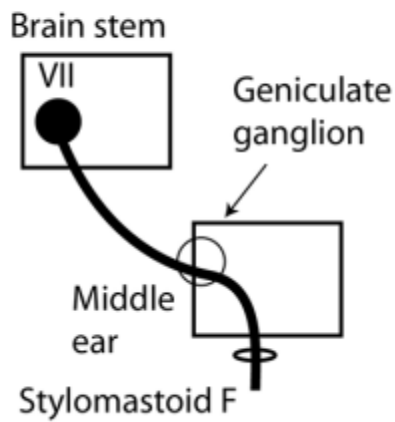
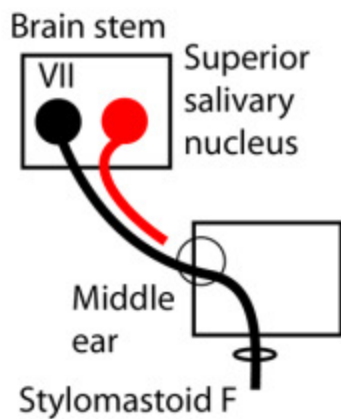


Parasympathetic Pathways for Nose, Palate, Sinuses and Lacrimal
Gland. The Pterygopalatine Fossa

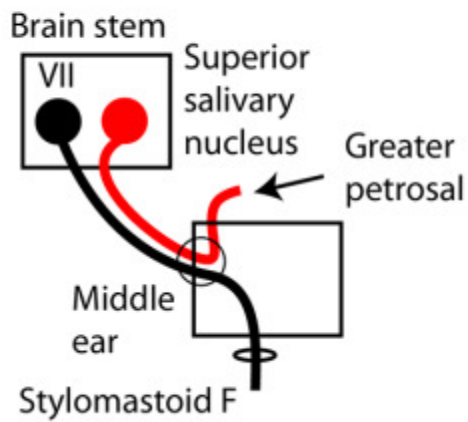
**PARASYMPATHETIC
PATHWAY TO
NOSE, PALATE & SINUSES
& LACRIMAL GLAND VIA
PTERYGOPALATINE GANGLION**



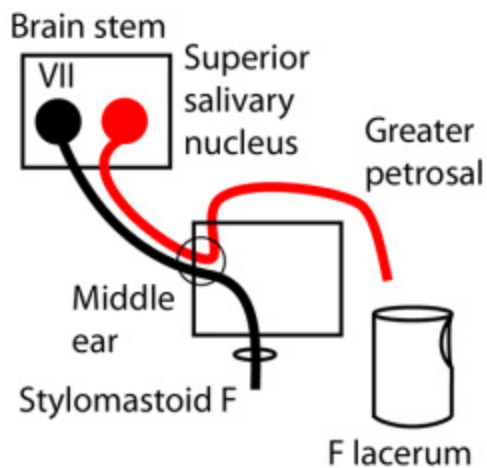
The facial nerve (VII) is associated with parasympathetic fibres for secretory functions in the nose, palate sinuses & lacrimal gland. It enters the middle ear via the internal auditory meatus. It passes through the geniculate ganglion and the cavity of the middle ear before exiting the skull via the stylomastoid foramen. It supplies the muscles of facial expression



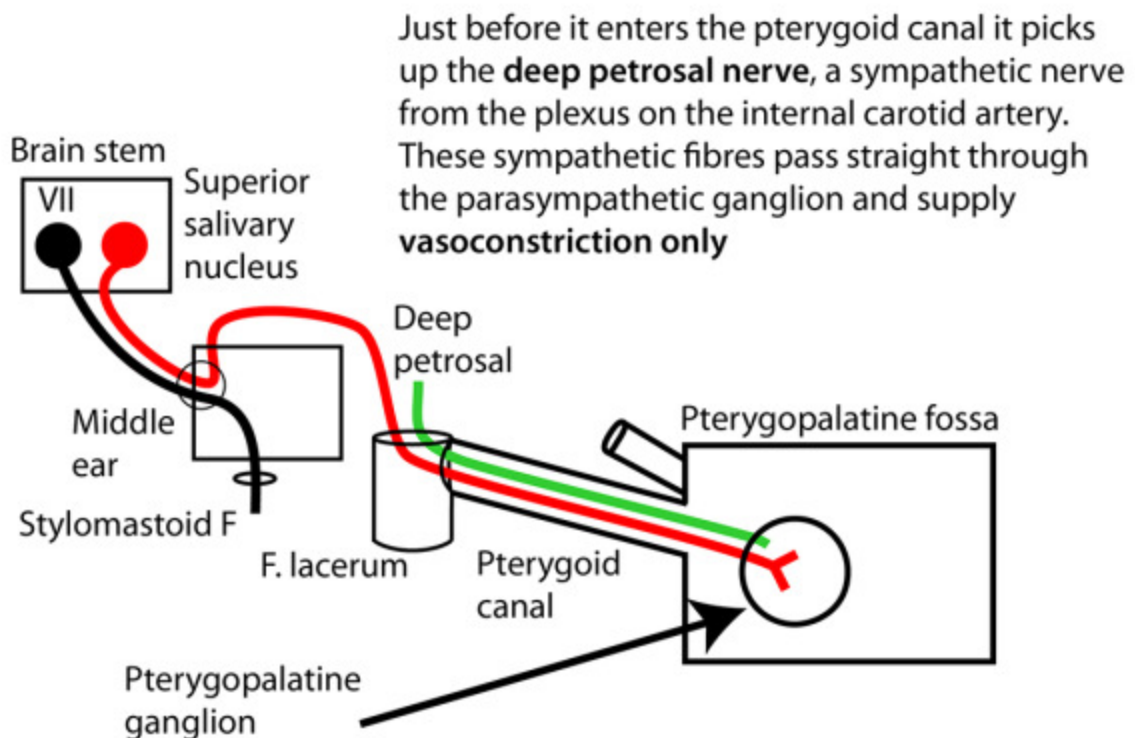
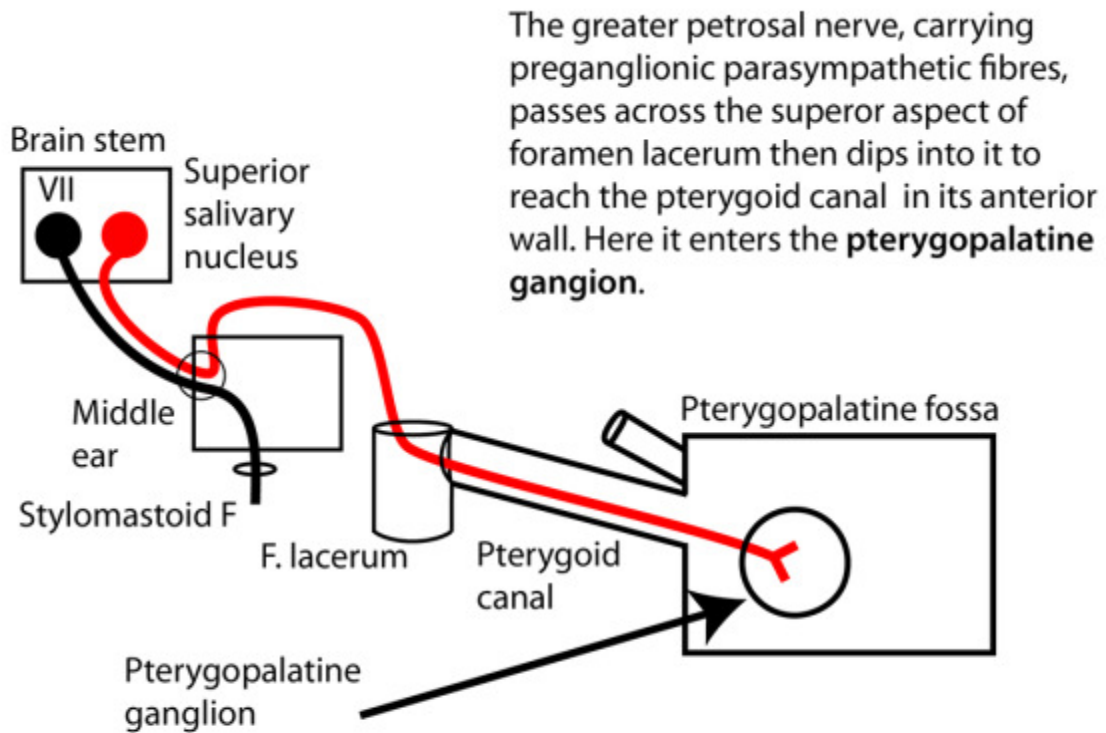
The parasympathetics arise in the superior salivary nucleus and travel with VII (actually in the **nervus intermedius**, a nerve closely associated with the facial nerve which also carries taste & a small amount of general sensation)



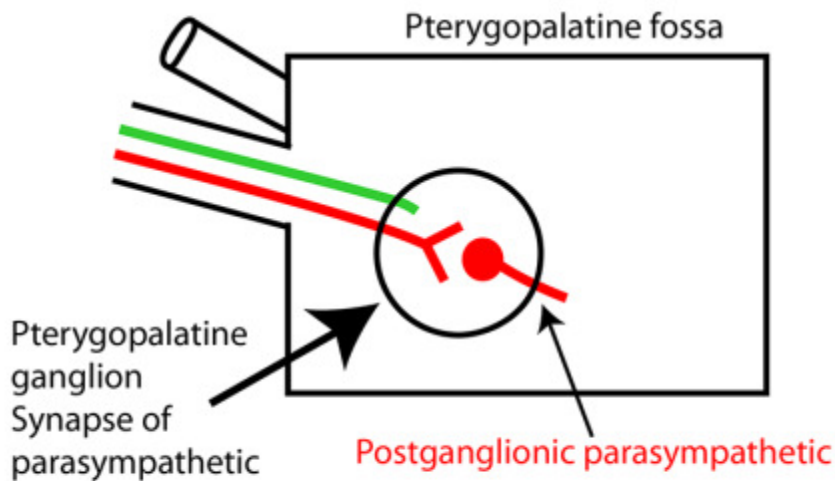
These **preganglionic parasympathetics** reach the geniculate ganglion and pass right through it without synapsing. They then exit alone through the roof of the middle ear as the greater petrosal nerve



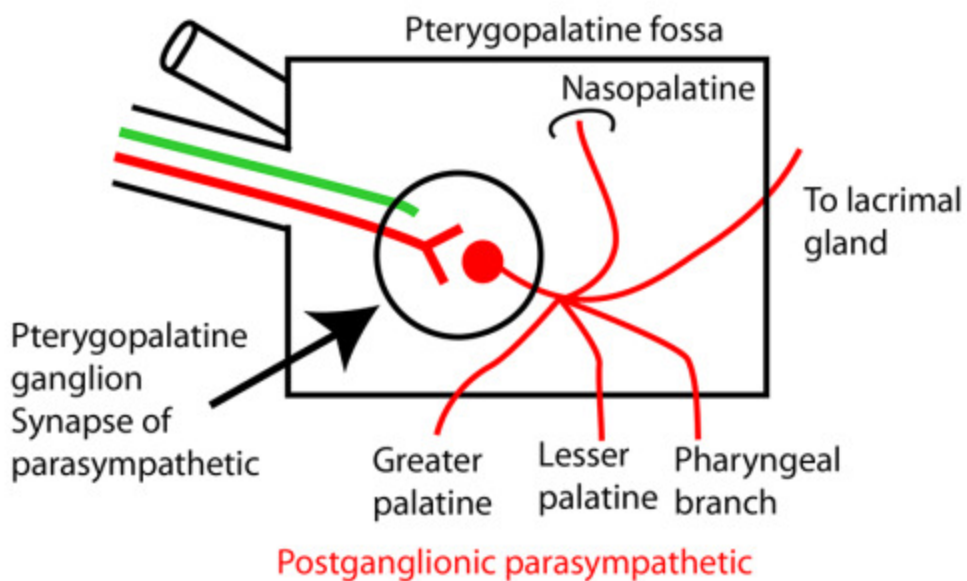
This **greater petrosal nerve** is now in the middle cranial fossa, under the dura, and runs towards the top of foramen lacerum



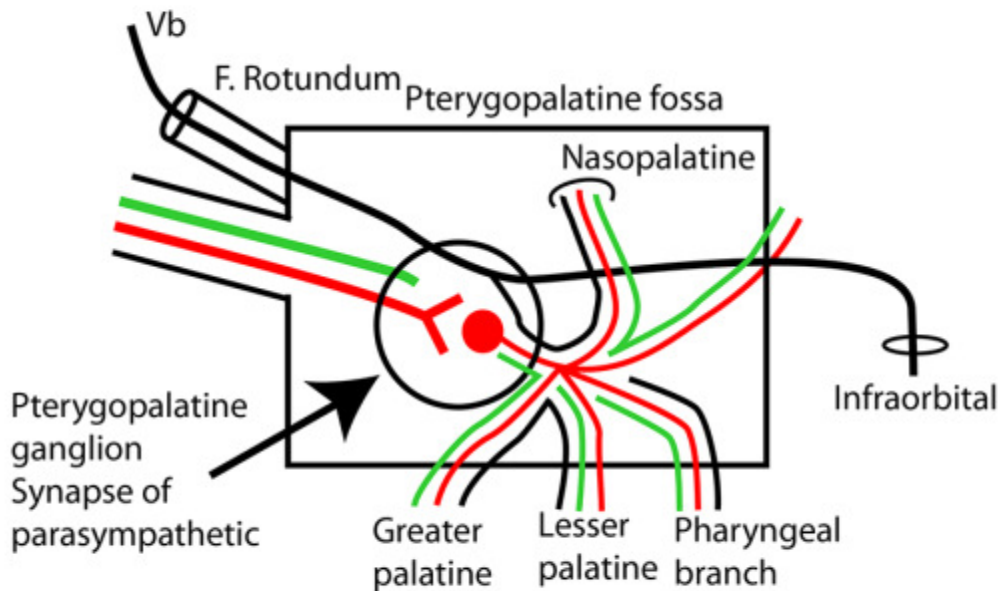
The preganglionic parasympathetic fibres synapse in the pterygopalatine ganglion



The branches of the postganglionic parasympathetic fibres that emerge from the pterygopalatine ganglion are the greater and lesser palatine, nasopalatine, pharyngeal and lacrimal. Others are to sinuses, teeth and orbit

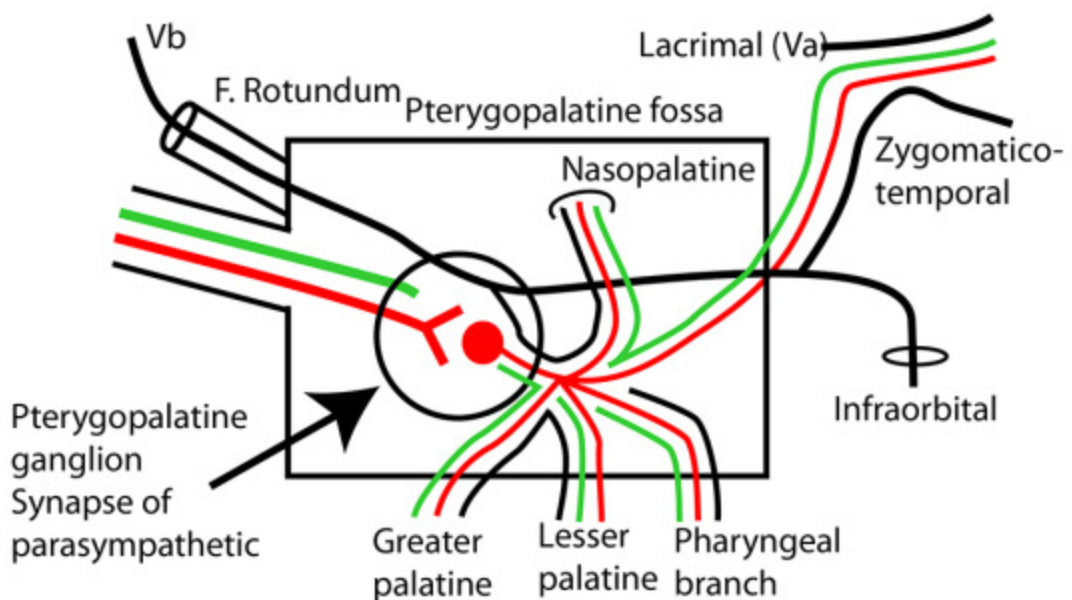


The maxillary branch of the trigeminal enters the fossa via foramen rotundum and branches carry the parasympathetic AND the sympathetic to the palate and nose.



Postganglionic parasympathetic Branch of Vb (maxillary - sensory)
 Sympathetics (vasoconstriction)

Postganglionic parasympathetics reach the **lacrimal gland** by joining the **zygomaticotemporal nerve** and then, in the orbit, they join the **lacrimal branch of Va** to be carried to the gland



Postganglionic parasympathetic Branch of Vb (maxillary - sensory)
 Sympathetics (vasoconstriction)

Taste from the palate, in the greater & lesser palatine nerves only, returns in the greater petrosal nerve and its cell bodies are in the **geniculate ganglion** in the middle ear. There is no taste in the nose or nasopharynx

