Upper Limb

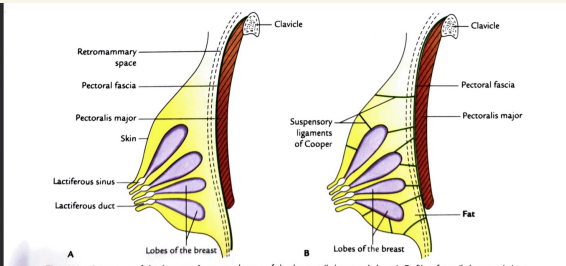

Fig. 1.1 Structure of the breast: **A**, parenchyma of the breast (lobes and ducts); **B**, fibrofatty (lobes and ducts of the breast); and stroma of the breast (fat and suspensory ligaments of Cooper).

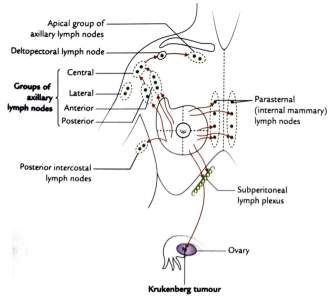

Fig. 1.3 Mode of lymphatic drainage of the breast.

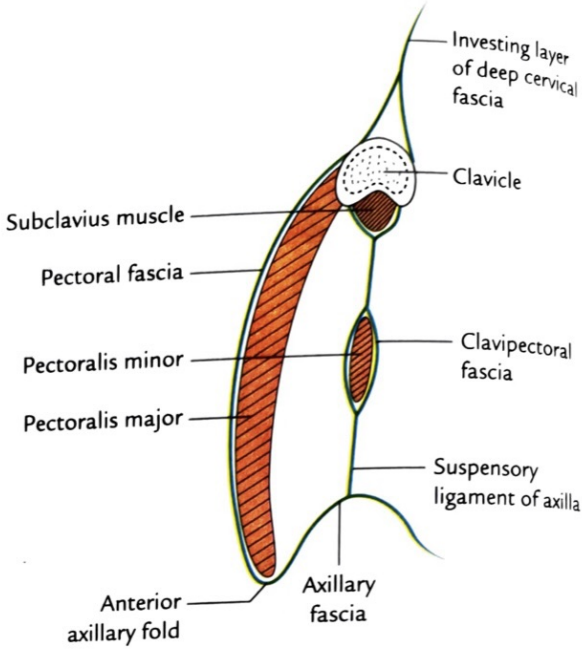

Fig. 1.8 Clavipectoral fascia, as seen in sagittal section of anterior axillary wall.

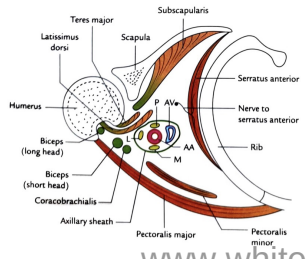

Fig. 1.10 Boundaries and contents of axilla as seen in a horizontal section. AA, axillary artery; AV, axillary vein; L, lateral cord; M, medial cord; P, posterior cord.

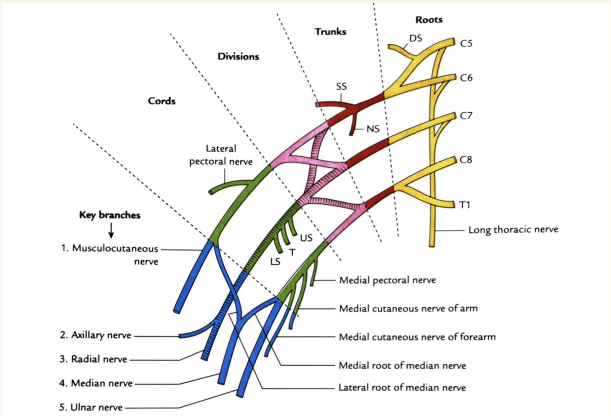

Fig. 1.11 Brachial plexus and its branches. DS, dorsal scapular nerve; LS, lower subscapular nerve; NS, nerve to subclavius; SS, suprascapular nerve; T, thoracodorsal nerve; US, upper subscapular nerve.

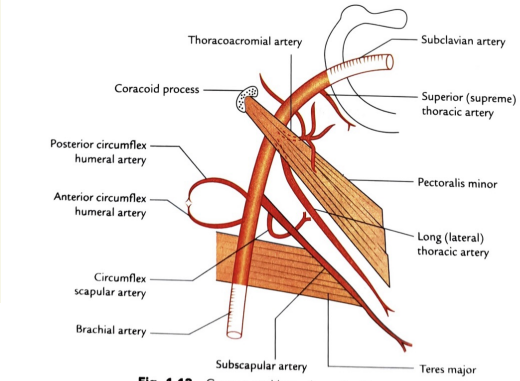

Fig. 1.13 Course and branches of axillary artery.

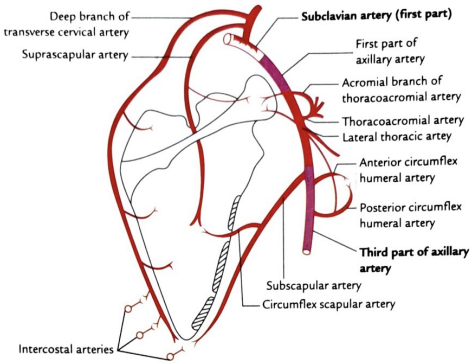

Fig. 1.15 Anastomosis around the scapula (scapular anastomosis).

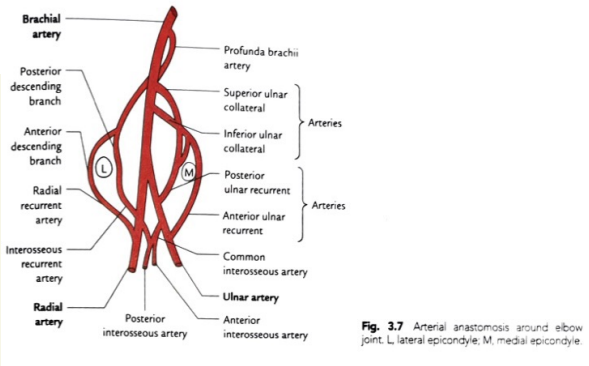

Fig. 3.7 Arterial anastomosis around elbow joint. L, lateral epicondyle; M, medial epicondyle.

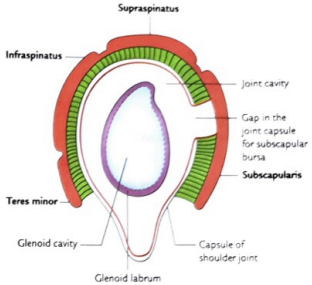

Fig. 2.7 Musculotendinous cuff.

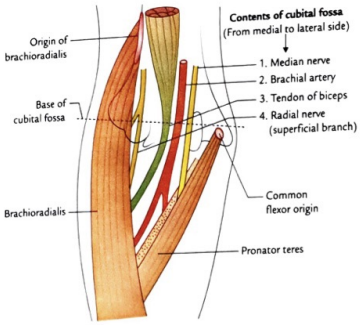

Fig. 3.8 Boundaries and contents of cubital fossa.

❖ **Write briefly about the quadrangular space.**

The quadrangular space (Fig. 2.8) is one of the subscapular intermuscular spaces present in the region of axilla.

Boundaries

Superior

- Subscapularis in front
- Teres minor behind
- Capsule of the shoulder joint (in between subscapularis and teres minor)

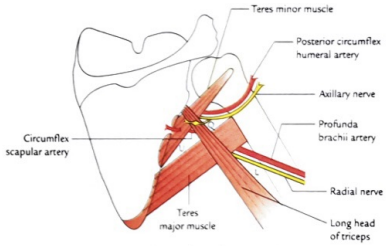

Fig. 2.8 Subscapular intermuscular spaces. Q, quadrangular space; U, upper triangular space; L, lower triangular space.

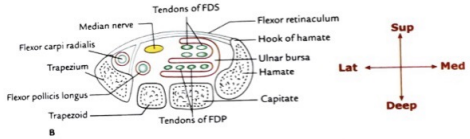

Fig. 4.2 Flexor retinaculum: A, formation at the level of proximal row of carpal bones (I) and formation at the level of distal row of carpal bones (II); B, structures passing deep to the flexor retinaculum (i.e. through carpal tunnel). FDP, flexor digitorum profundus; FDS, flexor digitorum superficialis.

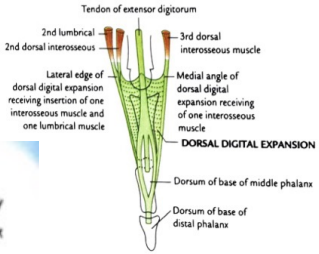

Fig. 5.6 Dorsal digital expansion of left middle finger and insertion of lumbricals and interossei into it.

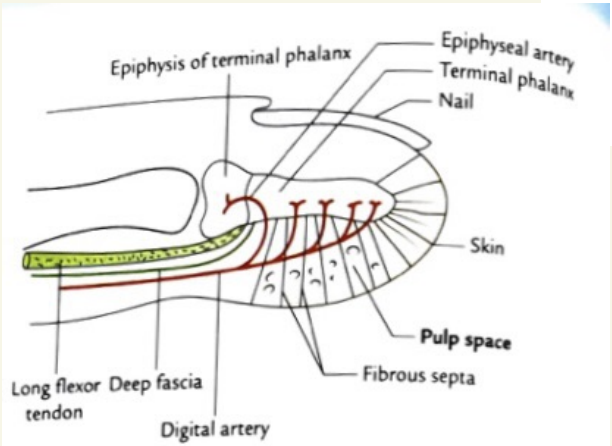

Fig. 5.8 Pulp space of finger.

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Selective Anatomy Vol 1

Selective Anatomy Vol 1

Clinical Cases 1

Floor: Scaphoid, trapezium.

Roof: Deep fascia stretching between the medial and lateral boundaries.

Contents
- Radial artery

Structures Crossing the Roof
- Cephalic vein
- Terminal branches of superficial radial nerve

Applied Anatomy
- Tenderness in the region of anatomical box indicates **fracture of scaphoid.**
- **Pulsations of radial artery** can be felt at this site.

◇ What is **dorsal subaponeurotic space**? Give its applied importance. AN12.10

The *dorsal subaponeurotic space* (Fig. 5.7) lies between the *aponeurotic sheath* and the dorsal surfaces of medial four metacarpals and the dorsal interossei.

On the dorsum of hand, the extensor tendons of the fingers are bound to one another by oblique bands of deep fascia in such a manner as to form an *aponeurotic sheath*, which is attached to the borders of 2nd and 5th metacarpals on the lateral and medial sides, respectively.

Applied Anatomy

The primary infection of this space is due to wounds on the dorsum. The space may be involved secondarily due to infections spreading from midpalmar space via the lymphatics.

◇ Give sensory innervation of the palmar aspect of the hand. AN12.7
- **Lateral two-third of palm and lateral 3½ digits** are supplied by the *median nerve.*
- **Medial one-third of palm and medial 1½ digits** are supplied by the *ulnar nerve.*
- It is shown in Fig. 5.11.

Fig. 5.11 Sensory innervation of palmar aspect of the hand.

Fig. 5.10 Boundaries and contents of anatomical snuffbox.

Fig. 5.12 Sensory innervation of dorsal aspect of the hand.

◇ Give sensory innervation of the dorsal aspect of the hand. AN12.7
- **Lateral two-third of the dorsum of hand and lateral 3½ digits** are innervated by the *radial nerve.*
- **Medial one-third of the dorsum of hand and medial 1½ digits** are innervated by the *ulnar nerve.*

It is shown in Fig. 5.12.

N.B. The skin on the dorsal aspect of distal phalanges of lateral 3½ digits is innervated by the *median nerve*, while that of medial 1½ digits by the *ulnar nerve.*

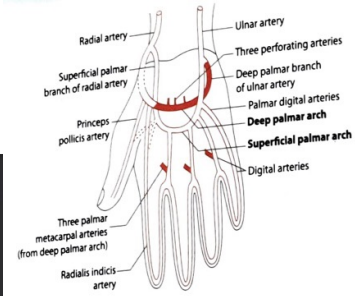


Fig. 6.1 Superficial and deep palmar arterial arches.

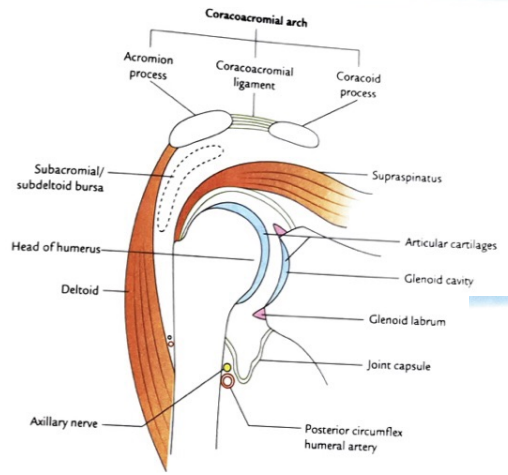


Fig. 8.1 Coronal section of shoulder joint.

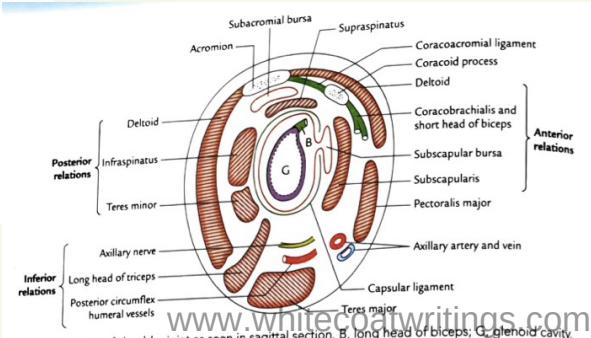


Fig. 8.2 Relations of shoulder joint as seen in sagittal section. B, long head of biceps; G, glenoid cavity.

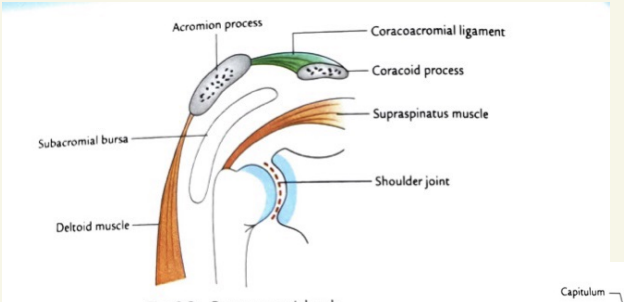


Fig. 8.3 Coracoacromial arch.

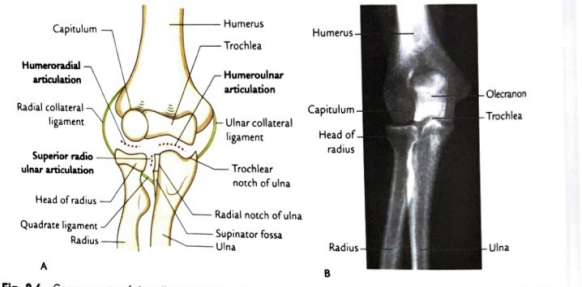


Fig. 8.6 Components of the elbow joint: **A**, schematic diagram; **B**, radiograph of normal elbow joint (anteroposterior view). (Source: Drake, Richard L; Vogl, Wayne; Mitchell, Adam WM. *Gray's Anatomy for Students*. Philadelphia: Elsevier Inc., 2005.)

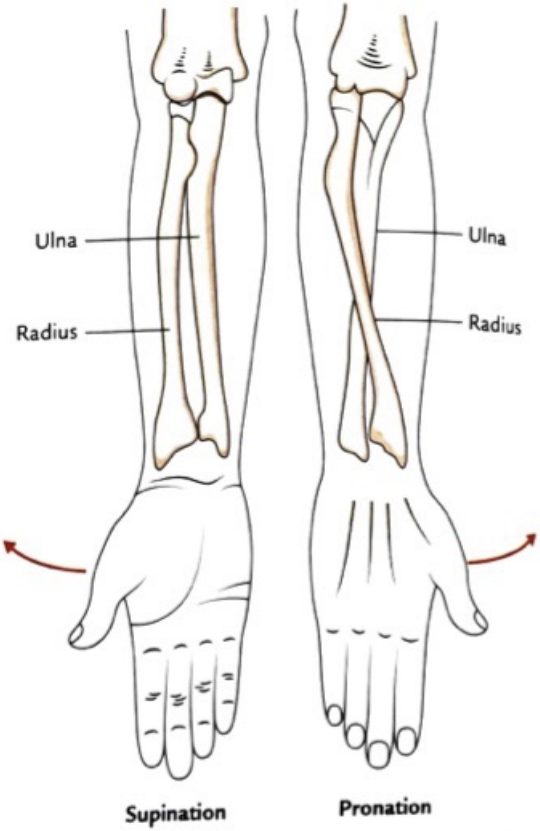


Fig. 8.9 Movements of supination and pronation.

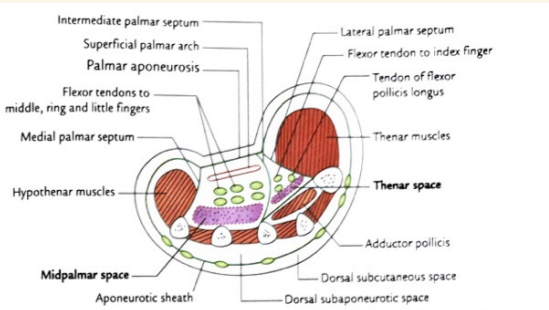


Fig. 5.7 Cross-section of hand showing palmar spaces and spaces on the dorsum of the hand.

NEUROANAT

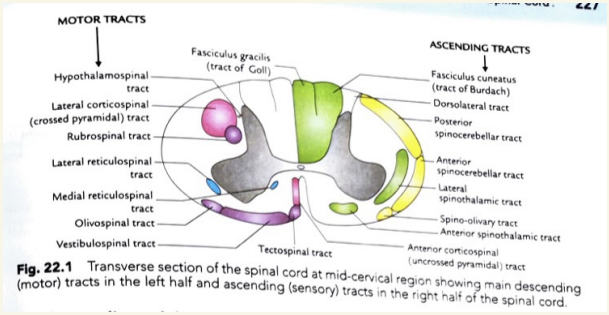


Fig. 22.1 Transverse section of the spinal cord at mid-cervical region showing main descending (motor) tracts in the left half and ascending (sensory) tracts in the right half of the spinal cord.

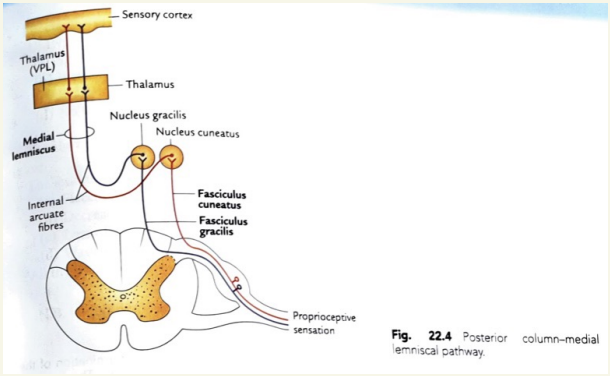


Fig. 22.4 Posterior column–medial lemniscal pathway.

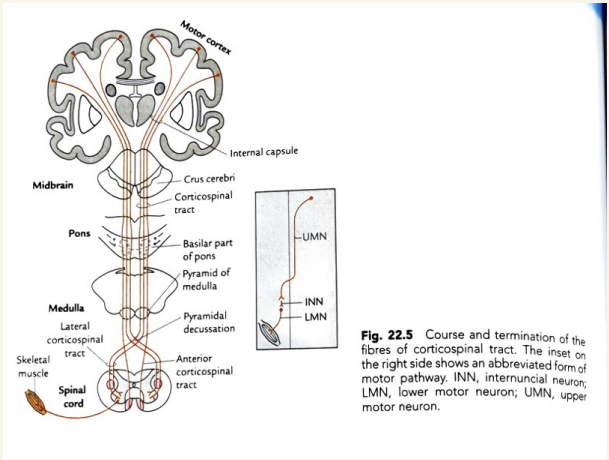


Fig. 22.5 Course and termination of the fibres of corticospinal tract. The inset on the right side shows an abbreviated form of motor pathway. INN, internuncial neuron; LMN, lower motor neuron; UMN, upper motor neuron.

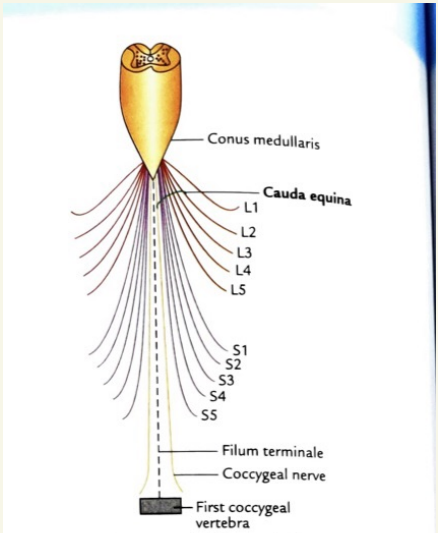


Fig. 22.2 Lower end of the spinal cord with filum terminale and lumbar, sacral and coccygeal nerve roots. The spinal nerve roots forming the cauda equina are encircled.

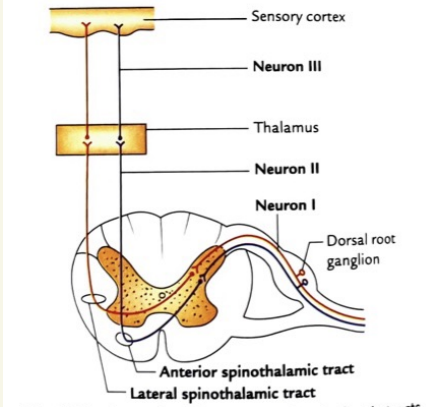


Fig. 22.3 Lateral and anterior spinothalamic tracts.

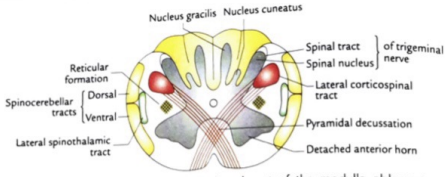


Fig. 23.2 Transverse section through the lower closed part of the medulla oblongata at the level of pyramidal decussation.

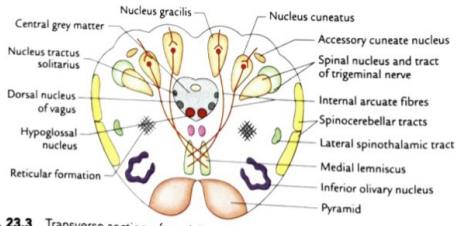


Fig. 23.3 Transverse section of medulla oblongata at the level of sensory decussation.

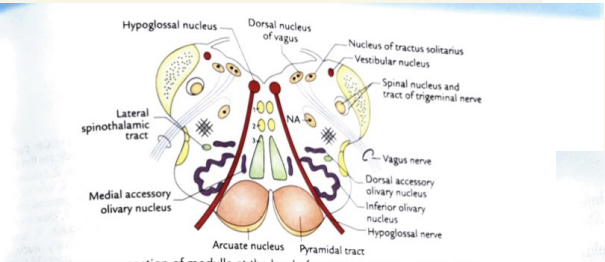
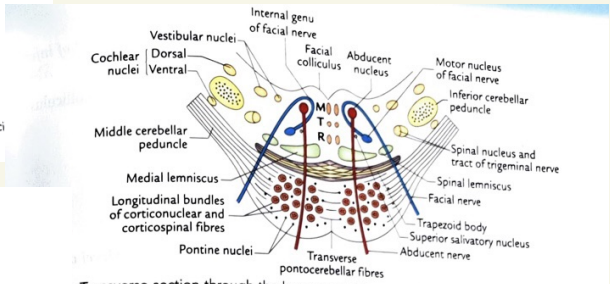


Fig. 23.4 Transverse section of medulla at the level of upper parts of olives. 1, Medial longitudinal fasciculus; 2, tectospinal tract; 3, medial lemniscus. NA, nucleus ambiguus.



Transverse section through the lower part of the pons. M, medial longitudinal bundle; R, r
t; T, tectospinal tract.

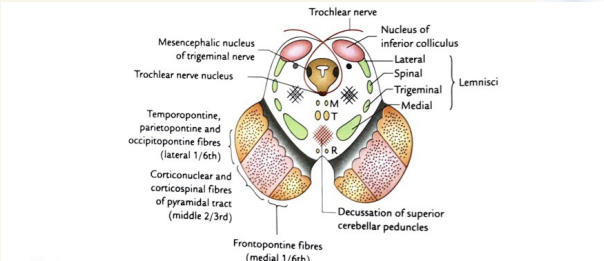


Fig. 23.8 Transverse section of the midbrain at the level of inferior colliculi. M, medial longitudinal fasciculus; R, rubrospinal tract; T, tectospinal tract.

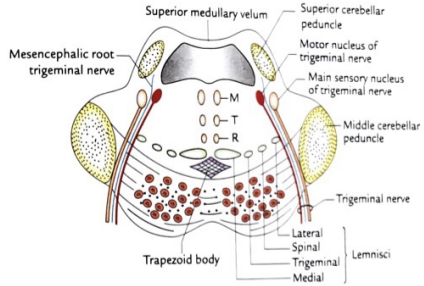


Fig. 23.7 Transverse section through the upper part of the pons. M, medial longitudinal bun rubrospinal tract; T, tectospinal tract.

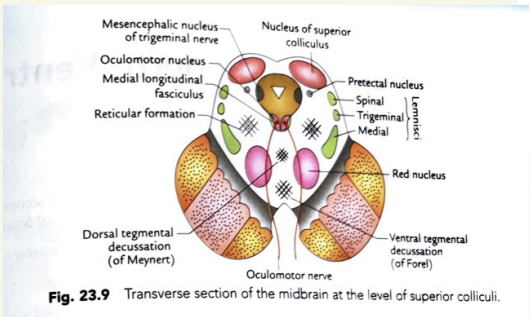


Fig. 23.9 Transverse section of the midbrain at the level of superior colliculi.

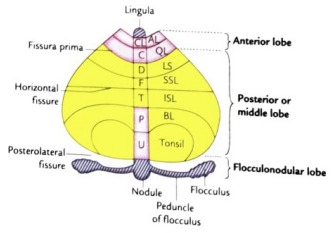


Fig. 24.1 Anatomical functional and morphological subdivisions of the cerebellum. The organ is being opened out (schematically) to show both superior and inferior surfaces together. The parts seen above the horizontal fissure form the superior surface and those below the fissure, inferior surface of the cerebellum. AL, ala; BL, biventral lobule; C, central lobule; CL, culmen; D, declive; F, folium; ISL, inferior semilunar lobule; LS, lobulus simplex; P, pyramid; QL, quadrate lobule; SSL, superior semilunar lobule; T, tuber; U, uvula.

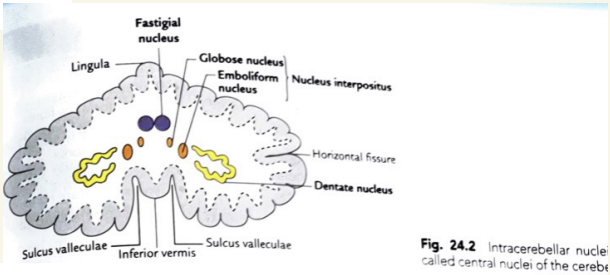


Fig. 24.2 Intracerebellar nuclei called central nuclei of the cerebe

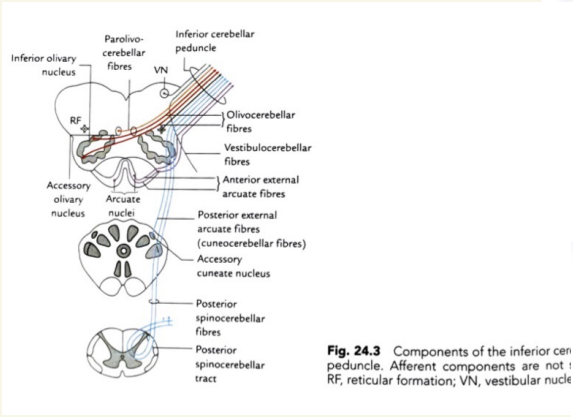


Fig. 24.3 Components of the inferior cer peduncle. Afferent components are not RF, reticular formation; VN, vestibular nucle

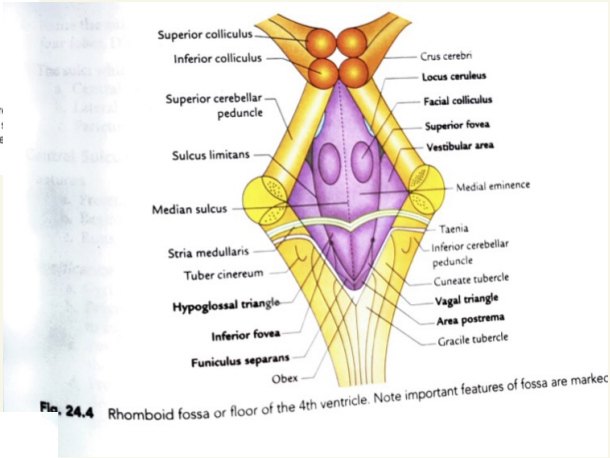


Fig. 24.4 Rhomboid fossa or floor of the 4th ventricle. Note important features of fossa are marked

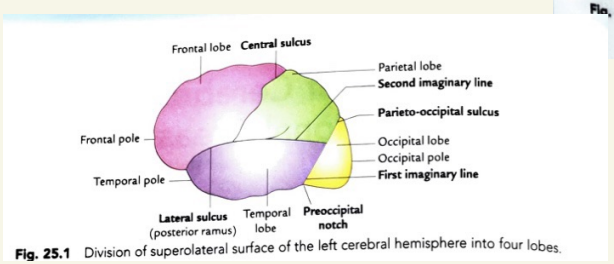


Fig. 25.1 Division of superolateral surface of the left cerebral hemisphere into four lobes.

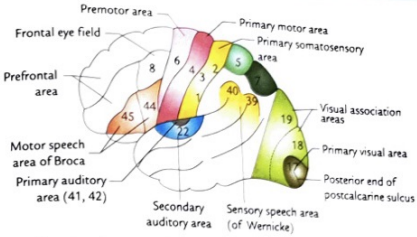


Fig. 25.2 The functional areas on the superolateral surface of the left cerebral hemisphere.

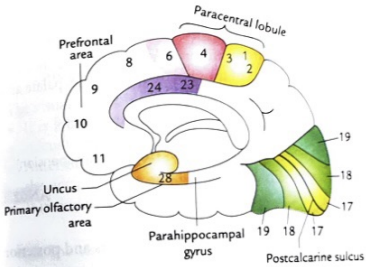


Fig. 25.3 The functional areas on the medial surface of the right cerebral hemi

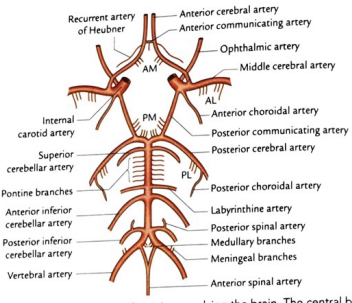
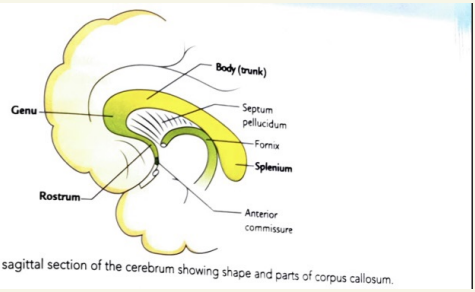


Fig. 26.1 Circle of Willis and the branches of arteries supplying the brain. The central branches of cerebral arteries are shown by abbreviations: AL, anterolateral group; AM, anteromedial group; PL, posterolateral group; PM, posteromedial group.



4 Median sagittal section of the cerebrum showing shape and parts of corpus callosum.

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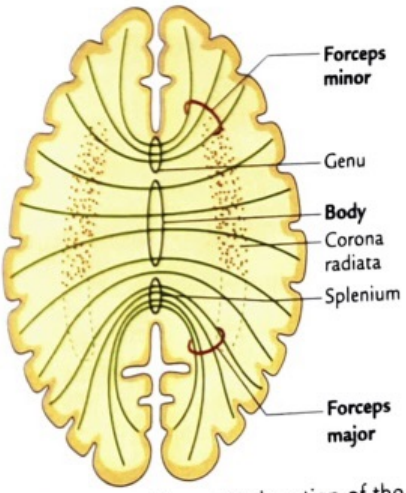


Fig. 26.5 Median sagittal section of the cerebrum showing course of fibres from different parts of corpus callosum.

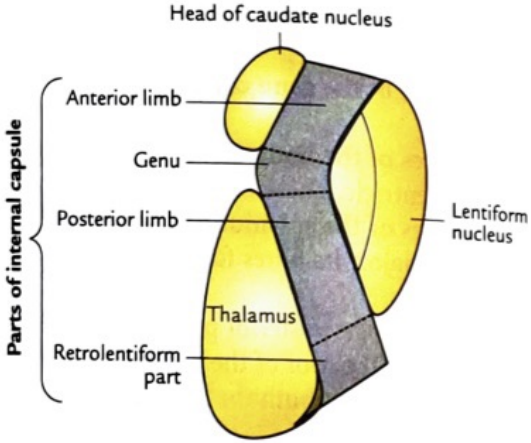


Fig. 26.6 Location, shape, boundaries and parts of the internal capsule. The sublentiform part is not seen.

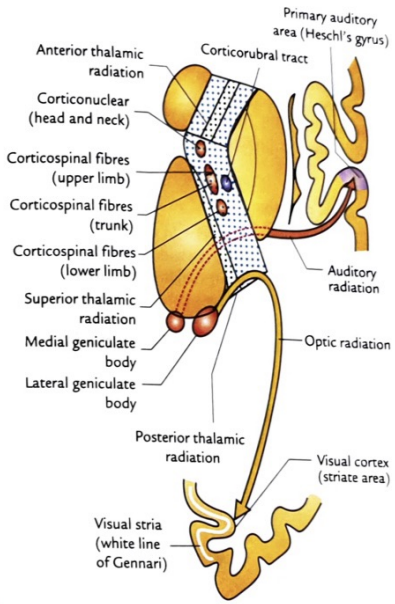


Fig. 26.7 Parts of the internal capsule and fibres/tracts passing through them.

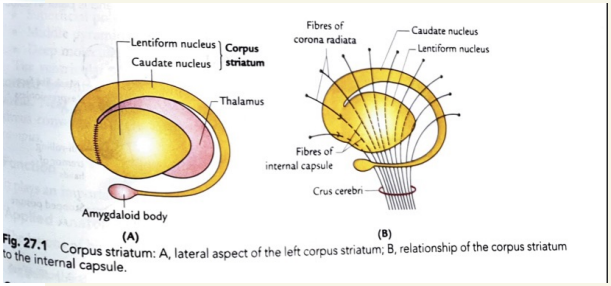


Fig. 27.1 Corpus striatum: A, lateral aspect of the left corpus striatum; B, relationship of the corpus striatum to the internal capsule.

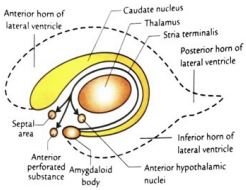
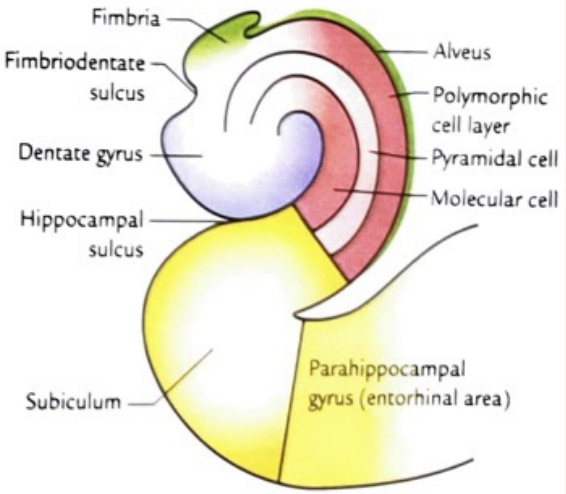


Fig. 27.2 Relationship of caudate nucleus with the cavity of the lateral ventricle and thalamus. Note that the stria terminalis, the main efferent tract of amygdaloid body projects to the septal area, anterior perforated substance and anterior hypothalamus.



g. 27.4 Coronal section of the hippocampus a lated structures.

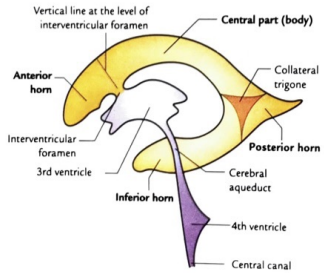


Fig. 27.6 Ventricular system of the brain; lateral view. Note the different parts of the lateral ventricle (labelled in bold letters).

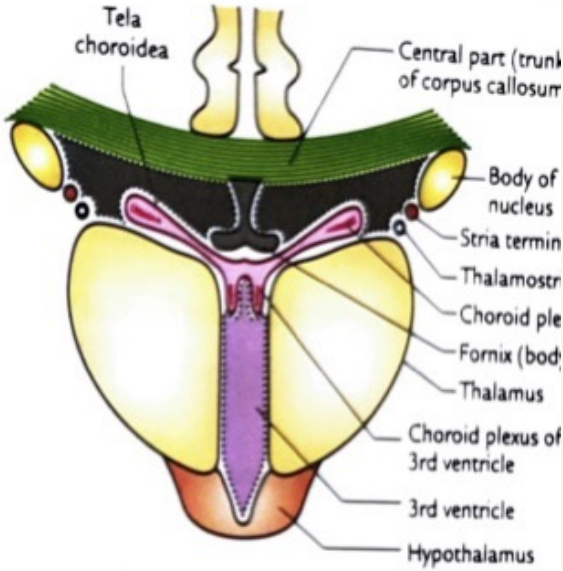


Fig. 27.7 Boundaries of central part of the latera ventricle.

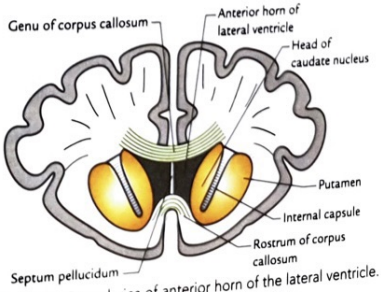


Fig. 27.8 Boundaries of anterior horn of the lateral ventricle.

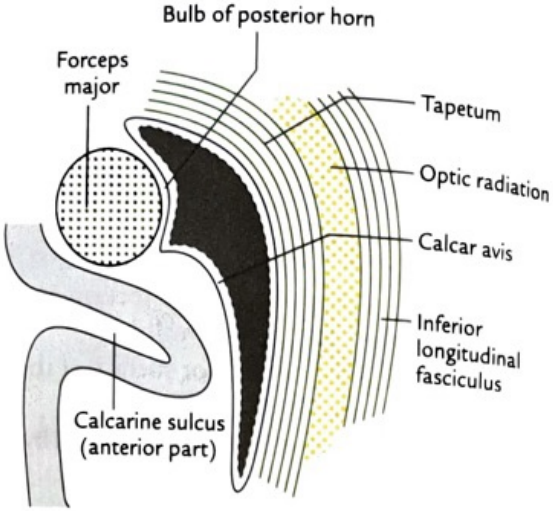


Fig. 27.9 Boundaries of posterior horn of the lateral ventricle.

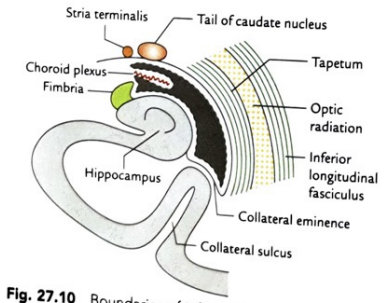


Fig. 27.10 Boundaries of inferior horn of the lateral ventricle.

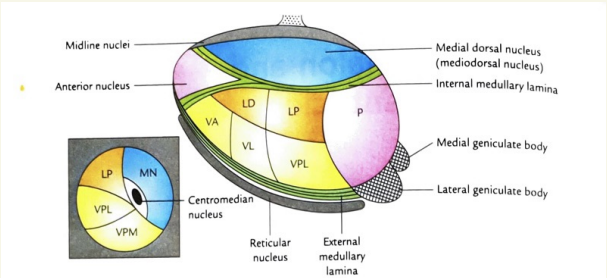


Fig. 28.1 Horizontal section of the thalamus (schematic) showing the location of various thalamic nuclei. The inset is the coronal section of thalamus passing in front of pulvinar showing ventral posteromedial (VPM), ventral posterolateral (VPL) nuclei and centromedian nucleus. LD, lateral dorsal nucleus; LP, lateral posterior nucleus; MN, mediodorsal nucleus; P, pulvinar; VA, ventral anterior nucleus; VL, ventral lateral nucleus.

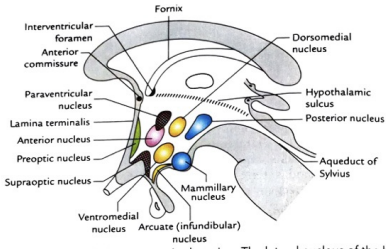


Fig. 28.2 Different nuclei of hypothalamus in sagittal section. The lateral nucleus of the hypothalamus is not shown.

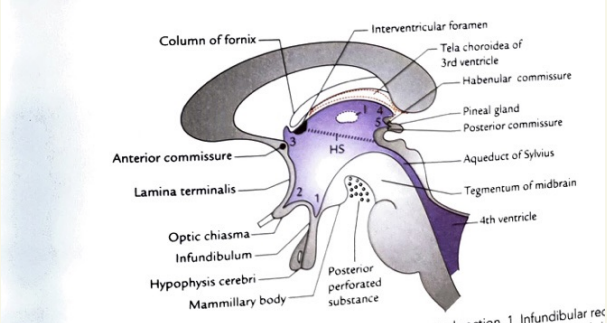


Fig. 28.3 Boundaries and recesses of 3rd ventricle as seen in sagittal section. 1, Infundibular rec recess; 3, anterior recess; 4, suprapineal recess; 5, pineal recess. HS, hypothalamic sulcus; I, i adhesion.

HEAD AND NECK

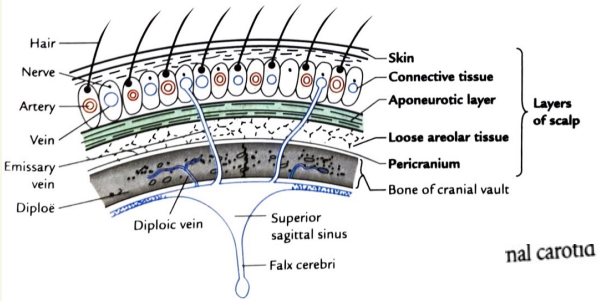


Fig. 9.1 Layers of the scalp.

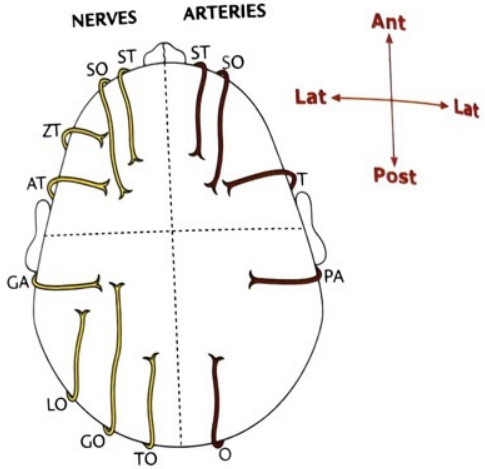


Fig. 9.2 Arteries (right half) and sensory nerves (left half) supplying the scalp. ST, supratrochlear; SO, supraorbital; T, supraficial temporal; PA, posterior auricular; O, occipital; ZT, zygometicotemporal; AT, auriculotemporal; GA, great auricular; LO, lesser occipital; GO, greater occipital; TO, third occipital.

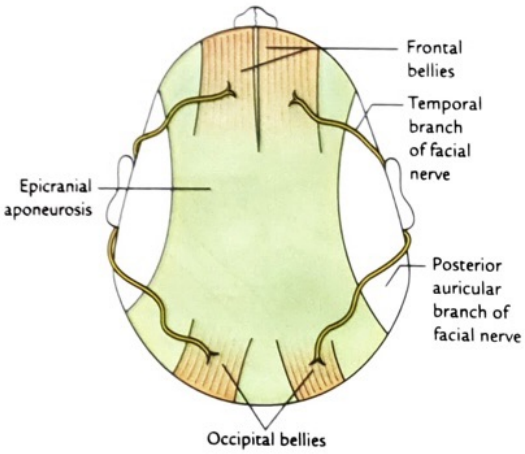


Fig. 9.3 Occipitofrontalis muscle.

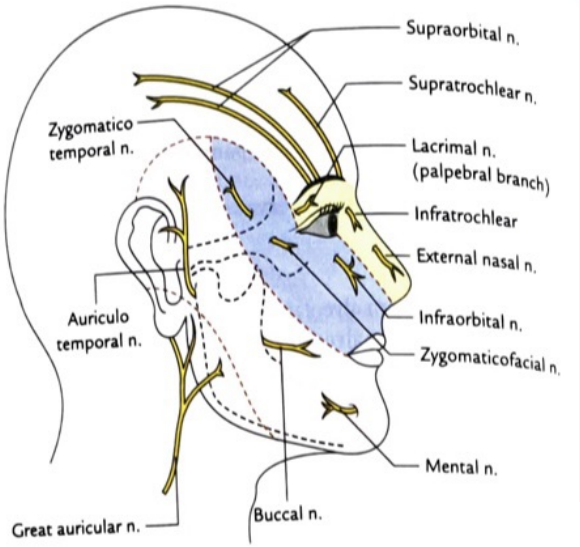


Fig. 9.6 Sensory innervation of the face.

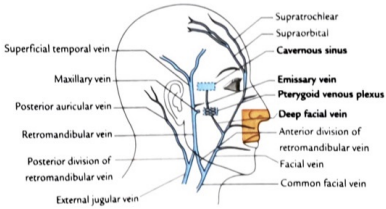


Fig. 9.8 Venous drainage of the face.

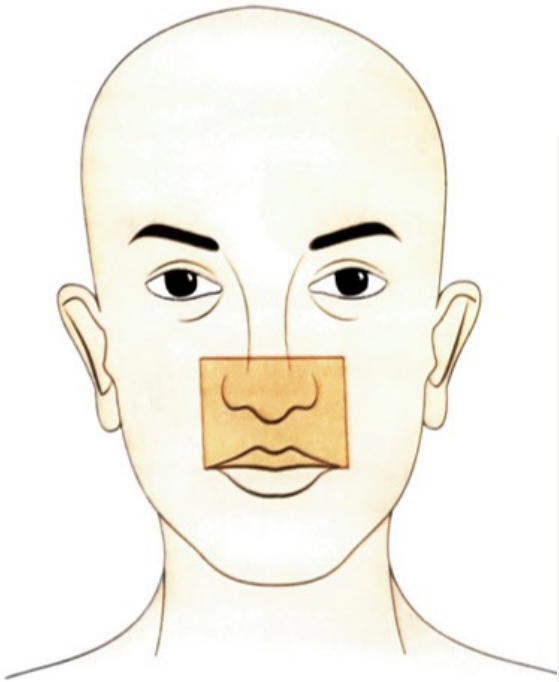


Fig. 9.7 Dangerous area of the face.

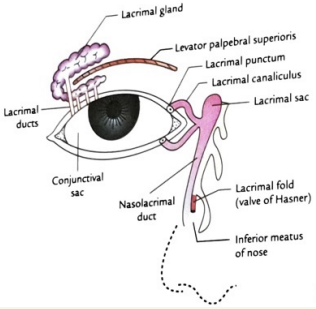


Fig. 9.9 Lacrimal apparatus.

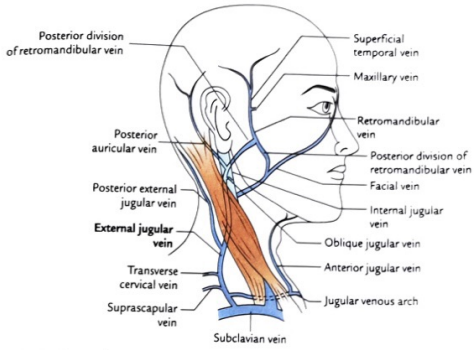


Fig. 10.1 External jugular vein. Other superficial veins of the neck are also shown.

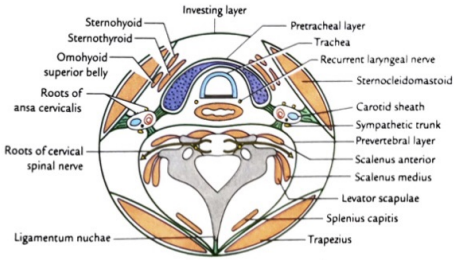


Fig. 10.2 Diagrammatic transverse section through neck at the level of the 6th cervical vertebra t horizontal disposition of the three layers of deep cervical fascia.

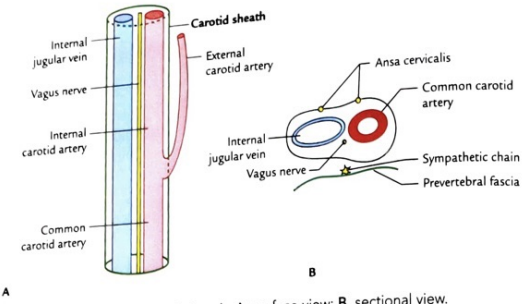


Fig. 10.3 Carotid sheath: A, surface view; B, sectional view.

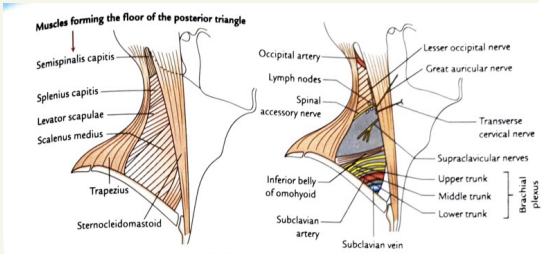


Fig. 10.6 Posterior triangle: A, muscles forming the floor of the posterior triangle; B, subdivisions and main contents of posterior triangle.

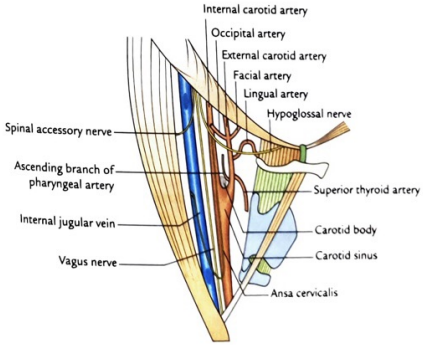
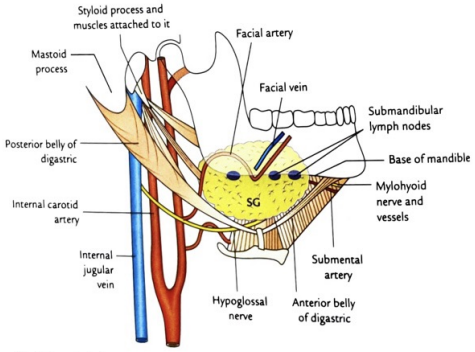


Fig. 10.8 Carotid triangl
boundaries and contents.



I.7 Digastric (submandibular) triangle: boundaries and contents. SG, submandibular gland.

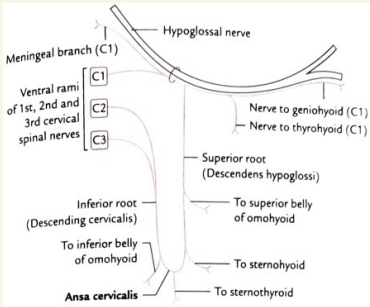


Fig. 10.9 Formation and dist
ansa cervicalis.

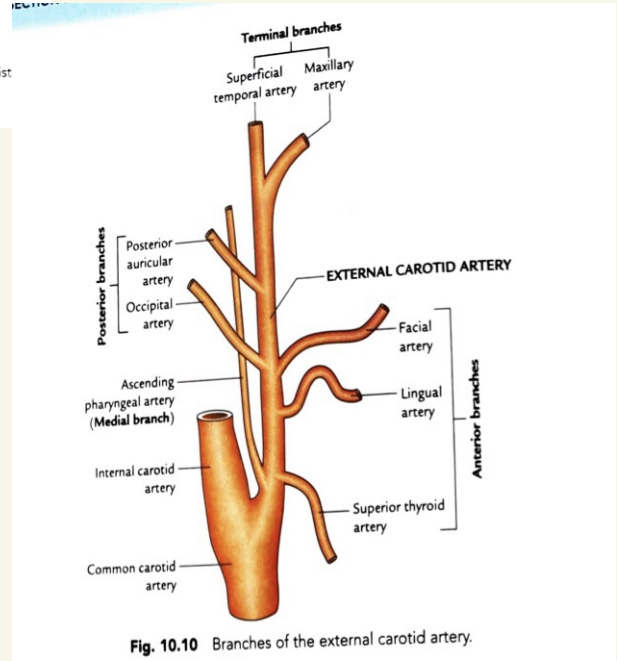


Fig. 10.10 Branches of the external carotid artery.

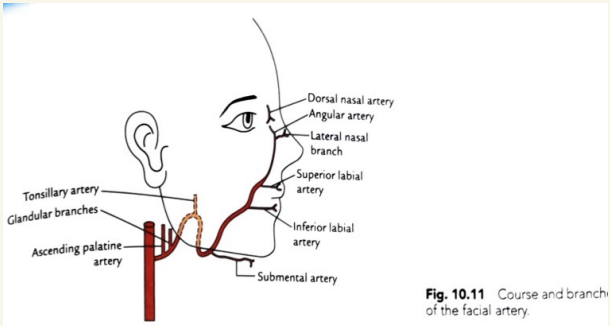


Fig. 10.11 Course and branch
of the facial artery.

N.B. Terminal part of the facial artery is called **angular artery**. The facial artery is tortuous to allow th
movements of pharynx, mandible, lips and cheeks.

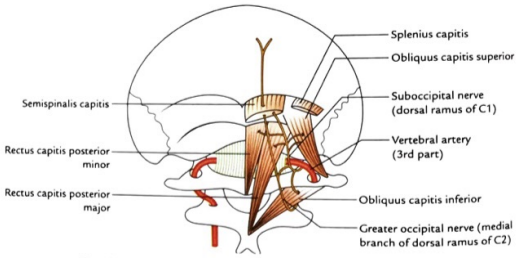


Fig. 10.12 Boundaries and contents of suboccipital triangle.

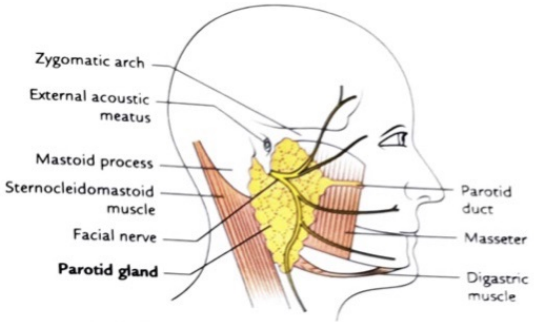


Fig. 11.1 Main features of the parotid region.

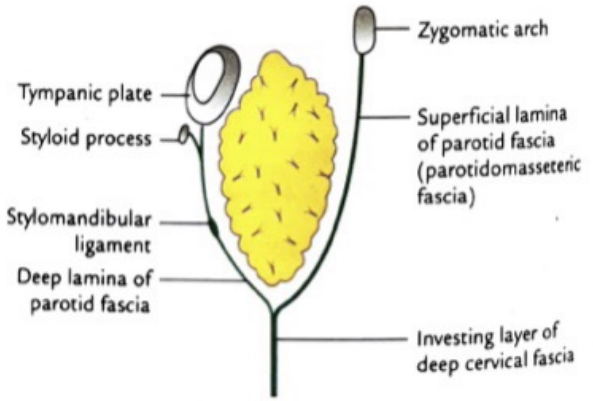


Fig. 11.5 Parotid capsule.

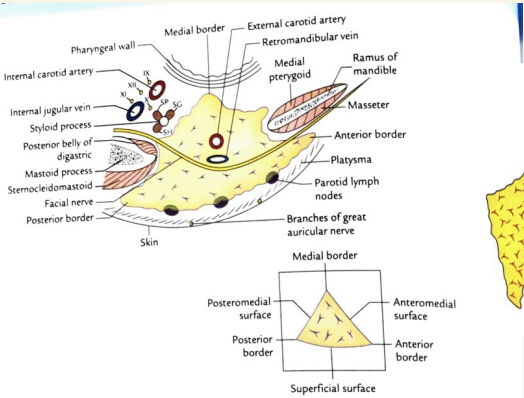


Fig. 11.2 Horizontal section through parotid gland showing its relations and the structures passing through it. The figure in the inset shows borders and surfaces of the parotid gland. SG, styloglossus muscle; SH, stylohyoid muscle; SP, stylopharyngeus muscle.

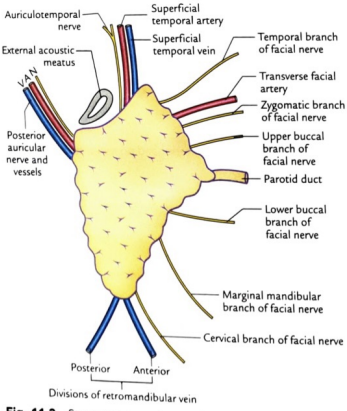


Fig. 11.3 Structures emerging at the periphery of the parotid gland.

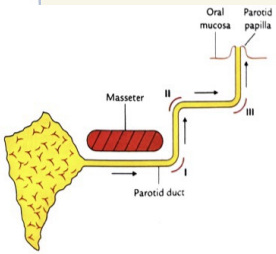


Fig. 11.6 Course of parotid duct, showing three bends marked as I, II and III.

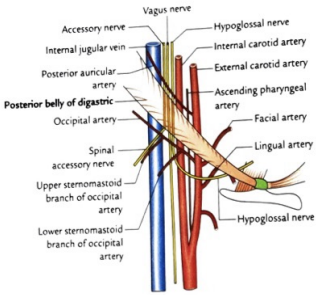


Fig 11.8 Deep relations of the posterior belly of digastric muscle.

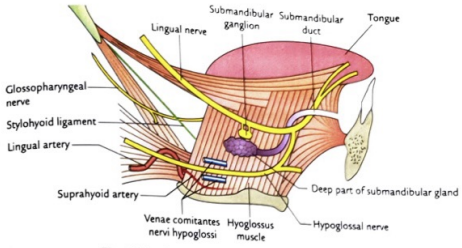


Fig. 11.9 Superficial relations of hyoglossus muscle.

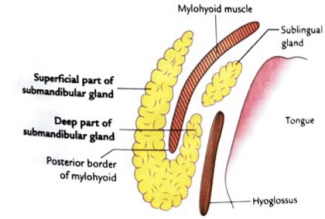


Fig. 11.10 Horizontal section through submandibular region showing the location and parts of submandibular gland. The sublingual salivary gland is also seen.

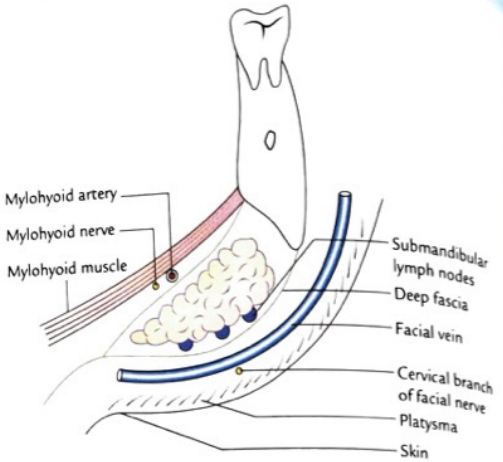


Fig. 11.11 Relations of the superficial (inferior) surface of the submandibular salivary gland. The relations of anterior part of medial (deep) surface are also seen.

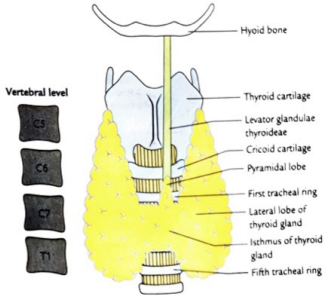


Fig. 12.1 Location, parts and extent of the thyroid gland.

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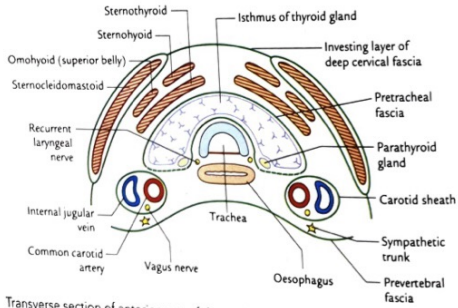


Fig. 12.2 Transverse section of anterior part of the neck at the level of thyroid isthmus, showing relations o thyroid gland.

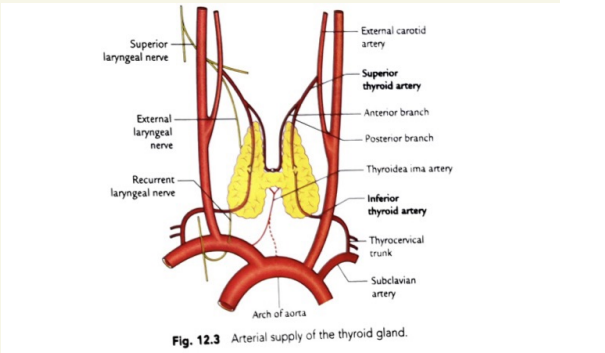


Fig. 12.3 Arterial supply of the thyroid gland.

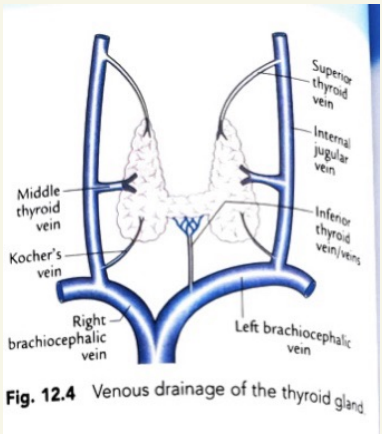


Fig. 12.4 Venous drainage of the thyroid gland

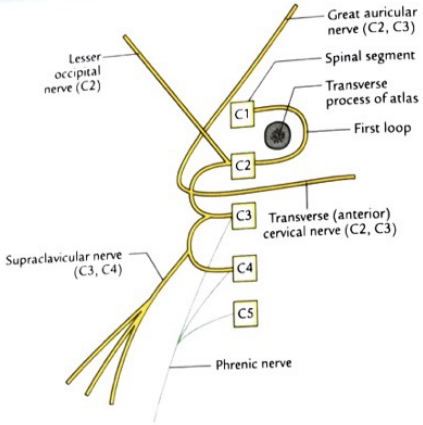


Fig. 12.10 Cervical plexus and its cutaneous branches.

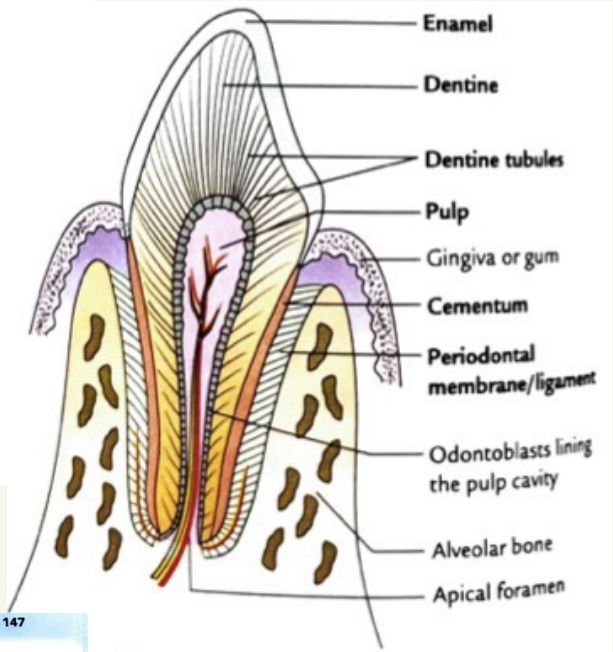


Fig. 13.2 Structure of the tooth.

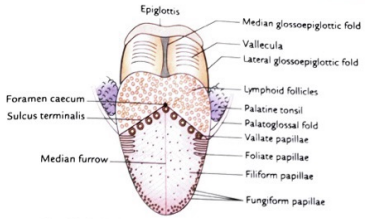


Fig. 13.3 Features on the dorsal surface of the tongue.

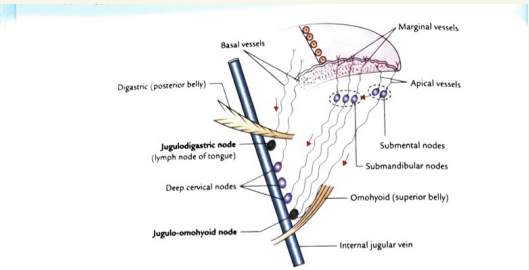
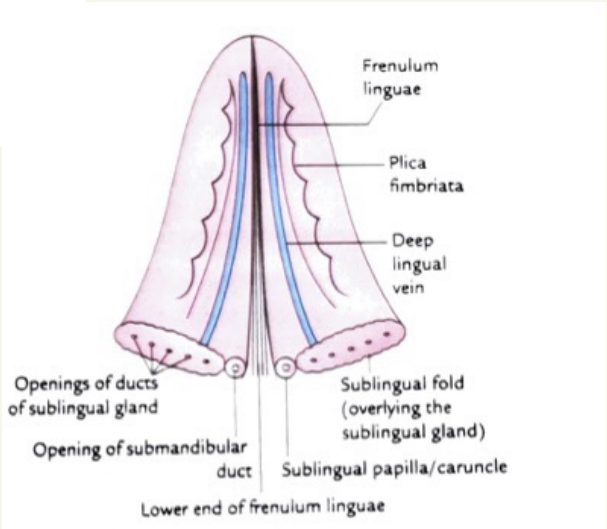


Fig. 13.6 Lymphatic drainage of the tongue: showing course and direction of apical, marginal and basal lymph vessels.



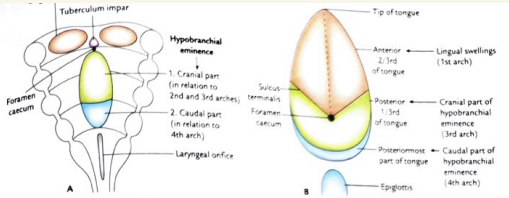
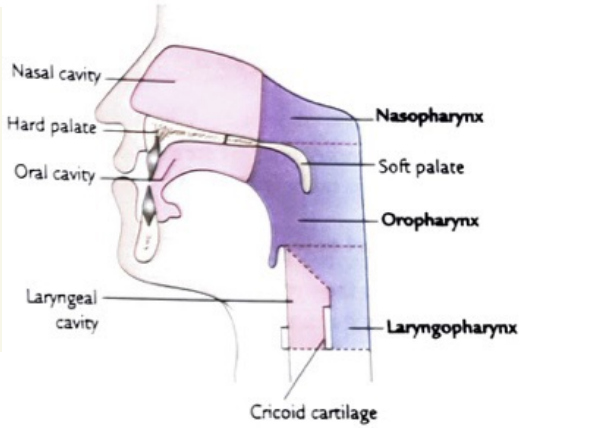


Fig. 13.7 Development of the tongue: A, four swellings forming tongue with subdivision of hypobranchial eminence into cranial and caudal parts; B, definitive tongue.



I Location and subdivisions of the pharynx.

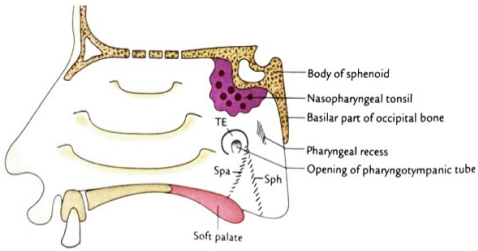


Fig. 14.2 Nasopharynx. TE, tubal elevation; Spa, salpingopalatine fold; Sph, salpi

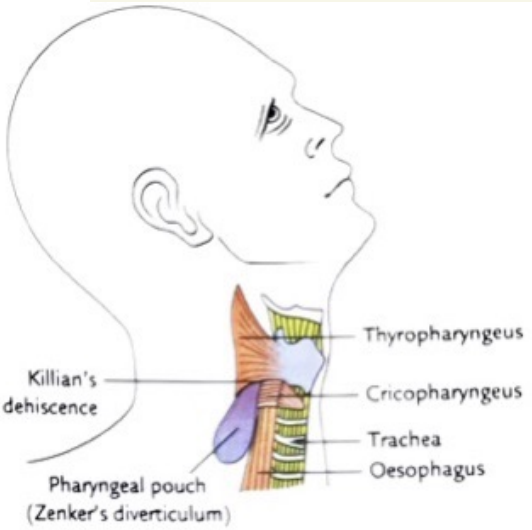


Fig. 14.3 Pharyngeal diverticulum.

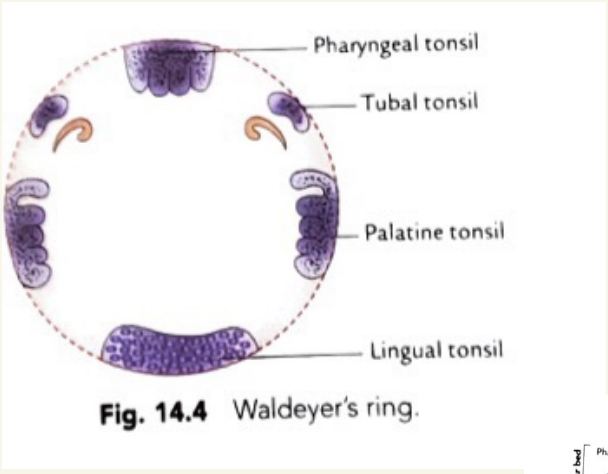


Fig. 14.4 Waldeyer's ring.

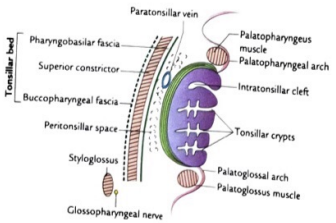


Fig. 14.5 Horizontal section through tonsillar fossa showing medial and lateral surfaces of the tonsil and tonsillar bed.

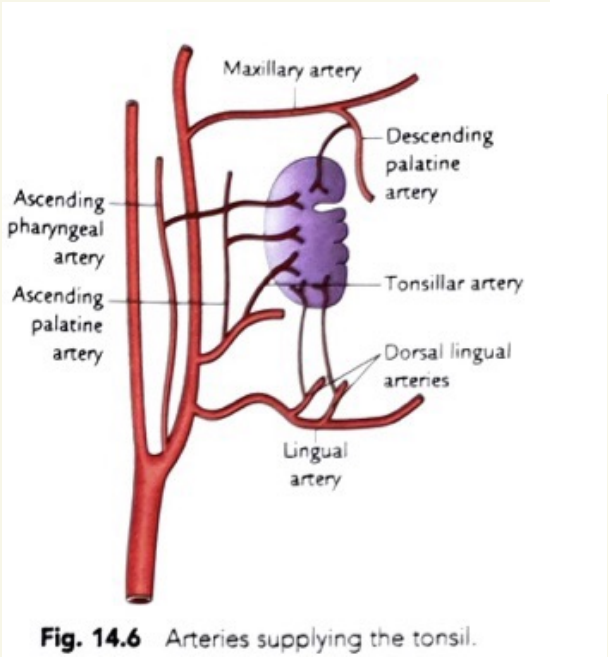


Fig. 14.6 Arteries supplying the tonsil.

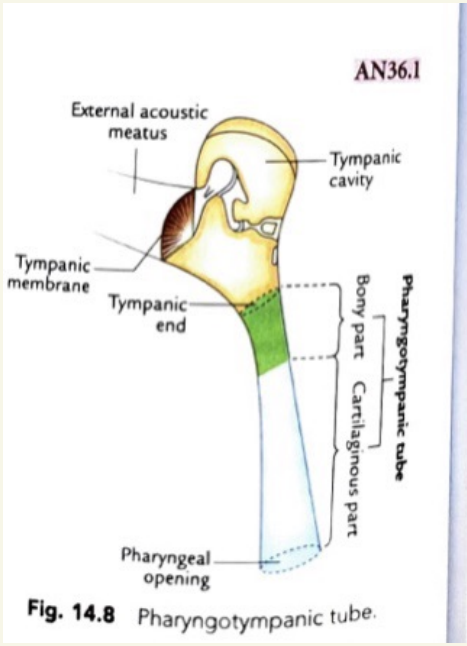


Fig. 14.8 Pharyngotympanic tube.

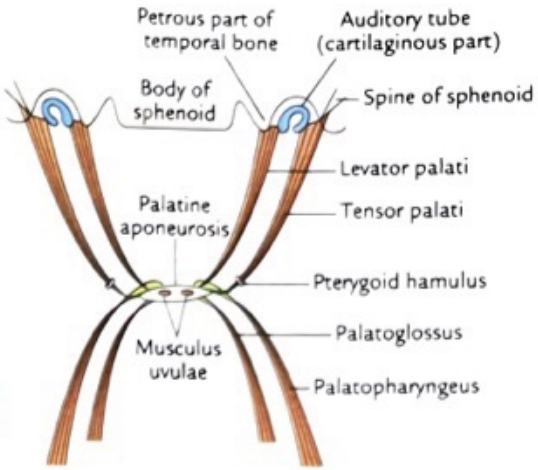


Fig. 14.9 Muscles of the soft palate.

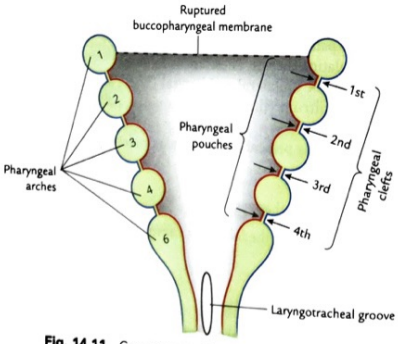


Fig. 14.11 Components of pharyngeal apparatus.

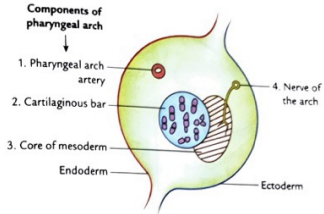


Fig. 14.12 Structure of pharyngeal arch.

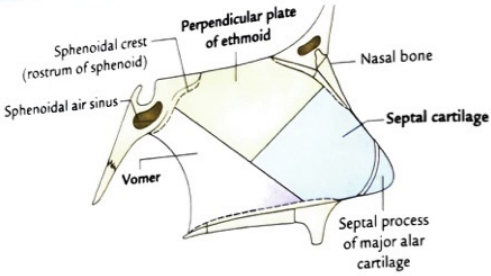


Fig. 15.1 Formation of nasal septum.

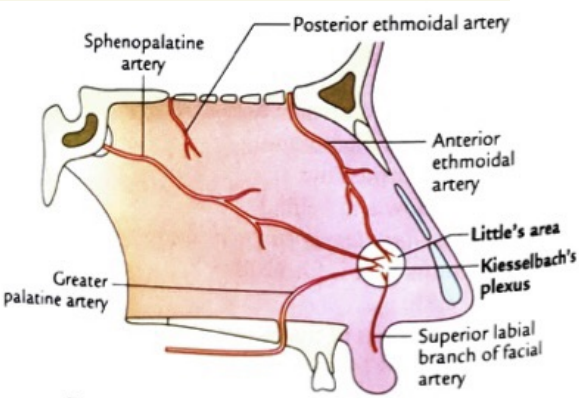


Fig. 15.2 Arterial supply of the nasal septum.

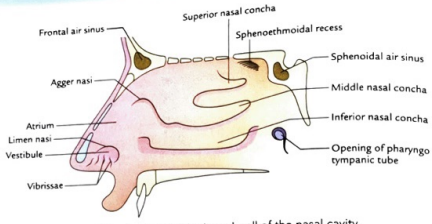


Fig. 15.3 Features of the lateral wall of the nasal cavity.

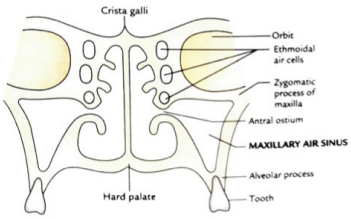


Fig. 15.5 Location and relations of maxillary air sinus.

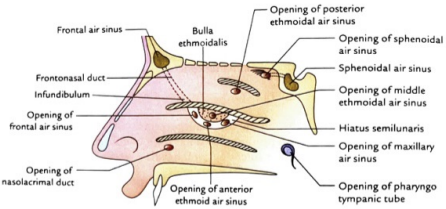


Fig. 15.4 Lateral wall of the nose with conchae removed showing openings of various sinuses and nasolacrimal duct.

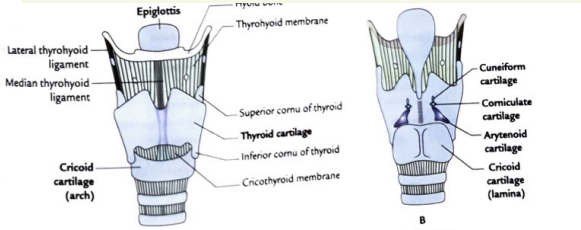


Fig. 16.1 Skeleton of the larynx: A, anterior view; B, posterior view.

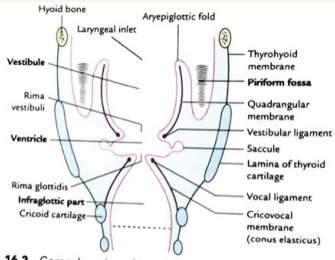


Fig. 16.2 Coronal section of laryngeal cavity showing its subdivisions.

The structures seen in the laryngeal cavity during

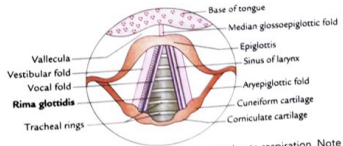


Fig. 16.4 Laryngoscopic view of the laryngeal cavity during moderate respiration. Note the location of rima glottidis in the center.

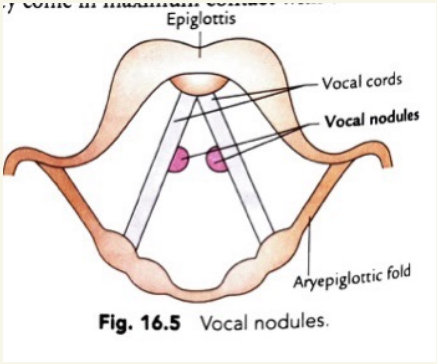


Fig. 16.5 Vocal nodules.

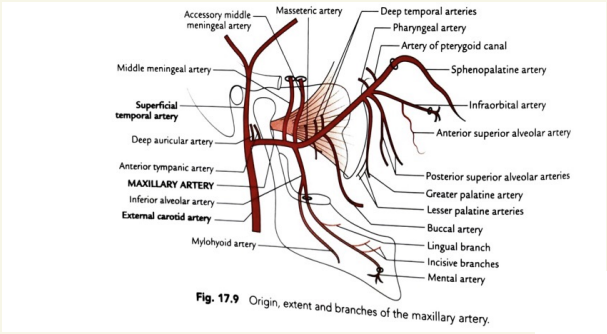


Fig. 17.9 Origin, extent and branches of the maxillary artery.

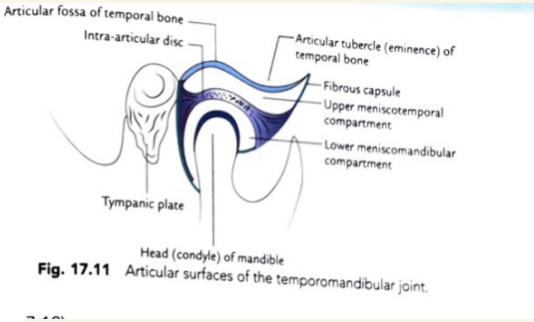


Fig. 17.11 Articular surfaces of the temporomandibular joint.

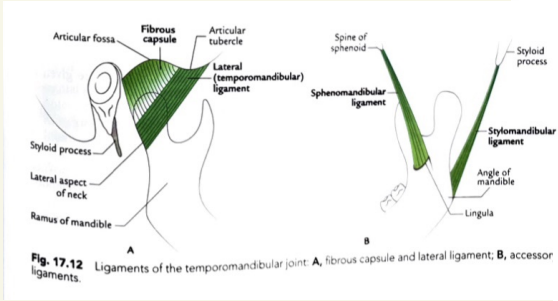


Fig. 17.12 Ligaments of the temporomandibular joint: **A,** fibrous capsule and lateral ligament; **B,** accessory ligaments.

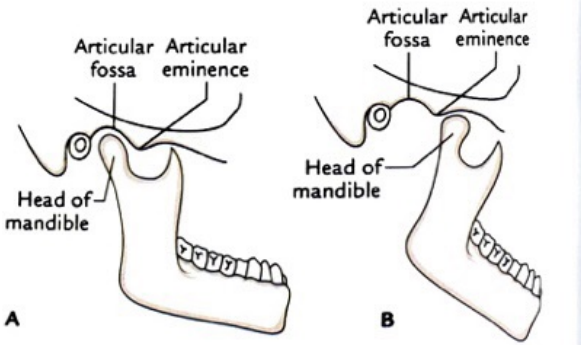


Fig. 17.13 Dislocation of TMJs. **A,** normal; **B,** dislocation.

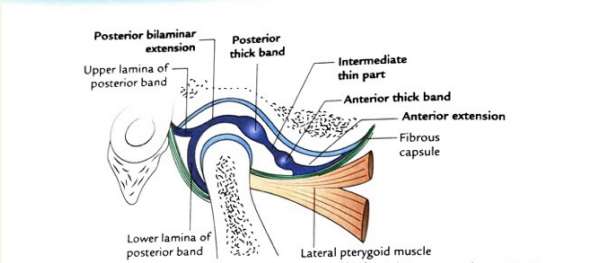


Fig. 17.14 Parts of articular disc of the temporomandibular joint as seen in sagittal section.

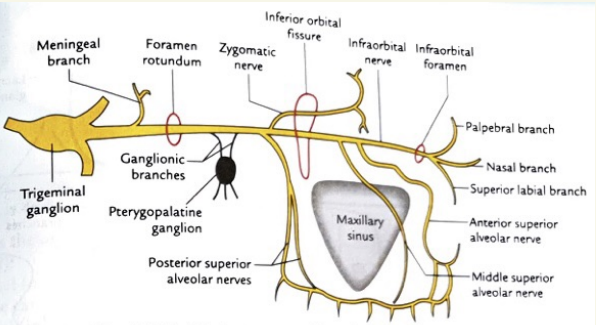
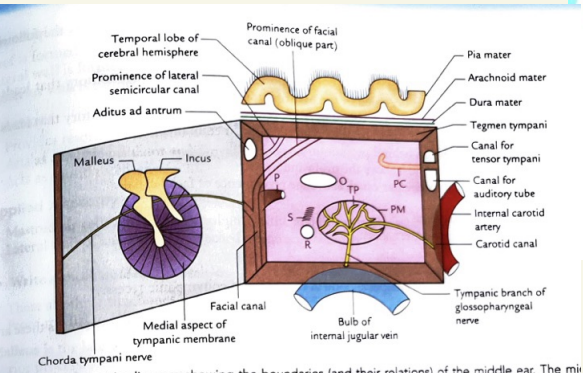


Fig. 17.15 Origin, course and branches of the maxillary nerve.



ig. 18.2 Schematic diagram showing the boundaries (and their relations) of the middle ear. The mi
ar is akin to a six-sided box. Note its lateral side is opened out. O, oval window; P, pyramid; PC, proce
ochleariformis; PM, promontory; R, round window; S, sinus tympani; TP, tympanic plexus.

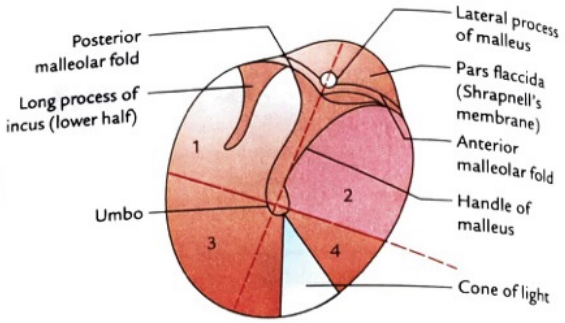


Fig. 18.1 External surface of tympanic membrane as seen through otoscope: 1, posterosuperior quadrant; 2, anterosuperior quadrant; 3, posteroinferior quadrant; 4, anteroinferior quadrant.

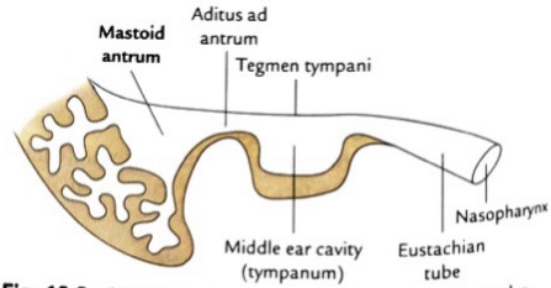


Fig. 18.3 Mastoid antrum as seen in section along the long axis of petromastoid bone.

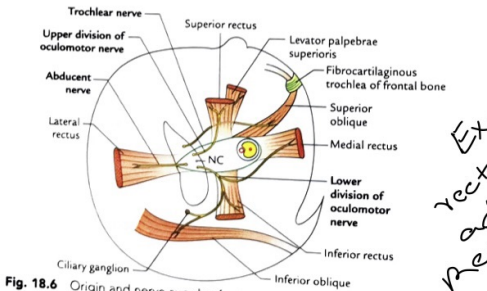


Fig. 18.6 Origin and nerve supply of extraocular muscles. NC, nasociliary nerve.

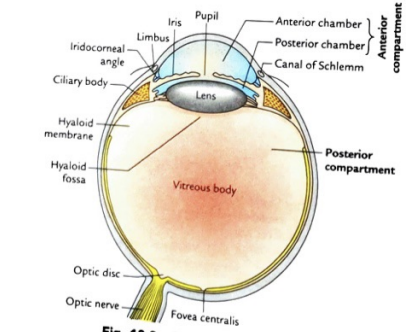


Fig. 18.8 Compartments of the eyeball.

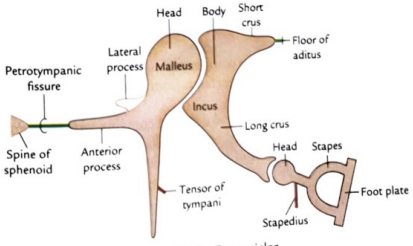


Fig. 18.4 Ear ossicles.

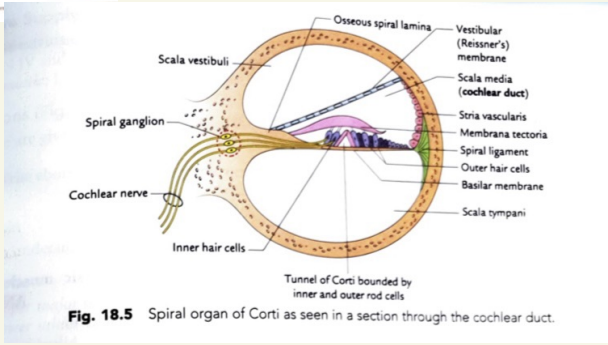


Fig. 18.5 Spiral organ of Corti as seen in a section through the cochlear duct.

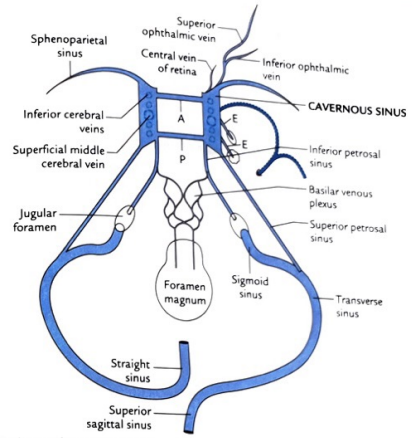


Fig. 19.3 Tributaries and communications of cavernous sinus. **A,** anterior intercavernous vein; **P,** posterior intercavernous sinus.

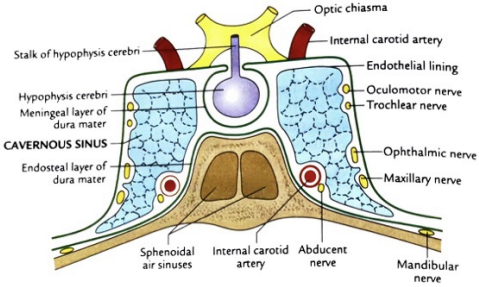


Fig. 19.2 Formation, location, relations and contents of cavernous sinuses.

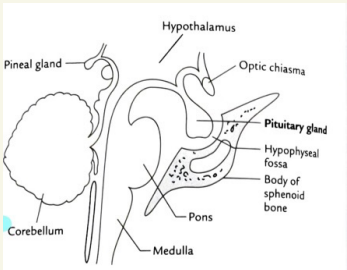


Fig. 19.4 Location of the pituitary gland.

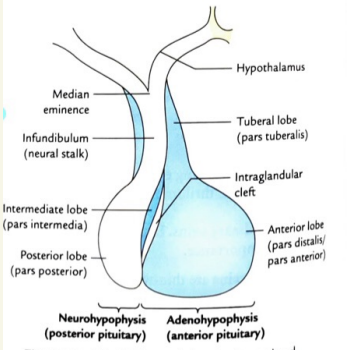


Fig. 19.5 Subdivisions of the pituitary gland.

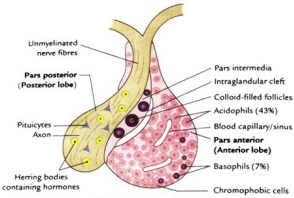


Fig. 19.6 Structure of pituitary gland (highly schematic diagram).