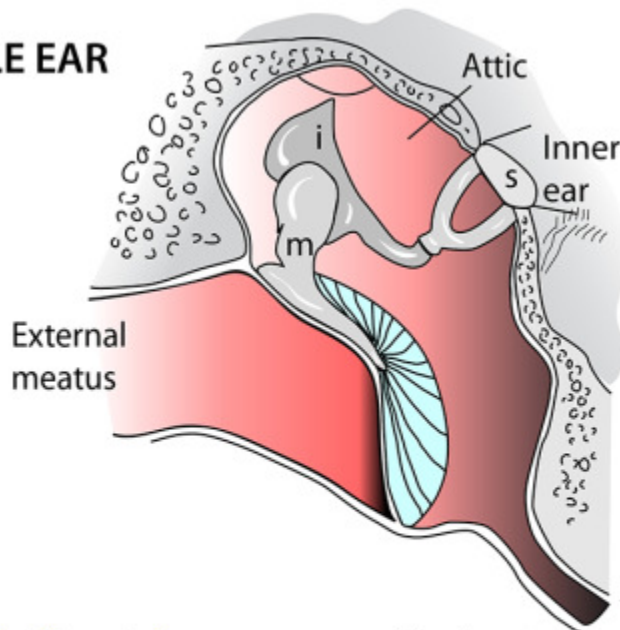


The Facial Nerve within the Middle ear

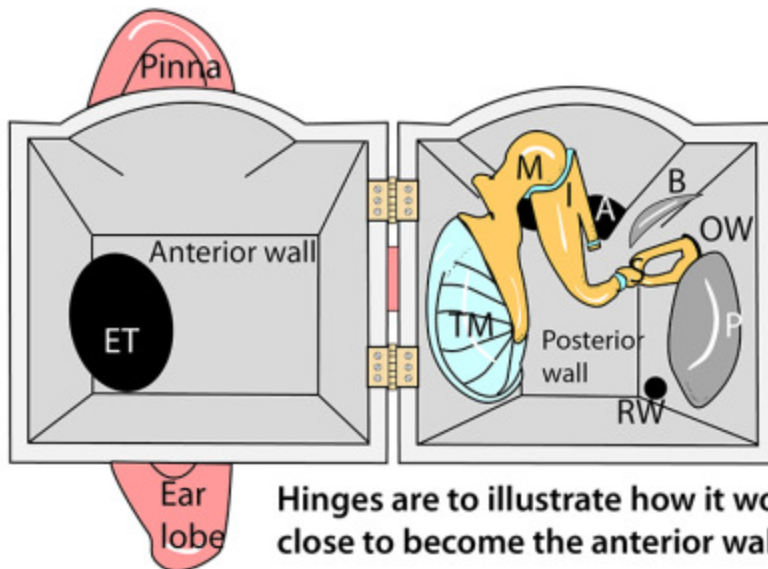
MIDDLE EAR



Ossicles increase amplitude of vibrations 15-20 times because of both leverage & eardrum to oval window ratio
Synovial joints. Almost adult size at birth

Auditory tube opens on swallowing to equalise pressure
3.5cm long. 1/3 bone, 2/3 cartilage
30 degrees downwards, 45 degrees anterior & medially
Tubal tonsil at exit. Mucosa valvelike
Ns: Vb(pharyngeal br) external end. IX internal end

MIDDLE EAR - RIGHT SIDE LOOKING POSTERIORLY

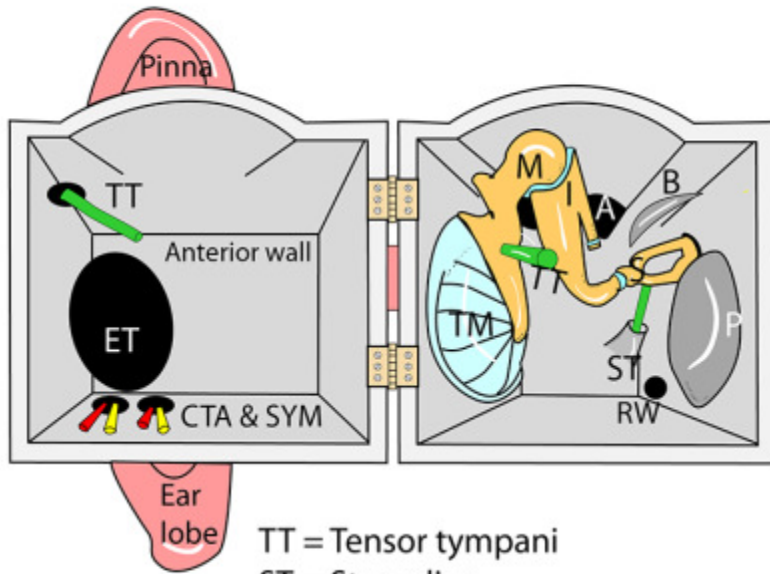


Hinges are to illustrate how it would close to become the anterior wall

- ET = Eustachian tube
- M = Malleus
- P = Promontory (last turn of cochlea)
- RW = Round window
- TM = Tympanic membrane
- B = Bony bulge of lateral semicircular canal

- M = Malleus
- I = Incus
- A = Aditus to mastoid air sinus
- S = Stapes
- OW = Oval window

MIDDLE EAR - RIGHT SIDE LOOKING POSTERIORLY



Mucosa covers all the walls of the middle ear & is supplied by IX & a little VII. The **carotico-tympanic arteries (CTA)** bring in blood supply & sympathetics for the tympanic plexus on the promontory

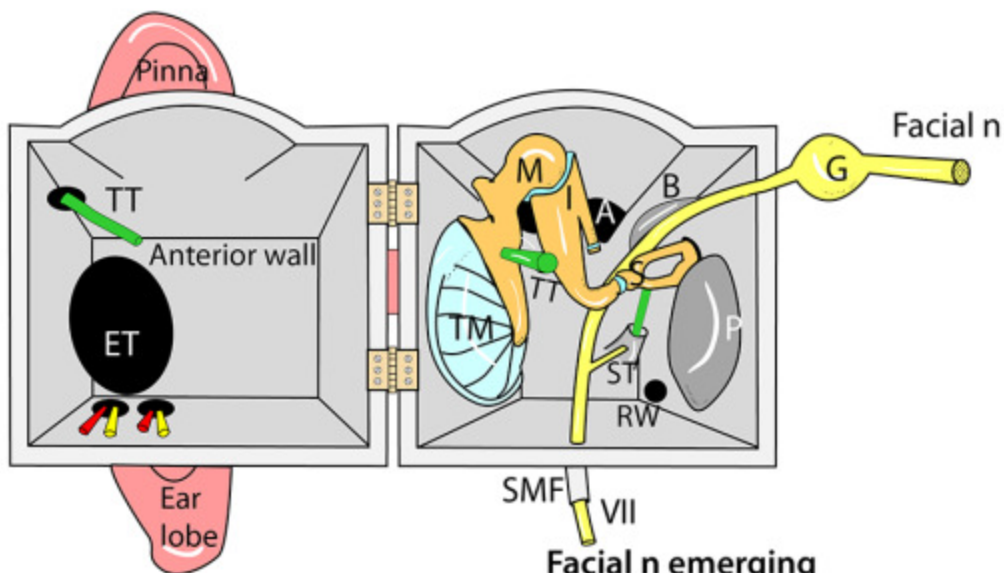
TT = Tensor tympani

ST = Stapedius

CTA = Carotico-tympanic arteries

SYM = Sympathetic fibres

MIDDLE EAR - RIGHT SIDE LOOKING POSTERIORLY



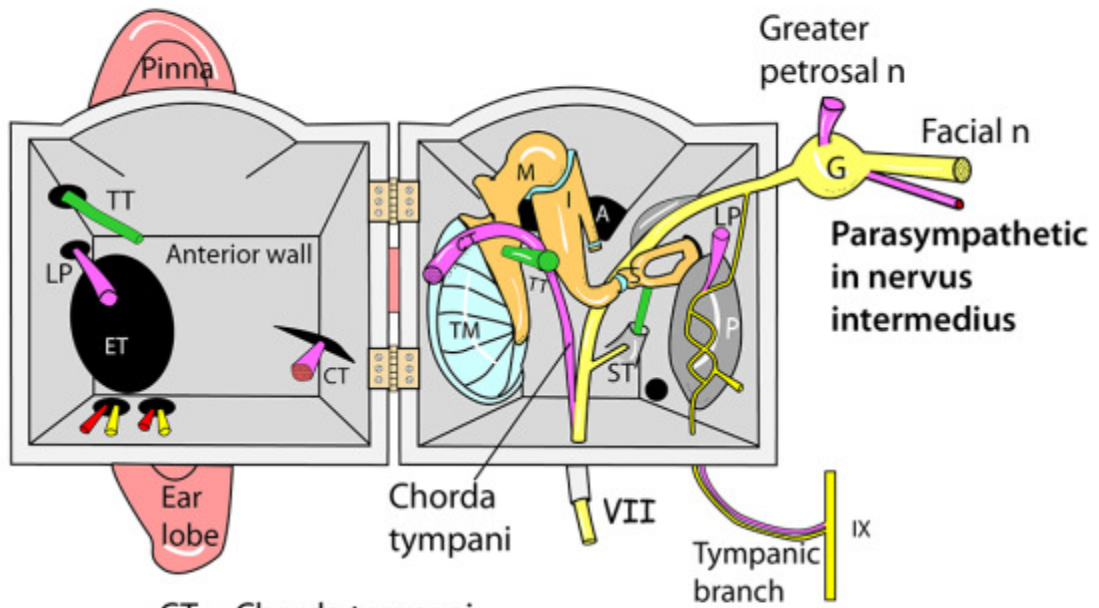
SMF VII

Facial n emerging from stylomastoid foramen

SMF = Stylomastoid foramen (VII emerging)

G = Geniculate ganglion

MIDDLE EAR - RIGHT SIDE LOOKING POSTERIORLY



- CT = Chorda tympani
- G = Geniculate ganglion
- LP = lesser petrosal n
- P = Promontory (last turn of cochlea)