also useful in chancroid.

after a tubo has discharged it is useful to inject $\frac{3}{4}$ ss.

Good in painful cancer boils fistular.

In painful conjunctivitis. Used as antiseptic

arising after operations. - If used too large.

It has healing effect anæsthetic w. irrit. q.

But it has a disagreeable odor & it is used so much
in syph. the not using it is suspected.

It has been mixed w. balsam of Peru when used as
ointment to kill & smell w good results.

1 part Peru - 10 of Iodoform.

It mixed w. strong odorous oil as Japernint.

Dichloromethane 'Methylene trichloride' $\text{H}-\text{C}-\text{H}$.

It has smell similar to chlo. & has props of chlo.

But it is inflamm. & it is said it is better than "

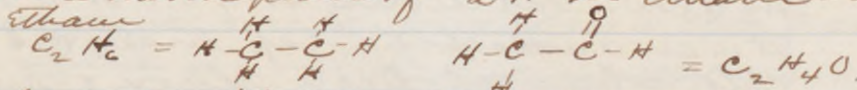
anaesthesia being quicker + effects pass off quicker
But it is expensive - spoils easily etc.

Ethyl Bromide $\begin{array}{c} \text{H} & \text{H} & \text{Br} \\ | & | & \\ \text{H}-\text{C}- & \text{C}- & \\ | & | & \\ \text{H} & \text{H} & \end{array}$ Is at present
praised as an anaesthetic, but Curtis thinks
it will soon pass out of use - volatile, light.
Praised by Phila surgeons. But a PT died in
N.H. & killed it here. The PT took a drug
badly - struggling & respiration ran high (50)
& died in 21 - 22 hrs.
For momentary anaesthesia use abt 3j.
Oft. n. taken kindly - prod. convulsions etc.

Aldehyde

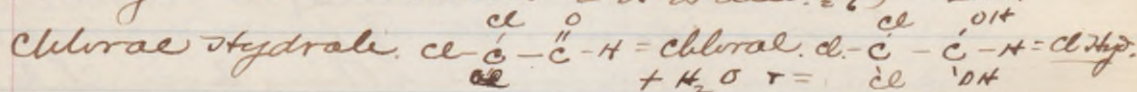
Chloral hydrate &
croton chloral hydrate

When a takes place of 2 H in Ethane = aldehyde.



Aldehyde etc. it is believed = it is Alco(C₂H₄O) - 2 H.

Chloral



Dissolves in H₂O.

Edwight. argued as chloral hydrate gives up chloro.
it wld give up chloro. in D. w. its alkali & warmth
but it has been proved & it is n. so. But it was so
introduced. It has prop. analogous to chloro.

It is irrit. antiseptic w.o. acting on delicate membrane.
If we wish to examine urine w. microscope st. after
drawing + few grs. of chloral hyd. But exam for
sugar & ura b.f. adding.

It is useful to keep alkaloids from spoiling 1% is enough
as in morphia sol. etc.

It produces a calm pleasant sleep w.o. any grt disturb^{tance}.
It may prod a nal anaesthesia w.o. musc relaxon. if a dist^{urb}ance
even in therapy. does it may n. act kindly - may n.
prod sleep, or if long contd. Chloral per long may cause
in o. caria peculiar pain of lips follow
" " dry pain in other hemiplegia. In PT
susceptible to alco. it may prod a grt redng. of face
∴ Chloral is n. a purely safe agent as hypnotic

It depresses respiration & $\heartsuit$ & so old n. virgin in cases where " depressed dyspnoea &c. The poison by chloral is similar to chlo. & that is similar to chlo. poisoning. i.e. we mean to start respiration.

Therapy - Only used to produce sleep - when lungs all right & heart excited or normal.

In delirium tremens. for short delirium.

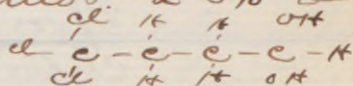
But in old drunkards n. good. May relieve pain but n. as good as opium or chloroform. But is good in spasmodic affections.

Average dose in new subject grs XX - XXX.

May be given dissolved in H_2O - may add sugar or o. thing to still a pungent taste.

13/- Anaesthesia may be prod. by injecting chloral in vein but it is dangerous. Being antiseptic it may be used as dressing for wounds. - 2-3% solution.

Croton Chloral Hydrate



i.e. dental chloral. - Looks like chloral compar. insol. in H_2O - Has effects similar to chloral hydrate - but has a strong tendency to paralyze supplied by 5th pair of cranial nerves - & so used in neuralgia - Sides head ache &c.

To prod sleep it is n. as strong Dose abt 3. or 4. grs. [grs XV - XXX]

Review.
alcoo.

Review

Alcoholic Beverages

Spirits average

% of abo. alco. Equiv. -
in vol. 50. $\frac{1}{2}$ 3 of abo. alco.

Port	16 to 23	9 to 6.	Rhine Wines	7-16-24
Sherry	16 " 25	9 " 6	Moselle "	8-13-19-11
Madeira	17 " 22	9 " 7	Hungarian "	9-15-17-10
Bordeaux (red)	7 " 13	21 " 11	Alie	3-8-50-19
" (white)	11 " 19	14 " 8	Porter	3-4-50-37
Champagne	6 " 13	25-11	Light Beers	1-3-150-50
Burgundy (red)	7 " 14	21-11		
" (white)	9 " 12	17-12		

13/ Review.

volatile

alcohols Ethers + derivativesAnesthetic.

Ether
 Chloroform
 Methylene Dichloride
 Chloral
 Croton Chloral
 Iodoform
 Ethyl Bromide.

Anodyne

Ether
 Chlo.
 Chloral.
 Croton "
 Aleo
 Iodoform.

Soporific

Chloral.
 Croton "
 Aleo.

Anti Spasmodic

Amyl Nitrite
 Chloroform
 Ether
 Chloral
 Alcohol
 Spt. Nitrous Ether

Antiseptic

Aleo.
 Chloral.

Heart Excitants

Ether
 Aleo.
 Amyl Nitrite.

Counter Irritants

Chloroform
 Ether
 Aleo.

Antipyretic

Food
 Alcohol.

Febrifuge

Spt Nit. Ether

DiureticDiaphoretic

Alcohol

HealingResolvent

Iodoform.

All anesthetics in Table etc. Ether cont Cl. Br or I.
 & these latter have a trisec action on V & so we may
 predict for new anesthetics acting. Cl Br I. a total or
 partial failure.

Anodyne. (allays pain)

Ether & Chlo. used by tading a few whiffs.

Soporific (To produce sleep)

Aleo. is soporific when P is in exhausted condition by
 sustaining V etc. as in fever etc.

Anti Spasmodic amyl nitrite - asthma & angina
 pectoris - & in gr. for spasms of unstriped muscles
 supplied by sympathetic nerves.

Antiseptic Aleo for specimens. Chloral for urine.

monatomic alcohols & ethers. (non volatile)

II Cetyl Palmitate &c = Spermaceti
 Myrical " &c = Bees wax.

II. Lat. Cetaceum. A sub. w. much c. is apt. to be solid rather than fluid & physiologically inert. Derived fr. a whale.

III. 2 kinds. Lat. (yellow) Cera flava & Cera alba, white. - above & only used as base for ointments.

Triatomic alcohols & ethers.

Propenyl alcohol = Glycerine

Propenyl ethers, Fixed oils & fats

Olive, Almond, Linseed, Cod liver, Pine, Castor, & Croton Oils. Lard, Suet, & Cocoa butter

Glycerine. Simple lig. n. volatile has a strong sweet syrupy taste - resembles alcoh. in being antiseptic. Is locally irritant - in concentrated form - but n. so when mixed w/ H₂O used in pharm. to make emulsions.

In cold weather it tends to keep hands from drying & is prophylactic for chapped hands, by rubbing on hands w/ a few drops after washing.

It acts as a mild laxative & is esp. good in piles. Taken sev. times a day tends to diminish sugar in urine of diabetics.

Taken at meals b/f. or after prevents sour stomach. It may be taken in coffee or tea instead of sugar thus a pt gets a drug & avoids a sugar.

Propenyl ethers, Fixed oils & fats.

Fixed oils occur in seeds of plants, n. vol. but inflamm. decomposed by alkalies. Entirely bland locally & externally but a laxative

Contain much C & H. in comparison w/ amt of O. & use to keep air fr. wounds & soon so promote healing.

1. Olive oil, 'salad oil' Oleum olivae.
2. Almonds " Oleum amygdalae Express-
3. Sesame " " Sesami.

1. Dose $\frac{3}{4}$ - $\frac{1}{2}$ - is v. good for Pt having piles.
 2. Expressed oil of Almonds seed. to desting fr. volatib oil wh contains hydrocyanic acid. may be used as dressing or internally.
 3. Props. v. sim. to Olive. will keep longer w.o. being rancid.
 4. Castor oil, *Oleum Ricini* - The cast. oil seeds if true will act as a dangerous cathartic. Bland but has a r disagreeable taste will mix w. alcoh. in all p.p.s.
- 1/2 a safe & mild purgative Pt. apt to be constipated after action. Remarkably speedy. No good to get rid of dropsy or to irrit. intest. in hyperaemia of brain.
- Taste may be disguised by taking w. Coffee lemonade - orange juice. C. buy Emulsion. Castor oil is useful at onset of diarrhoea - may add $\text{m} \times \text{v}$ - xx . Laudanum.
- also in Pnq. &
- Colic due to retained sub in alimentary Canal Persons w. habitual constipation, shd n. resort to castor oil, as a after effects & < averting the many others. Uses in hair oils dissolved in alcoh.
- Purgative dose for δ abt 7 ss. - 3 ss.
- Taste may be avoided, if give oil slightly warm Give w. aromatic water. Prob. best way to give it is in ale - put frothy in glass add a castor oil + add < ale -
- Emulsions may be made - Take c. oil + Glycerin = parts + add a few drops Wintergreen Cinnaomon or oil of Bitter almonds. St. laudanum is added when intestine irritable.
5. Croton oil *Oleum Tiglii*. Derived fr. seeds by pressure. oil is viscid & ush. of darkish color has a hot acrid taste. It is an exception to oils - being irrit. but this is due to s. m. known acrid element dissolved in it.

Is one of strongest purges we have - Stools being watery - If 11 ds. given & symptoms will resemble Asiatic purge - Its action is < rapid of all purges acting in 1 1/2 - 2 hrs. It. used w.r. or w. w. a rapid action - i.e. rush of B to head. again when a PT will n. swallow, it will act by putting a 1 ds. on back of tongue & ~~it will act~~. may give in food. Used in Dropsy. Dose. drop 1/3 - 2. Good way in broad pills with o. other bland oil is st. used as a Blister. 1 part of Croton 3 of Bland.

Flax seed - Linseed - Cumin Linseed Best is cold pressed not having been heated N. much used in Med. Is mild purge Dose 3 ss. used to soften faeces in piles. Carron oil is made fr. it.

Fats - Fatty foods r. further oxidizable & keep up a system. Fresh butter, cream & milk & v. useful - cooled fats & apt to upset digestion. The cooing changes it from fatty to oil. hair & fresh fats. If they r. n. digest & they irritate & inflame. Producing cholera &c.

Cod liver oil - Cumin Morhuæ. or juvenis or illi color light straw to v. dark. a light colored oil, gaily test as > smell. has strong rancid fishy taste. It conts. an unknown acid subst. in sol. Taken by healthy person simply prods. increase of In size thin persons b.c. heavier B. better &c. Produces no corpe. like &c.

It is indicated in Scrophulous diathesis & Phthisis The PT. will grow better appetite increases & dis. may take Caes. traces but will n. be cured. Heavy fat PTs. w. greasy skin may have scroph. & r. oil n. much use.

Useful in Chronic rheumatism &c. Give by it self some times after eating Dose abt. 7 ss. 3 times a day for 9 t. ss. It is a food so. too much sld n. inspire, watch how much they c. digest. Will be observed

stools + see if any oil globules + present if so - sign = it is n. all digested.
 The taste may be covered by taking a pungent tasting sub. b.f. + after - as a dried burning. May be taken in all coffee &c. May add aromatic oils. Emulsion best w. mucilage ^{Glycerine} &c.
 St. Pt does n. digest any fat - then no use.
 But if add 10-15 drops of ether to $\frac{1}{2}$ of pancreas will be incited + so fat digested. Chlo has a better taste so may mix.

Cod liver oil OJ during administration
 Chloroform 3j tion for other fats.

Lard adipis (adipis) Obt. for Hog.
 Is rep. useful in making cerates + ointments. A principle objection is = it turns rancid - we may prevent it by + ing. Fine of Benzoin. Then cd. ung. Benzoin.

Suet Scurum. < fine obt. for sheep.

Cacao Butter oleum Theobromae. (for plant)
 Prime use is for suppositories. Used for ointments.
 May also be used to coat pills.
 Has no disagreeable flavor + consistency of wax or spermace, but melts easily at body temp.

Hexatomic Alcohols + Ethers

<u>Cane Sugar</u>	<u>Cellulose</u>
Mannite Manna	Cotton
Sugar of milk	Pyroxylin
<u>Starch</u>	<u>Tapioca</u>
Wheat Starch	Barley
Arrow root	Iceland moss
Sago.	Marsh mallow root
<u>Gum + Mucilage</u>	Slippery elm bark
Gum arabic	Sassafras Rith
Fragacanth	
Linseed	Irish moss.

Stx. at alews, &c. all bland. mixed w. ^{rice} ~~water~~ used for emollient drinks, as in colds & infl. & foisting &c. They & elements of good diet - Starches Sugars - they do n. oxydize as much as fat & o. n. so sustaining. They have a tendency to form adipose tissue. In diabetes > sugar & Pt eats - & better he will be sld avoid starches & sugars. He c. use to good advantage bread for Gluten Almond flour. Do n. use wine &c.

Am q below 7 mos. cn. digest starch & sugar ^{sub} & sld n. give infant arrow root, &c.
 1/2 Starch & sugar & st. good when animal food cn. be taken, as in severe fevers &c. For q we c. use malt to start & change of starch to sug. If taken Liebig's Infant food is good.

R. Wheat flour $\frac{3}{4}$ ss. = heaped T. 3 f.
 Malt " $\frac{3}{4}$ ss " " desert "

Crystallized Bi Carb Potass. $\frac{7}{8}$ grs.

Mix well & add $\frac{1}{2}$ H₂O $\frac{3}{4}$. The mix & + Cane milk $\frac{3}{4}$ v.

Heat over a $\frac{1}{2}$ slow fire stirring until it thickens remove & stir for 5 min. - Put back, thicken remove until it gets quite thin & sweet. Put back & let boil - Strain & use.

Cnts. Nitrogenous 305 g. Non Nit. 116.

Proportion 1:3.5.

But n. let nurse make it. St. & concentrated forms & good if it is intended to be used when q c. n. take mother's food. - In preparing starch rub w cold H₂O 10 or 15 min. then + hot H₂O or milk - Oatmeal prep^d. in W way is r nutrition.

Cane Sugar. Saccharum (offic) used to make syrups &c.

Molasses. Sympus fuscus

Sugar of Milk. Saccharum Lactis.

Not as sweet & > (o) th cane sugar.

Cellulose. cotton used to make gun cotton & the
 { Pyroxylin
 { Collodion used to cohabit or cover parts

Flexible collodion (c. flexible) wh. gently yields.

Starch (wheat & corn.) Amylum.

useful to dust over moist sore &c.

arrow root Starch Maranta

light Starch food for q

Sago - (indeclinable)

Tapioca - ae.

Barley Hordeum.

Island moss Citraria.

Conts. a sub. a cross bet. starch & mucilage
also slightly bitter extracted by hot H_2O

Gum mucilages. useful to make muculent
drinks, w.o. any special effect

Gum Arabic acacia. sol in H_2O to make
mucilage - + essential oil to keep fr. spoiling
carbolic - oil of clove &c.

Fragacanth - swells up w. + on of H_2O
useful to make troches.

Flaxseed linum. oft. used to make
fomentice - use o meal w H_2O for p

Marsh mallow root althaea used for di-
muculent drinks.

Slippery elm bark Ulmus (fum)

Sassafras pith (indul.) medulla.

Irish moss (chondrus) H_2O w lemon & sugar
makes pleasant muculent drinks.

Acids.

acetic Olvic

Lactic Oxalic

Tartaric Citric

acid, is formed by + ing. O to an alcoh. $H-\overset{H}{\underset{H}{C}}-\overset{O}{\parallel}C-OH$.

acetic acid. sharp taste & smell - irrit. Its pec-
uliar property is dissolving of fibrine. $\therefore$ c. tr used
to destroy its eq. - cancer - many is used to de-
stroy virus a Rt.

Vinegar - acetum. also acetum distillatum & dilutum.
Is astringent - used in fevers as cooling drink & to start
action of o. mouth.

Oleic acid comes fr. Fat has a greasy feel & leaves a greasy looking smear. But it is highly diffusible & a smear soon disappears. It is used to promote absorption of s. drugs. w. w. it is united in oxide of Hg. It is also useful alone for cracked hands & skin. To destroy parasites etc. - also used to destroy ova of lice.

Soap Sapo. onis. - & also, l.c. of fatty acid nace of oleic acid is overcome by a l.c. base.

useful in s. skin dis. - Liniment of Soap. Soft soap w. l.c. base often ed. - Green soap.

Lactic acid developed by milk turning sour. Taseu w. pepsin to help digest also Taseu alone. Used in diphtheria as a gargle in m. xxx to (0j or 3j?)

Oxalic acid (3) & looks like $HgSO_4$ intense sour taste. The antidote is s. (s) lime confd. forming in (s) CaO of lime. Do n. give Na. as another poison is then formed.

Citric acid Occurs in fine crystals. sour - (3) s. acid as th. in lemon. Must be freshly made. make a 6% sol. - If lemons c. to rot they r. bitter. Lemon & lime juice & useful in scurvy. & Fevers.

Tartaric acid stronger th. Citric acid. st. poisonous. Fos. has proved fatal. Dose 10-20 grs. in H_2O .

20/ Review - acids -

Sour acids
acetic, Tartaric &
Oxalic, Citric
Lactic

Poisonous as
Oxalic.
Corrosive
acetic.
Oily = Oleic

All sour acids promote flow of saliva, & quench thirst. They r. & pleasant th. muc. ac. Their action is local th. constitutional.

Oleic acid, used to make oleates - oleates of Hg etc.

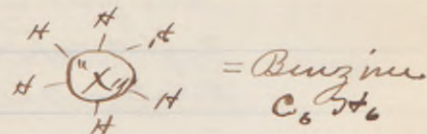
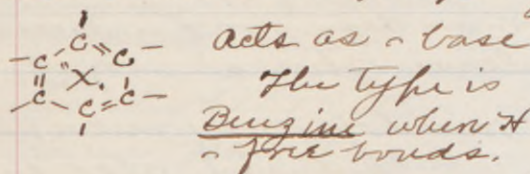
Amines.

Trimethylamine

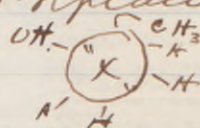
chloride.

amine - when 3 atoms of NH_3 & each replaced by methyl = Trimethylamine C_3-N-C_3 It is a pure colorless fluid used in H_2O of (s). In order to get a sub. of diff. strength a salt is used = Tma. Cl.

Trimethyl - Chloride. has some what s. effts.
 of NH_3 - it irrit. Constitutional effects & opposed to
 NH_3 , it tends to $>$ in trats of ∇ - lower temp.
 Has been used w. advantage in acute Rheumatis.
 but it was probably due to Iodid - I used now.
 dose of a Chloride. grs iv - viii
 It has a bad taste & also be mixed w some aromat. H_2O .
III. Aromatic Group. of Organic Carbon Compds.



To make all aloe. we have a phenol as Carbolic a.
 $\begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \\ | \quad | \quad | \\ \text{H}-\text{C}-\text{C}-\text{C}-\text{H} \\ | \quad | \quad | \\ \text{H} \quad \text{H} \quad \text{H} \end{array}$ = $\text{C}_6\text{H}_5(\text{OH})$ when another atom of H
 is replaced by CH_3 methyl
 it is called Cresol



Carbolic acid carbolic oil & for coal tar - It often be reddish
 in color but it is just as pure. It is v deliqu-
 escent - but it is an exception for it does not dissolve
 readily in H_2O - but (8) in ether aloe. & glycerine
 odor & taste entirely peculiar.
Action v. destructive to life esp. of low organisms
 as bacteria &c for these 1% is strong enough, then
 antiseptic. It has been found that strong
 sol. 1-5% destroys a amebic motions of W.D. corps.
 destroys corps. - coagulates albumen.
 In 5% locally caustic & anaesthetic when applied
 1st there is a burning tingling sensation & skin
 turns white & afterward b.c. numb. It used in
 spray for operations. If 1 dr. takes 6-8 grs.
 if stone empty may be nausea, soon afterward P.T
 b.c. giddy ringing & deafness - urine b.c. darker
 & sulphates in urine. It is a v powerful poison
 Poisons dose leave white exchem in mouth
 death may occur shortly after taking.
Treatment evacuate by emet or pump. It has
 been proposed using (a) sulphates as Na_2SO_4
 mild & sweet oil afterward.
 Poisoning has occurred & ext. use & been mistaken for

septic poison - & carbolic dressings increased.
One of the best ways to determine - is to examine
urine. - Acidify w. a th + BaCl₂ if, or no
ppt carb. poison. sld be ppt if urine normal.

Thurax. In treating wounds - also in Lister's method
for surgical operations. The Lister method will
prob. be modified by Thurax. - Carb. destroys
vitality of Citra & W. corps. rather th bacteria.
It lessens itching &c.

Internally in 1. do. in may relieve nausea & when
combined w. flatulence - it stops fermentation

Dose 1-15 drops deliques. acid.

Carbolic acid is disinfectant or antiseptic when mixed
w. putrifying sub^s. it stops putrefaction at once

But it will n. disorganize & not kill germs - so if it
set near & n. mixed w. putrifying sub^s. it has n. effect.

It is practically useless hung in cloths in sick room.

Croasote Corrosive proper is only dry distillation of certain woods.
but " of commerce is 1/2 pt. made fr. coal tar.
& is impure Carbolic acid.

It is colorless has smell resembling carbolic smell
water of Croasote - Antiseptic of Croasote.

Carbol. acid has replaced Croasote to a grt. degree.

Thymol. Has a sharp peppery smell & slightly
sol. in H₂O - sol. in alcoh. - ether & oils.

It has property of arresting putrefaction, of abt. 2. strength
as carbol. a. as a dressing for wounds it is n.

as for poisons. or as irrit as carb. neither does it have
bad effect on instruments. - Internally in 1. do.
causes diarrhea - diuresis, &c.

It reduces temp. & slows action of V.

Thymol has n. been used & much in med. Surgeons
do n. consider it as good as Carb. in suppression
suppuration & hasten cure. one diff. is in (S) in

The following form is abt strength gely used

Thymol	1 part
alcoh	10 "
Glycer	20 "
H ₂ O	1000 "

Pyrogallol. - Has been recently introd. & has n. estab-
lished its claim perfectly as a med.

It is prod. by action of heat on gallic acid hence
its name (S) in H₂O - alcoh. - & ether

It has tendency to absorb a. - It is used in obstinate skin dis's. It does n. stain & soe like Chrysophanic a. One Pt. who had his body freely averted - ($\frac{1}{2}$) died. Having haemoglobin urine chills &c. - So when used only a 1 part of a body sld. be covered at once. a 10% sol'n can be used. It is indicated - in psoriasis lupus &c.

Table.

— Aromatic Alcohols. —

Phenols.

Phenol. — Carboic acid —

Cresol — Cresylic "

Thymol

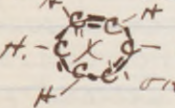
Pyrogallol

Resorcin.

Aromatic acids. —

do n. have a strong sour taste.

Monatomic. Benzoic acid.

Salicylic.  Formerly obtained fr. Salicin willow bark.

But r. expur. Now it is made fr Carb. a. by + H_2O CO_2 - It is n. properly purified, if a sample smells of Carb. a. it sld n. be used.

It has a brownish color or bleached to white

& freely sol. in H_2O - it may be made (2) by + H_2O .

an alk. sub. i.e. NH_4A . It has an irrit sharp stinging taste.

It is slightly irrit to wounds & causes slight pain.

Pts. can gen. take 15 grs every hour w.o. evil effects.

When full dose taken at once perspiration ceases.

out face flushes - buzzing in ears like quinine &c.

St. & drug causes delirium & hallucinations.

It tends to reduce temp esp. in Pts w. fever - Prob. as strong an antipyretic as we have. When temp

runs down below normal Pt is kept to hair collapse.

It prevents putrefaction.

Sodic Salicylate creamy white powder freely sol. in H_2O - when dissolved gives a brownish color to liquid. - It does n. have disagreeable taste of Salicylic acid. an extemporaneous Sodic

salicylate may be made by dissolving together

Sodic Bicarb. - 2 parts + Salicylic a. 3 parts.
Both the Sodic + acid. & used in fever to lower temp. & as good as any used. It must be given in pretty n. ds. as much as $3\frac{1}{2}$ in a day. st. of at once
It is gradually being used < + < the cinchona.

It has a tendency to cure rheumatism (Inflammation)
It is v. apt to alleviate if it does n. cure

When salicylic a. used in rheum. must be given in n. ds. - gently begin w. gr XX. ev. 2 hrs. But sld carefully watch any lowering of ∇ . esp if ∇ dis is set up by rheum. In some Chronic cases it has good results. When pt. has crook in back or pains for ever worse as in gymn. Sal. acid good.

Diabetes Mellitus. is st. cured by Sal acid when recognized early. If cont'd. it may keep sugar at low grade v. i. appearing in urine.

Curtis had a pt to whom he gave 120 gr. day for sev. mos. always better to R. n. Sodic salt th. n. acid.

May give in sugar + H_2O - Glycerine + H_2O + warm water.
It is an antiseptic n. much used in med.

26/ Benzoic acid. delicate fine crystals like alcohol salts. Dissolves in 24 parts of hot H_2O .

Borax will increase its solubility.

Slightly irrit. - Internally seems to inc. a flow of ^{mucus}.
Benzoic a. restores urine acid & prevents its decaying in a B.

Dose gr X - XX.

Benzoic closely resembles salicylic acid & has same effect in Rheum. It is n. as dangerous as salicylic.

Ammonio Benzoate - used to acidify urine. Dose gr X - XX.

Sodic Benzoate Its props depend much on how it is made - furthest fr Benzoic - n. as pure as - made fr. horse urine.

Vegetable stringents.

veg. Astringents - Gallie acid. silvery crystals nearly colorless sub. found in plants - little taste - It is weak but has same genl. props. of sol. in hot H_2O + alev.

Tannic acid. s. yellowish white color

slightly in H₂O. < so in glycerine. > so in alc^o & ^{Et}
 It takes name fr. plant fr. wh. it comes fr. as gallo-
 Tannic - fr. galls. Has a decided astringent taste
 They act simply as strong astring.
 Gallic > so th Tannic + w.o. irrit
 Tannic a. in 1 ds. increases appetite & constipation
 When tannic a. is absorbed it is likely changed to gallic a.
Therpy. For spongy gums, Catarrhal affections - flabby
 would - &c. a com. prep. is Glycerite of Tann.

R Tannic acid ʒij
 Glycerine ʒviij. M.

Dist. ment of Tannic acid + Suppositories.
 & Troches.

Tann. acid is used inter. &c. It is harsher astringent
 while Zn SO₄ & Cu SO₄ &c & for in one.

It is used for inter. humaticis. For 2nd stage of dia-
 rhea often given w. opium.

When given for absorption tannic a. is changed to
 gallic acid. ∴ just as well to give gallic a. at 1st.
 Then & several plants give simply as a means
 of giving tannic acid.

Galls - galls - gall nuts - formed by an insect.
 Unguentum is fr. used in hemorrhoids.

White oak bark. *Quercus alba*
 Black " " *tinctoria* ^{does not stain}
 For bleeding relaxed gums would &c. & white rest.

Kino } suspected juice
Catechu } Indelible.
Rhatany *Krameria*.
 Fine kino used in
 diarrhea of & doses 1-2
 tasp. f. oft in chalk M.

Fine Catechu in effects & similar to above.

Logwood *Haematoxylon* - i ^{green}
 good astring. But it has bad prop. of staining &
 will stain diaphors of & yellow cases &c. D. red color.
Bleeberry Root *Rubus*. & good astring. well known by stor.

Granium root *Granium*

Chrysophanic acid. occurs in many plants as

shubarbo &c. It is $\bar{v}$ = gives a shubarbo prep a yellow color
 Has no taste or smell. N. r. sol in ~~cold~~ ^{hot} H₂O & some
 It tends to purge & vomit, a Pt.
 applied locally it tends to irrit & exim. It tends to
 cure obstinate dis. It is used in psoriasis - but it
 has bad prop of irritating skin & leave a stain
 & only comes off w o skin, or removed by alk. wash.
 Prop gaily used 20 gr - 3j to 3i.

Review

Aromat. acids

Benzoic	{	ammonic Benzoate
Salicylic		sodic salicylate.
Gallie.		

Gallotannic :- "tannic" & tannins

galle.	{	Catechu
White oak bark		Rhatany root
Black " "		Log wood
Kino		Granium root

Blackberry root.

Chrysophanic

Vegetable astringents.

Tannic acid gr 2-20
 Glyceritum
 Unguentum 1 in 16.
 suppositoria
 Trochisci.

Galla

Tinctura 3j-ij
 Unguentum 1 in 8.

Kino gr 20-30
 Tinc. f 3j-ij.

Krameria (rhatany)

Extract gr 5-10
 " fl. gr 20
 Tinc. f 3j-ij
 Symp. f 3ss.
 Infus. f 3j-ij.

Gallie a. gr 5-20

Glyceritum

Quercus alba.
 Decoctum 3ss-ij

Quercus tinctoria

Catechu.

Inf. c. comp f 3j-ij
 Tinc. f 3j-ij

Haematoxylon i

Extract gr 10-20

Decot f 3j-ij

Rubro (blackberry root)

Syrup f 3j-ij
 Ext. fl. f 3ss-ij

Granium

Ext. fl. f 3ss.

Turpentine, Camphors & resins.
Aromatic type.

Rose petals	Partridge turn leaves.
Savender flowers.	Sage "
Orange "	Rosemary "
Elder "	Rue "
Cloves	Peppermint.
Anise fruit	Spearmint.
Caraway "	Horsemint
Cardamon "	Am ⁿ Penny royal
Coriander "	Cinnamon bark.
Fennel "	Canella "
Allspice.	Sassafras root
Nut-meg.	Sweet flag
Wace	Oil of Bergamont
Sweet orange peel	" " Cajepuit.
Bitter orange "	" " Thyme.
Semen peel.	" " Origanum.

The dots (.) mean that the active principle is extracted & given alone.

Volatile oils. When dropped on a sub. disappear by vaporation
 fixed oils do not. All (as) in alee. Fixed oils r. n. w one
 exception castor oil. They r. v. apt to get thick when ^{oil}
 exposed to air eg Turpentine v. diffus. - ∴ diff. fr Fixed
 Volatile oils r. v. irrit.
 2^d When taken into a stone, there is always a warm glow
 They tend to relieve colic pains & prevent such pains
 of some purgatives & so given w. them.
 Relieve nausea. They r. carminative, that is they relieve
 nausea colic, flatulence griping.
 Taken inter. they have an action similar to vol. alee. ^{& ethers}
 depress a reflex action of cord. Some of oils r. diuretic.
 S. of oils in n. do. cause pains in urinary muscles wh
 is st. reflected to urine & bring on menses.
 They suppress growth & development of bacteria -
 used in mucilage to prevent spoiling.
 The do. is small & shd be given in a mixture.
 They r. also used.

Waters - i.e. Waters of Peppermint etc.
 Directions.

Finishes. Spiritus sol. in alcohol.
 Almost all plants have < or > vol. oils. order due to the
 the flavor & taste is greatly agreeable.

They & < or > surfacient

They & often R^d is purgative to prevent griping, nausea.

Rose Petals pale rose *Rosa centifolia*
 red " " *gallica*.

Water of rose made for pale rose. preparations of
 red rose have a bright color. + S to R to color
 as well as for its action

Lavender flowers used for its flavor.

volatile oil. - used for its flavor - by those who like it
 Spr. Lavender.

Comp Spr " is useful bc. it cuts drugs of action
 prin. it is used as a carminative, also to flavor R

Orange flowers *aurantium*, *aurantii flores*.

H₂O of " " *aqua aurantii florum*.
 v. agreeable flavor.

Elder Flowers *sambucus*.

Principle used in folk-ties for sprains, bruises etc.

cloves *Caryophyllus*. - it is an unexpanded flower
 dil of cloves. v. volat. - of dark color
 when put into a hollow tooth, v. good for toothache.

(a) Anise fruit - *anissum*.

(b) Caraway " - *Carum*.

(c) Cardamon " *Cardamomum*.

(d) Coriander " *coriandrum*.

(e) Fennel " *Foeniculum*.

used as carminatives. Anise given in colic.

(c) Largest the others of v group.

True cardamon

Compd " " cuts also (H) & (Z) seeds - & v.

useful in colic of v & as a carminative w. purgatives.

(e) used as a carm for v water of Fennel
 oil of (e) given on lump of sugar.

allspice. *Pimenta*.

Nutmeg *Myristica* — *Mace* — *Maceis*.

Both come fr. s. plant the former is seed — both ^{action} s. ^{prim.}

Sweet orange peel. *aurantii dulcis cortex*.

Bitter " " " *amari* "

Confection & Symp of sweet Org. peel.

Used & for flavor. Bitter — also used as stomachic.

Lemon peel.

Partridge berry leaves. — also cd wintergreen.

Cheserberry — Mountain tea &c Lat. *Pauletteria*
while it doesn't have strong flavor yet it has got power
in masking disagreeable taste.

Sage, *Salvia*. — an infusion of sage is domestic
remedy for sore throat. — to sweat & increase flow of milk.

Rosemary *Rosmarinus*.

oil of " is an emmenagogue.

$\frac{1}{2}$ Rue has reflex action on uterus & may prod.
an abortion — Carminative — antispasmodic.
used in amenorrhea 1-5 - mx

Peppermint *mentha piperita*. Is one of the
useful drugs of W group. Is a useful Carmin.

Is v. good to disguise smell & taste of drugs —

But s. persons dislike peppermint.

A few drops is truly all that is necessary
Water of Peppermint.

Menthol — derived fr " — a white solid-
fably sol. in $\frac{1}{2}$ O — freely in alc. & ether. — often
cd Chinese & Japanese oil of peppermint.
Often useful in tooth ache.

Spear mint or Green mint *Mentha viridis*.

Mint Juleps made fr. W Used as a Carminative

Tine of Spear mint — Water of Spear mint.

Horsemint *Monarda*

American Oregonal *Hedeoma* —

Formerly used to bring in menses.

Cinnamon bark English call it Cassia.
It has an agreeable flavor to almost all
added to diarrhoea &c.
Lat Cinnamomum. Oil - H_2O - Spit + Fine of ^{Sim}
Canella. used except in composition.
Sassafras root bark. Sassafras radicis cortex ^{icis}
Useful for its agreeable flavor - also as carminative.
Sweet flag rhizome calamus.
No official prep. Mentha virginica as Cam. in ^{ss.} grxx-3.
Oil of Bergamot. used except by ladies for headache ^{dis}

" " Caputiti (Ind)

" " Thyme } Both abt. s. as sold in market.
" " Oreganum }

Mustard seed. (Black & white) Sinapis alba & nigra.
The seed conts 2 elements wh when m^d. w H_2O undergo a
chem. change. & effct when m^d. w cold th. w. hot H_2O .
It is a powerful emetic. a t.spf. in $\frac{1}{2}$ glass H_2O . It is a
true mechanical " w.o. preceding nausea or after effts.
Mustard plaster is used as a counter irritant.
Usually take mustard meal in ditcher & m w. H_2O
enclose on both sides. & leave on for 10-20 mi.
The mustard of grower is v. strong enough ^{as} adult d.
If too strong for y mix w. wheat flour.
Mustard plaster & now prepared ready for use.
Oil of Mustard.

worm seed chinopodium.

vol. oil of " diffire fr other in being v.
disagreeable. In 1. do. has abt. o. efft. as other oils.
In n. do. has effect on nervous syst.

on acct of disagreeableness used for ^{mund} o worm. of
intestine. When given as worm med. & introd
sd to as empty as possible. Let it take 5-10
drops of ^{2. 10 min} ing. per day. & in 2 or 3 days give a purge
to clear away dead & sluggish worms.

Bitter almonds amygdala amara.

Valerian type

valerian root Valeriana.

on exposure tends to undergo change, & form acid.
 Valerianate of NH_4 , Zn & Quinine. No much effect.
 Valerian is carminative & in 11 do acts on nervous syst.
 Menstrual flow of urine - Formication caused.
 Used prin. as a Nervine - Can be so used, w. no bad results
 always reflex irritability. Fidgets hysterical relieved.
 Ammoniacal tinct. of Valerian. is prob. most elegant
 way of giving Valerian. D^s. 3ss-j in 1 H₂O.
 Fls. Ext. - Tinc. of Infusion of Valer. last disagree.

Chamunonide flower - *Anthemis* - idios.

Oil of " " used in nervousness fidgets etc.
 warm infusion of Cham. fls. is v. good adjuvant to
 emetics.

Eucalyptus leaves. Olam Eucal. lvs. No yet offic.
 was formerly used to grt extent in Malaria
 Its efficiency now doubted. < Crucifical in old
 cases etc. when as might be used. Used in
 catarrhal affections. Buter after secretion has set in
 Anticeptie. It is claimed - when P. trees
 planted - malaria tends to disappear
 Lowers pulse rate & temp.

Oil of amber - Succinum. It is a rectified oil
 th is R^s. Ol succini Rectifica. Givly given in
 capsules on acct of disagreeable taste.

Camphor

Camphor - *Camphora*

Chemically is closely allied to a vol. oil. slightly sol. in
 sol. in ales. ether etc. Has irritant effect on skin
 Facies inter gives feeling of coolness.

In 11 do. has efft. on nervous syst.

Thorp v. similar to valerian - for mild spasmodic affets.
 Is useful to add to diarrhea mixture, esp. when it
 depends on s. nervous affe. It is a com. ingredient
 of diarrhea R when tongue red & n. coated.
 Useful local remedy in catarrhal affets.
 Dose inter. gr 1-20.

When do. 1 given in pill form when 1 in emulsion.
 When powdering + a 1 ales.

Camphor H₂O. about 1/2% contains Na_2CO_3 .

Spt. Camphor dose 10-20-30 drops used for ex-
 ternal application. Used for inhalation in coryza (cold)

Liniment of Camphor

Soap liniment.

Vol. oil of Camphor.

Dominates Camphor crystals when B-taxis place
of it in a camphor n. yet of fies (3) like Camphor
in also other re.

Effects - Cardiac depressor & diminishes size of arter^{ies}
respiration dimin^d. fall in temp.

Powers sleep. St. used in Del Tremens. Dose gr 3-5.

Cantharides, cantharisidis. Derived fr. insect
(Spanish fly) was formerly es. vita.

Has a disagreeable odor, & thing like strong urine.
Ceratum Cantharidis. - usually used to prod.
blister. also. Cerate of Extract Cantharidis.

Collodium cum cantharide used to blister
Ointment of Canthar, much weaker. Pitch w. Can.
Paper w. cantharides for blister

Five Cantharides. Tasseu internally.

Locally " is a powerful irrit. at 1st & 2^d
during their vesicles form wh. break together.

Cerate most oft. used - Tasse abt. 5 hrs. to blister
usually applied about 4 hrs. then removed & a

warm poultice applied. St. s. of cantharides for
blister. wh. gives feeling of warmth of throat

& stom^{ach}. The urinary apparatus is irritated
desire to pass H₂O & perhaps sexual desire

If long cont^d & kids. may refuse to secrete
prob. w. pains running down lumbar region
(writers) - urine br. bloody.

It ranks among probably fatal irrit. poisons.

By reflex action (irriton) may probly. prod. abortion

The drug most used to produce blister.

A Blister causes organic change in skin & dis. has
first it will be increased by blister. It removes fr. B. & into
vital principles.

Blister r. n. used as much as
formerly - Rubefacients as mustard, turpentine
seem to act just as well as blisters w. o. their r. effects

St. 1 blister (size of egg) & used about stiff joints &c.

It is dangerous to blister & extensively - also old P^{ts}.
skin & apt to slough. & susceptible to poison.

old n. is used in dis. of os. when a blister is formed

best to let it *run* naturally. Nervous debility
of os. & sexual nervous debil. Fr. cauth. st. useful.
Dose of fine cauth. always sld be
Used in old chron. gleet, cystitis &c but n. in acute forms

Turpentine type.

all tend to bet on urinary orgs. ^{pinus} Derived from *Pinus*
oleum Terebinthinae. vol. - sharp pungt. odor.
when exposed &c. yellowish & sticky. applied to
skin will prod a blister. Inter. warmth & glow
in stom. increases action of $\heartsuit$ - slightly
diuretic. Contd. will prod stranguela

In r. & ds. poisons. w vomiting &c.

Therapy used locally to produce ordness of skin. It acts
v. rapidly. Best take flau. & dip in
warm H_2O then wring out apply to skin &
cover w dry clothes do n. leave on $\leq$ the 10 mi.
Hemorrhage from lungs may st. be stopped by
inhaling turpentine - put a turp on hot H_2O
& fumes will rise.

Tympanitis (swelling of abdomen) oft. g. tly benefited
esp. when occurring in typhoid fever
or in other cases when tongue dry. + $\circ$ to anema.
Used for thread & $\circ$ worms. Also used in Catarrh.
Dose 5 - 30 mxx Given on lump of sugar
or in emulsion. To emulsify. 1st mix oil
w dry acacia & th. easily " 8.

Liquid Pitch *Pix^{is} liquida*.

Used now &c. so disagreeable. st. used in exindiss.
Infusion - Glycerin & ointment liquid pitch.
Cacum. soaked in tar is a good antiseptic
dressing for wounds.

Savin tops *Sabina*.

Oil of sabin has same efft. ext. as Turp. but
not $\leq$ sure in its action. st. used to prod abortion
st. used to sweep sens of ur.

Vol oil. mxx - x. is $\circ$ *Junp.* g. tly used

$\frac{3}{2}$ - *Juniper berries*, *linx* *blacx* *Junp* berries -
give a warmish glow to $\circ$ stom.

Oil of Juniper. in 11 ds. may prod. strangury?
 It is a useful assist. in diuretic mixtures, when
 - & irritat^d. w dis. Juniper sld. n. be given.
 Oil + spir of Juniper. could spr + infusion.
 The Juniper berries used to make gin + give it a ^{flavour}

Buchu type

< aromatic th. Furfentine type but weaker.
Buchu laur Buchu (radic) Has a decided
 aromat found useful as carminative -
 increases flow of urine + changes catarrhal
 state - The urine is colored by it. Has a rep-
 utation of checking uric acid.
 When m.m. of genital organs is degenerated fr.
 abuse as masturbation &c.

Infusion Buchu 3j - 4j

Fl. Ext most used. 3ss - 1j.

Canada Fleabane ^(cutis) Erigeron ^(is) canadense

Possible use in urinary catarrh v. seldom R^d.

Fl. ext. 3ss - 1j.

Oil - used to arrest hemorrhage as Furfentine in
 minorrhagia &c.

Wild Carrot seed. carota

Technically all of 'fruit' is eaten.

Parsley Root Petroelinum.

a feble diuretic Infusion use.

It is a source of 'apiol' a dark colored oil, wh. causes
 ringing in ears &c. It tends to excite a
 sluggish uterus as in amenorrhoea &c.
 sld. be given in capsules.

Oil of Sandal wood. Santalum album.

Not. offic. - and Santalum is offic. but v. old.
 only used as a coloring matter.

Used like Copaiba for gonorrhoea - sld. be contd.
 for 10 ds. after an aperient cure. Dose 5-10 mx.

Table of Forgoing. Vol. oils & ethers.

Mustard seed	<u>Turpentine type</u>
Worm seed	Oil of Turpentine
Butter almonds	Savine tops
	Juniper berries.
<u>Valerian type</u>	
Valerian root	<u>Buchu type</u>
Chamomile fls.	Buchu leaves
Eucalyptus leaves	Canada thistle
Oil of amber	Wild carrot seed
Camphor	Parsley root
Cantharides.	Oil of sandal wood.

Oleo Resins

<u>Pepper type</u>	<u>Copaiba type</u>
Black pepper	Copaiba
Capsicum fruit	Cubeb berries
Ginger Rhizome	Malico leaves.
Male fern Rhizome	<u>Suppeline</u>

Oleo Resins r.n. as (S) as vol. oils. (S) in ether + 2 st oils but n. in H₂O or alev.

Pepper type = aromatic type of oleo resins.

Black pepper - Piper (is), black berries. useful as carminatives also gives warmth in diarrhoeal affes.

Capsicum fruit - elongated ped. - average $\frac{3}{4}$ in. long. sharp biting pungent taste & good carminative.

Infusion - used in sore throat

Tinc. used in diarrhea

Dose 2 or 3 drops - 3 if n. Useful for Pts. who r
breaking off drinking - a. in H₂O or lemonade.

Ginger rhizome. Zingibar. - white ginger has rhizome
slab ped. Pungent agreeable flavor. & useful if
carminatives.

Infusion

Tinc. n. x - xxx.

Toochea. each cont 2m of tinc of ginger.

Fl. Ext.

Aromatic Confection. composed of Ginger Cinnamon &c.
(useful. - put in a muslin bag + 1 deco. + ^{Carachi} fruit to ear cule

Copaiba n. technically a balsam. s. also. - ether-oil. w. 1/6 part of mg. forms a solid, & pills made in v way. Has a tendency to cause eruptions & taste is v bad. May have a tendency to purge - causes dryness in Larynx & pharynx. In mild ds. acts as diuretic urine bc. darker & gives flavor. It is c^g in urine by HNO₃. To disting. fr alb. + deco. when copaiba will be discolored while alb. will not. n. ds. may prod. strangury. may produce an eruption - Roseola or papulae. Useful in grinto-urinary catarrhs. esp in Gonorrhea. St. given in n. ds. at 1st to abort dis. but as a rule n. to be given until after early signs of irritation. Dose of v class has local action on part affected. Curtis recommends - to use only in 2nd stage.

Resin of Copaiba. (n. offic) Has often used as diuretic

Cubeb-berries cubeba. - belongs to pepper class has aromatic flavor - carminative. May be used in Respiratory as well as urinary catarrh used in capsules in form of cigarettes. n. v. irrit n. os. oil. - dose. 5 - 20 drops on sugar, or in capsules. & form gently Tinc.

Matico leaves. - Has a tendency to stop hemorrhage.

Fl. Ext. 3. ss - j.

Male fern rhizome *Felis* ^{is} *maris*

Prp. dose n. v. well. Particularly obnoxious to tape worms Dose. 3 ss - j per day. The Pt. is n. cured until head is passed - Hair & bowels emptied t.f. giving drug & old hair light easily digestible food. For a couple of days - Then a purgative s.d. to take to carry away sick worms.

Lupuline Found under leaves of Caper is simply concentrated form of hop (humulus.)

contain volatile oil - resin & a bitter prin. Tends in feeble way to relieve restlessness - allays irritability of gastric organs to a limited ext.

Fls. Est. Lupulin 10-15 m - Time 3j-ij.

St. put in pillor to food sleep. moistened w also to prevent swelling. Drops. moistened w hot vinegar also etc st. used for bruise tooth & ear ache abrasions etc.

- Gum Resins -

assafoetida type

assafoetida.

Ammoniac.

Gamboge.

Myrrh.

Scammony type

Scammony

Gamboge.

assafoetida type (fetid odor.) Allays nervous irrit ty.

" comes fr. a tree in Persia - dark brown cents. resin - gum + 3 or 4% of vol. oil. makes emulsion. w. H₂O - Taken in pills improves appetite. If long conts. may prod. nausea vomiting & diarrhea. used in nervous irrit ty. useful in catarrhal affections of air passages.

used to treat hysterical attacks - In typhoid fever. If given interj. pill bet form. & offic pill cents 3 grs. Truly gum in fluid by rectum.

If no effect for effete may use suppositories.

Ammoniac. ammoniacum.

Gum resin fr tree. Not allied to ammonia

Plaster of ammoniac similar to assafoet. but weaker.

Gamboge sim to above. used in preparations.

Compd. Gamboge pill. contng. assafoetida & Myrrh.

Emplastrum.

Myrrh myrrh.

comes in masses increases appetite & allays nervousness but is mild. Is used to prod mild counter irrita.

Scammony type have no volatile oils.

Scammony Scammonia. Derived fr oriental plant roots cut & a few resin exudes & hardens -

acts as a purge w. griping - but is not certain.

st. a. ds. has a effect. st. n. ds. v so seldom used alone
but in comp. w other drugs purges
Has hardly any taste & may be given to & in emulsion.
Gamboge st. prods. griping & irritation w. purges
st. acts as cathartic w. griping. Is used in
comp. Cathar. pill.

Resins Resin type Has negative results.
" used as basis of plasters & cerates. offic. cerate
of resin - used as gentle irrit. in indolent ulcers.
mastic Mastiche ^{res.} Small brownish colored tears
used only in pills of albore & mastic.

Burgundy Pitch. of soft consistency.
Plaster of Pitch w cantharidise.

Canada Pitch ^{res.} Canadensis
Used only as a plaster.

Koroso type Boagura ✓
Koroso fl. & fruit. Used to get rid of tape worms
if it acts as a cathartic another mean. is given
But taken as infusion.

Kameela powder Rottlera
Fruit v. much like lupulin, also useful for tape worms

Guaiaac. wood. Both - wood & its resin officinal
Guaiaeci lignum & resina.

When spoken of - resin is meant unless specified.
Has a tendency to increase secretions.

Has been used for a long time but now is used.
Was formerly used in Syph & Rheumatism.

The wood is used in comp. Sarsaparilla.
used in Gonorrhea Barth

1/2. Hemp tops Indian { canabis indica - generally used
american " americana

Greenish tint bitter acid taste. The med effect
is n. constant. Has an intoxicating effect.
greatly nourishing. A peculiar disorder of space & time
Anesthetizes lower extremities. Action of &
respiration & secretion r.n. changed to any marked
degree. Causes sleep like chloral.

a sleep from wh. it awakens, refreshed. Mother
it causes nausea, depression, horrible images etc.
But as a rule it has n disagreeable effects. It
used in place of opium.
used in migraine or sick headache
 $\frac{1}{3}$ gr ter die - b.t. attacks.
used in tetanus & delirium. effects w varied success.
Extract - dose $\frac{1}{2}$ - 2 grs. c.n. tell strength of a
sample until tried. Ext. given
fine - bad taste.

Mugwort bark. Cnts. a strong acrid irritant.
will cause blistering - also is an irrit. poison.
Has an old. rep. as cure for syph. n. now used.
In new form used in dist. mints to keep son running.

Jalap. Jalap root occurs in chunks size of egg up.
mild irrit in intest. & acts as purge one of
favorites. - causes $\frac{1}{2}$ l. discharge. The irrit.
is mild in comparison w. most of other purges.
Esp. of advantage when a quick action is required
as in case of 3 to head etc. (a.p.x.)
may give in form of powder. st. m. w. Calomel - pts. $\frac{1}{2}$
Extract. do. gr X - XV. Tinc. do. 3j - ij.
Compd. powder of Jalap consists of Jalap 1 part -
cream of tartar 2 parts. used in dropsy to get
stool discharges.

Podophyllin May apple root Podophyllum cd. mandrake.
Cathartic resembling Jalap but < harsh & energetic
slb tr. given w. S. anodyne. its action is slow & un-
certain. Used in biliousness - dyspepsia.
it causes stools w. much bile
It is rarely given alone but w. other purgatives
Resin of Podophyllin dose $\frac{1}{2}$ also well to
give an anodyne w. it.

Balsam. cnts. a resin & o. Buzoic or Cinnamon.
Buzoic used as a protective film for a wound, kept out,
truly used in compd. Tinc. cnts. aloes, Storax.
Balsam of Pine & Benzoin. a T.o.f. of H Fine put
in casing of boiling water is good in tight cold of
chest. Used in Scurvy - cracked nipples etc.

Balsam of Tolu. Balsamum Tolutanum.
fr tree of new Granada. Mildly irritant.
used esp as aromatic for coughs.

Balsam of Peru Balsamum Peruvianum.
slightly irritant & healing

Storax r. similar to above.

Rhubarb $\frac{1}{2}$. Rhubarb Rheum. composition r. complex
considerable Tannic acid & Chrysophanic acid.
wh gives a yellow color Has a bitter prin wh helps
digestion. after purgative efft. then actgt. fr quick
Beyond abt grs $\frac{1}{2}$ we get purgative effect
the stools & n. they but fluid feces - so prob it
nearly increases finet attn action of bowels.
so a safe cathartic. Acts in 4-8 hrs. Comb. w. aromats.

Therap Stomachic bitter in atonic dyspepsia.
In acid dyspep. w no powder good. Diarrhea w²⁰⁰⁰
stools is gently relieved by it. In d. it is valuable
to control diarrhea. Can be allowed in habitual
constipation. Give & aromat to control griping.
For stomachic effect about grs r.
extract.

Pills grs $\frac{1}{2}$

Fl. Ext. used to make syrup.

Infusion

The wine is stomachic cordial, so, wine.

" Syrup is useful as purgation in young &

compd Powder of Rhubarb, composed of Rhe. Neg. Cinnamon
& Ginger's powder - useful in sour stomach
dose 3 ss. - j or in child r - x grs.

Compd. pill contains 1 gr w alone + myrrh.

Syrupus Rhei aromaticus. chrys cinnaum & nut-
meg crucial taste so n. a cathartic but useful
in diarrhea in t.s.f. + to each 2-5 grs. Ricarb Na.
Warure

Arnica flowers. mild irrit but st. get irritn.
causing violent colic. Int. it upsets a syst.

Fr. of Arnica for tonsils.

Plasit.

Squill. Scilla st. ed sea onion fr skin of Med.
Is a powerful irrit. Locally will blister.

In our dose may cause death fr irritation
It will cause symptoms of strangury.
It acts like digitalis on $\hearts$ 24 grs of powdered
tub has caused death.

In moderate dose acts as mild diuretic.

Is an antiecatarrhal remedy.

Therapy Diuretic, inadmissible in dis of $\hearts$.

useful in dropsy fr $\hearts$ dis. Given in powder

Squill. - H_2O - Digitalis. aa gr
one grain of squill is abt dose.

In 2nd stage of catarrh is good, & in cough mixtures.

Syrup. 3ss.

Compd. Syrup cante. Tartar emetic one gr - 3j. D^s glt. xx.

sugar & squill

Tinct of squill grs x - xxx in chronic catarrh.

Black snakeroot cimicifuga acetacia in Eng books.

Full dose gives headache - dilatation of pupil & but
slow $\hearts$ action. Now n. will be established.

Fl. Ext. 3ss - j Effects similar to Digitalis.

used in Rheumatism - lumbago &c.

Pink root Spigellia. In full doses like Belladonna. (& th. cimicifuga)

uses. anthelmintic for round worm - like
worm seed. - follow w cathartic.

can give Fl. Ext of spigellia & sumac as purgative

It has agreeable odor. Dose 3ss - j 4 hrs.

Pumpkin Peps. Inside of seeds.

anthelmintic for Tape worm.

Aromatic Props.

Waters -

Rose
Orange fl.
anise
Fennel
Peppermint
Spearmint
Cinnamon

Infusions -

Rose (co)
Sage
Capsicum
Ginger

Troche -

Ginger.

Powder of aromatic.

Spirits.

Lauracer
anise
Nutmeg
Lemon.

Stimulants

Rose
Fl. Ext.

Ginger

Tinctures

Cardamon Orange
Cinnamon
Capsicum Ginger.

Syrups.

Rose
Orange fl.
" Full

Confections

Rose
Orange full
aromatic.

Review of Volatile oils &c.Flavoring

Rose
Lavender
Orange flowers.
Anise
Sweet & Bitter Orange peel.
Lemon peel.
The mints

Partridge berry
Cinnamon
Sassafras & Ginger
Balsam of Tolu

Bitter Stomachic.

Bitter Orange peel.
Chamomile & hops.

Nervine

Lavendar(?) - Rue
Valerian group.
Camphor
assafoetida grp.
Hemp - Lupulus

Astringent

Partridge berry.
Cinnamon
Turpentine oil
Fleabane - Matice.

Antiperiodic

Eucalyptus.

Anti Catarrhal (Respy)

Eucalyptus
Camphor - Copaiba
assafoetida - Balsams.

Anthelmintic

Worm seed
Turpentine oil - Tereb.
Kousso group

Diuretic.

Juniper - Carrot
Copaiba resin & Parsley.

Carminatives

Cloves
Aromatic fruit
" leaves & herbs.
" barks & roots.
Chamomile
Pepper group.

Emetic

Mustard
Chamomile.

Emmenagogue

Rosemary - Rue
Savine - Cantharis
Apliv - Guaiac.

Counter Irritant

Rosemary oil.
Storac mint.
Thyme - Mustard.
Camphor - Cantharis
Turpentine oil.
Capsicum - ammoniac
Galbanum.

Irritant Dressing

Savine - Myrrh.
Resin group.
Nigella.

Anti Catarrhal (Urinary)

Eucalyptus - Juniper
Buchu - Fleabane
Sandalwood oil
Copaiba - Cubeb.

Purgative

Scammony - Jalap group.

Healing

Copaiba - Balsams.

Atrostatic - Guaiac.

Glycosides - Alkaloids & Bitter Tonic.

Glycyrrhizin - Licorice root.

Sassaparilla - Sassaparilla "

Glucosides also &c. They r. neutral

" end in "in" alkaloids end in "ine"
a few alkaloids r. fluid. Conaine - Nicotine & Lobeline.
as a rule they r. insoluble - but salts r. soluble.
we may find in a plant many alkaloids & Glucosides.

Aloin type

Socaloin

Socotrine aloes & Purificata.

Nataloin

Natal "

Barbaloin

Barbadere "

The aloin of Cape.

aloin type alors. aloë (alors)
allors of diff. kinds - wh diff in shape &c.
Socotrine alors is one of purest it is a dried juice - r. bitter
It is purgative no matter in what way introduced. Having
a bitter taste - they help appetite & digestion - grif - x - acts
as purge - It acts r. slow, st. as much as 24 hrs after
the stool is soft but not H_2O . a feeling of warmth b.f. stool
probably it only acts on a large intest. If taken con-
tinually has a tendency to irritate pelvic viscera.
Alors valuable in chronic constipation - The dyspepsia
accompanying is also gently benefited.

Gruly. given w. $\frac{1}{2}$ strychnine. Best to R purified alors.

Dose for stomachic effect grif

" " loosening bowels " $\frac{1}{4}$ - $\frac{1}{2}$

" " purge gr $\frac{1}{2}$ to $\frac{1}{4}$ of grain going to bed.

Till of alors & Mastie cent. alors grif - so ed. Dinner pills.

Pills of " " myrrh - " $\frac{1}{2}$ used in amenorrhea

" " " assosfortida " $\frac{1}{2}$

Tinc of alors & myrrh

Wine of " - cent Cardamom & ginger - used as a warm stomachic.

Senna is a purge wh acts on a whole length of Intest. canal
In nas. may cause H_2O stools. No dangerous irrit on
stools yellowish & watery Acts r. quick w. in 2 hrs.
causing griping colic &c. The griping may be & m. by
aromatics. - It is genly. used as an addition to purgative
drugs. It is a purge & nothing else - lt. mild & severe.

Infusion of Senna - Has a v. disagreeable taste
 Fl. ext. is 2 oz. gaily P. + a few drops of s. annuat.
 Conf. of Senna. used oft. as a laxative. conts.
 Compd. powder of Licorice. purgative due to Senna whit.
 Senna 2 pts. sugar dose t.s.f. in H₂O
 Sulfur " " 4 annul. 1 part. for a child.
 Licorice 3. "

acts like castor oil. It is offic in Eur. but n.
 in our Pharm. useful purgative for a q

Rueo Thorn bark. Rhamnus frangula.
 n. yst offic. - likely will be. - Pleasant Purgative
 mild laxative & like Senna. does n. bear as much
 constipation as s. other laxatives.

These two last s. Cathartic acids.

Colocyinthian type.
 Colocythin = colocyth fruit.
 Elaterine - elaterine.
 Stilleborin } Black Stillebore not.
 Stilleborine }

Colocythian type Purgative. violent drastic
 dangerous in our dose - The stools s. St. of

Colocythin - colocythin's idis. Loose st. like orange
 - rind is taken off and pulp used & bitter
 acts as a purge w. grt. severity. - When prescribed it is
 used as addition to other purgatives.

Compd. ext Colocyth. conts. also Scammony Soap &
 Cardamon - given in 1 ds. (gr. iij - v.) acts mildly.

Compd Cathartic pills. ex & Jalap. Calomel, Gamboge
 & a compd ext Colocyth.

Elaterine Elaterium. c. s. Squirting cucumber.
 dry fawn colored plates. It is a L. et powerful P.
 hydragogue - it acts slowly its effect is debilitating
 It is a dangerous purge. In poison's dose it n. only
 irritates bowel but nervous symptoms appear. It is
 only used as a last resort in dropsy &c.

It is a drug of uncertain strength & so s. begin w
 smallest dose dose gr 1/6 - 1/4

Elaterine crystalline gr 1/10

Helleborin & Hrim } Black Hellebore root, is a r. sure
purgative seldom used now.

$\frac{1}{2}$ - When a bitter drug w. no off other prin. & appetite
is increased by gentle irrit. But if taken
in too n. ds. or too much then digestion is upset.
Bitter prin also tends to allay thirst, better th. H_2O
thus like acids. N. guly. indicated in fevers
for liver & stone. is so irrit. & nausea is apt. to
be prod^d. When taken for appetite give w. in
half an hr of meal for irrit. is temp. & vary.
If given w. other drgs wh. r. indicated at same time
as in convalescents give Fe at same time for anaemia.
May be given in large warm draughts as Emetic.

Yellow Gentian Root.

Is favorite b.c. so pleasant but too irrit. for a delic. stom.
Comp^d Tine. w. bitter orange peel & Cardamon - $\mathfrak{z}j$.

" Infusion. " " & Coriander $\mathfrak{z}i$.

Ext used in pills as incipient.

H. Ext.

Quassia Simaruba - So cd in commerce but
is n. fr. quassia tree - & source being exhausted
Now obt^d fr. a simaruba tree.
It is one of most intense bitters & w. have
Barbours

Barbary Root (var.)

No offic prps. may make infusions.

Columbo Root

Conts a cert amt of starch & not nause. at all
It is used to allay nausea in pregnancy &c. It is r.
useful when beginning bitters on a delicate stomach
Infusion

It conts no tannic acid & so may be +^d to chalybeates & Alks.

H. Ext.

Hydrastis r. used.

Gold thread root. Coptis^{idis} good bitter - used. No offic prps.

Chiretta herb, n. much used.

Dogwood bark *Cornus Florida*.
 (no. 412 del.)
 not r. much used. at one time supp^d to be antiperiodic
 but not used for it now.

Decoction

Fil ext.

Thoroughwort ls. & tps. *Eupatorium perfoliatum*
 In nauseating is used as adjuvant to emetics
 st. given hot for diaphoresis & diuresis.
 Infusion - dose $\bar{z}j - \bar{ij}$.

Glycosides *Alas.* & *Bitter* *Princ.*

Gentianopierin type

Gentianopierin - yellow Gentian root

Quassin - Quassia wood; *Samaruba* " bark.

Berberin - Barbary root bark.

" & Calumbin : Calumbo root

" . Hydrastin Hydrastis "

" " Coptine Goldthread "

Opheleic acid & Chiratin - Chiratta herb.

Cornin Dogwood bark.

Thoroughwort ls. & tps.

Gentianopierin type with Vol. oil.

— Virginia snake root

Cascarillin Cascarilla bark.

Cusparin : angustura "

Absinthine : Wormwood leaves & tops.

Marmalin : Horchond " "

Cherry bark.

Arbutin : Bearberry & Pipsissewa leaves.

Gentianopierin type w vol. oil.

Virginia snake root *Serpentaria*.

Fil. ext.

Junc

Infusion.

Cascarilla bark. comes in quill like pieces ^{ft.} _{table}
 small branches. Conts. a r agreeable bitter. used on x

Angustura bark similar to above

Wormwood leaves & tops *Absinthium*
used as a bitter. Has another prin. & in a dose gives
epileptical form of fits.

Horchard leaves & tops *Marrubium*
no offic. propo. *Amygdalin*
Has a peculiar prop. of forming hydrocyanic acid
when a solution is brought in contact w. a
nitrogenous ferment. found in
Bitter almond.

Wild cherry bark *Prunus virginica* a
The offic. name is n. correct for it does n. come
fr. a prun virgin (choke cherry) but fr. wild cherry.
It develops r. i. hydrocyanic acid.
Fl. ext. — *Infusion* —
added to cough mixture &c.

Arbutin found in many plants but ^{those} most used
Bearberry. *uva ursi* — *Pipsissewa* lvs. *Chimaphila*.
They r. n. only bitter but also astringent on acct. &
tannic acid. Used in chrt. Catarrhal affes. Fleet.
The Bearberry used < th. *Pipsissewa*.
Droction & Fl. ext.

Alkaloids gaily powder or crystal & gaily white
tend to bitter taste — insol. in Al. some f. salts & (s)
" " to ppt. by tannic acid.

Quinine type

Quinine	} <i>Cinchona</i>
Quinidine	
Cinchonine	
Cinchonidine	
Quinamine	} Bark. 2 salicin
Etc.	
	3 Ruxine
	4 Apomorphine

Cinchona or Peruvian bark. & often cd. simply Bark
Found esp. in aude. The Pharm. being r. up any
Cinchona bark that contains 2% of alkaloids.

Cinchona flava = yellow bark

" *rubra* = red "

" *pallida* = pale "

The yellow bark is a best *Calisaya*. The bark & st.
cd. fr. botanical names of trees.

$\frac{1}{2}$ The cinchona trees r. being transplanted w. beneficial results. Dutch transp. in Java Ind. - Eng. in East Indies.

The bark conts. many alkaloids - also Tannic acid.

Yellw " " much quinine r. cinchonine.

Pale bark vice versa. The effect of 4 alkaloids in table is same in kind. Cinchonine is weakest. Quinine Quinidine & cinchonidine r. of strength. Acco to Curtis latter is cheap.

Quinine salts slightly soluble.

Sulphate most used. Valerianate of Quinine

Sesquioxide of Fe + Quinine - both official.

Sulphate of Quinine - Bitter. r. int. in H_2O

< so in hot H_2O - but when cold crystals out.

may be made (3) in H_2O by + ing sour acid - H_2SO_4 or better aromatic H_2SO_4 P & t. used. Facies abt.

mg for grain of drug. P acid mixture con.

to given hypoderm on acct. of irrit of skin

nitrate or chloride of Quinine. has been sug-

gested for hypoderm. it dissolves in 24 parts H_2O .

but even here a bulk of H_2O is r. great for a no. & salt is quite expensive.

Hydrobromate of quinine prob. better, dissolves in

parts hot H_2O . if 10 pts. cold H_2O to + to 1 M

it will be fixed & so (3) in 15 parts.

P salt is r. good to be given by stone, prob. best.

but r. expensive.

Tannate of Quinine is r. good as being tasteless.

not bitter. Insol. - but sol. in stone. - Give abt.

2 1/2 times a dose of quinine. It is n. expensive

useful for q

Quinidine - Black mass - but alkaloids

r. cheap. dose 2 times quinine.

Cinchonidine residue fr mother liquor after

extracting a Quinine. It is useful for fever pts.

given in double dose of Quinine.

Cinchona alkaloids locally irrit.

action on stom. in 1 do. on acct of bitter & stomachic. In larger doses - stom. apt to be upset prod vomiting & nausea. In H case can get effect by giving a 1 larger dose emetica. The salts being (s) in acids they are rapidly (s) in stom & rapidly absorbed -
 Symp. of 1 do. & disturbances of nervous system - the hearing apt to be affected - buzzing - roaring &c. also certain amt. of deafness. Diminution of sight. severe frontal headache - effect on motor syst. Pt. may stagger. - face flushed - & dull expression. St. Pt. wishes to pass H&O contly. St. causes a rash on skin - like urticaria. Discussion not disputed ft. & Quinine will prod abortion - but quinine best to give & Quinine ^{needs it} of the
 The disagreeable symps. will subside - St. if long taken - may take mos. 1 or 2 cases of permanent deafness reported.

In 1.1 doses - & may be paralyzed. But never given for H.

Given to Pt w elevated temp. a tendency to lower temp. does n. so act. in healthy Pt w normal temp.

This lowering of temp is direct & n. through nervous syst as shown on animals - But it prevents oxidation of O in a body. Profs by lowering & carrying down of haemoglobin of R.

It prevents growth of protoplasm. bacteria &c. i. antiseptic. Much dispute among Phys. as to whether pulse rate increased or n whether anaemia or hypoaemia follows.

2 1/2 Quinine used to lower temp of fever must be given in 1 do. It is a specific remedy for malarial diss. Its action is n. diff. known. It is prophylactic. If Pts. charge their systs w it. they can go into malarial districts w impunity. It is impossible to cure malaria as long as Pt. lies in a poisoned district.

The drug is given during the intermission
obj. is to have it under influence of Quin.
at next spell.

The drug also is used s. time after it apparently will
st. certain kinds of neuralgia & cured by quin.
But in neural. depends on Malal. & is on
Spasmodic dis. epilepsy & tetanus have been cured.
I think it causes contraction of uterus in P. Partur.
In 1 dr & stomachic bitters. It also prevents fer-
mentation & in v way is st. better than Gentian.
Best to give in pill form. or if 1 dr. may give in capsules
or may make a solution in aromatic water. + s.
acid as Aromatic Sulphuric acid. The taste is
disguised by licorice, aromatic syrup of Rhubarb.
If can. taste by stom. then enema or hypodermically
for latter. Hydrobromate is prob. best.
For stomachic effect - bark itself is st. given - see prep.
Compd Tinct of Cinchona

Infusion	"	red & yellow
Decoction	"	inf. best.
Extract	"	

Salicine White Willow - *Salix*^{alis}
loose like salts of Quinine - has no smell - & bitter
not (s) in H₂O. (s) in alc. Has no effect on nerv. syst.
In 1 dr. may produce a warning &c. in case.
Reduces abnormal temp but not as effectly as Quinine.
Has effect on Malal. dis. One Phys. cured 8 out of 15.
Used as stomachic it also prevents putrefaction.
Has some efft. in full doses on acute Rheumatism
but is n. as good as salicylic acid. [for a thing
it. used to abort a cold in head but don't feel if good]

Buxine Beberon bark Parira [Grava root
comes in 1 large scale. Has what same efft as quinine.
It is expensiv. but not as much as quinine.
In 1 dr. it prod. disagreeable effects th quinine.

Apomorphine derivative of morphine. The morphine gives up one molecule of H_2O & forms apomorphine which differs chemically. It exists as crystalline scales after $\frac{1}{2}$ gr. dose. $\frac{1}{2}$ gr. causes, gruelly, feeling of malaise which is soon followed by vomiting - The after effects r. n. bad. $\therefore$ we have a speedy emetic - even by hypodermic injection.

$\frac{2}{3}$. When vomiting does n. occur. v. apt. to have dangerous symptoms collapse, syncope, coma when it does act it does n. prod. nausea or after action. It is expensive. Its grt. advantage is - it c. b. given hypoderm. to P's who can. or will not take an emet. It is better to use a chloride of apomorphine. $\frac{1}{10}$ gr. a fresh sol. sol. to be made when used.

Hypodermic injects. in genl. Advantages. The drug is absorbed & rapidly th. by stom. or other ⁱⁿ $\frac{1}{2}$ aft. to prod. its effect. It may n. all be dissolved in a stom. or chem. change may take place, or in cert. dis. stom. may refuse to absorb. It is a case where n. do. of opium takes. The effects of a certain do. is certain, it all being absorbed. Disturbs a stom. >.

It is an available avenue. It will st. cure neuralgia whereby stom. we only have temporary relief. Use limited - a do. is limit $\frac{1}{2}$ in size, only those drugs (o) in H_2O c.n. use any other drugs. This dose is abt. $\frac{1}{2}$ what wld be taken by mouth. It masks, diff. what part of skin used. But in neuralgia &c may be benefited as < when injected near seat of pain. Inj. when a skin thin the piston also work smoothly & n. by force, see $\frac{1}{2}$ - lig. does n. mark back of piston. In injecting - to avoid wounding veins raise skin w. fingers push needle well in then withdraw a certain dist. - to withdraw from vein if it has cut it.

Emetic type

Emetine - Ipecacuanha root.

Sanguinaria - Blood root Rhizome

Polygalic Acid (Saponin) Senega root.

Emetic type Emetine n. offic. Eucanas. secretions in genl. & esp. of bronchial tubes

Ipecacuanha root - Grows in Brazil - irritant. some persons v. r. susceptible. & prod. sympt. of asthma
 In dose of fraction of gr. it acts as stomachic. In dose of
 1-2 grs. it increases secretions of stomach &c In n. do.
 acts as an emetic - acts in 15-20 mi. after taking.
 It causes nausea - then is a slight depression of
 vomiting. Bowels may be loosened by a full dose
 a v. n. do. may be given w.o. vomiting. if Pt. does not eat any-
 thing for 24 hrs. b.f. taking take it in a 1/20 as pos-
 sible & keep perfectly quiet on back for 2 or 3 hrs.
 It may be well to give a 1 morphine b.f. taking &
 put mustard plaster over stom. - Then a deep
 sweat may break out & Pt. have a natural sleep.
 Safe to give to a child It is used when time is n. necessary.
 It acts kindly & mildly & is advisable in a child. In 1. do.
 (frase. 1 gr) it is well to + to fields in derangement of stom.
 or intestines. It also acts as cholagogue.
 It stops nausea & vomiting in 1. do. Gentle irrit. of Pt.
 benefits stom. while violent irrit. causes nausea.
 Useful in nausea of Preg. as a drop of wine.
 It is often well to + mix with wine or strichnia.
 when dry hacking cough due to dryness of m. m. then ipe-
 cac. is v. useful. S. Phys. advise inhalation of Ipec. &
 wine used. The Pt. shd. be careful to wash out mouth
 afterward. or he may swallow enough for accumulation
 to cause nausea. - Good in chronic bronchitis oc-
 curing in winter. It is v. useful in dysentery by its
 effects on m. m. It must be given in n. do. Taking
 precautions to keep it down not eat anything for 6 hrs.
 b.f. opium - must plaster on stom. &c. Pt. shd. n. drink
 anything after. Better to give 30 or 40 grs & even 90 grs than
 be given - Give in powder & will be up in 1/2 hr. &
 use as 1/20 as poss. does best when a dis. seen early
 If Pt. vomits a do. wait 10 hrs & try a 1/20 dose.
 useful for a in 1. do. Useful in a nervous dis. - in s.
 cases of asthma. - 3-8 mx of wine but fails in some
 as is case w. all nervous dis. Used in whooping cough.
 S. Phys. say it stops inter hemorrh. but Curtis doubts it.
 Dose for emetic give 5-gr doses repeated every 15 mi.
 until vomiting usually have to give 15-20 grs.
 7 l. ext. Ipec. by rub. of Ipec.

wine of Spec. keeps better & is same strength as a syrup.
 Trochee " Trochee Spec. Co. 1 gr Morphine
 Compound powder " = Dover's powder

Blood Root Rhizome. *Sanguinaria*. It conts. sanguinarine
 The effect is similar to Specac but harsher
 used in Respiratory dis 2nd stage - as squill &c.
 Fine. 3ss. - j

Snake Root. diuretic - diaphoretic.
 used in Rx for catarrh of air passages when secretions
 are viscid & tough.

Decoction {Syrup - favorite 3ss. - j.
 7l. ext. $\frac{1}{2}$ x - xx. 2 Abt. - {Solid ext. n. reliable.
 3 Comp. Syr. Squills.

Nicotine type

Nicotine - tobacco leaves
 Lobeline - Lobelia Root.

Colchicine (&) Colchicum corn seeds
 Scopolamine & Sparteine (?) Brown tops.
 Santonine: Santonica buds.

Nicotine - tobacco leaves *Tobacum*.

Prods. nausea & vomiting. Nicotine is a vol. dark cold fluid.
 (s) in H₂O also in ether. There is a cert amt of Nic. in tobacco
 smoke smoking & chewing give effects like nicotine
 Tobacco. affects nervous syst. esp. motor.

As seen in new smokers. causes weak pulse - ashy pale
 & severe nausea - maxis Pt. feel weak & limp. Eff.
 vomiting. conts. after a stern. empty. bile coming up.
 In poisons. ds. a Pt. may die fr. paralysis of v. s. Pts &
 v. susceptible. & ∴ tobacco dangerous - no antidote
 known. Empty stom. & treat sympt.

Pts. using tobacco. v. oft. have chronic sore throat
 Remedies & of v. use until cause stopped.

dysphagia also appears. n. nerve O. & oft. affected.
 & Pt. affect! palpitation intermittent &c.

in growing persons. I say - it interferes w. nutrit.
 & stunts growth. ∴ loss of sight.
 St. causes atrophy of optic & auditory nerve. But v.
 probly. due to also the tobacco.

It is a nervous sedative to many w. where Tob. agrees.
 when taken in moderate amt. Pts. affected w. indigestion an after meal cigar oft. prevents constipation
 was formerly used to relax muscles. now anaesthetics used
 But in country where en. get anæsthes. may use Tob.
 an official infusion made - take 3 j. - ʒj. ʒss
 give as enema.

Is useful to s. in spas. Asthma
 Has been used in tetanus, giving ʒss drop by larynx.
 but Chloral &c. & used now.

Infusion - gently as enema.
 wine of Tobacco. seld. used.

oint + oil of Tob. local use

Lobelia - cd Indian Tobacco. - Irritating odor effects
 r similar to tobacco but weaker - The pois. dose
 is variable prob. a ʒ of powdered plant wld be dangerous.
 Fine. f3 most oft. employed. Vigor powdered.
 plant used in asthma & other like dis.

Colchicum corn + seeds. effects like an action irrit.
 also an effect over nervous syst. In 11 ds. it acts as an
 emetic & drastic purge.

No chem. antidote for poisons. dose but treat sympt.

It ameliorates many of disagreeable sympt. of gent. tuten.
 cure it. usually employ 1 wine of ʒss of

colchicum 10-20 rx ʒl. ext. of root 2-4 rx ʒss

wine of seeds - dose larger ʒss - ʒj.

Fine

Scoparius Brown tops 1 do. acts as diuretic

in 11 sr. ds. purges & emetic It is prin used a " but
 does n. stand high - st. acts where other. " fail.
 Truly test in Rng to comb. sev. diuretic drugs.

Santonica buds abt. size of cardamom seeds

Glucoside Santonin is offic. v. ind. in ʒss slightly in
 alco. v. bitter. when it colors a urine saffron color

It also affects sight so that Pt. sees every thing as
 through a yellow glass But it is sure to
 disappear as soon as drug stopped.

No antidote known for poisonous dose

Is anthelmintic for worms. For 1-3 yrs. for adu.
 2-6 yrs followed by dose of Calomel.

Prochee cont $\frac{1}{2}$ gr. favorite way of giving
 $\frac{1}{3}$ Coniine type Coniine - Spotted Hemlock fruit E. lvs.
 Curarine: curare (woorari)
 Gelseminine: yellow jasmine root
 Physostigmine: (eserine) Calabar bean
 Pilocarpine - Pongamara root bark
 Pilocarpine - Jaborandi leaves.

Spotted Hemlock - coniine. Hair both fruit & leaves

The also is a vol. liq.

so have to designate - fructus or folia
 Poison. Coniine or conia - a fluid alkalo-
 lid. v. vol. acid flavor - steeping smell sol. in alco
 + in 100 pts. of w. Then is also a vol. oil trides & also
 w group is peculiar in attacking certain parts & leaving
 other parts undisturbed. Curtis has 16x Squibb's H.
 Ext. Hemlock. & found in his eyes played false. In
 attempting to dip pen in stand. it fell short a few ins. to.
 It attacks motor syst. - may cause death by paral-
 of respiration & as a consequence & slow. but may
 be increased by artificial respiration.
 a drug affects motor nerves but n. a contractility of
 muscles. sens. nerves & cord remains intact.
 effect falls on a plate of motor nerve spreads out
 in a mus. & in a ds. it passes outward toward cord

Paralys. of motor syst.
 Ext. in eye. last 2.

It also affects s. b. f. others. ^{a = sensitive nerve}
 as of eye ball - levator palpebrarum &c
 a larger ds. c. be taken by an action of the lag & duct
 can be taken in larger ds. in action exercise, after
 effects leave a nausea. Used for its paralyzing
 in spasmodic dis. as in Tetanus. but clinically
 it has effect in v. dis. br. a dis. lies in motor track
 of cord. Chorea s. cases have been benefited
 Epilepsy. n. much benefit.

spasm of eye muscles.

Contraction of muscles about eye. before spasm - as
 in strabismus ophthalmia - hemlock is gently v. useful.
 a mania may oft. obtain relief fr. hemlock - paralyzing
 muscles & making him feel sick.
 Hemlock & opium combined when opium causes restlessness
 For Poisons. dose - cont. artificial respiration

In administg. Humlock number remember almost all pharm. props. & inst.

Extract alcoholic.

Time.

Juice prob. & active - but uncertain strength accord. to brains used. dose 3j - 4

Squibb's is best - 15-16 mx other druggists have been tried & some given in 11 ds. w no effect.

sl. more given unless phy. is present as in case of some idiosyncrasy of P.T.

Curari - (Wootari. Wari)

a veg. ext. made

by S. Amer. Indians & guarded v. carefully by them

Effects & v. as humlock only does h. attack & eye 1 st.

clinical use is v. as humlock but objection, diff.

samples diff. in strength & grt. price. Dose 1/4 gr. must be given hypodermically, for 1 or no ext. by stomach.

Yellow Jasmine root.

Indigenous to Southern states

effect does n. fall on end plates, but on nervous trunks.

gelsemium is active alkaloid but v. much used

Has same clinical effect as humlock attacking eyes etc.

In poisonous ds. Has < effect over sensory nerves. When

applied locally to eye it dilates pupil. - but inter. v.

The diff. in effect is due to 1 ds. inter & 11 ds. compare

slightly when locally applied. (11 ds. contract. 11 ds. dilate)

used to prod. palsy as humlock. also to effect sur.

cough as whooping C. & asthma. oft. true, not always

a unique use is for relief of neuralgia. esp of 5th n. & part

of sup & inf. max. divs. in neuralgia of teeth etc. 5th mx.

Fl. ext. Gelsemium. - 5 - 10 mx. (Nth) Tincture.

Calabar Bean *Physostigma* (atis)

a kidney shaped tran.

residue alkaloids. 2 has effects resembling strychnine.

∴ differing fr. effects of strychnine still continues to murder.

1/3 - Effect falls on nervous trunks, not plate.

Before a paralytic crisis in there is a twitching attacks

tendency to increase secretion of m.m. tears, perspiration etc.

contractions of pupil due to affection of 3rd nerve. In

many of its effects it is v. to Belladonna. ∴ in p^{is}.

ds. of Calabar bean. well to give atropine.

Has been used in many cases of tetanus w. effect

It is used in frequency next to chloral hydrate. If used

in tetanus, it must be given until spasms & controlled to a

certain extent. Extract is a prop. & used

in Tetanus. after chlor. & Brides.

may be given in pill (s) or lypho. Dose $\frac{1}{16}$ gr.
but much is used. Dose $\frac{1}{16}$ gr. in lypho.
(s) is acid so tritur to + Bicarb of Na. until a
meat. (s) is obt d. Calabar bean has no effect
in epilepsy. In ryz diss. where wish to contract

7. n. n. tension of eye

pupil use Calabar bean. N. much used to overcome
dilation. after Belladonna tx. its effects v. temporary
In giving Calabar bean may take Powder 1 gr.

(N. Ph) Tincture. T.
silybally of Physostig.
into cu. $\frac{1}{16}$ gr.

Remuner - it is v. expensive. Ext Physostig $\frac{1}{16}$ gr.

Conegranate granati Radicis cortex.

Pelletierine alkaloid. Has an effect similar

It is a v. antihel.
Tamar of Pelletierine
(31?)

to hellebor & curare but has never been used for dis.
for wh. they r. used. It has also another
special use for tapeworm as in all anthelmintics
old to give after a short starve & followed by purg.
may give a mild laxation of a doug Effusive

Jaborandi leaves Pilocarpine alkaloid digd.

Is a group by itself. Profs. of Jabor leaves & also

produce (in abt. 15 mi) slight warmth then an

excessive flow of saliva & sweat even w/o extra

amt of clothes - Thus a prof. secretions - but

also tears mucous in air passages & milk in g

In addition a action of a v changed in cold blooded

a v is slowed fr 1st In warm B. it hastens a action

at 1st but after a time slows & may be fatally paralyzed.

It contracts a pupil. 2nd any convgs. also follow

nausea vomiting & espiz. Pt. swallows a saliva.

There is also a tendency to fall of temp. after Perspiration

Pt. quies. sleeps waker feeling languid. Much <

ura is contained in a perspiration th. naturally.

q r. much > susceptible to a drug th. adults & so may

give larger do. It is prob. & it attacks a sympath.

synt. for if a symp. on one side of a neck is cut it

will produce sweating on a side. It is a powerful

antagonist to atropine. Used as a diaphoretic to get rid of dropsical ef-
fusions also to get rid of ura in v dis.
It is a disagreeable diaphoretic & old n. to gum in mild cases
Has been used in purpura albuminuria & convulsions
Used in pneumonia & Bronchitis.

urine > or < w.
painful or nat. mist.

atropine will stop sweating of Jabroudi in short time
But Jab. will n. cure a Pt. fevered by atropine.

Has been used in diphtheria w. alleged benefit. Has also
been used in chronic skin dis. as *plurigo-exima* (w. oth.)
cuts. short an attack of chills & fever.

In administering. Infusion. Fl. Ext. 10-60 mx.

Hydrochlorate of Pilocarpine (v.s.)
" Nitrate " } $\frac{1}{10}$ - $\frac{1}{3}$ gr & test.

Ant. salts of " & r. expensive.

Aconite type

aconitine } aconite root & leaves.
Pseudaconitine }

Aconite (monks hood) root & leaves. But as usual
root is a little active. It is now cultivated in W. country

for a beauty of flowers

aconite & Pseudaconite, alkaloids. & with ferns.

The effects & complicated th. forming drugs.

affects a sensation - paralyzing a sensation

Toxin inter. causes, a tingling sensation in fauces w.
desire to swallow. A sensation passes along tongue etc.
The pulse falls in number in 1 ds. a Pt. will n. feel as
wired as he is. In large ds. if on empty stomach, aft.
to be nausea & vomiting. A feeling of warmth

in stomach. a tingling n. only attacks fauces & lips but
travels to tips of fingers anesthesia of skin. pulsation &
respiration > etc. in n. a Pt. has symptoms of anaemia
feeling giddy & when getting up for chair

of 3 of Poisons. ds. turning in stomach. w. tingling &c. at
it produces vomiting. The numbness of circulation rapidly
spreads - motor & sensitive nervous syst. paralyzed.

It acts rapidly but feebly. gradually. treats slow
Respiration slow skin cold to Pt. & pharynx. feeling.

Signs of anaemia giddiness cutting pains through
joints. Pt. feels death approaching. when death fi-
nally takes place a respiration & circulation fail to go
by slowing respiration & it > us. a chemico-vital action
& thus lowers a temp. of body.

The diagnosis for narcotic (Opium &c) also poisoning.
is made by fact - a Pt. retains his senses in aconite
poisoning. Formication of aconite.

Gr. of fresh Ext. Acon. has produced death.
Death follows in a few hours. & the indiastole

effects as if w. of 2
grains of B.

aconitine. in a
marat is v. strong

It is dangerous to R. drugs wh have to be given in excee-
dingly. 1 ds. as a also. aconite.

When given in pill it is n. likely the each will cont. s. aut.
Frost Poison Emetic arouse action of. & Resp.
may give digitalis, belladonna, with electricity also.
artificial respiration &c.

Therapy

aconite used fr. its anesthetic & depressing
action of. It is esp. useful for & latter purpose.

old m. begins when
a & weak & rapid.
but in chronic cond.

When Pt. has an attack. of inflammatory dis. as pleurisy,
pneumonia peritonitis, &c. a & trates < rapidly w. hard
forcible trates. If old bleed Pt at v. time he feels
much better temporarily. But aconite gives a s.
relief w.o. withdrawing a vital fluid but storing it
up in a n. vms. aconite has true cd. o. veg. lancet.

It does n. remove a inflam. products but relieves a Pt.
But if a Pt. & trates freely even if has high temp then
aconite is aconite indicated. In acute infl. of Phary-
ngeal walls tonsils &c. aconite seems to have a specific
effect if given early. st. of fever is v. high fr infl. of P parts.
Aconite is genly. useful only in a early stage of fevers
but when a & begins to fail wh oft. occurs v. early in
a dis. then acon. is n. wanted but rather stimulants.
Better to give 1 ds. oft. 20. 1/2 hr. to keep Pt under a efft.
unless a objection arises of arousing a Pt so frequently
of need comparatively a ds.

aconite st. useful in apoplexy. when face flushed
vessels distended &c. Best to Tx. Tinc. of Root m 3-4.
1 ds. oft. 9th 6-8. Better not to give by drops for a variable.
The tinc. of British Phar. is only 1/2 as strong - while
Fluimig's. tinc. is twice as strong as ours.
Ext aconite n. v. good. aconite may relieve neural-
gic pains - painting a tinc. locally over a painful part
The hypoaesthesia also useful. May also use a linament
Tinct. 1/2 gtt 4-5 m. w. glycerine &c. May use a alkaloid aconitine
Extract 1/6 gr. if a skin is n. broken - useful about v. pair of nerves.
Best aconitine internally begin w. gr 1/100 - 1/100
given in Hablitz or pills.

Local.

abstract 1/2 gr.
7 L. Ext. m. j 3 m.
Tinct. 1/2 gtt 4-5 m.
Extract 1/6 gr.

Ext aconite n. v. good. aconite may relieve neural-
gic pains - painting a tinc. locally over a painful part
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given in Hablitz or pills.

Veratrine type

Groove alkaloid american

Helebor root veratrum viride.

grows in damp places in states East of Mississippi
Veratrine obt'd. fr. Croadilla seed.

It prods. depressing effect on force & frequency of pulsations of $\heartsuit$. It has tendency to nausea &c. For action of " it is similar to aconite & may be used in s. diss. s. give aconite to avoid nausea & use *verat viride* as safer. th. aconite i.e. vomiting safety valve. But aconite probably bet. Fl Ext - prob. $\frac{1}{2}$ o. oftent.

$\frac{8}{3}$ - not used internally but applied ext. when skin is numbrous to relieve neuralgia esp. of st. n.

Digitalis. - Fox glove.

Leaves of plant used & sld. be taken during 2nd yr. action of it has n. been determined - at present 4 known applied locally will cause s. inflam. - Inter. in moderate ds. s.t. like aconite lowers pulse rate. In vds. nausea vomiting & purging - nausea for s. time. aconite leaves $\heartsuit$ relaxed - Dig. causes stronger contractions & leaves $\heartsuit$ contracted.

It narrows B. v. s. & raises their tension.

Effects. contrac. of $\heartsuit$ & v. s. slowing of v. s. action so it is a titanizing agent a 2nd ary. effect is to slightly lower temp. it does n. as quickly as we sld suspect. It may take 2-3 days s. to get effect & same time to get over its influence. Some persons easily affected & nausea oft. caused. In n. ds. we may get weak rapid pulse as w. aconite.

Toxicology Slowing of pulse tend to vomit &c. resembling aconite - but no numbness or formication. Fatal dose varies - death rare inside of day. Recovery v. slow - Treatment. Evacuate & Stom. give tannin tea &c. also. NH_3 &c.

Therapy used in s. cases of hemorrhage ^{is haem.} haemoptysis. can be used in case of nervous shock when arteries relaxed &c. C. b. used, but acts slow in syncope. Give xxiv Fl Ext.

Hypoderm. C. b. used when $\heartsuit$ is paralyzed for poison as for aconite *veratrum viride* &c.

can be Rx in s. cases of nervous fr. fr. & Org. & dis. Digitalis neutralizes obstruction by helping $\heartsuit$ to beat & forcibly & regularly & quietly.

Doopsy may be absorbed & all vms. & org. ments relaxed - use dig. when there is an irregular feebly acting $\heartsuit$ full veins & weak pulse.

Dig < apt to be of use in dis. of mitral - has no effect
on fatty degeneration - or where there is rapid & severe stenosis
In case of rapid & full hypertrophy dig. will do harm
In genl. Dig is n. good in aortic insufficiency ^{taking}
st. good when no valvular lesion is. hypertrophy dilation helps
In atheromatous arteries it is better n. to give Dig.
Cardiac asthma oft benefited. Dig. is given to
relieve ~~distress~~ ^{caused by an irregular beating} &
under certain circumstances Dig. acts as a diuretic
It is n. so with a healthy & - But it has an effect
in various engorgement &c to relieve dropsy
It may oft. be used when co. is inflamed; other
drugs n. being allowed. Dig used to lower
abnormal temp. esp by Germans.
In Del. Tremor. Tinc. in 11 ds. has been v. beneficial
1/2 oz. has been given The dose of Dig. has n.
been fixed, but must be given until effect.

Powdered Leaf - gr. j
oft given { Squill - gr. j
with Calomel aa. gr. j ^{as a purge}

Infusion Digitalis - ʒij may + a cinnamon to make it sup.
Tinc. Dig. - ʒij - xxx. fl ext. 1/4 gr.

Digitalis is in market but n. good. - sld not
begin w. < th. 1/50 gr. Leaves + Tinc. have been used ^{further} for

Ergot. ergota. 'Spurred Rye'

Fungi growth, found in rye has a close musty smell
& contains a No. of active principles. The effect which
fr a dose of ergot is kind of poisonous - nausea &c.
By practicing on animals we see it narrows &
calibre of vessels at 1st by Dig. contracts un-
striated musc. fibres. contracts uterus - even impreg.
There is an effect on & similar to Dig.

Ergot is used in internal hemorrhage - when we wish
shudder effect rather use hypoderm. of ergotine
anurisms, have been cured by " near lesion (of it)
used successfully in enlarged veins + Purpura hemorrhag.
has been v. useful in hyperaemia of cord has been
useful in occasional attacks of mania - but no good in
constant mania. useful in many head aches

ergot has been useful to retain Pts. fr. severe accidents
used to contract bladder in atony etc.

In obstetric use sld similar ^{not} contract. In
uterus is like intermittent $\therefore$ q n. skilled, but
contract. of ergot is n. + sld n. is given
too early in labor, + sld be sure + there is no me-
chanical obstruction. It sld. be used in every

labor to prevent post partum hemorrhage - The eff.
of a drug is genly. prod^d in fr. 10-20 mi. It is al-
ways used in post partum hae.

Fibroid tumors have been removed or reduced by causing
constant contraction of u. + has been found
useful in many cases of diabetes.

Fl. Ext. $\frac{3}{4}$ is used wine ergot $\frac{3}{4}$ - $\frac{1}{2}$.

Ergotine - kind of an eth. extract + n. an alkaloid, is
esp. used for hypodermic gr $\frac{1}{2}$ - $\frac{5}{8}$. bitter to only to
inject 1 gr. at a point as it is slightly irritant.

¹⁰ Nux Vomica ^{fr. seeds.} Gen. nuxia Vomicae.

Strichnine most used. Dissolve in H₂O. (5) in acidulated H₂O
Sulph " sol in H₂O. Strichnine v. bitter

increases irritability of nerv. spinal cord etc.

" " arterial tension, also S.O. action.

When taken in " do. causes twitching etc. It is seized
w spasms v. like tetanus. May be suddenly thrown
fr. feet - eyes stick out of head - attacks come $\frac{1}{2}$ hr.
after taking. 2 hrs. is genly a limit of severe symptoms.

Fract. vacuate stern. Give tannin to form
in (s) compds. charcoal - + antagonists

chloral hydrate. Pot Bromide etc. Case cited

where Dr. given $\frac{3}{4}$ jss. in $\frac{3}{4}$ p. doses w good effects
Strych. is given as a bitter stomachic - It also in-
creases peristaltic movements. Nux Vomica

or Strych. v. almost always given in stomachic
It tends to prevent fermentation When irritat.

or inflame etc. of word or meningis causing paraly.
Strych. is harmful during excitable state, but

is st. useful for paralysis. Good in functional
paralysis foll. diphtheria etc. In progressive

paralysis of a nerve as amaurosis etc Strych. good

" " of bladder in old Pts. + q It is +
useful in nervous debility

2. alkaloids.
Strichnine v.
Bromine

not meet. nervousness

Tetanus comes on
slowly

when a respiratory C (in medulla) is inactive, it may be excited by strychn - as in asthma &c. ^{drugs sleep} nothing is a better antag. of depressing effects of Opium, chloral hydrate &c.

Strychn in pill Strychn in sol. + acid until dissolved - But when wanted for hypod. write for Sulph. strychn which is (S) 50 to 60 - $\frac{1}{2}$ gr. The drug should be stopped if P.T. be. v. nervous twitching &c. For local use hypoderm. test begin w $\frac{1}{40}$ gr.

Ext. Mux Bonic. - n. reliable strength - begin w. $\frac{1}{4}$ - $\frac{1}{2}$ gr. Fine " " 5 - 20 drops. v. bitter n. much used used for. Epimatomia (worn out) falsey shakiness

Erythrophorin - Sassy ^{true} ^{Caeca Burx.}
action v. sim. to dig. ~~Essence~~ No. 2 of V's Treats
& struthous & pulse. But is n. as powerful
fine. (eng) Erythro to mix V-X.

Caffeine type

Caffein (C) - white powder Sol. in 60 pts hot H₂O
Salt sol. as cit rate &c.

Effects Tends to excite nervous irritability
causes wakefulness &c tendency to diuresis
increases arterial tension - may incr. $\frac{1}{2}$ act.
& afterwards slow its action

Useful in nervous prostration. or when P.T.
has work to do & wishes to keep awake
useful in sick headaches Etia a prompt
diuretic th digitalis

Best to use ^{one} salt dose 2-3 grs.
st. causes nausea & vomiting & st. causes
palpitation of $\frac{1}{2}$ & may be used as a possible
diuretic.

'veratrine' *Veratrum* seed.

glycosides + c + Bitters.

digitaline, digitalin } Foxglove leaves
 digitoxin digitonin }

ecboline, Ergotine } ergot (Spurred Rye)
 sclerotic acid }

Strychnine type

Strychnine }
 Igasurine } { nux vomica seeds
 Honaine }
 Thebaine - opium.

Caffeine type

Caffeine (C): coffee bean; Guarana: Ha leaves

Theobromine: Cacao kernels.

Cocaine: coca leaves.

aspidospermine: Burbrache bark

(Caffien contd)

In cases of exhaustion it is of benefit st. useful in
 sick head ache. St. proper means of & dis. w.
 dyspnoea, urine & dropsy.

It is antidote for s. forms of poisoning -
 opium give coffee - Coffee valuable in s. cases of cold
 Gt. nervousness is sign of poisonous effects.

Tea same alkaloid as coffee - may have tremors
 & palpitation from tea drinking - Flatulent dys-
 pepsia often are to nothing but tea - feeling of
 sinking at pit of stomach

Guarana - made fr seeds - Can be used in
 sick head ache & as caffeine - Good to be taken
 after a full meal.

Cacao seeds found in chocolate

effects similar to caffeine & conts. certain
 amt. of nutriment.

Coco leaves (Prob. ed in next Pharm. erythroxylon)
used by natives of Peru w. s. effect as we
use tobacco & alcohol.

Elixir not official.
Fl. Ext.

Quercus bark (" ") aspidosperma-atris
Put on a list in '81. effects n. v. will cause

slow respiration & pulse - causing languor.

Therapy used in dyspnoea - as in asthma, & dis.
emphysema &c. Has been used as an astringent in
diarrhoea may be given in n. ds. Fl. Ext.

Opium From poppy - juice allowed to exude
& dry & used. It should have a reddish brown
color & peculiar characteristic odor
effects - has a calming effect on a cerebrum &
opposite in s. cases. Suppose person takes 1 ds.

1/4 gr. - causes languor - dryness in mouth - if
soon dark may sleep.

dose 1 gr. - warmth in stomach - languor - w s
impairment of intellect - cn. do mental work.

stops pains - dryness of mouth & clammy taste
pulse at 1st rapid &c. full & slow - nausea & vomitg.
may come on - dry up & feces & to a certain amt.
dries urine. Grs. 2-4. Dull feeling over

back of head rapidly spreading & cause sleep
may be hard to awaken - respirations slowed
mouth dry - contraction of pupil - Stinging of nose.

Poisonous dose effects increased on to roused fr.

& sleep - an emetic has no effect &c. & nervous
tracts & paralyzed - slow full pulse, slow respir.
pupil may be so small that can hardly be seen
(near death pulse may be rapid) Death comes
fr failure of respiration If Pt. recovers - has
head ache & gaily malaise & all broke up.

S. persons have & opposite cerebral effects, &c. excited
have many visions or imaginations. Persons w
vivid imaginations may see fine images &c as orient.
but it simply increases & not true of a subject

It causes intense itching st. dangerous, colly^{er}
but v. rare S. Pts. & easily put to sleep & r.
vastly & susceptible to opium th. adults.

When opium taken habitually & ds. must be const-
antly repeated - case cited where pt. took 30 gr.
morphine per day

Toxicology opium is a most common form of pois-
oning. Poisonous doses varie. v. n quantities
often paralyze stomach & so stops absorption
4 grs. crude opium stops on poisonous dose - but varies.

Symptoms St. lying in coma - early face flushed
later cyanosed. & resp. difficult. Pupils cont d.
It resembles coma w congestion of brain or apoplexy
in this st. one or both pupils dilated - unequally
affected - usually one side paralyzed.

It also resembles uræmic poisoning to certain
extent. In "dead drunk" seldom see a pupils
contracted at least not as much as opium - odor
of liquor.

In opium poisoning v. oft. ere-
tion of penis wh. does not occur in coma fr.
other drugs, when Pt. wakes favorable
sign - but they often relapse & cu. again be roused
Opium is v. a v. swift poison - when death
does come it is genly v. t. 6 - 12 hrs after taking

Progn. Don't give up - ship (uncertain)

Treatment Treat. no matter how late & Pt. is seen evacuate

the stomach. If pat. seen early v. f. pat
comatose & active emetics Zn SO₄ - Cu SO₄
But if pat seen after coma has come on then
stomach pump much better th. emetics.

If solid form of opium is taken it is often dif-
ficult to wash it out as it sticks.

Use a general emetics for poisoning alkaloids
as tannic acid - tea - charcoal &c.

The fat dies fr failure of respiration. The
coma favors this defect ∴ keep & pat. awake
if possible - by keeping & pat walking -
making noise or slight pain - sudden
draught of cold tea coffee v. good.

If called when coma is profound do n. attempt

2 diaphoretic brain
is is < like 14
but if hairs are =
pupils & paral.

v. n. good.

Treatment of earlier stages - use drugs to excite respiratory center - prob. best is atropine (belladonna) Hydroxymethyl ammonium.

keep Pt. warm.

Artificial respiration may help greatly to keep patient awake - Electric shocks.

Chronic Poisoning due to what is called opium eating and lately hypodermic of morphine is used. The habit usually begins by taking drug for pain. Dr. Phys. old guard against giving opium for chronic affections.

Effects of opium eating.

Interferes w digestion & patient dies earlier than usual. Symp. appetite fails - The patient has peculiar dried up appearance - mind affected in s. way as by excess of alcohol i.e. silly untrustworthy & lies about his habit. When opium taken by stomach, digestive function is impaired - opium eaters usually dislike tobacco & also. If opium taken in 1 do. may do so for lifetime w no bad effect.

Tea & coffee habit easiest to break off tobacco next - alcohol next - & opium by far the hardest.

Treat. break a habit at once if constitution will stand it. A patient may be in extreme prostration w vomiting & diarrhea if symptoms be dangerous must give some opium & break habit gradually. The disagreeable effects will last 2 weeks. Morphine - not used itself but salts.

sulphate - acetate - chlorate - muriate.

Morphine not sol. in H_2O but salts r.

Prob. > headache & uneasiness for morphine than for other drugs does not interfere so much w digestion - valuable b.c. can be used hypodermically w > harm to digestion intestines &c. It gets permanent cure when em. do by stomach - as in neuralgia &c.

Codine codia

It produces sleep but has > of curative effects of opium & morphine. has 1 effect over pain.

Narcine

r. insol. as also salts its effects & similar

9-12% in opium
Brid. used at
Utica

to codeine to produce quiet sleep. not much used is rare & costly. ^{1/4 strength of morph.}

Narcotine Improperly named - for it is a most inert of alkaloids. (Tetanus)

Papaverine } curiosities not practicable
Thebaine }
cryptopine }

Mar. 17. Therapeutics. Opium is a neurotic drug wh. may disturb a nervous os. gttly. We do not always produce narcotism as w other neurotic drugs. indeed a rule is not to.

A beneficial effect may often be obtained fr. 1 ds. Opium in many cases has a power to sustain a vital functions. esp. when at low tide thus numbing also.

In some cases it tends to increase nutrition & a healing effect. Cures pain - prod. sleep.

anti spasmodic allays nervous irritability suppresses secretion. Produces resolution in some morbid conditions. Used to sustain vital functions in non narcotic doses. In persons who lose sleep - do not get enough to eat.

Proba a part of a action is used to support a heart. Useful in exhaustion fr loss of Blood or part part. hum. &c. In exhaustion best to use hypodermic

1/6 - 1/4 gr morphine &c. a absorbing power of a stomach is below par

In low fevers - rapid pulse &c. then opium may oft. be used w gtt benefit. also opium & oft. given at same time But in v case narcosis must be avoided.

Narcosis must also be carefully avoided. Formerly b.f. hypodermic. a stomach & intestines not absorbing a repeated dose of opium given in repeated doses when a pt began to recover a opium was absorbed often with fatal narcosis. In v dis. hypodermic injec. shd. be used as early as possible.

In organic & dis. 1 ds. of opium like digitalis tend to steady a & &c. Fagdenius ulcers

& oft. controlled by opium internally. a ds. may often be large oft. good to sprinkle a ulcer w opium

"Pain Killer" The pain may often be cured w. a narcotic dose. Given hypod. a ds. may be v. i.

neuralgia is v. apt to occur when a part's syst is below par & so best not to give narcotic doses again. Narcot. doses & apt to prod. an opium habit dose $\frac{1}{50}$ - $\frac{1}{4}$ gr. In acute rheumatism & other pains, it may be use to give narcotic doses for a time to blunt a sensitibility. It makes v. diff. when a hypoderm is injected but if superficially pain it may be well to "near a pain unless a adjacent part is v. tender".

Production of Sleep Sleep may genly be prod. w. bad after effects. w a nonnarcotic dose narcotic ds. genly. harmful when given to prod. sleep in delirium. ^{danger to prod. sleep when wax- fulness due to - d. Hyponimia. or - d. Anamia of brain.}

$2\frac{2}{3}$ - In delirium tremens it is dangerous to give v. n. ds. to prod. coma. a Pt. wakens fr apparent sleep worse when sld be better.

Mania. 1. ds. oft. useful - 10 ds. dangerous. Persons who can sleep on act. of difficult breathing opium is dangerous - except in s. cases of dis. where opium cures a dis. & so relieves dyspnoea also spasmodic dyspnoea. ^{Students who can sleep it is dangerous to rely on opium on act. of habit}

To relieve muscular spasms as a rule many other drugs & better is. chloroform. Nit. Amyl. Nitrite - Chloral & Br Calabar bean. &c.

Opium does no good in tetanus. May modify Chorea but will not cure a dis. In acute Bright's dis w uraemic convulsions opium seems to do good Whooping cough. & other spasmodic dis. & s. relieved but not cured. To relieve nerve irritability

In coughs for Bronchitis Phthisis Pneumonia &c opium sld not be given in n. ds. for it dries up m. & &c & does harm. Opium is indicated when a cough is out of all proportion to a lesion & depends on reflex irritability. Given in 1. ds. for vomiting.

Tenismus of dysentery &c is relieved by opium esp in suppositories. Dyspepsia depending on a purely nervous condition often benefited - give a fraction of gr. hypodermally of morphine

Given in coughs. w. too - secretive.

Curation in Inflammations.

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Opium ^{It seems to be} beneficial in all inflammations
peritonitis pneumonia &c. ^{the} drug ^{old} be
carried to poisonous line & respiration ^{old} not
sinks much below 12 per minute
Opium may regain in acute dis. w.o. fear of habit
diabetes mellitus - opium ^{of the} seems to gently
diminish & sugar.

To Diminish Secretions. 1st of bowels. ^{It is}
useful in diarrhea - opium & ipecac ^{It gives to}
sympathy benefited irritability also relieved
of sun early give castor oil & Tinct opii
Locally to relieve pain

for hypoderm & salts of morphia & used. It is v.
good to give a. atropine w. morphine increasing
power of morphia w. tendency to nausea,
poisonous effects &c. Atropine old always be
combined w. morphine 1 Lt. atropine 1/2 part.
Morphine by hypoderm 1/10 - 1/4 gr. 1/2 gr. to Pt not
used to a drug is st. poisonous.

In loss of blood &c. call for a ds. of opium.
To produce diaphoretic effect opium better than
morphine gently given is specific in sovereign fevers.
Diarrhea &c opium best salts of morphine 4-6
times stronger than opium.

~~Therefore~~ ds. of " ^{average} gr. 1/2
For q. a ds. must be much diminished Purgative
weak is gently used for q's.

Tincture laudanum It is dangerous to prescribe in ^{any} ^{form}
It is a poor prep. to be taken internally. If ^{kept}
it concentrated by evaporation. If at all muddy
do not prescribe. - - - - - 1 gr. in 12 m.

Tincture Aged Is really an agrus solutio
much better to begin internally. The drops of it
larger than of laudanum

Tincture Camphorated (purgative) Has camphor &
oil of anise - Benzoic acid & honey Purgative is
useful in bowel complaints & coughs. - good way of
giving opium to children 1/2 gr - 3.

Wine (Sydenham's land^m) sherry wine &c
not as good as deodorized.

To ascertain
dried op. fulcr.
12-15 % of morph.
by measuring proves.
all fld. preps.
10 % ext. paragoric ore.

To combine spec. or to combine

1 gr in 10 ml (?)

Vinegar (Black drop) The strongest prep. of opium
Pills apt to be unduly hard - But if they get
 in bowel complaints it is then locally applied
 $\frac{20}{3}$ Compd. soap pill. ^{each cont. 1 gr. op.} can be used w/o. using wood
 opium. Compd. Opueac Powder. A very fine powder
 Sulph of Pot used as a powder to help grind up
 opium & Opueac a fawn colored powder
 A diaphoretic drug - gr 1-10 used esp to
 stir off an inflammation or congestion for catching
 cold give Pt. 10 gr & put in bed, quilts
 used also after inflammation set up. Used in ^{anther} Si
Confection a waste prep. used for q. not much ^{used}
 Extract. sol in H₂O - H₂O is used to make an extract ^{compd.}
 It has same benefits over crude opium that
 we derived opium has over laudanum.
 Plaster seldom used.

morphine
 acetate
 cyanide chlorate
 sulphate.

Morph Sulph. solution ^{n. off.} The official. gr j ad f 3
Magnesia soltn. Not official. gr xiv ad f 3.
 The safest way to wrap these for bring mistake
 for each other bet to write for so much morph
 sulph in so much H₂O. When a soltn is
 kept it is apt to undergo a change color
 changing &c. a few grs. about 5. of chloral
 hydrate to ounce will prevent it as said
 of. it is well to add atropine 1 part to 10-12 of
 morphia.
Suppositories lead & opium used locally abt
 rectum Forches used in colds -

Lactucarium Obtained fr lettuce - effects an-
 alogous to opium but v. slight May be given
 when v. l. ds. of opium needed 15 or 20 gr. XX.

Atropine Type.

The drugs of " group & closely allied.
 Atropine Deadly night shade root & l. Belladonna
 " insol in H₂O - But, salts & sol.
 The salt Sulph Atrop mostly used

It is prominently a neurotic drug v. ds. given
 hypoderm. $\frac{1}{120} - \frac{1}{160}$ gr. The effects are as follows
 The $\heartsuit$'s action is increased v. soon, as well as
 arterial tension. In abt. $\frac{1}{2}$ hr begins to
 subside - some disturbance of mind - may
 have hallucination. May become dryness abt.
 month - soon dilatation of pupil
 Effect of hypoderm $\frac{1}{48}$ gr. The pulsations of $\heartsuit$
 may be doubled - feeling of warmth - throbbing of
 carotids - mouth & throat dry - Dry hacking
 cough. - St. conjunctiva & nostrils may be dry
 Cerebral symptoms. - decided giddiness, con.
 control muscles - wandering of mind - hall-
 ucinations. Dilatation of pupils comes on
 soon & v. well marked. St. a scarlet rash
 appears v. much like scarlatina. & con. in
 9 th. in adults. Slight rise in bodily temp.
 n. r. got. Increased rapidity & depth of resp-
 iration. Later a difficulty in passing urine
 the dryness of month may give way suddenly
 to a viscid bad taste in month.

The dilatation of pupil subsides slowly
 " amt of solid ingredients of urine increased prob.
 due to increased flow of blood. Tends to dry up &
 sweating of Russian bath Jaborandi &c.
 It does not tend to dry up bowels, but rather
 opposite by increasing a peristaltic movements.
 In poisonous do. & symptoms, above & only increased
 v. wildly delirious &c. When he dies, he does so
 comatose. May be tracheal desin to pass
 H₂O but inability - Dis of failure of respiration
 In 9 they & < susceptible to > important symptoms. &
 > suscept. to > therapy. effect. so a n. do. (compare to opium)
 old to given :: just a opposite of opium
 S. Pt. & v. suscept. to a drug as is a case w all poisons
 It has v. effect over a sensitive fibres, How & effect
 over motor.

$\frac{2}{3}$ In dangerous poisoning. & Os. b.c. exhausted & a symptoms
 develop into those v. similar to opium & Pt dies
 for failure of respiration
 Dilatation of Pupil
 dilating muscles supplied by sympathetic



muscles contrac-
 ed by 3rd nerve

The peristaltic movement of bowels is increased.
Has a tendency to decrease respiration - dry air
passage or decrease of mucus of $\varnothing$

Toxicology. When death occurs it is about 15 or 16 hrs
not later than 30

Symptoms: vasodilation, prof. delirium, dry mouth,
rapid pulse & breathing - dilatation of pupil
Belladonna in urine which will dilate pupil of
an animal. = st. convulsions.

Often a Pt. is poisoned having delirium & but pulse
& respiration show he is in no special danger
Give morphine.

Case suggested had mania
re who who greatly benefited (cured) by chloral hydrate
Give emetic or stomach pump Tannic charcoal
philocarpus Opium etc.

Atropine is useful in poisoning by toad stools, cause
ing paralysis of $\varnothing$. also useful in poisoning by
catalor brain.

As an antidote used in opium poisoning.

The antagonism b.t. atropine & opium is only
in opium poisoning atropine sld be given in
nonpoisonous do.

$\frac{29}{3}$ Atropine sld be given contd.
& guided by respiration. St. Poisons do. must
be given to overcome collapse coma etc $\frac{1}{8}$ - $\frac{1}{2}$ gr.

Belladonna used in spasmodic dyspnoea of
air passage as in asthma Whooping cough
The time is prop. given. used int. Often useful
in relieving pain In peripheral circulations
as in inflams. Gent etc. & it is useful for pain
in viscera. The hypodermic mixture of morphine
& atropine good. Often used in other cases
for renal colic. Spasmodic contraction of
urethra may be relieved by passing a bougie
smeared w. Belladonna.

Suppositories used in rectum
Colic of intestines often benefited Chorda st. brief
also useful in spasms of hollow organs w.o. pain
Belladonna used to prevent vomiting & retching. Give in
it does not greatly operate for a couple of wks.
It tends to quicken peristaltic activity of intest.
It is a good addition to a cathartic pill.

The dose

used to check secretions. - To dry up a milk of a woman who has lost a v. good for this. May abort a threatened mammary abscess.
 used to stop morbid sweating for Russian latter Jaburandi &c. St. fat surate on $\frac{1}{2}$ body, or one limb - or wrap child on back of neck & head - Phthisis in all Belladonna is good. small dose atropia $\frac{1}{200}$ gr. also good in Hg. salivation
 used to dilate a pupil atropine sol. gently. iv grs. - $\frac{1}{3}$. 1 drop causes complete dilatation - wh may last 10 ds or 2 wks. The above soln is often or gently, highly diluted. When slight dilatation wished. Gelatin dissol. contg. a fraction of a gr. This tends to suppress inflam. - iris is contracted to a very $\frac{1}{2}$ ring so that a blood is squeezed out. Photophobia often relieved by atropine as a rule all inflam. of cornea & benefited. Glaucoma is gently. made worse. atropine may be used or used for years keeping eye dilated & when stopped after usual dose or 2 wks a eye worse normally.
 St. constitutional synops. occur fr application to eye getting into ear ducts - this may be avoided to a certain extent by winking w. eye rapidly for a short time after application.
Preps. Leaves & Roots, Leaves used internally - 2 preps. Extract strength ^{variable}
Line more reliable mixt. - v. - $\frac{1}{2}$.
Ointment Suppositories $\frac{1}{2}$ gr alcohol ext.
 Atropine insol. } Both
 " sulph } Effine. atrop. sulph. by sidence no $\frac{1}{20}$
 St. even $\frac{1}{200}$ gr. controls surats Internally $\frac{1}{40}$ - $\frac{1}{20}$
 But a sulph atropine is seldom used internally may give Jaburandi to counteract dryness of mouth
Homatropine Derivation of atropine weaker than atropine but effects same ex. on heart for it tends to slow & make a irreg. Useful in dilating a pupil it does so in 30 mi. But it passes off in 24-30 hrs. $\therefore$ for a simple experiment or exam. it has a decided advantage over atropine.

Duboisium Duboisia leaves When applied to eye has a strong tendency to absorption & causes constitutional symptoms

$\frac{30}{3}$ Naturine Thorn apple Stramonium. Same effects exactly as Belladonna - Used for asthma by smoking leaves or roots in a pipe or cigarette. 15-20 grs.

Fine Stramonium - Unguentum Stramon
Extractum " in Seminis
" " foliarum.

grows about barn yards &c. flowers a. like morning glory large leaves &c.

Hyoscyamine Hyoscyamus. (Stenbane) effects similar to Belladonna. Slowing of pulse not longer. But is $\angle$ quieting & calming often produce sleep. In mania where others fail $\angle$ rep. beneficial where patient furious & destructive. Should not be used in full dose if patient debilitated. all $\angle$ props fr. $\angle$ leaves
Extract of uncertain strength
Fl " (crystalline Hyoscyamine gr $\frac{1}{100}$)

Fine. used in spasmodic diseases esp of tracheitis
Paralysis agitans to give rest for a few hrs. does not cure.

Solanine Bittersweet twigs Solanum
Berries of potato plant poisonous. Potato sprouts ^{pois}
nausea vomiting & purging occur in this which is not case w Belladonna also quiescence respiration - dilated pupil - dry throat &c
Ext. used w tracheitis in skin dis.

Preparation Extract gr v-x. Fl. Ext. m 20-3j
seldom prescribed.

Proteids.

Pepsin. Stained for dogs stomach - British method by scraping American gently discolored out w HCl.
Pepsin deteriorates on keeping.

Extractions of Fish. 1 lb. of wt = 34 lbs of meat
 Ext^d by H₂O making a dark semisolid mass
 sol. in " It does n. cont. any alb. gelatin or fat
 Some Phys. think = effect is only due to hot H₂
 Curtis thinks it has no nutritive effect in proper
 sense of word But it is palatable & crasurus
 &c can often be taken dipped in it. & it has
 somewhat same effect as coffee (sustaining)
 It conts. much excrementitious material & also n.
 to given in Kidney dis & gout &c.

Cowhage mucuna hairy part on pod of plant
 applied to skin dry causes intolerable itching - It
 is used mixed w molasses taken internally
 for round worms abt. 1/2 at dose Not much
 used now as many agreeable drugs for same purpose
cold

Application causes n. only feeling of cold but con-
 traction of muscles is goose flesh. contraction of
 Scrotum - cold applied to abdomen causes cont. of
 bladder w desire to micturate And to ♀ after
 child birth contracts uterus contracts arterioles
 & drives blood fr. & fatt V. cold applics.
 causes tingling sensation & loss of tactile sens.
 chemical & nutritive functions &c. sluggish &
 if too long contd a part dies.

^{of Local. ap.}
 4 Therapy. cold used to check hemorrhage, By di-
 rect local application or indirect. i.e. cold app
 at nape of neck for nose bleed
 Cold allays nervous irritability - PT may taste
 ice (cold) in mouth to introduce laryngeal
 mirror to prevent gagging Cold used to allay in-
 flammation of m. in. But infl of parts deeper th
 m. in. or skin & not affected by cold This is
 noticed in conjunctivitis & infl. is tranquilized by infl.
 cold but in Rheatis cold increases a pain & perhaps infl.
 Cold applications & often used on body in inflamm.
 of viscera Cold is st. used to prod. temporary
 anaesthesia for surgical operations
 When wish to medicate stomach w. ice, PT.

* ev. r. irritated. in P
 cases. st. relieves

must swallow ice & not H_2O of melted ice.
 It a good way to apply cold is to have a block of
 ice & keep cloths on this & change them v. frequently
 The Pts. feelings must be considered in amt of cold
 Rubber bags a good way to apply ice
 When ice can be obt'd. considerable cooling may
 be obt'd. fr. vaporating drugs as alcohol. &c.
 The reflex action fr. sudden application of cold
 often causes several deep inspirations. Effect
 desired in fainting some kinds of poisoning &c.
 When a bladder has been distended w urine for
 some time & so b.c. partially paralyzed a
 spasm may often be broken by plunging a hand
 or foot in cold H_2O or suddenly applying cold
 over a bladder. Many other spasmodic
 dis. may be benefited by a reflex action prod'd
 by a sudden application of cold
 Weak persons who can. respond to a call for heat
 shd. not go out in cold weather. The same
 rule applies to sea bathing

Ice applic
 as cold touch

It is better to go in while a body is in a glow - so
 better to go in after taking some exercise
 It does no harm to go in, in summer when in
 perspiration. Go in w. a flinger & n. slowly
 Do not go in immediately after eating - or any-
 thing that obstructs a blood circulation.
 Formerly It is beneficial for weakly persons
 to take a small draught of alcohol of o. kind
 b.f. going in. Doing &c. often damages a car
 & is often benefited by application of cold.

Formerly cold effusions were used. Put Pt. in
 tub & pour 4 or 5 pails of H₂O at 40-50° over him
 repeat & as a pump. size. This is a v
 truth method & not as beneficial as many others.
 Cold pack. put dry blanket on & bid them wet sheet
 a Pt. lie on a wet sheet & it is wrapped around
 a arms legs &c. This is st. useful in mild cases

$\frac{1}{4}$ Cold bath. reduction of temp. may be produced
 fr $\frac{1}{2}$ - 3°. Extremely useful in sudden exacerbation
 of fever applied as soon as possible.
 Cold baths do not give a Pt. a chill as is generally sup'd.
 by a laity. Neither does it cause internal
 inflammation as a rule

on weak persons
 may prod congestion

Bob made T. & V. cells. seen. & 40
 1 & 2 of the 1st. 1st. 1st. 1st. 1st.
 1st. 1st. 1st. 1st. 1st.

Temp. and 100 in axilla does not seem to bath. but N
 depends upon a phys. condit of PT.

In scarlet fever w threatening symps a cold bath
 will bring a rash out & relieve dangerous symps.
 But st. Bronchitis & pneumonia & caused
 death has resulted fr. nervous shock
 On act. of disturbance if < th. 6 baths per day &
 require some other method also to be used.
 In Typhoid fever w hem. fr. a bowels bathes shd.
 be avoided as it drives B. in & increases them.
 The body is cooled by circulation of B. & when
 it is & slow then cold baths & of use.

Heat. Locally applied effect is exactly sim-
 ilar to irritate (mustard turpentine &c)
 Tendency to relieve pain or spasm is partly by
 reflex action on sensory parts
 may cause anaemia in one part by causing a
 in another as foot bath &c.
 warm applications over a & useful to keep
 in action as in drowning chloroform poisoning &c.
Poultice - of heat & moisture causes softening of
 tis. If inflammation has n. advanced too far then
 resolution may take place - & relieve throbbing
 pain. If has advanced then suppuration or
 dissolution takes place. Do n. continue
 Poultice after effect desired has been obt. for
 skin to be sodden & prevents healing.

Hot applies. It. relieve sprains & bruises when
 cold fails. Where a soft poultice is n.
 wanted an oil silk gasket = a poultice &
 prevents evaporation of moisture of body & is
 used often in Pneumonia &c.
 Sew. thickness of flannel dipped in hot H₂O is st.
 used but has a disadvantage of soon cooling
 Flax seed meal poultice is one often used
 made by taking H₂O bowl & stir meal in
 It has a advantage of keeping warmth long time
 but it is heavy for a tender part &c
 Bread & milk poultice is softer & good
 Starch w warm H₂O is a light poultice for tender
 parts as joints &c. but does not keep heat & long
 Heat st. used Slippery elm bark used
 charcoal often mixed w poultice as disin-

factant the poultice shd always be thick an
inch at least when a poultice is to be v. n.
effects of a thick poultice may be obt'd. by
putting a thickness of cotton over & then
all covered w oil silk. When worn at
night it shd be fastened to a st.

may apply warmth internally by inhaling
steam. Spasmodic coughs, croup, asthma,
Laryngismus, stridulus &c often so relieved
Hot foot baths & often & useful to determine
n. p. to v. part - useful in colds in head aches
of furs &c the effect is often increased by ap-
plication of cold to head at same time
But is often beneficial & clearly for head aches
ear-aches &c. may use bag of sand salt &c
or if lighter needed use bag of heated meal or
carmine flowers.

4. Heat is used as a diaphoretic st. simply use
many bed works st. aided by dovers powder
st. apparatus is used - But if don. hair v
use hot bricks - but sand bags, if moisture
wanted at same time may wrap bricks in
clothes wrung out of H₂O a lukewarm bath =
85° - 92° a warm bath 92 - 98° hot 98 - 110

(air hot & moist)
Russian & Turkish baths v. useful as prophylactic
in persons w tendency to taking cold. It is st too
soon for delicate persons & shd be v. w care.

Electricity

C O P P E R = Positive = Pours

Z I N C = Negative = Takes.

or Frictional

Holly machine

2/4 Franklinism (static electricity) when
used n. Pt shd be isolated by sitting on stool
w glass legs or on common chair w rubber
cape on feet. By "Charge" connect n. Pt by a
chain w machine. The Pt's hair will stand
on end. Pain, spasm &c relieved.

"Sparks" applied locally have same effect.
good in hysterical aphonia "shocks" by
Leyden jar &c. seldom used as v. disagreeable
The static electricity n. much used on acct
of expense & difficulty in making it work in
damp weather

Hot applications relieve spasm. Gall stains, rheumatic
v. relieved by hot bath. Colic. Strang'd Ania.
Heat recovers it after. P.T. stimulates v. i.e. (q; down 75)
x. Rheumat. & out. by phos.

3/4 of sp. arcs & c. connect
v. shd get a current

galvanic - chemie
voltaic direct
const. primary
continuous.

a cell is as good as a resistance
tho the current must pass
current: strong the = intrinsic electric force
+ dry = 2 resist. ext + int. (Ohm's law)

dynamic - current electricity.

Galvanism "Battery current" large no. of cells
If current sent fr. $\odot$ toward - periphery cd. direct
or descending diminishes irritability
If current passes fr. $\odot$ periphery toward $\odot$
then cd. inverse. wh increases irritability
If this current be broken at intervals the
moments of making & breaking will cause
muscular contraction. S.t. it will cause
contraction when Faradic current fails
may charge - Pt. w. positive elect. may discharge
galvanic current by insulating - Pt. &
connect - Neg. pole by an additional wire to ^{earth}
Never use a current wh. is painful in therapy use
ex. in disintegration of tumors &c.
In using interrupted current to prod. contrac.
have just strong enough to cause mild
tetanus. Never use long enough to fatigue
Pt. - Dry skin offers great resistance so will
to use damp sponges on poles. For muscles
better to use large sponges & sensation w.
But if desire to apply locally to a single pt
then use electrodes - If desire effect on
skin then use dry sponges may apply by
putting hands & feet in warm salt H₂O & change
this.

1/4. In causing contrac. of muscles by interrupted
applications of Galvanic current - greatest contrac.
when applied direct that is positive pole above
direct - decreases " - pole below using a battery to make & break
current. A strong Galvanic current cd.
electrolysis may be used locally to disinte-
grate naevi &c. Best to use electrodes
bundle of needles often used. The needles
& attached to - neg. pole - a large damp sponge
to + pole. The sittings shd. be 20-60 mi.
few sittings nec.

Faradic Current.

"Induced" (in coll.) may
use inner or outer coil former cd. primary &
latter secondary - prim. is - mildest
The induced current can be made to penetrate

induced current
Faradic indirect
Elec. mag. for & from
mag. elect. 2ndary
Induct in Interrupt

as deep as - Galvanic current. Galvanism
best for brain cord &c. for nutrition & electrolysis
Faradic current is better than galvanic to prod.
contract of muscles. The effects & ^{is} pronounced
it - pole. Better to avoid placing a pole
over a bone near a surface as skin &c. pain
st. effects & v. disagreeable. Dry sponges cause
In applying in gnl. it is used ^{anest. tissue} for periplasm
used esp. for contract of muscles & heat of
counter irritation. In contraction of ^{constrict}
muscles well to keep a pole pretty near
each other & Phys. may hold both poles in
same hand & apply at diff pts - use
large damp sponges
Counter irritation for neuralgia - anaesthesia
&c. then ^{use} dry sponges. May dust starch or
ZnO - Electric brush of wires useful for this
therapy in Gnl. whatever current is used
only use enough to produce desired effect
Be careful abt. nervous Os. Strong galvanic
current may do harm. Do not apply until
Pt weary. St. nec. to apply got many (xxx)
but if any good effect is to be prod. - it will ap-
pear in short time after beginning treatment
Electricity is contraindicated when any active
operations in any of viscera - or when par-
ticularly sensitive
Applications to partic. pts. To head. Use
Galvanic (Faradic will n. penetrate) ^{5-10 cells.} + pole
nearest forehead & - nearest to neck - use
2 sponges. apply 3/4 - 1 1/2 min. do n. move
when applying - apt to cause dizziness
headache nausea &c. - sld be applied w care
& mild currents used. ^{& apoplexy convulsions &c.}

1 1/4 - When wish gnl electrifying of Pt hairy
lim stand on a cu. plate in salt H.O. attach
to + pole - apply + pole to a diff muscle
of body - a delicate way is to pass a fine
elect through a body of a Phys. & then be

By simply coiling a wire, a induced or 2nd
is prod. who is v. strong cr. (2 sponges)
W. 2 coils. muscle induced in 2nd coil
is stronger & use both to prod. in
a human body. If a contr. current of sponges
have a effect as a contr. Galvanic current.

When action morbid
changes & going on
in a brain &c. elect.
does harm.

Therap.
Centra. of muscles
Relieves pain.

applies it by touching P. w hand
The elect. current seems to excite & nutrition
Experiments on scithus showed = daily applic.
of galvanism favors growth
Muscular pain often greatly benefited ^{by Galvanism} formic
Abnormal anaesthesia is greatly relieved by Elec.
if any thing will do it. Best to use dry electrode
wire brush prob test. St. merely causing
Cont. of muscles does great good.
Paralyzed muscles treated by electricity
paralysis may be local & due to a central
lesion. Elect. shd be avoided as long as irritat.
of dis continues.

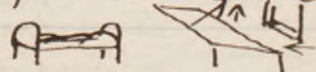
< benefit when a
contractility of mus-
is intermediate
Sts. mus. will n. act
to Farad. try Galvan.

Phonia often relieved at once by a spark.
unnatural rigidity of muscles often relieved
by Faradizing & antagonistic muscles & Galvanizing
at an other time & affected muscles in a de-
scending direction. Galvanism applied
by putting foot in H_2O w one pole & hands
in H_2O w other pole often helps nutrition

Tumor of muscles

2/4 Action of Therapeutic Measures

Environment Proper air - The sick room
shd be ventilated. See = sewer pipes
& all admit a person shd have 3000 cu. ft.
of fresh air every hr. usually count on
200 at least for each. If air smells
bad to a person just coming in then it shd
be changed. In severe ^{cases of infectious ds.} fevers &c. more
shd. be as bare of upholstery &c as possible as
carpets lambrequins &c catch emanations fr. Pt.
may mask draughts. fr Pt. by making incoming
air change direction



20/4 may make artificial ventilation by opening &
shutting a door. The average temp. of sick room
65° - 70° But in fevers & high temp shd be low
50° - but if any affection of air passages then
temp shd. be higher. The temp. shd be kept
at same pt. so shd always have a thermometer

Grates & best way to heat room Sunlight
is one of best dis. disinfectants & so should be
allowed to enter room South room is
best for a sick E & W. better than North.

Putrefaction - fermentation & caused by
good name of Zymosis (see table)
agents inhibiting zymosis (see table)
that cold for clothes &c. SO_2 Sulphur salts
 SO_2 one of most valuable disinfectants
turning ^{powdered. with w. aloe.} in room after Pt. removed.

By chimney & Ster-
ilizers. r. r. of
n. effect in as n.
applied all over.

Phenols - Carbolic acid &c used to stop
putrefaction but will n. destroy products

175. The P. -

48-0. 3m ch.
3m 30 + 4m 30 + 2m 30
for direct a. or
dil. H_2SO_4 + CaCl.

derived from ventilation after using smoke
agents affecting riddance of products of
Zymosis ^{of room - remove paper -} charcoal & ventilation best.
dry earth mixed w faces is good disinf.
Charcoal or gypsum may be used w
benefit thrown down a privy

Nourishing Food. milk cents. all the
kinds of food. It is & valuable for a sick Pt.
It is also pretty easily digested often when
Pt. can take cod liver oil or animal fats
can take cream or butter &c. It is useful
in fevers &c. & powder of digestion & at
a low cost. When nausea present good

to mix lime H_2O & milk given ice cold
 $\frac{1}{4}$ milk for infants cows milk cents.
< casein so H_2O should be added below 6 wscs
add $\frac{1}{2}$ pt as normally & butter is present
in same quantity w woman's milk so
after dilution add 7.s.p. of cream to 6 oz.
add tea spoon of sugar to 6 oz. don. use
brown sugar as it cents. fermentable also.
lactose best St. & milk n. digested - then
add alkali - Lime H_2O for best determines
& coagulation in smaller floculi. For adults

this may be procured by adding farinaceous matter or gelatine s.t. diluted condensed milk agrees better w. a q 2 pts. H₂O 1 pt. con^{milk} cream is often a good substitute for cod liver oil. When Pt. put on milk diet it may be agreeable to Pt. to change to skim milk &c.

Eggs - highly nutritious - generally easily digested - have a constipating tendency so useful in diarrhoea.

Meats & ^{digestible} ~~useful~~ in following order

Veal - Mutton - Beef - Veal & lamb salted pork - fresh pork.

Thymus gland & pancreas & sweet bread & often < digestible.

Chicken wild fowl &c often good for Pt. & easily digested - ducks & geese old n. & allowed

Fish is easily digested by sick. Oysters properly cooked & useful - 1st saw them stew

lobsters & crustaceans generally & not easily digested. Meats & digested as cooked in following order. Boil stew roast &c.

Licbig's cold fluid ext of flesh. (see table) nutritious - has taste of raw meat but may often be made palatable by spices or better claret wine.

Raw meat is often & good for diarrhoea of q. Juice of meat & give to a child - if & disagreeable add sugar. The breath of a q will be heavy & feces smell & bad like spoiled meat but for some reason it is beneficial for q's diarrhoea.

It is n. deleterious to drink H₂O while eating. & H₂O is absorbed so rapidly that it does n. dilute & pancreatic &c juices.

artificial Respiration, pronounced epig-
 gastric region. Hull's method. rolling
 Pt out on side - arm of r side being
 under & press down w. other arm.
 This has a disadvantage of interfering w
 rubbing limbs (This, rubbing, shd be
 done towards a heart.

Sylvester's method better.

Flx arms - press on sides & then raise
 will up back over head. always & begin
 artificial Resp w expiration. See that
 tongue does not fall back in fauces
 Electricity faradic current one fol at
 neck other at diaphragm in front
 object to pass along phrenic nerve

Review

R for nasal catarr

1. carbolic acid 3j

Borax

Sodii Bicarb aa 3j

Rose water

Glycerine aa 3j

water ad. 0j

~~M~~ sig wash spray

2. Iodine Crystals gr iv

Potassii Iodid gr x

Zinc Iodid

Sulpho Carbolate Zinc aa 3j

Glycerine

Aquae

ad

3ss.

3 iv

~~M~~

sig. use 1 as spray to wash nasal cavity
 then No 2 to medicate.

Fables

Opium

n. to be learned.

alscaloids

morphine

Codeine

Narceine

Narcotine

Papaverine

Thebaine

Cryptopine

Hydrocotartine

Pseudomorphine

Protopine

Salandamine

codamine

Rhaeadine

meconidine

Salandamine

Santhopine

acid

meconic

neutral

meconin or opianyl

Pectin

albumen

mucilage

sugar

water

wax

salts

guoscopine

morphium type

morphine

codeine

other narcotic principles } opium

Lactucine (?) Lactucarium

atropine type

atropine deadly night shade root & leaves.

Naturine Thorn apple ^{stramonium} seeds & leavesHyoeyanine ^{strubane}Solanine { Bitter sweet twig, dulseamar
garden night shade herb
Potato & tomato herb

Duboisine duboisia leaves

Preparations of Opium & equivalents of gr

1. Tincture (Salandamine). in 13 (gtt 25)

2. " deodorized " "

3. " camphorated (Purgative) 1/3 ss

4. " acetated

in 10

} 10%

- 5 Wine (Sydenham's Laudum) m 8
 6 Vinegar (Black drop) m 6½
 7 Pills 1 pill
 8 Compound Soap pill gr 5
 9 " Ipecac powder " 10
 10 Confection about gr 36
 11 Extract " " ½
 12 Plaster
 13 Morphia sulph - act Mur gr ⅙
 14 [" " solution gr j ad f ¾]
 15 Suppositories = gr j ext opium
 16 " lead & opium Pb gr 3 Ext op. ½
 17 Troche's Liquorice & O = Ext. Op. gr ⅙
 18 " Morphia & Ipecac m ¼ I. ½ gr
 "

Proteids

Pepsin Diastase Pancreatic
 Proteid food substances

Extractives

extractives of flesh

Mechanical

cowhage

Dynamical

cold, heat, & electricity.

Electricity.

I Statical 'Frictional' 'Franchise'
 application by charge sparks shocks

II Dynamic current electricity

(a) Battery current

Galvanic continuous direct
 Voltaic chemical Primary
 constant

application by passage, continuous or interrupted

(b) Induced current

Faradic Induction
 Electro-magnetic For & Fro
 Magneto Electric Secondary
 interrupted

applⁿ by passage, using current of inner
 or outer coils (primary secondary &c)

Action of Therapeutic Measures

Modifying environment	Modifying	Body temp
" nutrition	"	secretion
" appetite	"	♥ action
" digestion	"	arterial con- traction
" organic status	"	respiration
" fluids of body - some acid alk etc.	"	sensation
" motility	"	certain mor- bid states
" nerve status		
Determining vomiting		
" purging		
" counter irritation		

Agents inhibiting zymosis

Strat	alcohols	Ruxine (Beberrine)
cold	Ethers	Benzoic acid
Sulphurous acid & salts		Boracic "
Phenols		Chloral hydrate
Wood smoke		Vol. oils & camphor
Salicylic acid		Cinchona alkaloid
		Salicine

Agents effecting riddance of prods. of zymosis

1. By removal ^{of germs}. Cleanliness Ventilation
2. " absorption dry earth Charcoal Gypsum
3. " Oxidation (destruction of germs)
 - a. Burning Fire - Phosphorus - Potass Permang
 - b. ox id. by cypro. Chlorine - Chlorinated lime Chlor & Soda
 - c. destr by chemicals. Iodine - Bromine

4. By Complex Process

- Lime Ferrous Sulphate
many metallic salts
3. Sterilizing - Germs. a. Superheating. b. Poisoning. (non fatal) -
c. Keeping cooled. d. Keeping acesidly (Poisonous).
4. Fortifying - Faberius a. Fermenting zymosis (vaccination)
Food, Diccation. Freezing. Pickling.

Anthelmintics

{ Santonin
or n. Ph. } 161 x a

II Against - Round worm

Santoninatis.

always freed + fol.
no by cast oil.

Wormseed oil (chunopodium)
Pinos root (Spigelia)

Santonin
(Coughage)
mucosa

III Against - Thread worm

Infections of cold H₂O

" " bitter infusions (Quassia) 10%

" " containing turpentine (emulsion)

Thin Firmicle. et. used by mouth

IV Against - Tape worm

cath. - s. as in
worm. cal.

Melifera (felix mas) Kameela (horq.)
Kosso (Brayera) Pomegranate (Granat)
Pumpkin seeds (Pepo)

Agents improving Nutrition

Fresh air
Nourishing food
Cod liver oil
Cold bathing
Exercise

Hygienic habits
Chalybeates
Phosphorus
Appetizers + Digestants

Soft meat Appetizers + Digestants

Salt meat extractions
Pepsin Pancreatic
alcoholic beverages

Senar acids
aromatics
Aromulic bitters
Electricity

- P 175 -

Milk.

	ass	human	cow
Caseine	1.82	1.82	4.48
Butter	1.11	3.38	3.13
Sugar	6.08	6.08	4.77
Salts	.34	.45	.60
	9.35	12.02	12.98
H ₂ O	90.65	87.98	87.02

Composition of Fresh Beef.

Water	73.4
Soluble albumen + haematin	2.25
Insoluble albuminous	15.2
Gelatinous	3.3
Fat	2.87
Extractive	1.38
Kreatine	.07
Ash	1.6

Solid Constituents in one pint of

Grains of Nitrogen	Milk	Beef tea (gr. 1 lb. beef.)	Leibig's Ext 1 lb. beef.
	369	148.6	---
Fat	351	---	---
Lactine	468	---	---
Extractives	---	95.8	95.8
Salts	72	105.7	105.7
	1260	305.1	201.5
For tissue & energy	1188	148.6	---

Sirbig's cold fluid ext of Fresh
minced meat 1 lb. : soft H_2O 8 oz. HCl 4-6 m.
Salt $\frac{1}{2}$ - 1 $\frac{1}{2}$ Macerate 3 hrs
Strain through hair sieve - wash residue
w $2\frac{1}{2}$ H_2O Freeze cold or n. hotter th. 120°

Percentage Composition

	Nitrog.	Starch	Sugar	Fat	Salts
Bread	8.1	47.4	3.6	1.6	2.3
Oat meal	12.6	55.4	5.4	5.6	3.
Indian "	11.1	64.7	.4	8.1	1.7
Wheat flour	10.8	66.3	4.2	2.	1.7
Rye meal	8.	69.5	3.7	2.	1.8
Barley "	6.3	69.4	4.9	2.4	2.
Rice	6.3	79.1	.4	.7	5-
Pear	23.	55.4	2.	2.1	2.5-
Amurrot	---	82	---	---	---
Potatoes	2.1	18.8	3.2	.2	.7

	n.	starch	sugar	fat	Salt
carrots	1.8	8.4	6.1	.2	1.
lean beef	19.3	—	—	3.6	3.1
fat "	14.8	—	—	29.8	4.4
" pork	9.8	—	—	48.9	2.3
Poultry	21	—	—	3.8	1.2
white fish	18.1	—	—	2.9	1.
" of egg	20.4	—	—	—	1.6
Yolk "	16	—	—	30.7	1.3

agents affecting chemical reaction

Alkalizing. Alkalies, alkaligenous anions

Potassium Sodium Lithium
Calcium Magnesium Ammonium

acidifying.

H_2SO_4 HNO_3 HCl
Nitrohydrochloric
Hydrobromic
Phosphoric
lactic acid
Tartaric "
Citric "
aromatic
Benzoic "

Caustics.

Penetrating

Potassa

H_2SO_4 type

Bromine

Chromic acid

Mercuric Nitrate soln

acetic acid

Circumscribed.

strat

Potassa w lime

Zinc Chloride

Silver Nitrate

Dried Zinc Sulphate

" alumin.

Astringents

Cold.

ferrous salts w inorg acids

Sol. compds of Ag

" " " Cu

" " " Zn

" " " Ca

Sol compds of Pb

" " " al.

Calcic Hydroxide + Carb.

Ammonio ferrous sulphate

Sulphuric acid	astringent + vol.
Tannic	" oils + resins.
Gallic	"

Antipyretics

1. By abstraction of heat
cold applic^{ns}.
2. By inhibition of heat production

Salicylic acid + salts	
Cinchona	alkaloids
Salicin	Buxine (Biburne)
Alcohol	Phenol Thymol
Reserin	

Agents provoking sweating

Heat	nauseants
Jaborandi	Opium + Opae.
<u>combined w. heat.</u>	

Alcohol	Volatile oils,
Spts nitrous Ether	Harmless resins
	Harmless bitters.

In Fevers

Antipyretics, Cardiac depressors.

Agents checking sweating.

Cold	Dryot	Sulphuric acid
astringent		Belladonna group

Diuretics.

- II By increase of matters for excretion
Water Potassium salts
- III By increase of arterial tension
squill : Fox glove : Caffeine
sassy.

By irritation of kidneys.

Line of Ferric chloride Diuretic vol. oils
 alcohol resins
 Spirit of Nitrous Ether Squill
 Broom scoparins

Agents affecting the Urates.

II Increasing force & frequency

Heat	acetic acid	Caffeine
Food	Nitroglycerine	Opium (1 ds)
Ammonia & carbonate	Amyl Nitrite	Atropine group
alcohol	Vol. oils	
Ether	Camphor	

III Increasing force: lessening frequency

& in a small ex. in Dropsy. } Squill (scilla) Fox glove {sassy}
 all II in overdose & } Black snake root Cimicifuga Digitalis
 previous. } Opium Full dose

IV " Lessening force & frequency

continuous cold	Vegetable acids (sond)
Bleeding	Trimethylamine
Antimonias	aconite (veratrum viride)
Potassium salts	amert ⁿ Hellebore
	with increasing.

Agents Affecting - arterioles.

II " Provoking contraction

Lead acetate	chloral (1 ds)	Nux Vomica
ammonia	(?) cinchona "	caffeine
alcohol (small dose)?	Fox glove	Opium (1 ds)
Ether	(?) Ergot	Belladonna group

Locally cold & astringents

III " Provoking dilatation

alcohol (full ds)	chloral (full dose)
Chloroform	Amyl Nitrite & Nitrogly
cinchona (full dose)?	
Locally heat & irritants.	

Agents Affecting - breathingI Strengthening.

Heat	Artificial resp ⁿ .	Strichnine group.
Shower of cold	Ammonia	
Electricity	Atropine group	

II Enfeebling

Continuous Cold	Tobacco group	Veratrum Viride
Cyanides	Humboldt "	Opium
Chloral	Aconite	

Agents blunting Sensation

Nitrogen Monoxide	Chloral group
Bromides	Trump
Cyanides	Humboldt
Carbonic Acid	Yellow Jasmine
alcohol	Aconite
Ether	Veratrine
Chloroform	Opium group.
Iodoform	Cold. - Belladonna

Agents Affecting reflex irritability.I Enhancing

Nux Vomica group	Belladonna grp.
Coffee	Electricity
Opium (1823)	"

II Blunting.

Nitrogen Monoxide	amyl Nitrite	Yellow Jasmine
Bromides	Nitroglycerine	Calabar bean
alcohol	Chloral	Opium grp.
Ether	Nerine Vol. oils &c	
Chloroform	Tobacco grp.	

Special Paralyzers of motor nerves

Humboldt	Curare
Belladonna group.	

Valeriana
asafetida.

Agents Inducing Sleep.II By Compulsion.

Nitrogen monoxide	chloral
alcohol	stump
Ether	stops
chloroform	Opium group

III By removal of Obstacles

Drowsiness: quiet	Bromides
Relief of hunger & thirst	Nervine vol. oils &c
" " pain & spasm	Tobacco
wholesome fatigue	

IIII By enforcing muscular rest
stimulus groupAgents inducing wakefulness.

coffee group	Silladoma group
--------------	-----------------

"Antiperiodics." (ov. malaria.)

Arsenic	Cinchona alkaloids
Salicylic acid & Salts	Salicine
Eucalyptus oil	Buxine (Berberine)
Apiole	Jaborandi (nattars)

"Expectorants."II Relaxing

Steam inhalations	Opaeae
Tartar Emetic	

III Irritant

Ammoniac chloride	Blood root
Squill	Seneca
certain vol oils & resins & balsams	

28/4 Remedies for Urinary Catarrhs

certain vol oils & resins	{ copaiba. cubeb. & sandal wood oil.
Barberry leaves	Pavina Brava root
Pipsissewa "	

pat. & cut. to n.
cay. & parts.pat. & cut. for
cay. & parts.

relieves - lungs. Lung rx.
 +. empties all P + also
 - duodenum. gall blad.
 In Proct. w. hernia or
 P. w. Cerebral trouble,
 antheromata artys.
 & vis. w. Gastritis

Emetics

II Non Haulcating (non irritating)

Apomorphine

(Irritant)

Cupric Sulphate

Alumina

Zincic "

Mustard

Yellow Sulphate of Mercury.

III Haulcating

(Poisonous)

Tartar Emetic

(Non poisonous)

Specac. n.s. sum +
 mud of all.

Auxiliary.

Tickling throat

Luscious draughts

Cathartics.

(P. 9.)

Factors of action

(1) Increased motion (2) Increased secretion

Acting chiefly by (1)

Castor oil

aloes

Rhubarb

calomel

Acting chiefly by (2)

Salines

Acting by both

Senna Rucosithon

colocynth

Jalap

Gamboge

Scammony

Croton oil

Podophyllum

Elaterium

Specially quick

Croton oil

Specially slow

Castor "

aloes

Jalap

calomel

Senna

Podophyllum

Salts

Specially on duodenum

calomel

Podophyllum

Specialty on colon

Alves.

Unreliable - -{ Blue pill.
Calomel
Croton oilLaxatives

(Stools faecal & mucous)

Wheat bran

Oat meal

Molasses

Manna

Edible fruits

Olive oil

Linseed oil

Sulphur

Magnesia

" carb.

Counter IrritantsI Depleting

Succus

cups.

II Disorganizing

Setons, Cauterization Issues

III Blistering

Cantharides ammonia water Heat

IV Pustulating

Tartar Emetic Croton oil

V Directly reddening & Smarting

Heat Electricity Iodine

Lincaments &c containing

alcohol

Ether

Chloroform

ammonia

Irritant vol oils

" resins

VI Various Irritating

Turpentine oil

mustard

capsicum

Heat

Opium poison If pupils unvaryingly contract
then & likely brain trouble & n opium poison.
So also if any unilateral paralysis
Hydrocephalus is a may resemble ^{diff.} abdominal
alcohol poison gives this smell
If any prep of opium (n. morphine) then get pec-
uliar smell The effects come on 15-30 m.
after taking - but et. may perform intelligent
acts 2-3 hrs after. The P. may come
out of coma & talk intelligently then go into it
again & die. If pupil b.c. rapid - there is
grt. danger - & pupils dilate just before death

Belladonna

Excites n. nervous system & blunts n. peripheral ends
of n. nerves. The brain is over busy & there may
be real mania w. hallucinations &c.

Increases n. O's action by paralyzing n. pneumogast.
pt. often affected w. disuria Peristaltic action
of bowels increased by paralyzing n. restraining
nerve (Splanic)

Tendency to dry up n. skin - glands tears mucus &c.

Summary

Increased action of heart & respiration (later dulled)
periphery may be higher temp.
Increased vital activity & secretion of urine
but bladder forbids excretion

44 - In applying electricity about head use n. sponges
wet Galvanism Positive pole in front. - behind &
apply - 1st In applying fr side to side there
is oft. disagreeable sensations.

In applying to spinal cord. - n. sittings old & short
may electrify n. whole length or localized pt. using Galv.
If Faradic fails to act on muscles then use Galvanism
w. + pole above & on one side of n. nerve pts & - pole
over belly of muscle

Neuralgic pains oft. cured using Galv. current just
strong enough to be felt Faradization will n. cure
but may relieve as a counter irritant

Abnormal Anaesthesia is best relieved by Faradization

using dry sponge or wire brush st. w/it spgs briefed
Paralysis is a strong hold for elect. (1) st nec.
to restore integrity of a spinal cord (2) " - muscle
simply waste b.c. they r. n. used
For (1) thru Galvanism but but wait until irritability has disappeared
For (2) as a rule - muscles respond best to Faradic current

Review -

Modifying environment.
air sld be pure. plumbing.

II. Empty traps by. 1 Back pressure
2 Siphon
3 Evaporation

Pan closet -



sld be no covering.



Clothes sld n. be dried in sick room
as w g Don. use as sitting "

Remove all food at once - after a meal
" at once all refuse fr body so not use
artificial light th. nec. for it uses up O.

Remove fr a room all woollens upholstery - curtains
In scarlet fur, fox v. a carpet sld be taken up
& have wooden or cane bottom chairs & room as
bare as possible.

When I go into room
notice whether air smells bad Pt. sld have
3000 cu. ft. per hr. to change air & th. 3 times per
hr. will cause a draught.

may assist ventilation by open fire & in summer
may put a candle in a grate If Pt. is too ill
change apartments may carry Pt. all up
open windows &c.

Temperature consult Pt's feelings to certain ext.
but as a rule sld be lower than for healthy person
& esp. in furs.

1/4 & 1/2. Hair plenty of sun light.

Rid dance of products of Zymosis

I Removal is best when possible In using
Sulphurous acid - sld have 2 lbs 3. in 10 c.ft.
Chloral - special use to preserve urine for examination

Ferrum sulphate is one of the best except for clothing
for it stains. FeSO_4 may be used for "
The strength of Ferrum sulph soln sold is $\frac{1}{2}$ lbs
to Gal. of H_2O or if used on a scale hang a basket
w. a salt in a barrel of H_2O . It is v cheap at 1 lb.
For foul wounds one of the best is Permang of K
or chlorinated lime or soda

$\frac{1}{4}$ In contagious, frost etc there is no chem.
agent strong enough to disinfect while Pt. is there
so take Pt. out & use SO_2 or ventilate

If bad smell may use cologne etc

For clothes, etc use following Rx of Nat. B. J. of Health

Zinci Sulph.	$\frac{3}{4}$ iv
Sodii Chloridi	$\frac{3}{4}$ ij
Aquae	C i

II Anthelmintics

Santonin is almost tasteless grubby & irrit. to tongue.
over dose is poisonous

III make from prob. need next *Scamella* being
cathartic itself does n. need a drug to follow

Food.

Proteids conts. n. always a necessity, difficult
digestion. Products poisonous, metamorph.

Disinfectants for S. if v. cum. & sour S. rt vomit.

If bridle - nausea & cum. & have colic & purge.
may prevent fermentation of food by min. acids. or - Salts
of S. sulphites or hyposulphites. If bitter & mixed - Quinine
& drugs. here act. as germ sterilizers.

No clinical results in giving germ. sterilizers, when
septic germs. & in - S. unless possibly it be Stg. in Syph.
or in Malarial diss.

Fertilizing - Pabulum Ferment - vaccination
" will undoubtedly be found applicable to other
sim. to the carlet fever. Plith etc.

Antiseptic Surgery. - 1st open method always
passing, and w. iodiform. - 8% Cl. Zn. sol. - mouth
soficid. - habulum.

usg. powerful
sterilizers.

R^o -Cystitis.

Saturated sol of

Kali chlorati $\frac{3}{4}$ x ii

Elx Opii (Me Mann)

Fl. Ext Belladonnas $\frac{3}{4}$ iNo $\frac{9}{16}$ XV

Liq. as Injection

vsq Lister to prevent germs coming in contact.
at a time sterilizing a wound & inside.

as a germ in atmosphere & n. v. numerous
a spray is n. as v. import. Do n. have any
cavity in a wound. - It is aseptic. -

5-7% sol in spray. 5-7% or 1-2% for washing
wounds & for dressings. W. mucus. Laid 7c.

1-40.
Dry carb - pres. is aseptic.

Notable Parasitocides.

Mercurials. (is of Luroful upy 11g 11g)

Chlorine Iodine

Sulphur & mercurials.

Borax.

Oils & Oleic acid.

v. vol. Alcos. & Eth. cos.

- also. chloroform.

v. many bodies of "Aromatic" series

Therapies. - aromatic acids.

Aromatic hydrocarbons.

volatile oils.

staphisagria.

Parasites & animal &
veg. 1st lice. itch

spider. veg. food. Tinea

Borax. by its alkalinity removes
- grease scales &c. ∴ besides
destroying - parasite & improves
- wound of skin.

Oils & acids. acts mechanically
by excluding - air. - Oleic acid
v. good as so diffusible. - nitro-
Oleate of stq. on w. acct. is v. best.

Head lice. if mild. combing. washing w. 1% w. borax. - also.

if v. bad. cut - hair short. 5-7% oleate. n. rubbing in v.

as might prod. mummification. or cream of silicic

v. Borax.

Body Lice. turn - clothes & wash. P7.

Nels. Sulphur, oint.

veg. Parasitocides. v. ft due to unhealthy cond of skin.

- P161. - anthelmintics. -

Decomposing AgentsDirect.

Ferrous sulphate + oth. metallic s's.

Potassic Permang.

Zinc. + oth metallic chlorides.

Lime

Chl. Br. + I. (P 3 r. indirect on moisture.)

Ozone. (by exposing P. Is a deodoriser + will n. dest. germs)

sulphur dioxide + S'ous. acid. (in prop. quant. dest. life)

~~Corrosive~~ acids. (oil. as. w. n. atase Pb. or Lithum pipes)

Fire.

Indirect.

Dry Earth. (n. earth holds + waters until oxid?)

Gypsum (by n. s. way)

Charcoal (still < powerfully.)

Diluted ~~with~~ with air + H₂O.Notable Germ Sterilizers.

Mercuric Chloride. (too corrosive for Surg. cry.)

Chronic acid. + Salts. (In prep. ligats)

Potassic Permanganate. too weak for antiseptic.

Zinc chloride. (used for wash. when c. n. apply antiseptic)

Alumina acetate.

Aseptic compounds. (Two ferrous for Surg. cry.)

Chl. Br. + I.

Oxygen. - free access. - feeds + microorganisms but n. s. wort. ^{forms}

Sulphur dioxide + derivatives. (n. s. import aerial)

Boric acid + Salts. (Borax)

The volatile alcohols + Ethers.

also. - chloral hyd. - Iodiform

V. many bodies of "Aromatic" series.

(Thimble, aromatic acids + hydrocarbons.
vol oils + Balsams.)

Quinine type of Alkaloids: Salicine

High Heat. (limited in use. but with wet or dry clothes)

all P organic sterilizers. is simply as. n. a decaying.
of carb acid is mixed w. + fabulum. with stop + decomposition
old be +. in .05% sol.

Notable Principles of Food & Drink.

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Organic. -

Nitrogenous.

Proteids.

(allied bodies, as gelatin
(extractives & albumoids.

non-nitrogenous.

Fats.

Carbohydrates (also)

Inorganic

Salts -

Water. -

by - Pancreatic juice.

tissue. Proteids. also fr. veg. sources. esp. - grains, seeds, etc.

Pancreatic juice saponifies - fats & foods. glycerine.

any & quan. of fats & hard to digest as - juices c.n. get at them

i. - easier digested. when emulsified.

Subs. contg fat. { lean meat - liver - egg - milk - Seeds of plants. if covered.

Carbohydrates - { import distic. starches & sugars.

Sugars cane grape & milk P.T. easily absorbed in digest -
cane being changed into grape by absorption.

Sugars. + liable to acid fermentation esp. in - & of dispepsia

Sugar of milk is - only import animal sugar.

cane sugar fr - cane. Beet sug. is cane.

Starches. + vegats. contg. P. usly. cont. < or > sugar usly. grape.

Leaves + stalks do n. usly. cont. sugar.

Sugar of milk is < > liable to undergo acid fermentation

∴ { Pts. w. Saccharine diabetes c. taste milk.

Starches - spherical or ovoid grain. starch grains

swells w. H₂O. forms starch paste.

chem. starch formed into sugars. in plants by diastase

+ by Saliva or Pancreatic by Ptyaline wh. P.T. cont.

chang'g it 1st into glucose. & change easier if cooked. boiled.

Starches but in a >° liable to an acid fermentation

Source { ly. fr. vegs. Glycogen of liver is a starch rather the Sugar

Cuds of cereal grains. arrowroot - sago - Tapioca.

also is a fluid & directly absorb. fr - G.

Salts chlorides. Phosphates. Sulphates (organic) citrates acetates etc.

of Na. K. Fe. enter - or are. w. change.

H₂O abt 1/2 - wgt. of food is H₂O.

Proteids - r. coag. ble by
heat. ex. easier. but " "

s. acids.

Proteids must undergo a
real chem. change to be
digested. act. on by -

Gastric juice. & changed
to oth. proteids wh. r. n. coag.
usly. P. c.d. Peptones. r.
quite diffusible. & sol.

Proteids wh. less th - & un-
oflet. changed. also into peptones

{ com. source of Proteids. r. animal.

N. 3 1/6 gr. C. 4862 gr

(water free)	(ounces avoird)	
Albuminates	4.587	6-7
Fats	2.964	3.5-4
Carbohydrates	14.250	16-18
Salts	1.05	1.2-1.5
22.		26.7-30.
average		(hard labor)

	ass	♀	cow
Casine	1.8	1.52	4.48
Butter	1.1	3.55	3.13
Sugar	6.08	6.50	4.77
Salts	.34	.45	.50
	9.30	12.02	12.98
H ₂ O.	90.65	87.98	87.02

Milk

Casine will n. coag. on boiling. Fats in cream
 & by churning butter. Fat is v. easily digest.
 Reac. sld. is faintly alkaline or neutral. Milk is
 soon undergoes acid ferment. & lactic acid being formed fr.
 - sugar. Coag. of milk of animals & chew-
 and coags. in a n. solid mass & a calf requires 10-15
 & chews. in a ass & non chewing. coags. in 1 minute.
 Flocculi. & is v. impert in feeding ♀.
 Afternoon milk is richer. & last part of milking aldering.
 Lactomet w. sld. show. n. > the 5-10 & abt. 10. of cream.
 milk may be poisonous. aft. certian. - In heat. - total
 treatment. During pregnancy. Dis to udder. in any of
 & candida. & milk foods. Cholera Morsus aseptis.
 In ♀ acute inflam. do n. necessarily affect milk.
 Dilution of milk by cont. animal H₂O. or H₂O for nursing.
 Sour milk & when acidity is v. indistinct will affect ♀
 & " " foods. nausea vomitg. diarr. re. may be + ♀
 lime H₂O. Bi-carb. Na. c. neutralize. milk, sld Boil.
Distill the above milk is abt as amount. & easily di-
 gested. of all foods. Pt. c. take abt. 2 Qt a day.
 1 quart often. in Feb. vis.
 In non. Feb. vis. speedily bear refusal - costiveness.
 & is digest. - & openness as n. enough bulox.

W. Lime & W. is an anti emetic. - v. good. - in ^{upper} cases
near of V. in mild cases. $\frac{1}{4}$ lintho. if < succ $\frac{1}{2}$ ice cold
r in v. ds. Zi. v. good in vomiting of preg.

If snow. can for q. old right. but if don. enter have
mixed milk as then $\Rightarrow$ danger of poisoning.

as ~~but~~ ^{caseine} in ans to q. & diff. of coagulable
+ H₂O. mid 6 weeks. $\frac{1}{2}$ lb. - 3 mos. 1st - 2 mos.

in 7 mos q.c. taste pure milk.

+ Zi. of cream. to Zi. milk. abt. s. amt of sug of milk
or. lump sugar. 1 pinch of salt. 1 gr of K carb.

or dilute - milk w. Lime & W. v. will change -
coagulability of milk. but v. free. alkali inter-
fere. w. nutrition. apt. a while. $\therefore$ dilute
early H₂O. if q. be n. too young.

Zi of Gelatin to Zi. of milk. or Gum arabic.

Best way is by partial digestion. Peptonize milk.
so it ready for absorption. v. is expensive so
- gelat. method for 1 cases.

- mortality among cows milk fed q. is v. great $\therefore$ sld
fed - q. w. q.s. milk of less. as cow milk is v. good.

all vessels re. sld be perfectly clean, scald^d. w. a
alkali. Bicarb Na. + $\frac{1}{2}$ - quicker & colder -

milk c. except better.

Condensed milk is preserved by sugar. sld v. agree when
cow milk will n.

Ches. is almost all caseine. is indigestible esp. new
Butter is a v. good food as solid cream.

Why coag^d milk in diff ways.

Koumiss alcoholic distil of milk is esp. good
in diarrhoeal dis. of q.

+ 4% of sug of milk $\frac{1}{3}$ q. milk is taken & coag^d.
- why + 0. case. while fermenting milk is v. richly
shaded. good koumiss sld cont no sug.

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It cunts. v. also.

oft. - bottle open? sld be kept
 cool. + last n. to sleep ov. 12 hrs. Ref. giving to
 summer - CO_2 . new sweeten it. new + old. + n. for
 2 hrs. aft. or milk.

Egg v. good food. even undergo changes. + r - better when perfectly
 . good egg sinks in 10% NaCl sol.

meat. cont no carb. hydrates.

meat is { digestible. of butcher's meat. with t.s. 3 poisonous
 beef almost as digestible. as meat. veal + lamb. + con-
 siderably < indigestible.

Sweet bread Thymus. glands Pancreas etc used but n. so
 Thymus is v. nice for unvaliscentis.

misolence. meat. P wh. cont. ova of parasites i.e. tape
 worm + trichinosis. P c. l. seem und. micros. measly. (cox)
 diseased meat. if an. subject to anthrax etc.

or comfort. c. educate - to stand v. putrid meat.

Poultry - game - wild fowl. rabbit. c. l. easily
 digest. as no fat mixed w. flesh. esp. game birds.
 (n. ducks) chicken turkey etc.

Fish. is v. light + easy - white meat. + easily digestible
 unless in v. fresh.

Encrustacea. crabs, lobsters. etc. poisonous. as it eats decom-
 also common to deteriorate as fish slowly dis. aft. taken
 out of H. O.

Molluscs. oysters. + digestible as soft. < as if raw
 if cooked lightly. be hard if < cooked.
 reject - eyes muscles. + only eat - liver if sick.

Fried meat. broiled etc. + v. indigestible.

all P. latter duty. sld. be rather fresh. but meat
 sld. be kept. until just before merific. sets in. or after
 rigor mortis has passed off. meat sld. n. be cooked to
 boil - stew + r. of digestible. for opposite.

as far of components of meat v. sol. in H₂O. ∴ flung
 joint. in H₂O. at boiling temp. v. for 5 min. then cold H₂O.

is + & then allowed to simmer.

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Roasting at r.s. idea. 1st put in high heat. then put when a heat is u- so high. for s. time.

{ Roast r. now based on nearly so good nor digestible
Fry become highly charged with a change, grace. & old
always see a morsel of griddle.

Soup. when flesh & bones are cut of gelatine. raise ^{slowly} heat
when not strained like a stew.

Broth & clear soup. r.v. nutritious when clear.

Beef tea. chopped fine meat. stand in cold H₂O for s. time
then slowly boil. & for sick. old u. or strained. & may

mechanically break down insol. albumins. subs of meat.
If use cold H₂O. w a v. acidulated as in Leibig's Cold Fl. Ext. of
meat.

Minced meat 1 lb. : Soft H₂O. 3/4 pt.

Stalk. 4-6 qt. : Salt 1/2 - 1/3

macerate 3 hours : strain through hair

sieve. wash residue w. 2/3 H₂O.

H has a disagreeable raw taste as has u. in heat.
at all. may flavor w. spices wine. &c. may leptonize.

Oleomarg. to properly leaven, & better the few water

Tartaric acid + sodic tartrate = Yeast powder by which CO₂ is prod.

H kind is easier to use than ordinary Yeast bread.

Stale bread < better for dyspeptic.

Cassava & digestible. flour & salt & H₂O. w egg or
milk + ?

Brown bread is < nourishing.

Rye is & like wheat. it is acidulous in flavor &
prods. diarrhea

Oat meal is & nourishing & digestible. it is liable to
turn sour on - S. & disagrees.

Indian meal conts. fats. & is liable to sour.

Barley is & easily digested. Barley H₂O. + 10 to 15 mls of g.
allowing - barley to sprout. = malt. conts. diastase.

Rice. from barley & conts. starch & easily digested. (they cook S.)

Peas cont < am^t of nitrogens. but rather indigestible
arrowroot. almost all starch & easily digest^d

Sago. & Tapioca " " " " but n. v. " "

sld. only use lump. sugar. for sick.

In masking gravel. or fainaceous. food take lb. of flour
in bag. plunge into H₂O 2/2°. for 10 hrs. Take out &
grate up - central hard mass. to mass. & gravel out
of. n is low - diff^t. but not. q's food & made.
but n starch is hard to digest. still. s. good results.
See figs. Infant food.

Potatoes. if properly cooked & old enough to be easily digest^d

Succulent veg^{ts}. - stalks & leaves. v. starch & sugar
cont salts. ∴ good for sensory. & give bulk.

Fruits. laxative & wholesome. P 2 latter veg^{ts}
sld be perfectly fresh. if stale. foods. choleliths attack.

Artificial digestion.

Remembering & in an alkaline fluid - Pancreatic fluid is
one of strong est digestants.

Pepsine fr. - 3 of fig. scraped off. when 3 fresh &
supt dry. n - Br. P.L.

Schiff's method. inner layer & massed in a sil HCl
sol. & NaCl. & Insects - Pepsine.

Pancreatic by laxative fresh figs. pancreas. chopped
& steeped in H₂O. + 2 to 3. also. now made in Boston.

used by adding to food 15-20 min. before eating abt 3/4 &
warmed. n thins food. - food sld. n. be boiled

only as warm as a mouth c. can

a & thorough heating. is food^d by + g. - sub to - food for 1 hr. &
- food kept at 140° F.

In milk. will food. a better taste. ∴ 1st + ~~Ca~~ ^{Ca} H₂O (1/3) + 20 gr
vic^{ts}. of Na. warm to 140 for 1 hr to 1 1/2 & when it comes
to taste bitter. boil for a minute or 2.

Small so treat^d is v good. + g. of f. Liquor Pancreaticus. &
Clinically n is found to be v valuable. - imitable 3 bearing H₂O

diastase - changes starch to sugar & is all. st. v. good 187
new Ph. Ext. of Malt. is of no good unless used in alkaline
sol. but Pancreaticum is - better as will do it & L.

Enema. Physiol. fact = food subs. c. h. absorbed & nourish. Pt.
Peptonized food & fluids & jelly. act - best. Inj. of B. r.
v. objectionable.

Notable Principals of Food and Drink.

Organic.

Nitrogenous.

Proteids

(allied bodies or gelatins)

(Extractives & alkaloids.)

Non-nitrogenous.

Fats

Carbohydrates

(alcohol)

Inorganic

Salts
water

Functions of Food & Drink.

1. To furnish Substance for Growth

2. To make up Loss.

(Metabolism)

(By direct exertion)

3. To regulate Processes.

Proteids & H₂O. will perform all of P functions.

Fat in is a Proteids but not nutrition. Extractives assist
oxidation but no nutrition.

non-nitrogenous. c. n. alone nourish animal. metabolism
does not give rise like proteids. but of CO₂.

Salts & H₂O. must be cont'd in any anim. dietary. salts in-
crease in ox. like extractives.

Impus. to give any precise diff. for food, aliment etc.

(cont'd on P. 1-2 & c)

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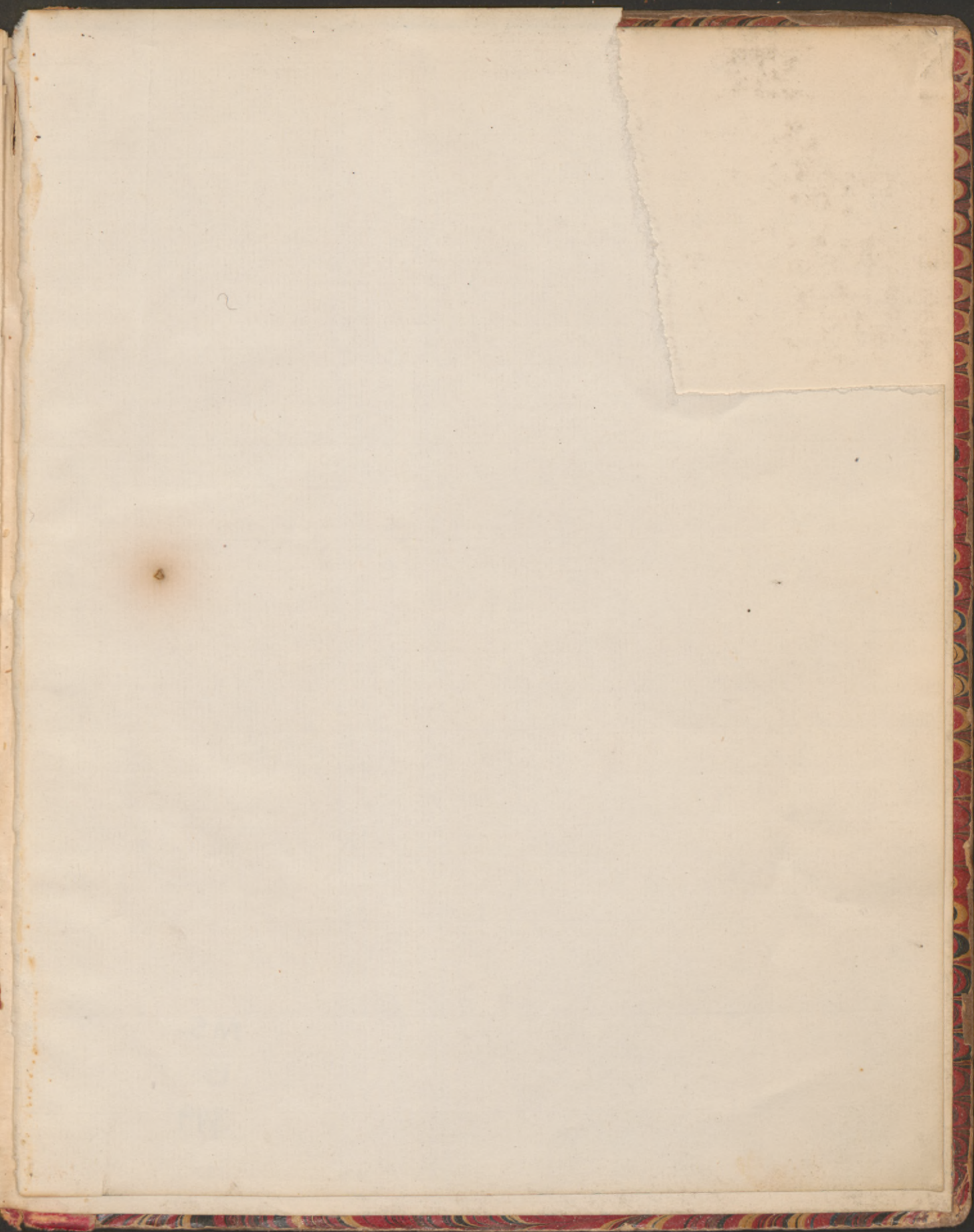
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