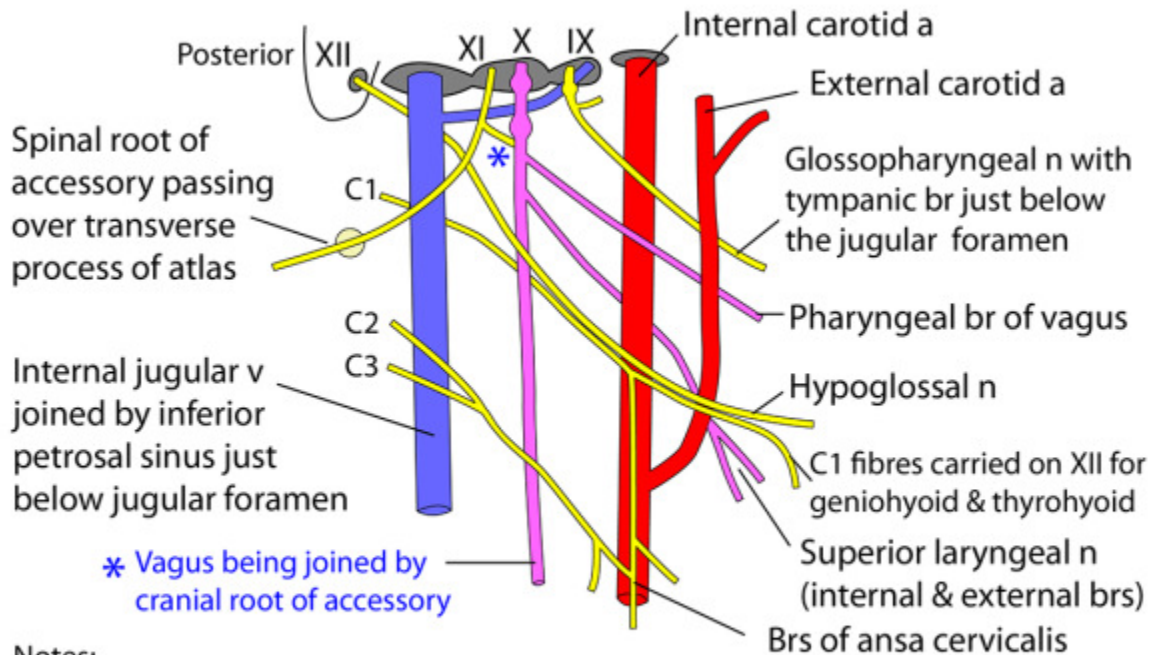


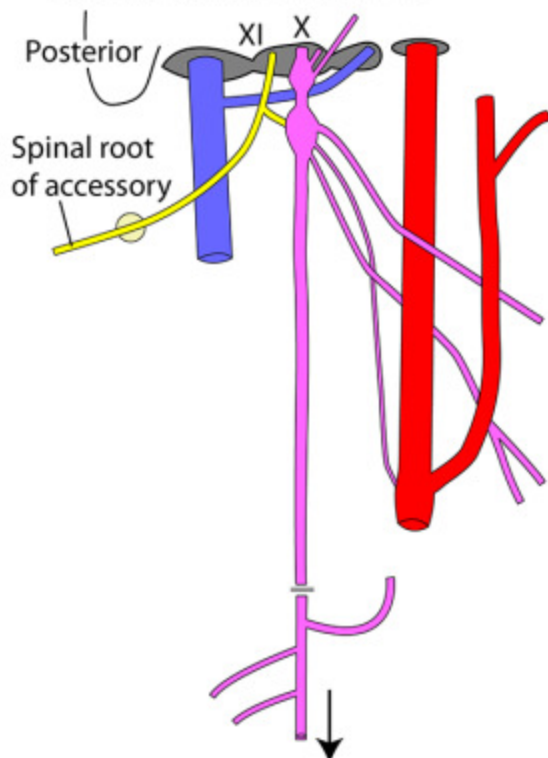
## EXPLODED VIEW OF RIGHT JUGULAR FORAMEN



Notes:

1. Hypoglossal nerve passes lateral to internal & external carotid arteries
2. Superior laryngeal nerve passes medial to both arteries
3. Glossopharyngeal & pharyngeal branch of vagus pass between them

## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN



**Vagus** arises from 8-10 rootlets on medulla. Associated nuclei are:

### 1. Dorsal nucleus of vagus.

**General visceral efferent (parasympathetic)** to smooth muscle of bronchi, heart, oesophagus, intestine to transverse colon.

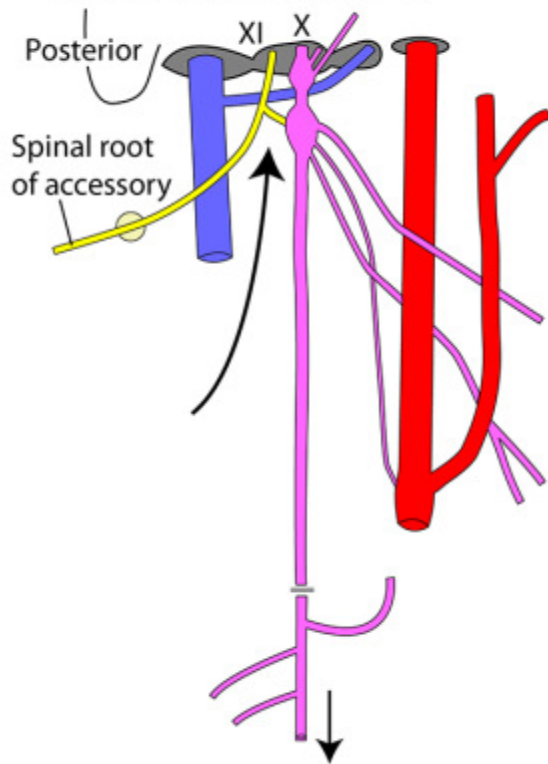
**General visceral afferent (sensory)** from above organs.

**2. Nucleus ambiguus.** **Branchiomotor** supply to striated muscle of palate, pharynx, larynx & upper oesophagus (these fibres originate from the cranial root of accessory).

**3. Nucleus solitarius.** **Sensory** for baroreceptors and taste.

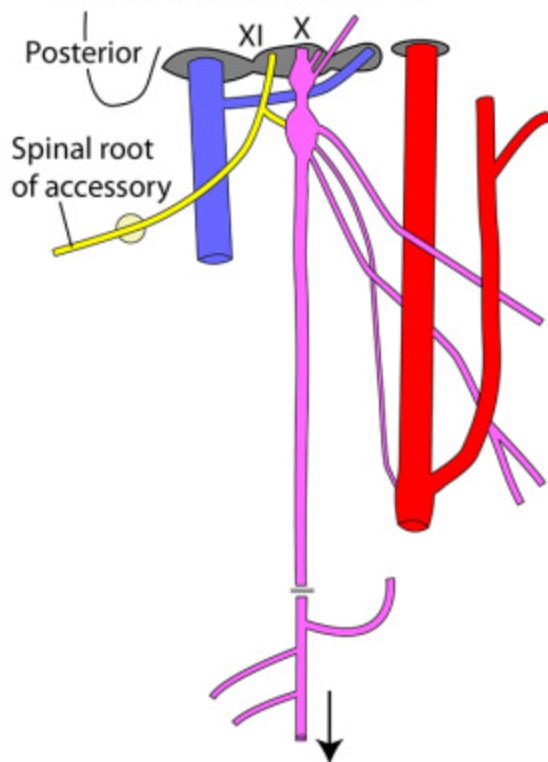
**4. Spinal nucleus of trigeminal nerve.** All **somatic sensory** fibres in vagus end here.

## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN



**Cranial accessory n.** "Dumps" all its **branchiomotor** fibres from nucleus ambiguus onto vagus for distribution to muscles of palate, pharynx & larynx

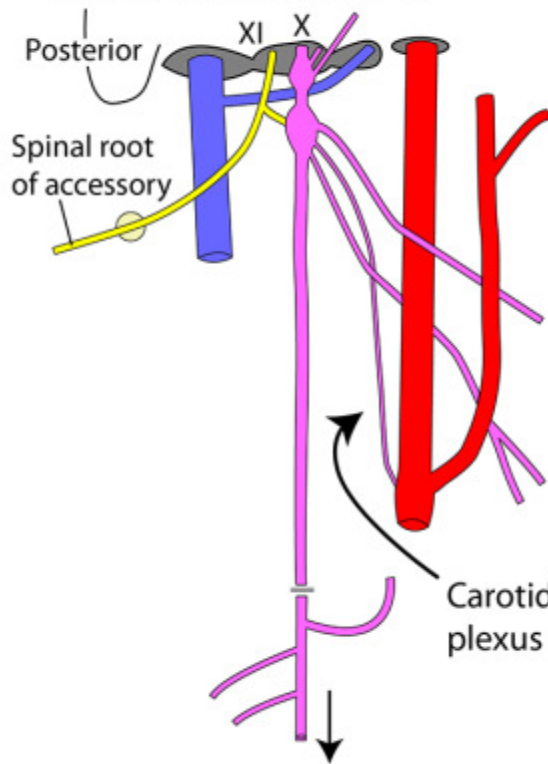
## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN



**Superior vagal ganglion** - cell bodies for:

1. **Meningeal br.** Sensory to posterior cranial fossa
2. **Auricular br.** Sensory to external auditory meatus & part of eardrum (communicates with VII)

## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN

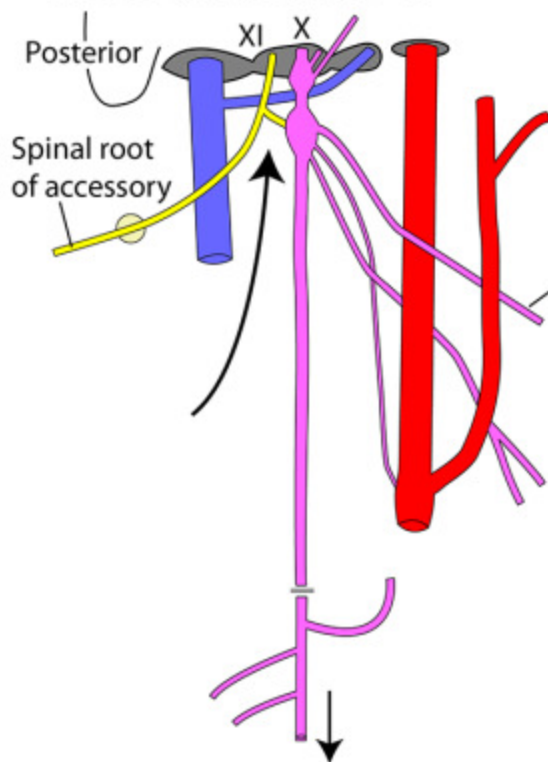


**Inferior vagal ganglion** - cell bodies for:

1. **Special visceral afferent** (baroreceptors & taste)
2. **General visceral afferent** (detects stretch in heart, lungs, abdominal contents, pharynx & larynx)

Carotid body nerve. Makes a plexus with glossopharyngeal

## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN

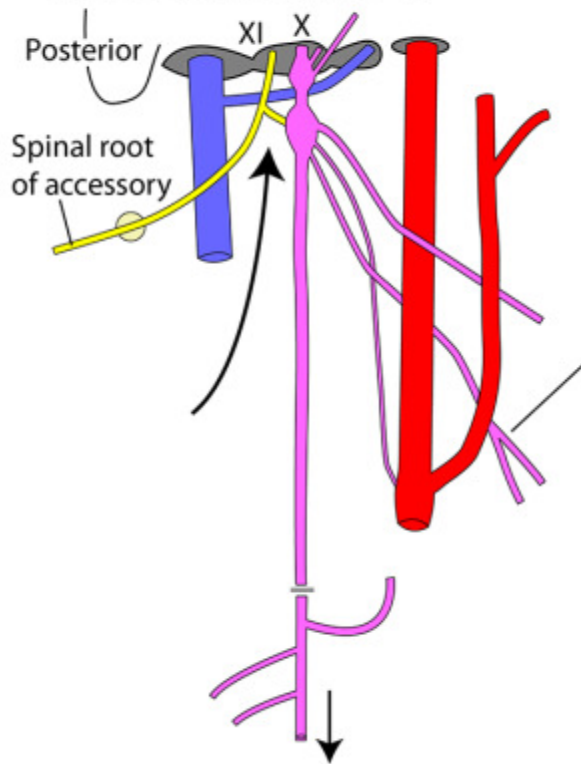


**Pharyngeal br of vagus.**

**Branchiomotor** to pharyngeal plexus for muscles of pharynx & palate (excluding tensor palati).

Note that these fibres arise in the nucleus ambiguus and travel in the cranial root of the accessory to reach the vagus (see large arrow)

## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN



### Superior laryngeal n

1. Internal br. **Somatic sensory** above cords. Small amount of **taste** in valleculae
2. External br. **Branchiomotor** to cricothyroid

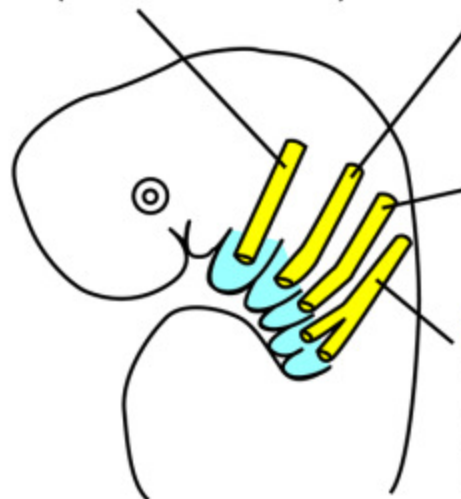
## PHARYNGEAL (BRANCHIAL) ARCH NERVES

**ARCH 1**  
**Mandibular div of V**  
(M of mastication)

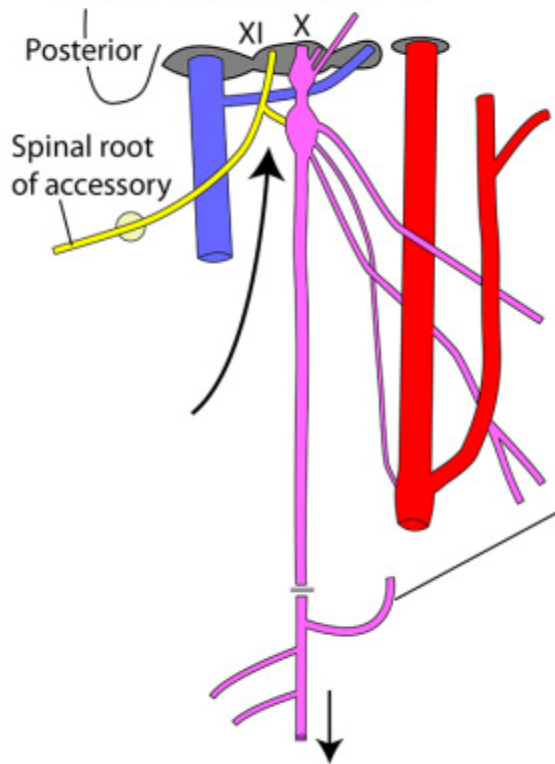
**ARCH 2**  
**Facial N**  
(M of facial expression)

**ARCH 3**  
**Glossopharyngeal N**  
(Stylopharyngeus)

**ARCHES 4 & 6**  
**Vagus N**  
(M of palate, pharynx, larynx)



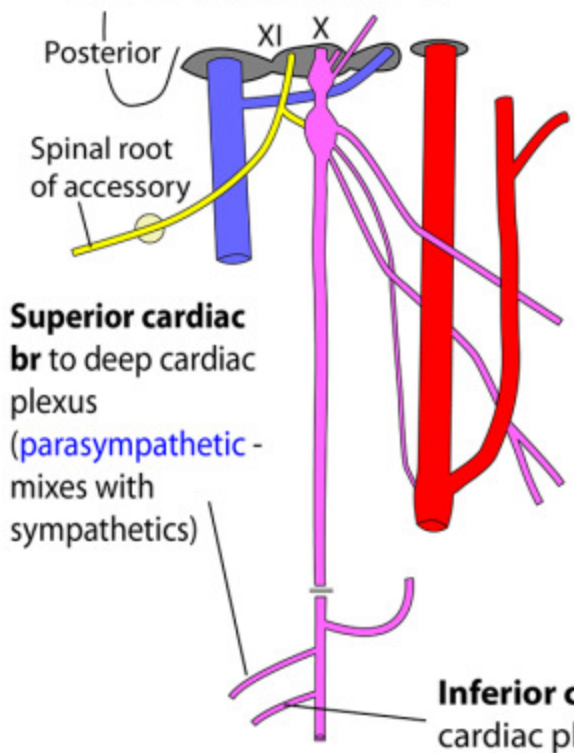
## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN



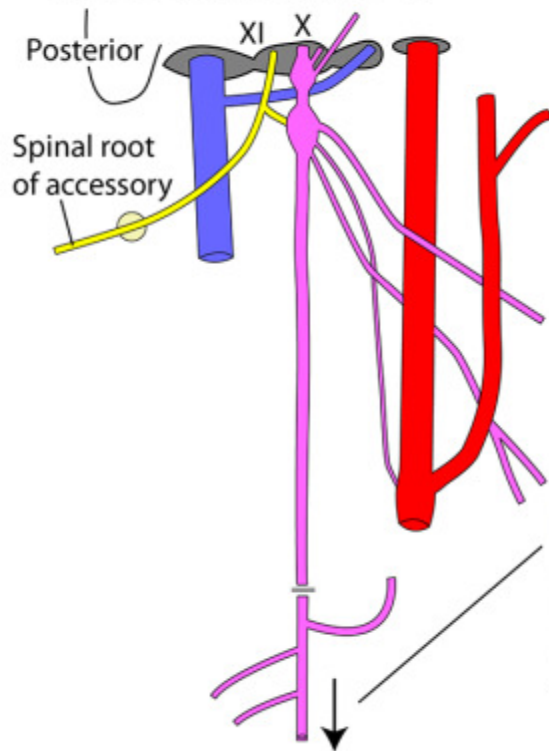
### Recurrent laryngeal n.

1. **Branchiomotor** to muscles of larynx & upper oesophagus
2. **Somatic sensory** to larynx below cords
3. **General visceral afferents** from larynx & pharynx for stretch

## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN



## VAGUS LEAVING THE RIGHT JUGULAR FORAMEN



### **Vagus continuing.**

Parasympathetic to pulmonary & oesophageal brs & to coeliac, hepatic & renal plexuses.  
Carries **general visceral afferents** from all these organs