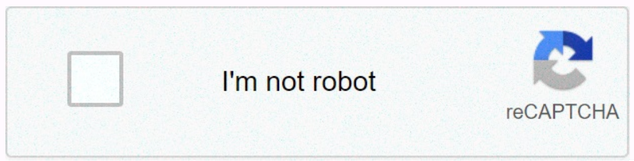

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External auditory meatus

Anatomy of the ear of the human ear. DetailsPrecursorgroove (fissure) of the first branchial arc. [1] Arteryanterior part: superficial temporal artery part: posterior auricular artery Temporal veins insuperficia, external jugular vein, nerve pterygoide plexusNerveauritempoculoral nerve, large auricular nerve, auricular nerve branch vagusLymphsuperficial cervical lymph nodes deepCervicalIdentifiersLatinmeatus acusticus externusMeSHD04424TA98A15.3.01.045 A02.1.1.06.055TA26867FMA61734The terminology[edit on Wikidata] The auditory canal (external acoustic meatus, external auditory meatus, AmS) is a path that goes from the outer ear to the middle ear. The adult human ear canal extends from the pinna to the eardrum and is about 2.5 centimeters long and 0.7 centimeters in diameter. Structure The human auditory canal is divided into two parts. The elastic cartilage part forms the outer third of the canal; its anterior and lower wall are caryphenous, while its upper and rear wall are fibrous. Cartilage is the continuation of the structure of pinna cartilage. The carytillanine part of the ear canal contains small and specialized sweat glands, called acririne glands, which produce cerumen (earwax). The bone part forms the two-thirds internal. The bone part is much shorter in children and is just a ring (annulus tympanicus) in the newborn. The epithelium layer covering the bone part of the ear canal is much thinner and therefore more sensitive compared to the carygnophagous part. The size and shape of the channel vary between individuals. The canal is approximately 2.5 centimeters long and 0.7 centimeters in diameter. [2] It has a sigmoid shape and runs back and up down and forward. In the cross section, it is oval in shape. These are important factors to consider when fitting earplugs. Disorders Due to its exposure to the outside world, the ear canal is susceptible to diseases and other disorders. Some disorders include: Cerumen auditory canal atresia impacting bone exposure, caused by wear of the skin in the osteoma canal of the auditory canal (bone growth of the temporal bone) Cholesteatoma Contact dermatitis of the auditory canal Fungal infection (otomycosis) Ear mites in myiasis ear animals, an extremely rare infestation of larvae of foreign body larvae in the ear Granuloma, a scar usually caused by external ot toymy tubes of tympanostom , inflammation caused by bacteria of the auditory canal Sournosis, a gradual closure of the Earwax canal Main article: Earwax Earwax, also known as cerumen, is a yellowish and waxed substance secreted in the auditory canals. Plays an important role in the human ear canal, assisting in cleaning and lubrication, and also provides some protection against fungi and insects. Excess or impacted cerumen may press against the eardrum occlude the external auditory canal and hearing impaired, causing conductive hearing loss. If left untreated, impaction of cerumen may also increase the risk of developing an infection within the ear canal. Additional images Skull base. Bottom surface. Left infratemporal fossa. External and middle ear, open from the front. Right side. Horizontal section through the left ear; top half of the section. Detail of anatomy of the lateral head. Dissection of the facial nerve. See also List of specialized glands within the human integumentar system References ^ hednk-022 — Embryo Images at the University of North Carolina ^ Faddis, B. T. (2008). Structural and functional anatomy of the external and middle ear. In W. Clark & K. Ohlemiller (Eds.), Anatomy and physiology of hearing for hearing therapists (pp. 93-108). Thomson Delmar Learning. External Links Site of the Veterans Health Administration OSHA Website of the Medical School Of Continuing Medical Education Photographs Of Ear Otoscopy Tutorial w/ Images Anatomy Diagram: 34257.000-1. Roche Lexicon - illustrated navigator. Elsevier. Filed from the original on 2012-07-22. Recovered The external auditory canal (EAC) or external auditory meatus (AMS) extends from the lateral porus acusticus externus medialally to the tympanic membrane. Because the term external auditory meatus is variously used to refer to the canal itself or to externus porus acusticus (the round lateral opening), it may be better to use the term external auditory canal instead of meat to avoid possible confusion. The external auditory canal is typically 2.5 cm long and is so-shaped The lateral third is delimited by a continuous fibrocaritillacin tube with auricle 3. Defects in the carytillase part of the canal, which allow transmission of infection and malignancy, are known as Santorini fissures.The two-thirds medial are surrounded by bones. The anterior wall, the floor and the lower part of the posterior wall arise from the timpanynic part of the temporal bone 3,4. The ceiling and the upper part of the posterior wall arise from the scythe part of the temporal bone 4. The skin of this inner part is directly applied to the periosteum, without the subcutaneous tissue present. A defect of normal variant in the anteroinferior aspect of the bony part of the canal that connects with the temporomandibular joint is known as the foramen tympanicum (Huschke foramen). Content1. Chakeres DW, A Kapila and D LaMasters. Soft tissue abnormalities of the external auditory canal: review of themes of CT findings. Radiology 156, no. 1 (July 1, 1985): 105-109.2. Keith L. Moore, Arthur F. Dalley. Clinically Oriented Anatomy. ISBN: 06830614103. Juliano AF, Ginat DT, Moonis G. Temporal bone imaging review: part I. Anatomy and inflammatory and neoplastic processes. (2013) 269 (1): 17-33. two:10.1148/radiol.13120733 - - 4. Sound PM, Curtin HD. Head and neck image. (2011) ISBN: 9780323053556 The ear can be divided into three parts; external, medium and internal. This article will focus on the anatomy of the external ear - its structure, neurovascular supply and clinical correlations. The outer ear can be divided functionally and structurally into two parts; the auricle (or pinna), and the external acoustic meatus - ending in the tympanic membrane. [caption id=attachment_5056 align=aligncenter width=303] Fig 1 - Overview of the ear[/legend] Auricle Auricle is a paired structure found on both sides of the head. It works to capture and direct sound waves toward the external acoustic meatus. It is a mainly carhylse structure, with lobule being the only part not supported by cartilage. The caryculinous part of the auricle forms an outer curvature, known as a helix. A second innermost curvature runs in parallel with the propeller – the antihlixa. Antihlixa is divided into two cures; the inferoanterior crus, and the superoposterior crus. In the middle of the auricle there is a hollow depression, called a shell. It's still in the skull like the external acoustic meatus. The shell acts to direct the sound to the external acoustic meatus. Immediately before the onset of external acoustic meatus is an elevation of the carychinous tissue - the tragus. In front of the tragus is the antitragus. [caption id=attachment_26117 align=aligncenter width=417] Fig 2 - Anterior surface of the outer ear auricle. [/caption] [start-clinical] Clinical Relevance: Auricular Hematoma An aauricular hematoma refers to a blood collection between the ear cartilage and the overlying peritodrio. It usually occurs as a result of trauma, commonly seen in contact sports (e.g., rugby). Blood buildup can disrupt the blood supply to the cartilage, and requires immediate drainage. Untreated cases may result in avascular necrosis of cartilage, resulting in a cauliflower ear deformity. [end-clinical] External acoustic meatus The external acoustic meatus is a sigmoid-shaped tube that extends from the deep part of the shell to the tympanic membrane. The walls of the external 1/3 are formed by cartilage, while the internal walls 2/3 are formed by the temporal bone. The external acoustic meatus does not have a straight path, and instead travels on an S-shaped curve as follows: Initially it travels in a superoanterior direction. Then turns slightly to move superoposteriorly. Ends up running in a previous inferous direction. Tympanic membrane The tympanic membrane is at the distal end of the external acoustic meatus. It is a connective tissue structure, covered with skin on the outside and a mucous membrane inside. The membrane is connected to the surrounding temporal bone by a fibrocarhylaline ring. tympanic membrane allows structures within the middle ear to be observed during otoscopy. On the inner surface of the membrane, the malleus loop attaches to the tympanic membrane, at a point called a tympanic membrane umbo. The malleus handle remains higher, and at its highest point, a small projection called the malleus side process can be seen. The parts of the tympanic membrane that move away from the lateral process are called the front and posterior malleolar folds. [caption id=attachment_14275 align=aligncenter width=627] Fig 3 - The tympanic membrane of the ear. [/caption] [start-clinical] Clinical Relevance: Tympanic Membrane Perforation Tympanic membrane is a relatively thin connective tissue structure, and is susceptible to perforation (usually by trauma or infection). An infection of the middle ear (otitis media) causes pus and fluid to accumulate behind the tympanic membrane. This causes an increase in pressure within the middle ear, and eventually the eardrum may rupture. In some cases, the tympanic membrane is cured, but in larger perforations the surgical graft may be necessary. [end-clinical] Vasculature The external ear is provided by branches of the external carotid artery: Posterior temporal artery Occipital temporal artery Maxillary artery (deep auricular branch) - provides the deep aspect of external acoustic flesh and tympanic membrane only. Venous drainage is through veins following the arteries listed above. Innervation The sensory innervation to the skin of the auricula comes from numerous nerves: Larger auricular nerve (branch of the cervical plexus) - innervates the skin of the occipital nerve minor aurculum (branch of the cervical plexus) - innervates the skin of the auriculotemporal nerve aurículo (branch of the mandibular nerve) - innervates the skin of the aurculus and the external auditory flesh. Branches of the facial and vagus nerves - innervatic the deeper aspect of the auricle and external auditory flesh Some individuals may complain of an involuntary cough when cleaning the ears - this is due to stimulation of the auricular branch of the vagus nerve (the vagus nerve is also responsible for the cough reflex). Lymphatic Drainage of the external ear is for superphoid, mastoid, deep upper cervical and superficial cervical nodules. We.