Competency-Based

B D Chaurasia's Human Anatomy

Regional and Applied | Dissection and Clinical

Ninth Edition

Volume 3

- Volume 1 UPPER LIMB and THORAX
- Volume 2 LOWER LIMB, ABDOMEN and PELVIS
- Volume 3 HEAD and NECK
- Volume 4 BRAIN–NEUROANATOMY

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Salient features of the four volumes

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- Colour codes used consistently in the drawings of various cells, tissues and organs are given at the beginning of each section.
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  Tables 33, Flowcharts 12, Illustrations 462, Ossification boxes 14, Dissection boxes 12, X-rays 4, Clinical Anatomy boxes 77, Facts to Remember 114, FAQs 104, MCQs 135, *Viva Voce* questions 227, Videos 32, Clinicoanatomical Problems 20.

Chief Editor

Krishna Garg MBBS, MS, PhD, FIMSA, FIAMS, FAMS, FASI is ex-Professor and Head, Department of Anatomy, Lady Hardinge Medical College (LHMC), New Delhi. She joined LHMC where she completed her MS and PhD and taught anatomy till her retirement. She has received fellowships of the Indian Medical Association, Academy of Medical Specialists, and the International Medical Science Academy. She was elected fellow of the Academy of Medical Sciences (FAMS) in 2005. She was honoured with Excellence Award in Anatomy in 2004 by Delhi Medical Association. She has received Life Time Achievement Award, Fellowship of Anatomical Society of India, and DMA Distinguished Services Award, in 2015. She is visiting faculty of DNB, MDS and a PhD examiner.

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ISBN: 978-93-5466-477-9

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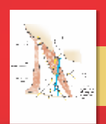
Wall Chart on Nerves of Human Body



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Ethical Aspects of Cadaveric Dissection

The cadaver, the dead body, that we dissect, plays an important role in the teaching of anatomy to medical students. The cadaver and the bones become an important part of our life as medical students as some academics have even referred to the cadaver as the 'first teacher' in the medical school.

We must pay due respect to the cadavers and bones kept in the dissection hall or museum. In some medical schools it is mandatory to take an 'oath' before beginning the cadaveric dissection which aims to uphold the dignity of the mortal remains of the departed soul while other medical schools help the student to undertake dissection in a proper manner and empathise with the families of the donor. During the course of dissection the student is constantly reminded of the sanctity of the body he/she is studying so that the noble donation of someone's body is used only as a means of gaining scientific knowledge/progress. Each and every dissected part afterwards is disposed or cremated with full dignity.

Honour of the donor and his/her family is the prime responsibility of the health professional. 'The dead teach the living', and the living pledge to use this knowledge for the upliftment of humankind.

Three-dimensional models and computer simulations cannot replace the tactile appreciation achieved by cadaveric dissection and we should always be grateful to those who have donated their bodies and strive to respect them. We have the privilege to study the human being through a body of a fellow human and have to be humble and carry forward the legacy of nobility and selflessness in our careers.

(Contributed by Dr Puneet Kaur)

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Competency based Undergraduate Curriculum for the Indian Medical Graduate

Glossary

L: Latin word, Gr: Greek word

Allocortex	L. ancient bark	Old cortex, i.e. paleocortex and archicortex
Alveus	L. trough	White matter on the ventricular surface of hippocampus
Amygdala	L. almond	Nucleus in roof of inferior horn of lateral ventricle
Arachnoid	Gr. like spider's web	Middle meningeal layer
Archicerebellum	Gr. old cerebellum	Phylogenetic cerebellum area in caudal region
Astereognosis	Gr. loss of knowledge	Inability to recognise solid objects
Astrocyte	Gr. star cells	A type of neuroglial cell
Ataxia	Gr. negative order	Loss of muscular coordination
Athetosis	Gr. without place	Bizzare movements
Autonomic	Gr. self law	Autonomic NS
Axolemma	Gr. axis back	Covering of axon
Basis pedunculi	—	Ventral part of midbrain
Brachium	L. arm	Fibres connecting 2 parts
Brainstem	—	Midbrain + pons + medulla oblongata
Bulb	—	Medulla oblongata
Calamus scriptorum	L. reed pen	Area in caudal part of IV ventricle
Calcar	L. spur	For example, calcarine sulcus, calcar avis
Cauda equina	L. horse's tail	Lower lumbar and sacral nerve roots
Caudate nucleus	L. comma-shaped	Part of corpus striatum
Cerebellum	L. little brain	Part of brain
Cerebrum	L. brain	Cerebral cortex + diencephalon
Chorea	L. dance	Involuntary movement of limbs
Cinerium	L. ash coloured	For example, tubercinerium
Cingulum	L. girdle	Name of association fibres
Cistern	L. reservoir	
Claustrum	L. barrier	Grey matter between insula and lentiform nucleus
Colliculus	L. small swelling	For example, dorsal part of midbrain and facial colliculus
Commissure	L. joined together	Type of white fibres joining identical parts of 2 cerebral hemispheres
Corona	L. crown like	For example, corona radiata
Corpus callosum	L. body hard	Main commissural fibre bundle
Corpus striatum	L. body striped	Grey matter at base of cerebral hemisphere
Cortex	L. bark	Outer layer (i.e. grey matter) in cerebellum and cerebrum
Crus	L. leg.	For example, crus cerebri or basis pedunculi
Cuneus	L. wedge	For example, nucleus and fasciculus cuneatus and cuneus gyrus in cerebral cortex
Decussation	L. like X	Crossing over
Dentate	L. toothed	For example, dentate gyrus of temporal lobe, dentate nucleus of cerebellum

Diencephalon	Gr. through brain	Thalamus + hypothalamus + epithalamus + subthalamus + metathalamus
Dura mater	L. hard mother	Outer covering of brain
Emboliformis	Gr. plug like	One of the nuclei of cerebellum
Endoneurium	Gr. within nerve	Connective tissue sheath around each nerve fibre
Entorhinal	Gr. within nose	Anterior part of parahippocampal gyrus adjacent to uncus
Ependyma	Gr. upon garment	The lining epithelium of ventricles of brain and the central canal of spinal cord
Epithalamus	Gr. upon inner chamber	Upon inner chamber
Exteroceptor	L. external + receiver	Receiver for external environment
Falx	L. sickle	For example, falx cerebri, falx cerebelli
Fasciculus	L. bundle	Bundle of white fibres
Fimbria	L. fringe	For example, bundle of fibres along medial edge of hippocampus
Forceps	L. pair of tongs	For example, forceps minor, forceps major
Fornix	L. arch	Part of limbic system
Ganglion	Gr. swelling	For example, dorsal root ganglia, basal ganglia
Genu	L. knee (bend)	For example, facial nerve, corpus callosum
Glia	Gr. glue	Neuroglia
Globus pallidus	L. ball +plate	For example, medial part of lentiform nucleus
Glomerulus	L. ball of thread	For example, glomeruli of olfactory bulb
Gracilis	L. slender	Nucleus and fasciculus gracilis
Habenula	L. rein	Swelling in epithalamus
Hemiballismus	Gr. half jumping	Violent movement of one side of body due to disease of subthalamic nucleus
Hemiplegia	Gr. half stroke	Paralysis of one side of the body
Hydrocephalus	Gr. water in head	Excessive CSF
Indusium	L. garment	Grey matter on dorsal surface of corpus callosum
Infundibulum	L. funnel	Stem of neurohypophysis
Insula	L. island	Part of cortex lying at the depth of lateral sulcus
Isocortex	Gr. same bark	Regions of cerebral cortex with 6 layers
Lemniscus	Gr. ribbon	Medial lemniscus
Lentiform	L. lens-like	Lentiform nucleus
Limbus	L. border, C-shaped	Limbic lobe, limbic system
Limen	L. threshold	Ventral part of insula
Locus ceruleus	L. place dark blue	For example, in floor of IV ventricle
Macula	L. spot	For example, macula lutea
Mammillary body	L. nipple-shaped	mammillary bodies
Medulla	L. middle	medulla oblongata
Mesencephalon	Gr. middle brain	midbrain
Metathalamus	Gr. after + inner chamber	Medial and lateral geniculate bodies
Metencephalon	Gr. after + brain	For example, pons + cerebellum
Microglia	Gr. small + glue	Type of neuroglial cells
Molecular	L. mass	Tissue with large number of nerve fibres
Myelencephalon	Gr. marrow +brain	Medulla oblongata
Neostriatum	New + striped region	Caudate nucleus and putamen
Neurite	Gr. of nerve	Axons and dendrites of the neurons
Neurobiotaxis	Gr. nerve + living attraction	Nerve cells moving towards sources of stimuli

Neuroglia	Gr. nerve + glue	Cellular, non-nervous cells glueing the neurons
Neurolemma or neurilemma	Gr. nerve-husk	Sheath around the peripheral nerve fibre
Neuropil	Gr. nerve + felt	Nerve cell process between the bodies of neurons
Nociceptive	L. to injure + to take	Response to painful stimuli
Obex	L. barrier	In fourth ventricle
Oligodendrocyte	Gr. few + processes	Type of neuroglia
Olive	L. oval	Olivary nuclei
Operculum	L. lid	Various opercula around the lateral sulcus to hide the insula
Paleocerebellum	Gr. ancient + small cerebellum	Old part of cerebellum
Paleostriatum	Gr. ancient + striped area	Old part of corpus striatum, i.e. globus pallidus
Paraplegia	Gr. beside + stroke	Paralysis of lower part of trunk and both lower limbs
Perikaryon	Gr. around + nut	Neuron
Pes	L. foot	Pes hippocampi
Pineal	L. pine	Pineal gland
Plexus	L. palit	Interwoven fibres
Pneumoencephalogram	Air + brain + to write	Visualisation of ventricles and subarachnoid space by replacing of CSF by air
Pons	L. bridge	Part between midbrain and medulla oblongata
Proprioceptive	L. one's own + receptor	Afferents from joints, tendons, etc.
Prosencephalon	Gr. before + brain	Forebrain part
Ptosis	Gr. falling	Drooping of upper eyelid
Pulvinar	L. cushioned seat	Posterior projection of thalamus
Putamen	L. shell	Lateral part of corpus striatum
Pyriform	L. pear + form	Olfactory cortex is pear-shaped in lower animals
Quadriplegia	L. four + stroke	Paralysis of all four limbs
Raphe	Gr. seam	Midline structure
Reticular	L. net	Net formation
Rhinal	Gr. nose	Related to nose
Rhinencephalon	Gr. nose + brain	Components of olfactory system
Rhombencephalon	Gr. lozenge-shaped + brain	Refers to hindbrain vesicle
Rostrum	L. beak	Beak-shaped portion of corpus callosum
Rubro	L. red	Red nucleus
Satellite	L. attendant	Cells around neurons of dorsal root ganglion and autonomic ganglia
Septum pellucidum	L. partition transparent	Septum pellucidum of lateral ventricles
Somatic	Gr. bodily	Skeletal muscles (in neurology)
Somesthetic	Gr. body + perception	Sensation of pain, touch and temperature
Splenium	Gr. bandage	Posterior thick end of corpus callosum
Striatum	L. furrowed	Caudate nucleus and putamen
Subiculum	L. decreased layer	Transitional cortex between hippocampus and para-hippocampal gyrus
Substantia gelatinosa	Substance + soft	Collection of small neurons at the apex of posterior horn of spinal cord
Substantia nigra	Substance + dark	Present in midbrain
Subthalamus	L. under + inner chamber	Region beneath thalamus
Synapse	Gr. to join	Site of contact between neurons
Syringomyelia	Gr. pipe + marrow	Cavities in grey matter around central canal
Tapetum	L. carpet	Fibres of body of corpus callosum

Tectum	L. roof	Roof of midbrain comprised of 4 colliculi
Tegmentum	L. to cover	Dorsal portion of pons and midbrain
Telachoroidea	L. web + membrane	Vascular connective tissue core of choroid plexus
Telencephalon	Gr. end + brain	Cerebral hemisphere
Telodendria	Gr. end + tree	Terminal branches of the axon
Thalamus	Gr. inner chamber	Part of diencephalon
Tomography	Gr. cutting + write	Sectional radiography
Transducer	L. to change	Mechanism which changes one form of energy into another
Trapezoid body	Trapezium like	Transverse fibres at the junction of dorsal and ventral parts of pons for auditory pathway
Uncinate	L. hood-shaped	Uncinate fasciculus
Uncus	L. hood	Hook-shaped anterior end of parahippocampal gyrus
Uvula	L. little grape	Part of inferor vermis of cerebellum
Vallecula	L. valley	Depressed area on the inferior medullary velum
Ventricle	L. diminutive of belly	Ventricles of brain
Vermis	L. worm	Middle region of cerebellum
Zona incerta	—	Grey matter in subthalamus