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A GUIDE . . .

TO THE

Dissection of the  
Human Body

BASED ON

GRAY'S ANATOMY

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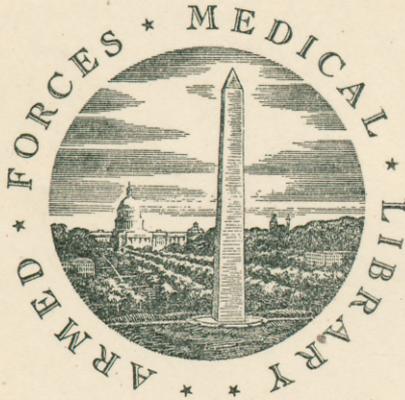
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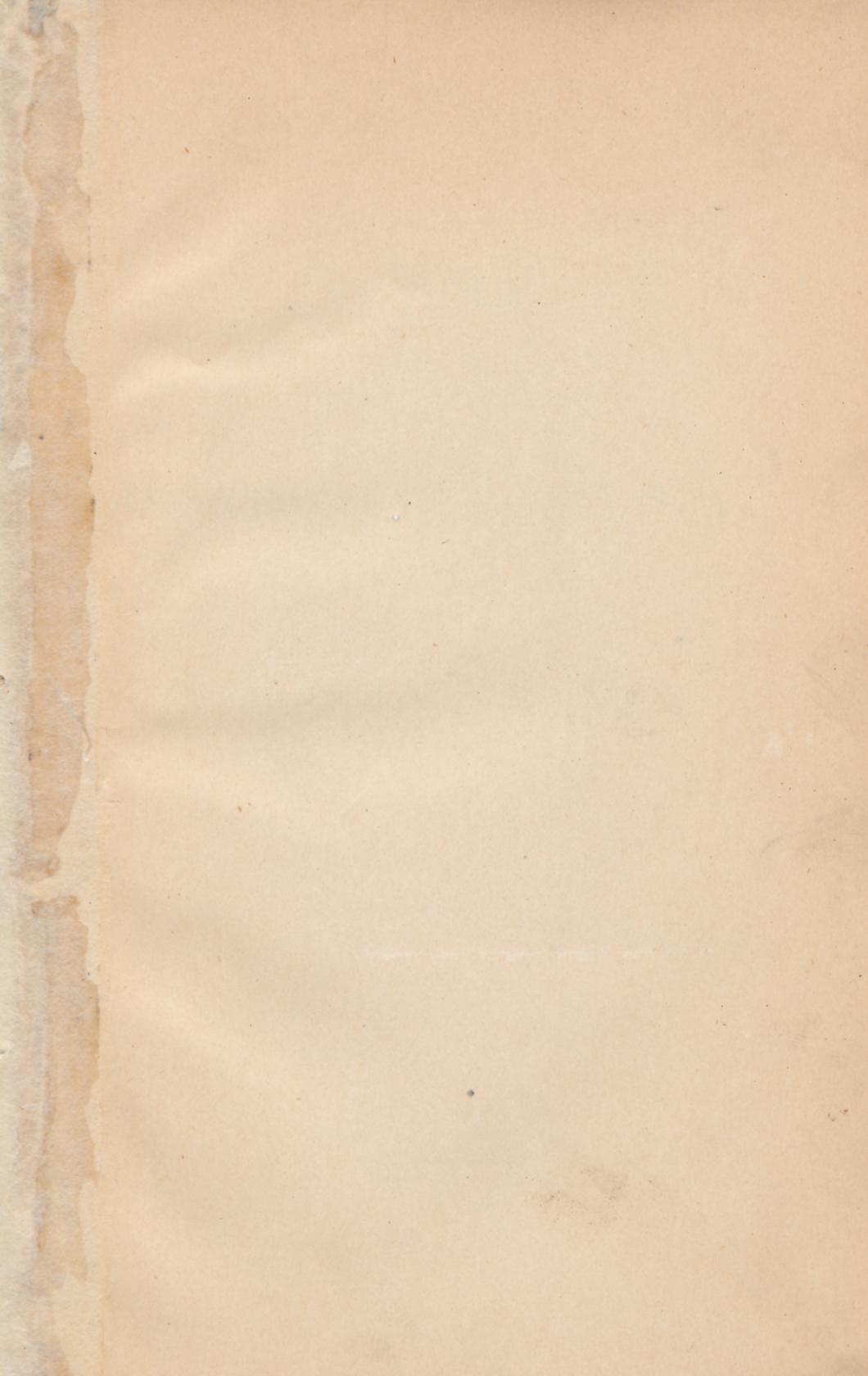


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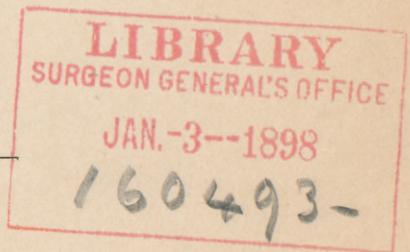
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OUTLINES OF ANATOMY

A GUIDE

TO THE

DISSECTION OF THE HUMAN BODY

BASED ON GRAY'S ANATOMY



GEORGE WAHR  
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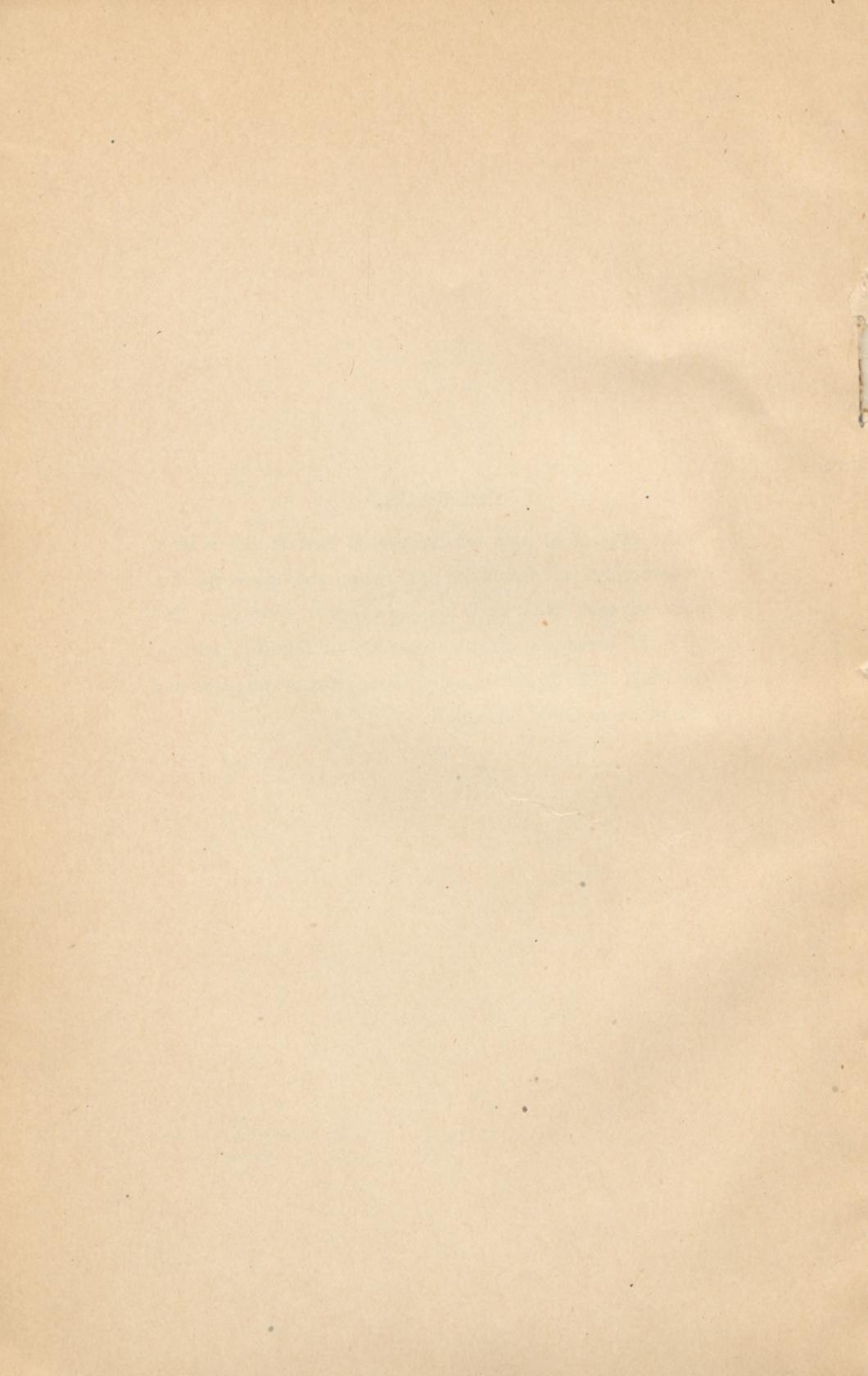
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## PREFACE.

The objects of this outline are to inform the student what structures are found in each region and where the description of each structure is found in Gray's Anatomy. The outline is based on Gray's Anatomy—thirteenth edition, dated 1897. The figures in parentheses refer to the pages and to the plates in Gray's Anatomy.



# UPPER DISSECTION.

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## Cranial Region.

Surface form of head and face (222).

Outline superficial nerves of head and face (814)  
(Fig. 489).

Outline arteries of head and face (553) (Fig. 349).

Outline veins of head and face (651) (Fig. 381).

### *Dissection* (391).

Coverings of skull are: 1. Skin, 2. Superficial fascia,  
3. Occipito-frontalis and its aponeurosis, 4. Loose  
connective tissue, 5. Periosteum.

Skin of scalp (391).

Superficial fascia (392).

### NERVES:

Supra-orbital (798).

Supratrochlear (798).

Auriculo-temporal (806).

Orbital or temporo-malar (801).

Temporal branches of seventh (814).

Occipitalis major (828).

Occipitalis minor (831).

### ARTERIES:

Supra-orbital (568).

Frontal (570).

Superficial temporal (558) (Fig. 349).

Posterior auricular (557).

Occipital (557).

### VEINS:

Supra-orbital (651).

Frontal (651).

Temporal (652).

Posterior auricular (653).

Occipital (653).

## LYMPHATICS:

Read lymphatics of head, face and neck (681).

## MUSCLES:

Occipito-frontalis (392).

## Auricular Region.

*Dissection* (393).

## MUSCLES:

Attrahens aurem (393).

Attollens aurem (394).

Retrahens aurem (394).

## NERVES:

Posterior auricular (813).

Auricular branches of auricularis magnus (813).

## ARTERIES:

Posterior auricular (557).

FACE.—(Fig. 26).

## External Palpebral and Orbital Region (392) (Fig. 269.)

The appendages of the eye (907).

The lachrymal apparatus (909).

*Dissection* (394) (Figs. 268-269).

## MUSCLES:

Orbicularis palpebrarum (394).

Corrugator supercilii (395).

Levator palpebræ superioris (396).

Tensor tarsi (395).

Tendo oculi (395).

## NERVES:

Supra-orbital (798).

Supratrochlear (798).

Infratrochlear (799).

## ARTERIES:

Supra-orbital (569),

Frontal (570).

Nasal (570).

Palpebral (570).

Lachrymal (568).

*Expose the tendons of muscles inserted into sclerotic coat of eye (396) (Fig. 271).*

**Nasal Region.**—(Fig. 269).

MUSCLES OF NOSE (398–399).

**Superior, Inferior and Inter-Maxillary Regions.** (Fig. 269).

*Dissection (394) (Fig. 268).*

MUSCLES:

Superior maxillary region (400).

Inferior maxillary (400).

Inter-maxillary (401–402).

Platysma myoides (407) (Fig. 269).

PAROTID GLAND (946) (Fig. 569).

Description of gland (945–946).

NERVES:

Facial (814) (Fig. 487).

Description (811–812–813–814).

Branches:

|                |   |                  |
|----------------|---|------------------|
| Temporo-facial | { | Temporal.        |
|                |   | Malar.           |
|                |   | Infra-orbital.   |
| Cervico-facial | { | Supra-maxillary. |
|                |   | Infra-maxillary. |
|                |   | Buccal.          |

Branches of fifth nerve (Fig. 482).

Description (796).

Infraorbital (803).

Malar (801).

Auriculo-temporal (806).

Mental (807).

Mylo-hyoid (807).

Auricularis magnus (831).

**ARTERIES:** (Fig. 349).

Facial (554).

Transverse facial (559) (Fig. 349).

Middle temporal (559).

Infra-orbital (562).

Inferior dental—Mental branches (561).

**VEINS:** (Fig. 381).

Frontal (651).

Supra-orbital (651).

Angular (651).

Facial (652).

Temporal (652).

Internal maxillary (653).

Temporo-maxillary (653).

Posterior auricular (653).

**FASCIA:**

Masseteric (403).

Temporal (403).

**Skull.**

Vertex (208),

Lateral region (214).

Temporal fossa (215).

Spheno-maxillary fossa (216).

Anterior region (217).

Orbit (217-218-219).

*Remove skull-cap as described on p. 702.*

Internal surface of skull-cap (208).

Middle meningeal artery (560).

Membranes of brain.

Dura mater (703).

Arachnoid (704).

Pia mater (705).

*Remove brain.*

Exit of cranial nerves through dura mater and base of skull.

Veins of diploe (615) (Fig. 382).

Sinuses of dura mater (657-658-659-660-661) (Figs. 383-384-385-386).

Emissary veins (661). Surgical anatomy (662).

BASE OF SKULL: (208).

Internal or cerebral surface.

Anterior fossa (208-9-10) (Fig. 172).

Middle fossa (210-1) Fig. 172).

Posterior fossa (211) (Fig. 172.)

External surface (Fig. 173).

(211-212-213-214).

### Internal Orbital Region.

*Dissection* (396).

Lachrymal gland (909).

NERVES: (Fig. 481).

Ophthalmic (797) (Figs. 479-481).

Lachrymal (798).

Frontal (798).

Nasal (798).

Ophthalmic ganglion (481-2),

Description (699).

Orbital branch of sup. maxillary (801).

Motor oculi (794) (Fig. 479-488-481).

Trochlear (796) (Fig. 479).

Abducens (810) (Fig. 481).

Optic (793).

ARTERIES:

Ophthalmic and branches (568) (Fig. 353).

VEINS:

Ophthalmic (659).

MUSCLES: (Fig. 271).

Levator palpebræ sup. (396).

Rectus superior (397).

Rectus inferior (397).

Rectus externus (397).

Rectus internus (397).

Superior oblique (397).

Inferior oblique (397).

## The Eye.

Dissect the eye of an ox or sheep.

*Dissection* (894).

Capsule of Tenon (890).

Tunics.

1. Sclerotic (891) and cornea (892).
2. Choroid (891), iris (896) and ciliary processes (898).
3. Retina (898).

Refracting media.

1. Aqueous humor (903).
2. Vitreous body (903).
3. Crystalline lens and its capsule (904).

## The Neck.

Landmarks—Locate: Median line of neck, thyroid cartilage, clavicle and lower jaw, and mastoid process.

Surface form (427).

Outline superficial veins (Fig. 381).

Outline arteries (Figs. 347-352).

Outline nerves (Fig. 489).

*Dissection* (407).

Superficial structures.

Superficial fascia (407).

Platysma myoides (407) (Fig. 269).

Deep cervical fascia (407) (Fig: 275)).

VEINS: (Fig. 281).

External jugular and tributaries (653).

Posterior external jugular (654).

Anterior jugular (654).

Study veins of head and neck (650).

NERVES: (Fig. 489).

Cervical plexus.

Superficial branches (831).

Infra-maxillary of facial (815).

Lymphatic glands of neck (683).

Deeper dissection of neck.

**Triangles of the Neck (566).****Posterior Triangles (565).**

Study the description of the posterior triangle given on p. 565 before beginning the dissection.

**OCCIPITAL AND SUBCLAVIAN TRIANGLES (565).****NERVES:**

Cervical plexus and branches (831) (Figs. 496–489–494).

Spinal accessory (823) (Fig. 489–491–492).

**MUSCLES: (Figs. 276–285).**

Sterno-cleido-mastoid (409).

Omo-hyoid (412).

Trapezius (428).

Scaleni (425) (Figs. 276–284–285).

Splenius capitis (433) (Figs. 276–285).

Levator anguli scapulae (431) (Fig. 276).

**ARTERIES: (Fig. 347).**

Suprascapular and branches (585) (Fig. 347).

Transversalis colli and branches (585) (Fig. 347).

Third portion of subclavian (578) (Fig. 347).

**Anterior Triangles (563) (Fig. 276).**

Study the description given on pp. 563 and 564 before beginning the dissection. Study Figs. 276–277–285–345–352–494.

**NERVES of inferior and superior carotid triangles (Figs. 494–492).**

Hypoglossal and descendens hypoglossi (823) (Fig. 494).

Communicans hypoglossi (833) (Figs. 493–494).

Ansa hypoglossi.

Superior laryngeal (821) (Fig. 492).

Pneumogastric (819) (Figs. 491–492).

Inferior or recurrent laryngeal (821) (Figs. 491–492).

Sympathetic (867–869–871) (Figs. 513–572).

Phrenic (833) (Figs. 494–496).

Review deep branches of cervical plexus (831).

## MUSCLES of inferior and superior carotid triangles.

- Sterno-mastoid (409).
- Omo-hyoid (412).
- Sterno-hyoid (411).
- Sterno-thyroid (411).
- Thyro-hyoid (411).
- Scaleni (425).

ARTERIES of inferior and superior carotid triangles.  
(Fig. 347).

- Common carotid (547).
- External carotid (551).
  - Superior thyroid (552).
  - Lingual (553) (Fig. 352).
  - Ascending pharyngeal (558) (Fig. 352).
  - Facial (554) (Figs. 347-349-352).
  - Occipital (556) (Figs. 347-349).
  - Posterior auricular (557) (Figs. 347-349).
- Subclavian (576-7-8) (Figs. 347-352-359-360).
- Thyroid axis (584) (Fig. 347).
  - Branches of thyroid axis (584-585) (Figs. 347-361).
- Vertebral (581) (Fig. 352).
  - Branches (582).
- Internal mammary (586) (Fig. 360).
- Superior intercostal (587) (Fig. 352).

## VEINS OF NECK (653) (Figs. 381-386).

- Internal jugular (654).
- Tributaries to internal jugular (654-655).
- Subclavian (665).
- Tributaries to subclavian (665) (Fig. 388).

## THORACIC DUCT (680) (Fig. 394).

## LYMPHATIC GLANDS (683) (Figs. 395-6).

- Superficial and deep (683).

## THYROID GLAND (1122).

## THYMUS GLAND (1124).

Submaxillary Triangle (564) (Figs. 276-277-347-352).  
Superficial structures *only*.

MUSCLES:

Digastric (413).  
Stylo-hyoid (413).  
Mylo-hyoid (413).

ARTERIES: Facial (554).

NERVES: Hypoglossal (823) (Fig. 494).

SUBMAXILLARY GLAND (947) (Fig. 569).

*Do not remove this gland now.*

Temporo- and Pterygo-Maxillary Regions. (Figs. 273  
and 274).

Masseter fascia and muscle (403).

Temporal fascia (403).

*Dissection* (403).

Temporal muscle (403) (Fig. 273).

MUSCLES OF MASTICATION: (493).

Masseter (404).

Temporal (403).

*Dissection* (404).

External pterygoid (404) (Fig. 274).

Internal pterygoid (405) (Fig. 274).

ARTERIES: (Figs. 350-351).

Internal maxillary and branches (559-560-561-562).

VEINS:

Internal maxillary (652).

TEMPORO-MAXILLARY ARTICULATION (327).

Ligaments (327-328-329) (Figs. 232-233-234).

Action (329).

NERVES:

Inferior maxillary of fifth and branches (805-806-  
807) (Figs. 482-483).

Otic ganglion (807) (Fig. 485).

Chorda tympani (812) (Fig. 483).

Branches of seventh at its exit (812).

Digastric (813).

Stylo-hyoid (813).

Posterior auricular (813).

LYMPHATICS of head (681) (Figs. 395-396).

### Submaxillary Triangle—Deep Structures.

Submaxillary gland (947) (Figs. 569).

Submaxillary ganglion (808) (Fig. 482-483).

#### MUSCLES:

Mylo-hyoid (414) (Fig. 277).

Hyo-glossus (416) (Fig. 278).

Genio-hyoid (414) (Figs. 277-278).

Genio-hyo-glossus (415) (Fig. 278).

Stylo-glossus (416) (Fig. 278).

Stylo-pharyngeus (419) (Fig. 282).

#### NERVES:

Hypoglossal (823) (Figs. 493-494).

Lingual (807) (Fig. 483).

Inferior dental (807) (Figs. 482-350).

Mylo-hyoid (807).

Chorda tympani (812) (Fig. 483).

#### ARTERIES:

Lingual and branches (553) (Fig. 352).

Inferior dental (561) (Fig. 350).

Facial—cervical portion (554).

#### VEINS:

Lingual (554).

LYMPHATICS (683) (Fig. 395-396).

SUBLINGUAL GLAND (948) (Fig. 569).

### Deep Dissection of the Neck.

STYLO-PHARYNGEUS MUSCLE (419).

GLOSSO-PHARYNGEAL NERVE (816) (Figs. 490-491-492).

INTERNAL CAROTID ARTERY (565) (Figs. 347-352).

ASCENDING PHARYNGEAL ARTERY (558) (Fig. 352).

LINGUAL VEIN (654) (Fig. 386).

PNEUMOGASTRIC NERVE (819) (Figs. 491-492).

HYPOGLOSSAL NERVE (823).

GANGLIATED CORD AND CERVICAL GANGLIA OF SYMPATHETIC (869) (Figs. 512-513).

### Anterior Vertebral Region.

*Remove the anterior part of the skull with the pharynx attached by dividing the trachea, oesophagus and other structures about one inch below the larynx. Draw the trachea and oesophagus forward and separate them from their anterior vertebral attachment. At base of skull divide basilar process of occipital bone with a chisel. With a saw cut inward along the posterior border of petrous portion of temporal bone, passing behind the jugular foramen and join the cut made with the chisel. Wrap the part removed in a wet cloth and lay aside while the anterior vertebral region is being dissected.*

### Dissection of Anterior Vertebral Region.

MUSCLES: (Fig. 284).

Longus colli (425).

Rectus capitis anticus major (424).

Rectus capitis anticus minor (424).

Rectus capitis lateralis (425).

Scaleni on lateral vertebral region (425) (Fig. 284).

ARTERIES:

Vertebral and branches (581-2-3) (Fig. 352).

Profunda cervicis (587) (Fig. 352).

VEINS:

Vertebral and tributaries (655).

NERVES:

Trunks of the cervical and brachial plexuses are exposed.

Deep branches of cervical plexus (333).

## ARTICULATIONS:

Atlas with axis (323-324).

Atlas with occipital (325-6).

Axis with occipital (326-7).

## Pharynx.

Examine mouth, palate, tonsil, uvula, pillars of fauces, openings of Eustachian tubes and nares (Fig. 552).

Description of pharynx (951).

MUSCLES: (Figs. 282-283).

Inferior constrictor (419).

Middle constrictor (420).

Superior constrictor (420).

Stylo-pharyngeus (420).

Palato-pharyngeus (422).

Salpingo-pharyngeus (423).

*Open the pharynx by a median incision through its posterior wall.*

## Mouth.

DESCRIPTION OF MOUTH (930-1).

## Palate.

DESCRIPTION OF PALATE (944-5).

MUSCLES: (Fig. 283).

Levator palati (421).

Tensor palati (422).

Azygos uvulæ (422).

Palato-glossus (422).

Palato-pharyngeus (422).

## Tonsils.

DESCRIPTION: (945).

## Tongue (Fig. 515).

DESCRIPTION (879-880-881-2-3).

## MUSCLES (Figs. 278-279-280-519-520).

## Extrinsic:

Genio-hyo-glossus (415).

Hyo-glossus (416).

Stylo-glossus (416).

Palato-glossus (416).

Chondro-glossus (416).

## Intrinsic:

Description (pp. 416-417-1418).

## Larynx (1100).

## DESCRIPTION (pp. 1101 to 1108 inclusive).

*Dissection: Cut the thyroid cartilage a little to one side of anterior median line and turn the smaller piece off to expose the muscles attached to arytenoid cartilage.*

## Supra-Maxillary Region.

*Expose the superior maxillary division of fifth nerve by cutting the bones to outer side of speno-maxillary fissure and infra-orbital groove.*

SUPERIOR MAXILLARY NERVE AND BRANCHES (801)  
(Figs. 482-483-484).

SPHENO-PALATINE OR MECKEL'S GANGLION (803) (Figs.  
483-484).

## INTERNAL MAXILLARY ARTERY.

Branches of speno-maxillary portion (562) (Figs  
352-351).

## Nose.

*Open nasal cavity by a vertical incision just to one side of median line.*

Description of nose (835-886).

Description of nasal fossæ (219-2220-221-222) (886-  
887-888-889).

Surgical anatomy (889-890).

## The Back.

### LANDMARKS:

Vertebral spines.

Surface form (440).

*Dissection* (428) (Fig. 286).

### SUPERFICIAL AND DEEP FASCIA (428).

### MUSCLES:

First layer (428) (Fig. 287).

Second layer (431) (Fig. 287).

Third layer (432) (Fig. 287).

Vertebral aponeurosis (433).

Lumbar fascia (433) (Figs. 287-295).

Fourth layer (434) (Fig. 288).

Fifth layer (437) (Fig. 288).

Suboccipital triangle (439) (Fig. 288).

### NERVES:

Cervical, posterior division (828) (Figs. 495-502).

Dorsal, posterior division (845) (Fig. 502).

Lumbar, posterior division (849) (Fig. 502).

Sacral, posterior division (857) (Fig. 507).

Coccygeal, posterior division (858).

Spinal accessory (823) (Fig. 492).

### ARTERIES:

Intercostal (606).

Anterior branches (607).

Posterior branches (608).

## Pectoral and Axillary Regions.

LANDMARKS: Clavicle, sternum, mammary gland, ribs, axilla (587-8-9), scapula and its processes, and shoulder joint.

Outline heart (1086) (Fig. 694).

*Dissection* (Fig. 301).

Superficial fascia (466).

Deep fascia (466).

Mammary gland (1178).

## MUSCLES:

Pectoralis major (467) (Fig. 302).

*Dissection* (467).

Costo-coracoid membrane (468).

Pectoralis minor (469) (Fig. 303).

Subclavius (469) (Fig. 303).

Deltoid (471) (Fig. 302).

Deep fascia (471).

Serratus magnus (470) (Fig. 303-4).

Fascia (471).

Subscapular fascia (472).

Subscapular (472) (Fig. 303).

*Dissection* (473).

Supraspinous fascia (473).

Supraspinatus (473) (Fig. 305).

Infraspinous fascia (473).

Infraspinatus (473) (Fig. 305).

Teres major (474) (Fig. 305).

Teres minor (474) (Fig. 305).

## ARTERIES OF PECTORAL REGION.

Perforating of internal mammary (586).

Branches of axillary (589) (Fig. 362).

## ARTERIES OF AXILLA.

Axillary and its branches (589-590-1-2-3) (Fig. 362).

Stydy subclavian artery and branches (576-577-578-579-580).

## VEINS:

Axillary and branches (664).

Subclavian and branches (665).

## NERVES:

Pectoral region.

Anterior thoracic (838) (Fig. 500).

Dorsal, anterior division (846).

First dorsal (846).

Upper dorsal and branches (846-7-8).

Axillary nerves:

Brachial plexus (834-5-6-7-8) (Figs. 497-500).

LYMPHATICS (684-5-6).

### Thorax and Thoracic Viscera.

LANDMARKS: Ribs, sternum and clavical.

*Cut the cartilages where they join the ribs and remove them with the sternum. Note\* internal mammary artery and branches (586).*

THORAX (1083).

Cavity.

Upper opening.

Lower opening.

MUSCLES:

Intercostal fascia (441).

Intercostal muscles (441) (Fig. 303).

External (442).

Internal (442).

Infracostalis (442).

Triangularis sterni (442) (Fig. 289).

Levatores costarum (442) (Fig. 283).

Muscles of inspiration and expiration (444).

Diaphragm (444-5-6-7) (Fig. 290).

PERICARDIUM (1082-3-3-5) (Figs. 692-3).

PLEURA (1113-4) (Fig. 707).

MEDIASTINUM (1114-5-6).

Study the position and relation of heart and large blood vessels, trachea and lungs (Figs. 344-5-6-388-394-694-707-710-711).

THE HEART: (1086-7-8-9-1090-1-2-3-4-5).

FOETAL PECULIARITIES IN VASCULAR SYSTEM (1096).

FOETAL CIRCULATION (1097-8-9).

ARTERIES: (539).

Pulmonary (540) (Fig. 344).

- Aorta (541) (Fig. 344).  
 Ascending aorta (541).  
 Arch of aorta (543-4).  
 Coronary (542-3) (Fig. 344).  
 Branches of arch of aorta (545) (Figs. 344-345).  
 Innominate (545).  
 Thyroidea ima (545).  
 Descending aorta (605).  
 Thoracic aorta and its branches (605-6-7-8)  
 (Fig. 708).  
 Superior intercostal (587) (Fig. 352).  
 Internal mammary and branches (586).

## NERVES.

- Phrenic (833).  
 Pneumogastric (819-20-1-2).  
 Dorsal:  
 First dorsal (846).  
 Upper dorsal and branches (846-7).  
 Thoracic gangliated cord (872-3).

## VEINS:

- Innominate right and left (665) (Fig. 388).  
 Internal mammary (666).  
 Inferior thyroid (666) (Fig. 388).  
 Superior intercostal (666) (Fig. 388).  
 Superior vena cava (667) (Fig. 388).  
 Azygos and tributaries (667) (Fig. 388).  
 Spinal veins (668-9) (Fig. 389-90).

## LYMPHATICS:

- Thoracic duct (680-1) (Fig. 394).  
 Lymphatics of thorax (691-2).

## SURGICAL ANATOMY OF THE UPPER EXTREMITY (499-500-501-502).

ARTICULATIONS OF RIBS WITH VERTEBRÆ (330-1-2-3)  
 (Figs. 235-236).

ARTICULATIONS OF CARTILAGES OF RIBS WITH STERNUM  
(333-4) (Fig. 238).

ARTICULATIONS OF CARTILAGES WITH EACH OTHER (334-  
5) (Fig. 238).

ARTICULATIONS OF RIBS WITH THEIR CARTILAGES (335)  
(Fig. 238).

LIGAMENTS OF STERNUM (336).

### Arm and Forearm.

#### LANDMARKS:

Bones of elbow joint.

Outline arteries and veins and superficial lymphatics,  
and nerves of arm and forearm (363-364-365-  
387-498-499-500-397).

*Dissection* (475).

FASCIA (475).

#### MUSCLES OF ARM:—

##### Anterior:

Coraco-brachialis (476) (Figs. 302-3).

Biceps (476) (Figs. 302-3).

Brachialis anticus (477) (Figs. 302-3).

##### Posterior:

Triceps (477) (Fig. 305).

Subanconeus (478).

Latissimus dorsi (430) (Figs. 287-305).

#### MUSCLES OF FOREARM:

*Dissection* (478-481-483).

Fascia (478).

##### Anterior radio-ulnar region.

Superficial layer (479-80-81) (Fig. 306).

Fibrous sheaths (481).

Deep layer (481-2-3) (Fig. 307).

Radial region (483-4-5) (Fig. 308).

##### Posterior radio-ulnar region.

Superficial layer (485-6) (Fig. 308).

Deep layer (486-7-8-9) Fig. 310).

## NERVES OF ARM.

- Brachial plexus (834) (Fig. 497).
- Cutaneous branches (Figs. 498-499).
- Branches: (Figs. 497-500-401).
- Suprascapular (837) (Fig. 501).
- Subscapular (838).
- Circumflex (839) (Fig. 501).
- External and internal thoracic (838).
- Lesser internal cutaneous (840).
- Internal cutaneous (839).
- Ulnar (841).
- Musculo-spiral (842).
- Median (840).
- Musculo-cutaneous (839).

## NERVES OF FOREARM.

- Cutaneous (Fig. 498-499).
- Circumflex (839) (Fig. 501).
- Internal cutaneous (839).
- Ulnar (841).
- Median (840).
- Musculo-spiral and its branches (842-843-844).
- Radial and posterior interosseous (844).

## ARTERIES OF ARM.

- Brachial and its branches (593-4-5-6) (Fig. 363).

## ARTERIES OF FOREARM.

- Radial and its branches (597-8-9) (Fig. 364-365).
- Ulnar and its branches (601-2-3-4) (Fig. 364-5-6).

## VEINS OF ARM AND FOREARM (462-3-4) (Fig. 387).

## LYMPHATICS (684-5-6) (Fig. 397).

## Wrist and Hand.

## LANDMARKS:

- Bony points. Palmar arches (604).
- Dissection* (489).
- Anterior annular ligament (489) (Fig. 311).
- Synovial membrane of flexor tendons (480) (Fig. 312).

- Posterior annular ligament (490).
- Deep palmar fascia (490-1-2) (Fig. 314).
- Superficial transverse ligament of fingers (492).

**MUSCLES:**

- Of the thumb (492-3-4) (Figs. 315-316).
- Of the little finger (494-5-6) (Fig. 316).
- Palmaris brevis (494) (Fig. 316).
- Middle palmar (496-7) (Figs. 317-318).

**NERVES:**

- Median (840) (Fig. 500).
- Ulnar (841) (Fig. 500).
- Radial (844) (Fig. 499).
- Interosseus anterior (841).
- Interosseus posterior (844) (Fig. 501).

**ARTERIES:**

- Radial and branches at wrist (598-9-0).
- Radial and branches at hand (598-9-0-1).
- Ulnar and branches at wrist (601-2-3-4).
- Ulnar and branches at hand (602-3-4).

**VEINS:**

- Of upper extremity (662).

**Articulations (313).**

- Bone (313).
- Cartilage (313).
- Ligaments (313).
- Synovial membrane (313).
  - Bursal (314),
  - Vaginal (314).
- Synovia (314).

**ARTICULATION OF UPPER EXTREMITY (340).**

- Sterno-clavicular (340-1-2) (Fig. 242).
- Acromio-clavicular (342-3-4) (Fig. 243).
- Ligaments of scapula (344-5) (Fig. 243).
- Shoulder-joint (345-6-7-8) (Fig. 243-4).
- Elbow-joint (349-0-1-2) (Fig. 245-6-7).

Radio-ulnar (353-4-5-6) (Fig. 245-6-8).

Radio-carpal, or wrist-joint (356-7) (Figs. 248-9).

Carpal (357-8-9) (Figs. 248-9).

Carpo-metacarpal (359-0-1).

Metacarpo-phalangeal (361-2) (Fig. 252).

Phalangeal (362) (Fig. 255).

Blood supply and nerve supply of the above articulations.



# LOWER DISSECTION.

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## The Abdomen.

LANDMARKS: Umbilicus, linea alba (455), semilunaris (456), Poupart's ligament (450), external abdominal ring (449), internal abdominal ring (456), inguinal canal (457), crest of ilium (275), anterior superior spine of ilium (275), anterior inferior spine (275), os pubis and its spine, crest and angle (277). Lower ribs, ensiform appendix (229).

(Read pp. 955-956-957-958-959.)

## The Abdominal Cavity and Contents. (959).

Regions (959-960-961) (Fig. 578).

How divided (Fig. 578).

Right hypochondrium.

Epigastrium.

Left hypochondrium.

Right lumbar.

Umbilical.

Left lumbar.

Right iliac.

Pubic.

Left iliac.

*Give contents of each region (p. 962).*

*Study Fig. 579—giving posterior view.*

## Abdominal Walls.

*Dissection (447) (Fig. 292).*

Superficial fascia (447).

External oblique muscle (448) (Fig. 291).

Aponeurosis of external oblique (448).

Relations (448), Petit's triangle (449).

- External abdominal ring (449) (Fig. 757).
- Intercolumnar fibers and fascia (450) (Fig. 757).
- Poupart's ligament (450) (Fig. 292).
- Gimbernat's ligament (450).
- Triangular ligament (451) (Fig. 758).
- Before detaching the external oblique muscles study the surgical anatomy of hernia found on pp. 1180-1181-1182-1183.*
- Dissection (451).*
  - Internal oblique (451) (Fig. 293).
  - Conjoined tendon (452) (Fig. 759-0).
  - Aponeurosis (452).
  - Cremaster muscle (452) (Fig. 293).
  - Cremaster fascia (452).
- Dissection (453).*
  - Transversalis muscle (453) (Fig. 294).
- Study the surgical anatomy of hernia given on pp. 1184-1185-1186.*
- Dissection (453).*
  - Rectus abdominis (453) (Fig. 294-295).
  - Lineæ transversæ (456).
  - Semi-lunar fold of Douglas (455).
  - Sheath of rectus (454) (Fig. 295).
  - Pyramidalis (455).
  - Linea alba (455).
  - Lineæ semilunares (456).
  - Transversalis fascia (456).
  - Internal abdominal ring (456).
  - Inguinal canal (457).
  - Deep crural arch (457).
- NERVES:**
  - Lower dorsal (848).
  - Last dorsal (848).
  - Of lumbar plexus:
    - Ilio-hypogastric (851) (Fig. 504).
    - Ilio-inguinal (851) (Fig. 504).

## ARTERIES:

- From femoral (Fig. 376):
  - Superficial epigastric (635).
  - “ circumflex iliac (635).
  - “ external pudic (635).
- From external iliac (Fig. 372).
  - Deep epigastric (629).
  - “ circumflex iliac (630).
- From internal mammary:
  - Superior epigastric (587).
- From intercostal (606):
  - Lower intercostals (608).
- From lumbar (617):
  - Abdominal branches (617).

## LYMPHATICS:

- Superficial lymphatics of the walls of abdomen (689) (Fig. 398).
- Superficial inguinal glands (686).
- Review the surgical anatomy of hernia on pp. 1181-2-3-4-5-6.*

## Inguinal Hernia.

- Definition of hernia (1186).
- Varieties (1186):
- OBLIQUE INGUINAL HERNIA (1187).
  - Description (1187).
    - Coverings (1187).
    - Seat of stricture (1188).
  - Congenital (1189).
  - Infantile and encysted (1189).
  - Funicular process (1189).
- DIRECT HERNIA (1189).
  - Description (1189-0-1).
    - Hesselbach's triangle (1190).
    - Coverings (1191).
    - Seat of stricture (1191).

**Spermatic Cord (1155).**

Description (1155).

Structure (1155).

**Contents of Abdomen.**

*Open the abdominal cavity as described under Peritoneum, pages 962-3.*

*Study description on pages 963-4-5.*

Notice the urachus (113, 963, 1443) (Fig 581).

Notice the obliterated hypogastric artery (621, 1099) (Fig. 698, 581).

Notice the umbilical vein (1099) (Fig. 998).

*Study the contents of each region of abdomen in place (962), the position of each organ and their relations to each other and surrounding parts. Note the position the different organs occupy to landmarks.*

POSITION AND RELATIONS OF STOMACH (1001-1003).  
(Fig. 636). FIXATION OF STOMACH (1003).

RELATIONS OF DUODENUM (1014-5-6-7).

MEANS OF FIXATION OF DUODENUM (1018).

RELATIONS OF LARGE INTESTINES:

Cæcum (1036).

Vermiform appendix (1032-3) Fig. 652).

Ascending colon (1037).

Transverse colon (1037).

Descending colon (1037).

Sigmoid colon (1037).

Rectum (1043).

RELATIONS OF LIVER (1055-6).

FIXATION OF LIVER (1056).

RELATIONS OF GALL-BLADDER (1064).

RELATIONS OF SPLEEN (1076) (Fig. 687).

FIXATION OF SPLEEN (1076).

RELATIONS OF PANCREAS (1071) (Fig. 634, 584).

**The Peritoneum (962).**

Adminiculum lineæ albæ (962).

Falciform ligament (963).

Urachus (963).

Obliterated hypogastric arteries (963).

Deep epigastric arteries (964).

Plica urachi, plica hypogastrica, plica epigastrica (964).

Fossæ:

External inguinal (964).

Internal inguinal (964).

Middle inguinal (964).

Femoral (964).

Development of the peritoneum.

Study pp. 967-8-9-0-1-2-3-4-5.

Mesentery of small intestines and colon (976-7).

Summary (977-8).

Development of special organs (978).

**Adult Peritoneum (978).**

Peritoneal sack (978).

Folds and bands (979).

Omentum (979).

Mesentery (979):

Ligament (979).

Trace peritoneum in a vertical direction (979-0-1-2)  
(Figs. 606-7).

Trace peritoneum transversely (983-4-5) (Figs. 608-9-  
0-1).

Parietal peritoneum (986).

Anterior wall (986).

Upper wall (987).

Inferior wall (987-8).

Visceral peritoneum (988).

Trace visceral peritoneum as given on pp. 988-9  
(Fig. 614).

Mesentery (989-990) (Figs. 613-614).

Omenta (991).

Great omentum (991).

Lesser omentum (991-2).

Foramen of Winslow (992).

Lesser sac or bursa omentalis (993).

Retro-peritoneal fossæ (994).

Duodenal fossæ (994-5).

Fossa intersigmoidea (996).

Pericæcal fossæ (997).

*Dissection.*

*Expose the structures between the layers of peritoneum forming the mesentery and meso-colon. Work out and expose as far as possible without destruction of the parts and before any of the organs are removed the following structures:*

Superior mesenteric artery and its branches (412-3-4)  
(Figs. 370-1).

Coeliac axis and branches (610-1-2) (Figs. 368-9).

Inferior mesenteric artery and branches (614-5) (Fig. 371).

Portal system of veins (675-6-7) (Fig. 393).

Ducts:—Hepatic, cystic and common bile (1063-4) (Figs. 368-677).

*Study and work out as far as possible the sympathetic plexuses described on pp. 875-6-7 (Figs. 512-14).*

**Remove Jejunum and Ileum.**

*To do this tie two ligatures around the jejunum at its beginning and divide the intestine between the ligatures.*

*Divide the ileum in same manner several inches above its termination. Divide the mesentery near the intestines.*

*Wash out and study the part removed.*

Jejunum and ileum (1020).

Structure of walls (1020).

Serous coat (1020).

Muscular coat (1020).

Submucous coat (1020).

Mucous membrane (1021).

Valvulae conniventes (1021).

Villi (1022).

Intestinal true glands:

Glands of Lieberkühn (1024).

Glands of Brunner (1024).

Intestinal lymph-follicles:

Solitary glands (1025).

Peyer's patches (1025).

ARTERIES of jejunum and ileum (1026).

Superior mesenteric (612) (Fig. 370).

VEINS (1027): See portal system (675) (Fig. 393).

LYMPHATICS (1027).

NERVES (1027).

### Remove Large Intestine.

*Ligate the large intestine above the brim of pelvis and divide it. Remove by cutting fixation structures of colon and great omentum along the lower border of stomach below the gastro-epiploic arteries. Wash out and study the part removed. The first part of colon, caecum and remaining part of ileum should be inflated and allowed to dry, then study ileo-caecal valve and appendix.*

Large intestines (1027-8).

Names of the different parts (1028).

Structure of the large intestine (1028).

Serous coat (1028).

Muscular coat (1028).

Submucous coat (1029).

Mucous membrane (1029).

Crypts of Lieberkühn (1029).

Solitary glands (1029).

ARTERIES:

Superior mesenteric (612).

Ileo-colic (614).

Colica dextra (614).

Colica media (614).

Inferior mesenteric (614).

Colica sinistra (614):

Sigmoidea (614).

VEINS:

Portal system (675) (Fig. 393).

LYMPHATICS (1029).

NERVES (1030).

CÆCUM.

Description, pp. 1030-1-2.

VERMIFORM APPENDIX.

Description, pp. 1032-3.

ILEO-COLIC OR ILEO-CÆCAL VALVE.

Description, pp. 1033-4 (Figs. 653-4-5).

COLON (1035):

Ascending colon (1035).

Transverse colon (1035).

Descending colon (1035-6).

Sigmoid flexure (1036).

Expose the coeliac axis and its branches (610) (Figs. 368-369).

Branches of coeliac axis:

Gastric (611) (Fig. 369).

Hepatic and branches (611) (Figs. 368-9).

Splenic and branches (611-12) (Figs. 368-9).

VEINS:

Portal system (675) (Fig. 393).

SYMPATHETIC NERVES:

Solar plexus (875) (Figs. 512-514).

Coeliac plexus (876-7).

**Remove the Stomach.**

*Apply a ligature and divide the œsophagus below the diaphragm. Apply a ligature and divide the duodenum at its beginning. Remove the stomach.*

**Stomach (999).**

Form and size (999-1000) (Figs. 623-4).

Position and relations (1001-2-3).

Points of fixation (1003-4).

Alterations in position (1004).

Structure:

Serous coat (1004).

Muscular coat (1004).

Submucous coat (1005).

Mucous membrane (1005-6).

Structure of mucous membrane (1006-7).

ARTERIES (1007):

Hepatic (611) (Figs. 368-9).

Pyloric.

Gastro-epiploica dextra.

Gastric (611) (Fig. 369).

Splenic (611) (Figs. 368-9).

Gastro-epiploica sinistra.

Vasa brevia.

VEINS (1007).

NERVES (1007).

*Inflate duodenum in position and study its relation to pancreas, pancreatic duct, common bile duct, kidneys, superior mesenteric artery and veins; notice parts of duodenum* (1014) (Fig. 634).

*Study pancreas in place* (1067) (Figs. 634-679).

### Remove Duodenum and Pancreas.

Duodenum (1008-9).

Course in adult (1009-10-1).

Peritoneal relations (1081-2-3).

Relations (1014-5-6).

Fixation (1018-9).

ARTERIES:

Pyloric (611).

Sup. pancreatico-duodenal (611).

Inf. " " (613).

NERVES (1026-7).

Pancreas (1067).

Color.

Volume.

Parts:

Head.

Lesser head.

Body and tail.

Surfaces and borders.

Ducts.

Relations.

Structure (1072).

ARTERIES:

Splenic branches (611).

Pancreatico-duodenalis superior (611).

Pancreatico-duodenalis inferior (613).

LYMPHATICS (1072).

NERVES (1072).

### Remove the Spleen.

Spleen (1073).

Number of spleens (1073).

Volume.

Form and relations (1074-5-6).

Fixation (1076-7).

Position in respiration (1077).

Structure (1077-8-9-0-1).

ARTERIES: Splenic (611).

VEINS: Splenic (675).

LYMPHATICS (1077).

NERVES (1072).

### The Liver (1047).

*Study the position and relations of the liver in place.*

Relations (1055).

Fixation (1056).

### Remove the Liver.

Liver—description (1047).

Volume (1047).

Color (1047).  
 Surfaces (1048-9-10-11).  
 Fissures (1051).  
 Lobes (1052).  
 Ligaments (1053-4).  
 Peritoneal lines (1054).

ARTERY: Hepatic (1057-611) (Fig. 368).

VEINS: Portal (1057-676) (Fig. 393).

NERVES (1058):

Vagus.

Coeliac plexus.

Structure (1059).

Ducts (1062-3).

Hepatic (1063).

Gall-bladder (1064).

Cystic duct (1064).

Cystic artery (1064).

Cystic veins (1064).

NERVES: Coeliac plexus (1064).

Structure (1065).

Ductus choledochus (1064).

### Kidneys and Suprarenal Body.

*Expose the kidney and suprarenal body by removing the tissue in front of them. Study them in place, noting the blood vessels, ureters, and surrounding parts.*

*Remove ONE kidney with its ureter, cutting ureter at brim of pelvis. Do not remove the other kidney at this dissection.*

Kidney (1127):

Surface form (1135).

Position and size (1127),

Surfaces, borders, and extremities (1127).

Structure of kidney (1128-9).

ARTERIES:

Renal (1133-616) (Fig. 367).

## VEINS:

Renal (1134-675) (Figs. 367-388).

NERVES (1134).

Ureters (1136).

Relations (1136).

Structure (1136).

Suprarenal capsule (1137).

Relations (1137).

Structure (1137).

Cortical portion (1138).

Medullary portion (1139).

ARTERIES (1139-616).

VEINS (1139-675).

NERVES (1139).

### Structures on the Posterior Wall of Abdominal Cavity.

#### Sympathetic nerves:

Solar plexus (875) (Figs. 512-514).

Semilunar ganglia (875) (Fig. 514).

Phrenic plexus (875).

Suprarenal plexus (875).

Renal plexus (875).

Spermatic plexus (875).

Ovarian plexus (876).

Coeliac plexus (876).

Gastric (877).

Splenic (877).

Hepatic (877).

Superior mesenteric plexus (877).

Aortic plexus (877).

Gangliated cord (868).

Great splanchnic (873).

Lesser splanchnic (873).

Lumbar portion (873).

Pelvic portion (874).

## ARTERIES (Figs. 367-388):

- Aorta and its branches (608).
  - Phrenic (616).
  - Coeliac axis (610).
    - Gastric.
    - Hepatic.
    - Splenic.
  - Superior mesenteric (612).
  - Suprarenal (615).
  - Spermatic (616).
    - (Ovarian) (616).
  - Inferior mesenteric (614).
  - Lumbar (617).
  - Sacra media (617).
  - Common iliac (618) (Fig. 372).

## VEINS (Fig. 388):

- Inferior vena cava (673).
  - Lumbar (674).
  - Right spermatic (674).
    - (Ovarian) (674).
  - Renal (675).
  - Suprarenal (675).
  - Phrenic (675).
  - Hepatic (675).
- Portal system (675-6-7) (Fig. 393).
  - Review portal system.
- Azygos veins (667).
  - Tributaries (667).

## LYMPHATICS.

- Study lymphatics of pelvis and abdomen (687-8-9-0.)*
  - Of intestines (691).*
- Thoracic duct (680-1) (Fig. 394).
- Deep muscles of abdomen:
  - Iliac fascia (503-4).
  - Psoas magnus (504) (Fig. 326).
  - Psoas parvus (504).

Iliacus (504-5).

Surgical anatomy (505).

Fascia of quadratus lumborum (458).

Quadratus lumborum (458) (Fig. 288).

**Lumbar Plexus (850) (Figs. 503-504).**

*Expose the branches of lumbar plexus by dissecting away carefully part of the psoas magnus muscle. Trace the nerves to their exit from the abdominal cavity.*

Branches of lumbar plexus:

Ilio-hypogastric (851).

Ilio-inguinal (851).

Genito-crural (852).

External cutaneous (853).

Anterior crural (855).

Obturator (854).

Accessory obturator (854).

LAST DORSAL NERVE (848).

**Pelvic Region.**

*Study the position and relations of the pelvic organs in place.*

Bladder:

Position (1138).

Surfaces and peritoneal covering (1140-1-2).

Urachus (1140).

Obliterated hypogastric arteries (1141).

Ligaments (1142-3).

Serous coat (1143).

Vas deferens (1159).

Surface form (1144).

Rectum:

Position.

Relations (1043).

*Insert finger into rectum and feel prostate gland.*

In female:

Uterus (1168).

Position.

Parts (1168).

Ligaments (1169).

Douglas's pouch (1169).

Appendages of uterus:

Fallopian tubes (1174) (Fig. 752).

Ovaries (1175) (Figs. 752-3).

Ligament of ovary (1175).

Serous covering (1176).

ARTERIES AND VEINS:

Iliac arteries and veins (Fig. 372).

External and internal (625, 620, 672).

Division of internal iliac (621).

*Trace visceral branches of internal iliac to where they enter viscera.*

Superior vesical (622).

Middle “

Inferior “

Middle hemorrhoidal.

Obturator.

SYMPATHETIC NERVES:

Hypogastric plexus (877) (Fig. 512).

Pelvic plexus (878).

Gangliated cord, pelvic portion (874).

*Sacral plexus may be exposed.*

Ischio-Rectal Region and Perinæum.

*Dissection* (1201).

Description (1201).

Ischio-rectal region (1201).

*Dissection* (1201).

Superficial fascia (1201).

MUSCLES:

Corrugator cutis ani (458).

External sphincter (458).

Internal “ (459).

Levator ani (459) (Figs. 296-771).

Coccygeus (460).

Ischio-rectal fossa (1202).

NERVES.

Fourth sacral (858).

Pudic (861).

Superficial perineal (861).

Inferior hemorrhoidal (861).

ARTERIES:

Internal pudic—male and female (624–625).

Alcock's canal (1202).

Superficial perineal (625).

Inferior hemorrhoidal (625).

Perineum in Male.

Description (1202–3).

Superficial fascia (460).

Colles' fascia (460) (Fig. 297).

Deeper perineal fascia or triangular ligament (463–1204–5) (Fig. 769).

Superficial layer (463).

Deep layer (463).

Structures between the two layers (463).

Central tendinous point (460).

MUSCLES (Fig. 298):

Accelerator urinæ (461).

Erector penis (462).

Transversus perinei (461).

Compressor urethræ (464).

ARTERIES:

Internal pudic (623) (Fig. 374).

Superficial perineal (625).

Transverse perineal (625).

Artery of bulb (625).

Artery of corpus cavernosum (625).

Dorsal artery of penis (625).

NERVES:

Pudic and its branches (861–2).

Inferior pudendal (862).

Cowper's gland (1205-1150).

Position of viscera at outlet of pelvis (1206).

Prostate gland (1206) (Fig. 770).

Surgical anatomy (1207).

**Female Perineum (1207).**

Description (1207-8).

MUSCLES (464-5).

ARTERIES (625).

NERVES:

Pudic and its branches (861-2).

*Remove the pelvic organs. Draw penis down and separate it from pubic arch. Divide levator and sphincter ani muscles. The remaining kidney and ureter should be removed with bladder.*

**MALE GENERATIVE ORGANS.**

**Penis (1150).**

Description (1150) (Fig. 735).

Structure (1151).

Corpora cavernosa (1151).

Structure (1151-2).

Corpus spongiosum (1152).

Structure (1153).

ARTERIES (625).

LYMPHATICS (1153).

NERVES (1153).

**Prostate Gland (1148).**

Position, size and form (1148).

Lobes (1149).

Structure (1149).

Nerves and vessels (1149).

Surgical anatomy (1149-0).

**Cowper's Gland (1150).**

Position and size (1150).

Structure (1150).

**Testes and Their Coverings (1153).**

Definition, and position and coverings (1153).

Scrotum (1153).

Integument (1154).

Dartos (1154).

Intercolumnar fascia (1154).

Cremasteric fascia (1154)

Fascia propria (1154).

Tunica vaginalis (1155).

*Compare the coverings of the testes with the layers of the abdominal walls.*

Vessels and nerves (1155).

Spermatic cord (1155).

Structure (1155).

Testes (1156):

Epididymis (1156).

Tunica vaginalis (1156).

Visceral and parietal portion.

Tunica albuginea (1157).

Tunica vasculosa (1157).

Structure (1157-8).

Vas deferens (1159).

Structure (1159).

Vesiculæ seminales (1160) (Fig. 741).

Ejaculatory ducts (1160).

Structure (1161).

Vessels and nerves (1161).

Descent of the testes (1161).

**Female Generative Organs.**

External organs (1163).

Mons veneris (1163).

Labia majora (1163).

Labia minora (1164).

Clitoris (1164).

Hymen (1165).

Glands of Bartholin (1165).

Bulbi vestibuli (1166).

(Relations of bladder (1166) ).

(Urethra (1167) ).

Structure (1167).

(Rectum (1167) ).

Internal organs of generation.

Vagina (1167).

Relations (1168).

Structure (1168).

Uterus (1168).

Virgin state (1168).

Body (1168).

Cervix (1168).

Ligaments of uterus (1169-0).

Cavity of uterus (1170).

Cavity of cervix (1171).

Structure (1171-2).

Vessels and nerves (1173) (Fig. 751).

Uterine (622).

Ovarian (616).

Appendages of the uterus (1174).

Fallopian tubes (1174).

Parts (1174).

Structure (1174).

Ovaries (1175).

Description (1175).

Structure (1175-6).

Ligament of ovary (1177).

Vessels and nerves (1178).

Round ligaments (1177).

## Bladder.

Shape and size (1139-0).

Summit and surfaces (1140-1).

Ligaments (1142).

Position of ureters (Fig. 741).

Position of vas deferens and vesiculæ seminales (Fig. 741).

Structure (1143).

Objects seen on inner surface (1144).

Vessels and nerves (1144).

Surface form (1144-5).

### Male Urethra (1146).

Portions.

Prostatic (1146).

Membranous (1146).

Spongy (1147).

Bulbous (1147).

Structure (1147).

### Rectum (1038).

Parts of the rectum (1038-9-0).

Anal glands (1040).

Structure of rectum (1040-1-2).

Vessels and nerves (1042).

Relations of rectum (1043).

### Cavity of Pelvis (1139).

Boundaries (1139).

Pelvic fascia (1209) (Fig. 771-772).

Obturator (1209).

Ischio-rectal or anal (1210).

Recto-vesical (1210).

*White Line*.—Angle of division between the obturator and recto-vesical layers of pelvic fascia.

*After dividing the body through the lumbar region, divide the pelvis with a saw by cutting through the symphysis of pubes and middle line of sacrum.*

Expose ARTERIES:

Internal iliac (Fig. 372).

Anterior trunk and branches (627).

Posterior trunk and branches (626-7).

VEINS:

External iliac (672).

Internal iliac (672).

Internal pudic (672).

Hæmorrhoidal plexus (672).

Common iliac (673).

Middle sacral (673).

Study lymphatics of pelvis (687-8-9-0-1).

Expose sacral plexus (Fig. 508).

Formation (859).

Branches (859).

Exit from pelvis.

SYMPATHETIC NERVES:

Pelvic portion of gangliated cord (874).

Pelvic plexus (878).

### Lower Extremity.

LANDMARKS: Poupart's ligament, Scarpa's triangle (630), saphenous opening (Fig. 762), line of femoral artery (Fig. 376).

## THIGH.

### Anterior Femoral Region.

*Dissection* (505).

SUPERFICIAL FASCIA.

SUPERFICIAL NERVES (Fig. 506).

Anterior crural:

Middle cutaneous (855).

Internal cutaneous (855).

Muscular (855).

External cutaneous (853) (Figs. 505-6).

Crural branch of genito-crural (852).

Ilio-inguinal (851).

SUPERFICIAL VEINS (Figs. 391-762).

Long saphenous (870).

Superficial epigastric.

“ circumflex iliac.

“ external pudic.

SUPERFICIAL ARTERIES (Fig. 376).

Superficial epigastric (635).

“ circumflex iliac (635).

Superficial external pudic (635).

Superficial inguinal lymphatic glands (686) (Fig. 398).

**Femoral Hernia (1191).**

Superficial fascia and veins, arteries, nerves and lymphatics contained in it (1191-2-3).

Deep fascia or fascia lata (506-1193).

Iliac portion.

Pubic portion.

Saphenous opening (1194).

Poupart's ligament or crural arch (1195).

Gimbernat's ligament (1196).

Crural Sheath (1196).

Deep crural arch (1197).

Crural canal (1197).

Femoral or crural ring (1198).

Septum crurale (1198).

Descent of hernia (1199).

Coverings of hernia (1199).

Varieties of femoral hernia (1199).

**Dissection of Anterior Femoral Region continued:**

Remove fascia lata:

MUSCLES (Fig. 326):

Sartorius (508).

Tensor vaginæ femoris (508).

Rectus (509).

Vastus externus (509).

Vastus internus (510).

Crureus (510).

Suberureus (510).

Quadriceps extensor (509).

ARTERIES (Fig. 376):

Femoral (630):

Common femoral (631).

Superficial epigastric (635).

“ circumflex iliac.

“ external pudic.

Deep external pudic.  
 Muscular (637).  
 Scarpa's triangle (630).  
 Hunter's canal (630).

Profunda femoris:

*Branches will be exposed in dissection of  
 inner thigh.*

VEINS (Fig. 391).

Superficial veins have been studied.

Deep veins:

Femoral (672).

NERVES.

Superficial nerves have been studied.

Anterior crural.

Posterior division (855).

Long saphenous (856).

Muscular (856).

Articular (856).

**Internal Femoral Region.**

*Dissection* (511).

MUSCLES (Fig. 327).

Gracilis (511).

Pectineus (511).

Adductor longus (512).

“ brevis (512).

“ magnus (513).

ARTERIES:

Profunda femoris.

External circumflex (636).

Internal “ (636).

Three perforating (636).

Anastomatica magna (637).

Deep external pudic (635).

Obturator (622).

NERVES:

Obturator (854).

Accessory obturator (854).

VEINS: Profunda femoris (872).

### Gluteal Region.

*Dissection* (514).

SUPERFICIAL NERVES (Fig. 509).

MUSCLES (Fig. 329).

Gluteus maximus (514).

“ medius (515).

“ minimus (516).

Pyriformis (516).

Gemellus superior (517).

“ inferior (517).

Obturator internus (516).

“ externus (518).

Quadratus femoris (517).

Obturator membrane (516).

NERVES:

Sacral plexus (859) (Figs. 509–510).

Small sciatic (862).

Great sciatic (862).

Superior gluteal (861).

Inferior gluteal (861).

Perforating cutaneous (861).

Muscular (859).

Posterior divisions of sacral nerves (857) (Fig. 507).

Iliac branch of Ilio-hypogastric (851).

Iliac branch of last dorsal (848) (Fig. 509).

Coccygeal (858) (859).

ARTERIES (Fig. 375):

Gluteal and branches (627).

Sciatic and branches (626).

Internal pudic exposed (Fig. 375).

Internal circumflex (636).

### Popliteal Space.

*Dissection* (637):

Boundaries (637).

Contents (637).

Position of contained parts (637-8).

Popliteal artery (638).

**Posterior Femoral Region (Fig. 329).**

*Dissection* (518):

CUTANEOUS NERVES (Fig. 509).

MUSCLES:

Biceps (518).

Semitendinosus (519).

Semimembranosus (519).

NERVES:

Great sciatic (862).

Small sciatic (862).

Obturator (854).

ARTERIES:

Perforating (636).

Popliteal (637).

Branches (639-0-1) (Fig. 377).

**The Leg.**

LANDMARKS: Study bony projections of knee, ankle and foot. Examine figures 377-378-391-392-398-505-506-509-510.

*Study deep fascia of leg.*

*Dissection of anterior tibio-fibular region and dorsum of foot (520-1).*

Fascia of leg (520), of foot (530).

Anterior annular ligament (528).

Internal " " (528).

External " " (529).

MUSCLES OF LEG (Fig. 330).

Tibialis anticus (521).

Extensor proprius hallucis (521).

Extensor longus digitorum (521).

Peroneus tertius (522).

MUSCLES OF DORSUM OF FOOT:

Extensor brevis digitorum (530).

**ARTERIES (Fig. 378).**

- Anterior tibial (641).
  - Posterior recurrent (642).
  - Superior fibular (642).
  - Anterior recurrent (642).
  - Muscular (642).
  - Internal malleolar (643).
  - External " (643).
- Dorsalis pedis (643).
  - Tarsal (644).
  - Metatarsal (644).
  - Dorsalis hallucis (644).
  - Communicating (644).

VEINS accompany the arteries.

**NERVES:**

- External popliteal (864).
- Anterior tibial (865) (Fig. 467).
  - Branches (865).
- Musculo-cutaneous (865) (Fig. 467).
  - Branches (865).

**Fibular or Peroneal Region.**

*Dissection* (527):

External annular ligament.

**MUSCLES:**

- Peroneus longus (527).
- Peroneus brevis (527).

**NERVES:**

- Musculo-cutaneous (865).

**ARTERIES:**

- Peroneal (646) (Fig. 377).

**Posterior Tibio-Fibular Region.**

*Dissection* (522):

SUPERFICIAL VEINS (Fig. 392).

SUPERFICIAL NERVES (Figs. 509-510).

- External saphenous (863).
- Communicans peronei (865).

**MUSCLES:**

## Superficial layer.

Gastrocnemius (522).

Soleus (523).

Plantaris (524).

Tendo Achillis (523).

Deep layer. *Dissection* (524).

Deep fascia (524).

Popliteus (524).

Flexor longus hallucis (525).

Flexor longus digitorum (525).

Tibialis posticus (526).

**ARTERIES** (Fig. 377).

## Popliteal.

Posterior tibial (644).

Peroneal (646).

Muscular (647).

Nutrient (647).

Communicating (647).

Internal calcanean (647).

**NERVES** (Fig. 510):

Posterior tibial and branches (863).

**VEINS.** Veins accompany the arteries.**Sole of the Foot.***Dissection* (529-530).

Plantar fascia (529).

**MUSCLES:** Three groups (530).

## First layer (Fig. 333).

Abductor hallucis (530).

Flexor brevis digitorum (530).

Abductor minimi digiti (531).

Fibrous sheaths (531).

## Second layer (Fig. 334).

Flexor accessorius (532).

Lumbricales (532).

## Third layer (Fig. 335).

Flexor brevis hallucis (532).

Adductor obliquus hallucis (533).

Flexor brevis minimi digiti (533).

Adductor transversus hallucis (533).

Fourth layer (Fig. 336-7).

Interossei.

Dorsal (534).

Plantar (534).

ARTERIES (Figs. 379-380):

Internal plantar (647).

External plantar (647).

Plantar arch (648).

Posterior perforating.

Digital.

Anterior perforating.

Internal calcanean (647).

NERVES (Fig. 511).

Internal plantar (863).

External plantar (864).

#### Articulations of Pelvis.

Sacrum and ilium (336) (Fig. 239-240).

Sacrum and ischium (337) (Fig. 240).

Sacrum and coccyx (339).

Ossa pubis (339).

Hip-joint (362).

Ligaments:

Capsular (362) (Fig. 243).

Ilio-femoral (363).

Ligamentum teres (364) (Fig. 253).

Cotyloid (364) (Fig. 253).

Synovial membrane (365).

Arterial supply (365).

Nerve supply (365).

Action (365).

Surface form (366).

Nélaton's line (366).

Surgical anatomy (366).

## Knee-joint.

## Ligaments.

External (368-9).

Internal (369-0-1).

Synovial membrane (371).

Structures (372).

Blood supply (372).

Nerve supply (372).

Actions (372).

Surface form and surgical anatomy (374).

## Articulations between tibia and fibula.

|                |              |
|----------------|--------------|
| Superior (376) | } ligaments. |
| Middle (376)   |              |
| Inferior (377) |              |

Synovial membranes.

Actions (377).

## Ankle-joint (377).

Ligaments (377-8).

Synovial membrane (379).

Relations (379).

Blood supply (379).

Nerve supply (379).

Surface form (379).

Surgical anatomy (379).

## Tarsus.

*Get a general idea of the articulations and ligaments of the tarsus (Figs. 264-266).*

Blood supply.

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Tarso-metatarsal articulation (384-5).

Articulation of tarsal bones with each other (385).

Synovial membranes (385).

Nerve supply (386).

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Ligaments (386).

Articulations of phalanges.

Ligaments (387).



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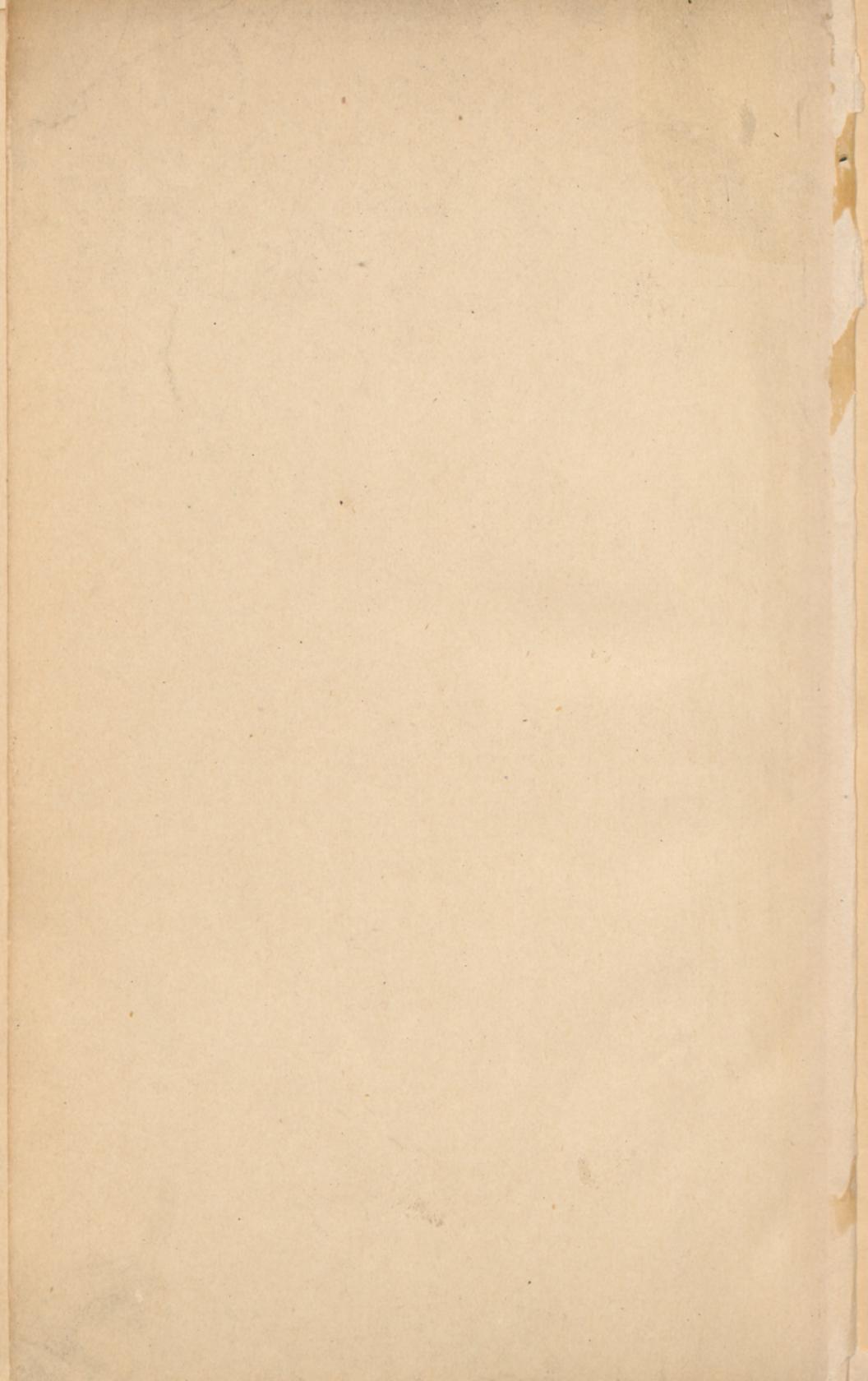
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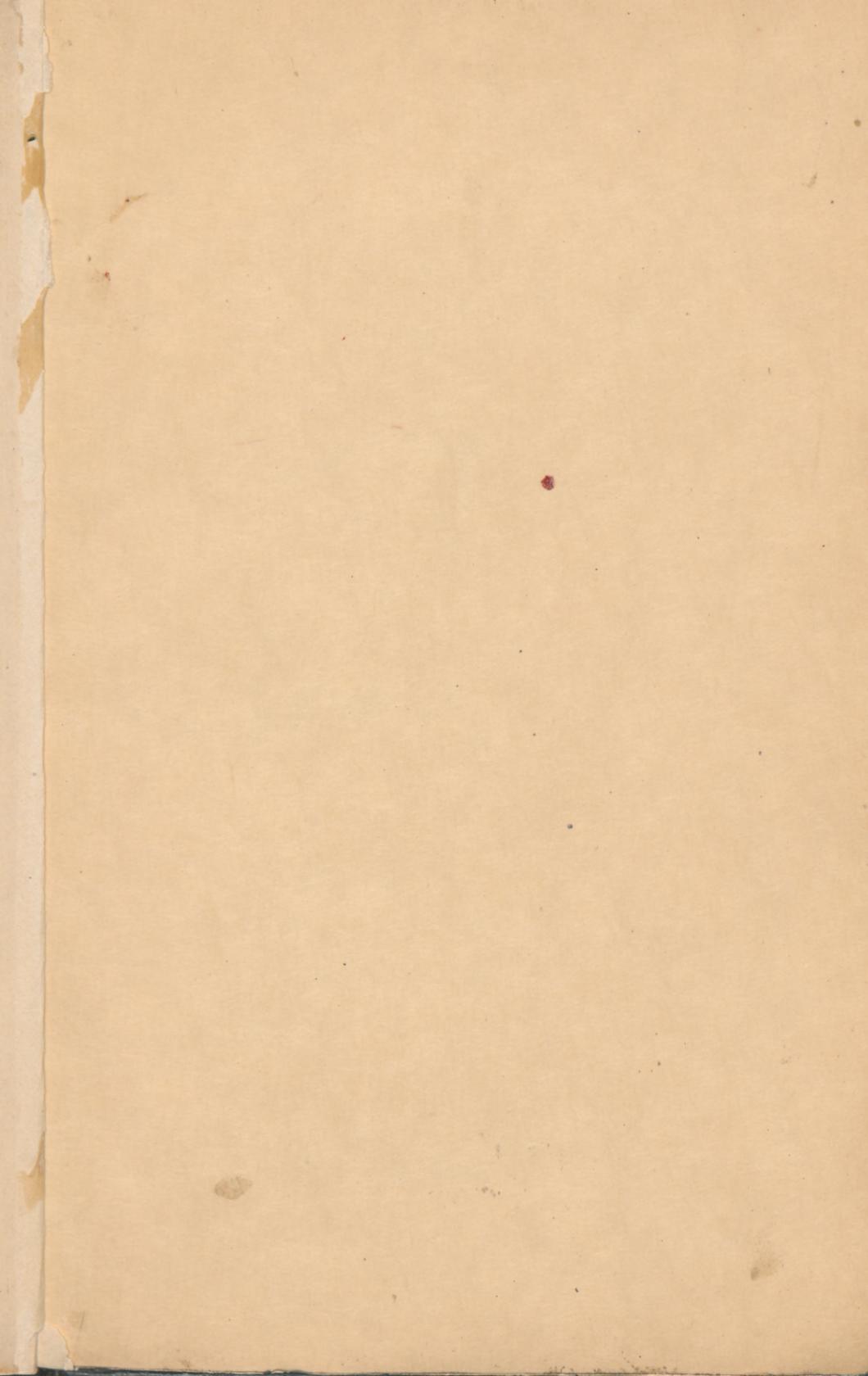
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