Cranial Nerve I

Name: Olfactory nerve

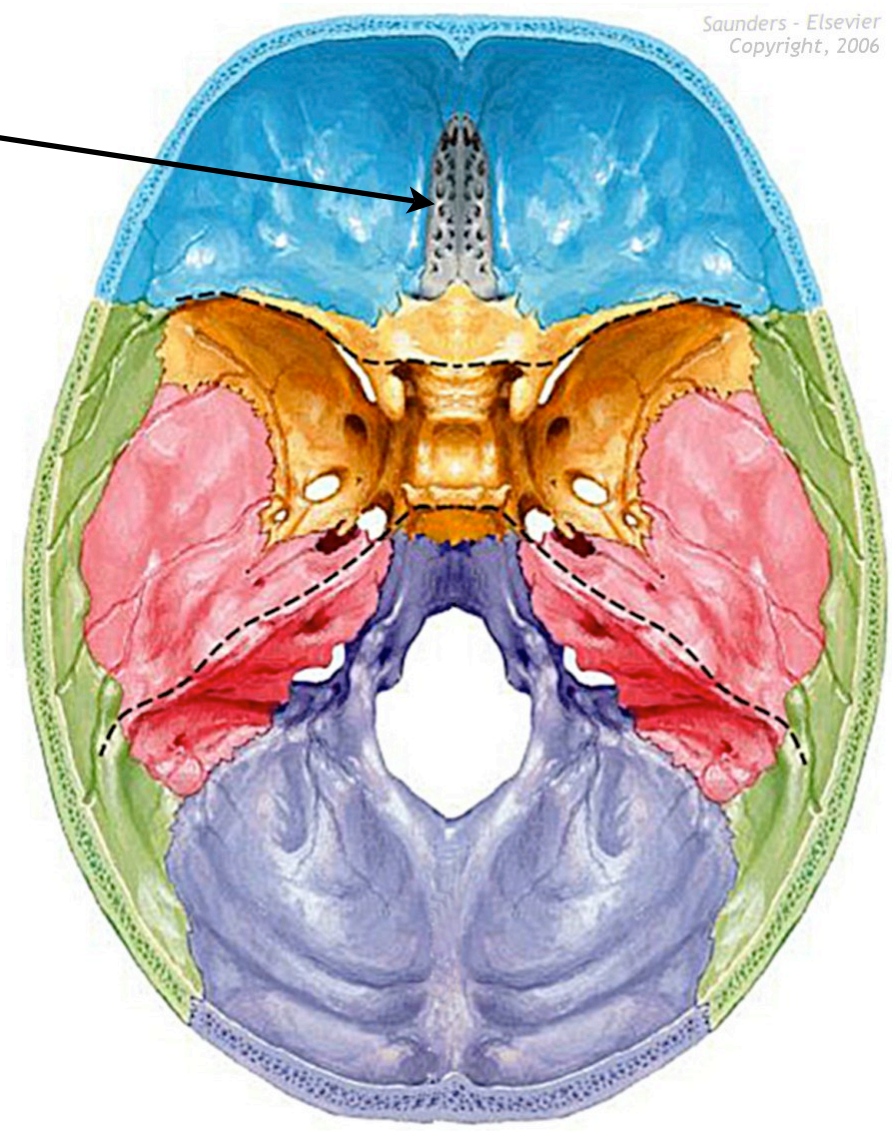
Foramen: Cribiform plate

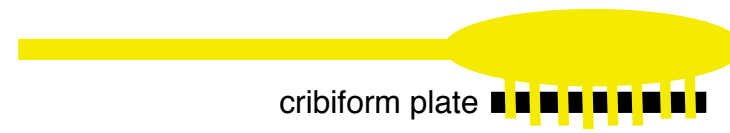
Fiber Type: Special sensory

Function: Olfactory bulbs, Smell

Branches: Olfactory filaments

Embryo: CNS (ectoderm)





sensory =

Cranial Nerve II

Name: Optic nerve

Foramen: Optic canal

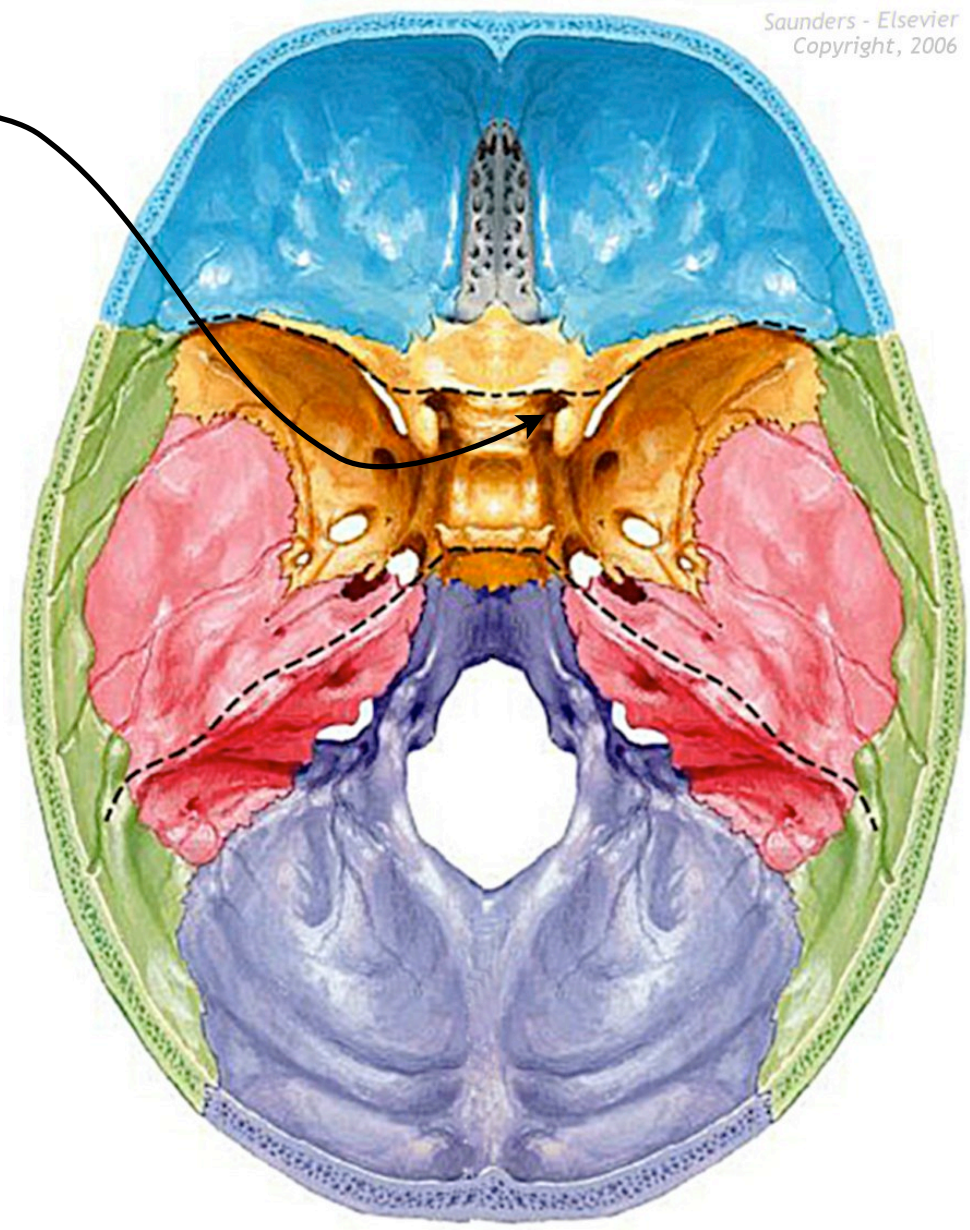
Fiber Type: Special sensory

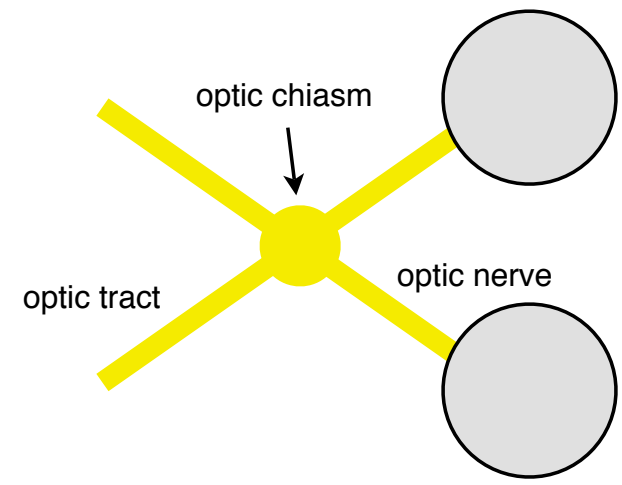
Function: Retina, vision

Branches: None

Embryo: Diencephalon

Other: Optic chiasm is in front of pituitary





sensory =

Cranial Nerve III

Name: Oculomotor

Foramen: Superior orbital fissure

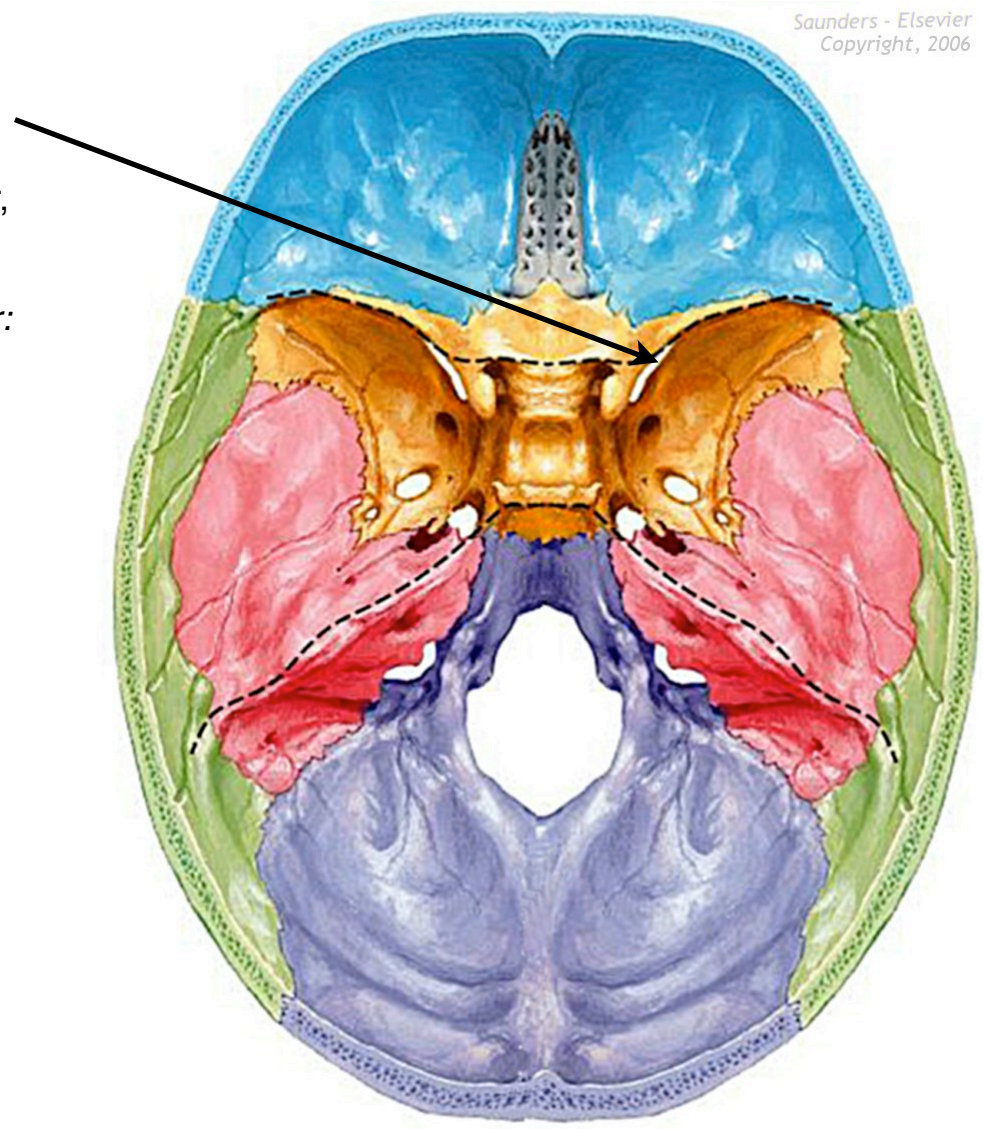
Fiber Type: General somatic motor, Parasympathetic

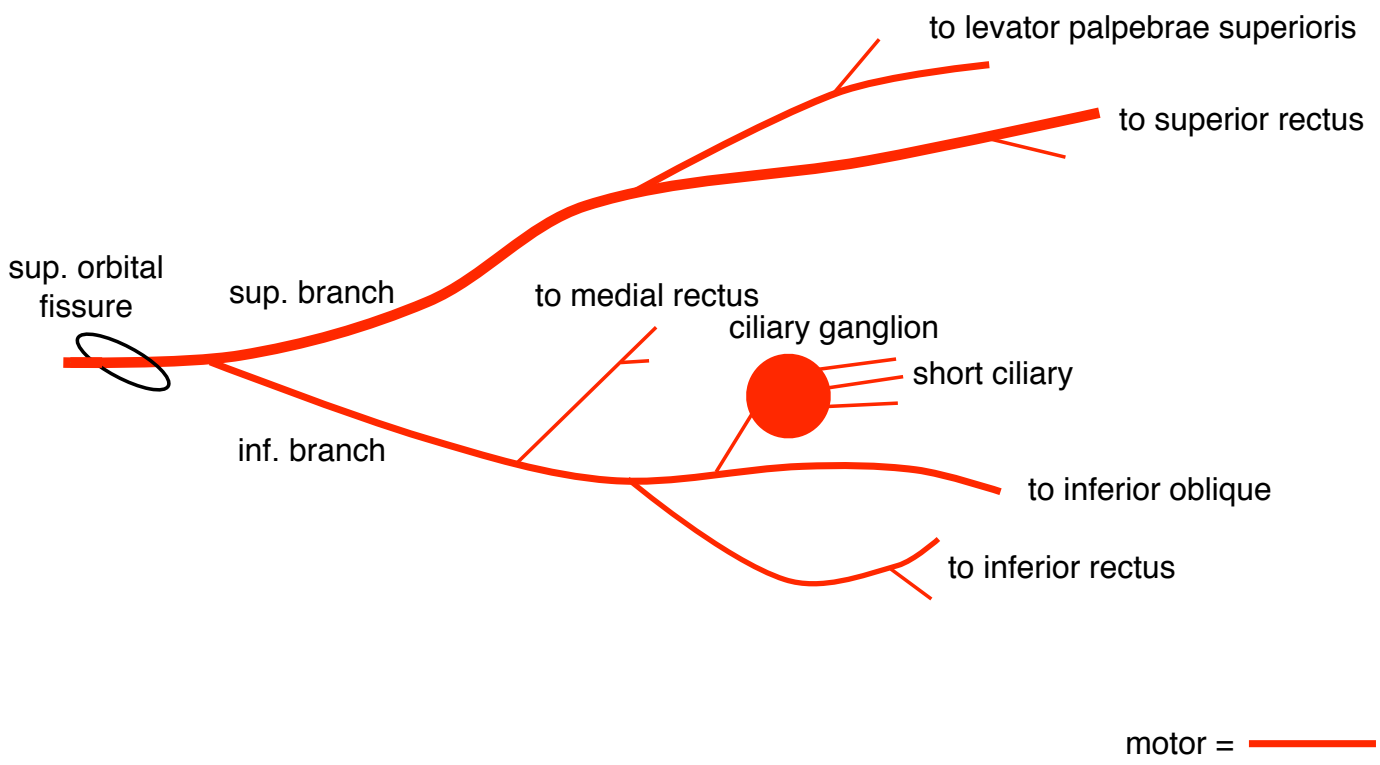
Function: *General somatic motor:*
1. superior rectus
2. levator palpebrae superioris
3. medial rectus
4. inferior rectus
5. inferior oblique

Parasympathetic
1. sphincter pupillae
2. ciliary muscle

Branches: 1. superior branch
2. inferior branch

Embryo: Mesencephalon





Cranial Nerve IV

Name: Trochlear

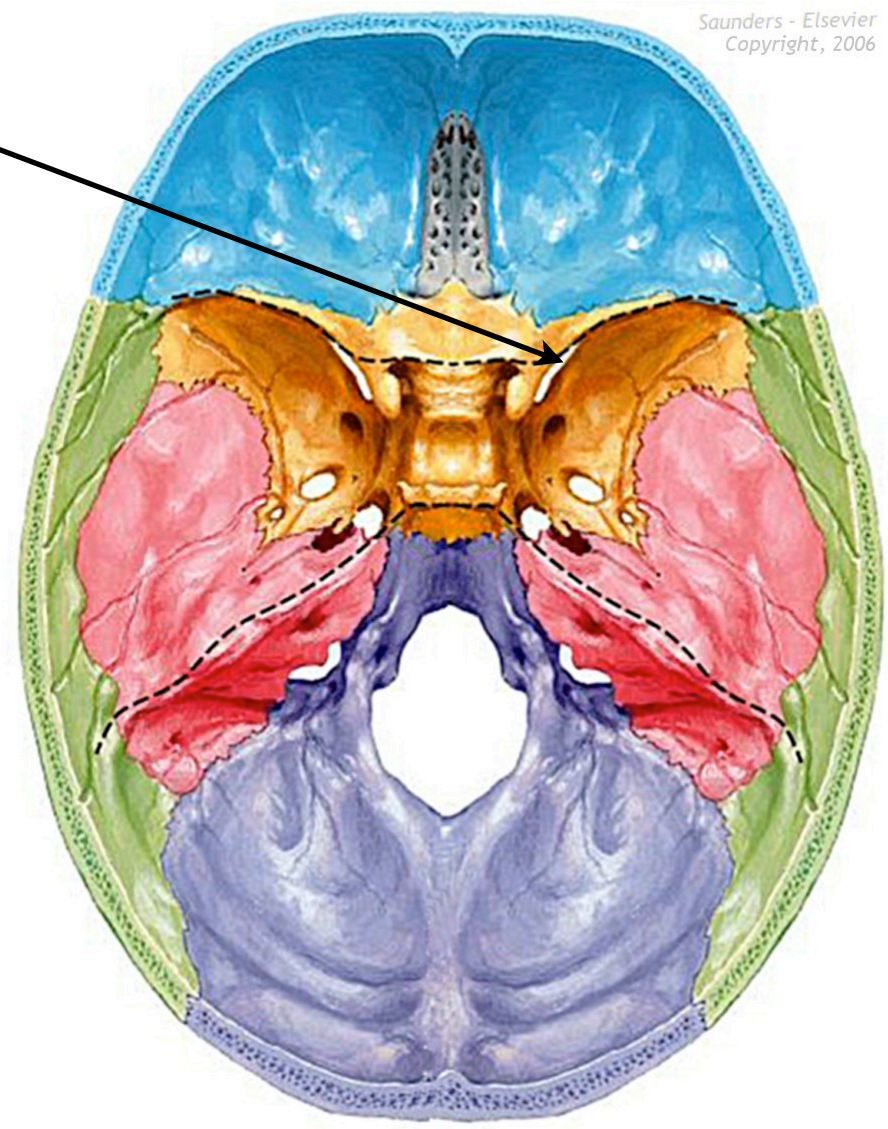
Foramen: Superior orbital fissure

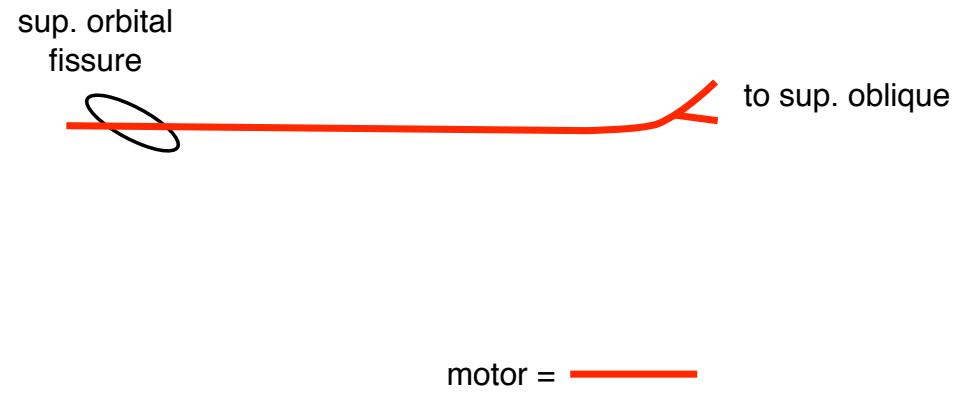
Fiber Type: General somatic motor

Function: *General somatic motor:*
1. superior oblique

Branches: muscular

Embryo: Mesencephalon





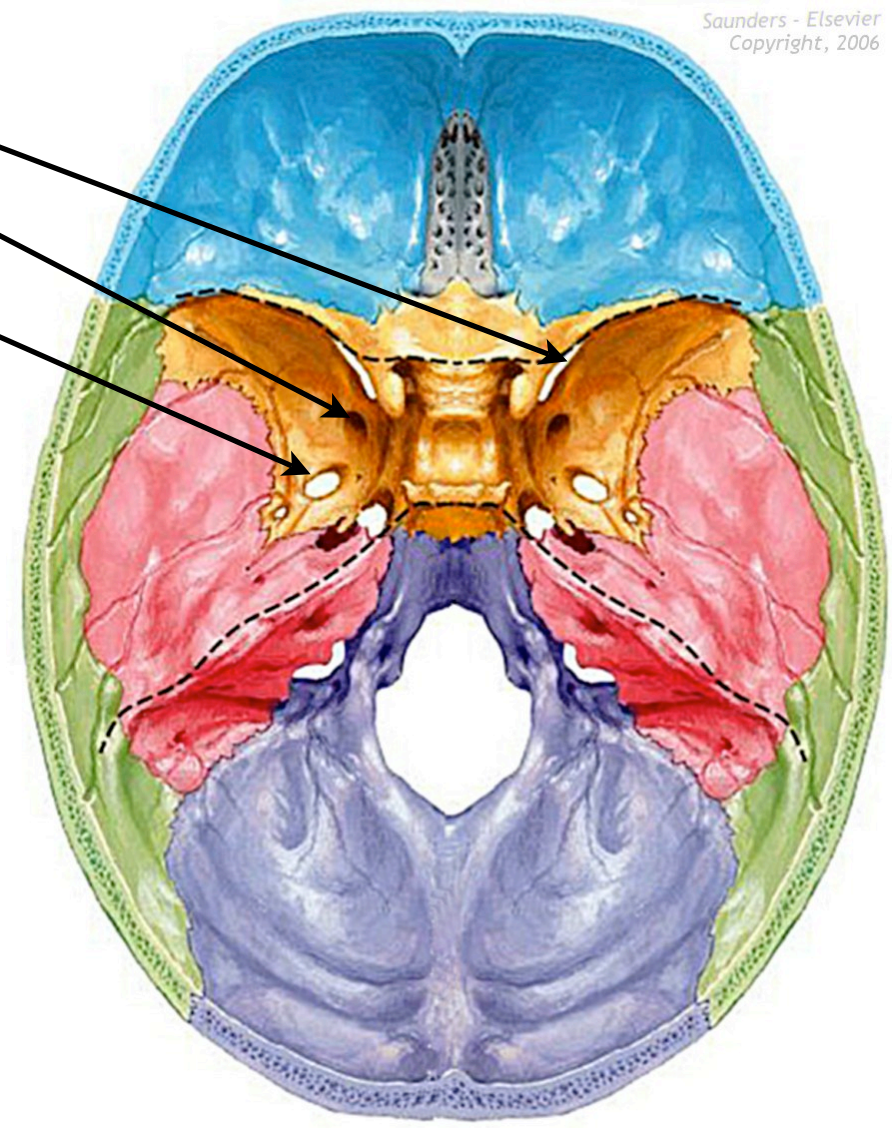
Cranial Nerve V

Name: Trigeminal

Foramen: *V1*: sup. orbital fissure

V2: foramen rotundum

V3: foramen ovale



Fiber Type: General somatic motor,
General somatic sensory

Embryo Metencephalon

Branches: *V1 - ophthalmic*
1. meningeal
2. frontal
3. lacrimal
4. nasociliary

V2 - maxillary
1. meningeal
2. infraorbital
3. post/ant superior alveolar
4. zygomatic
5. sensory roots to pterygopalatine ganglion
6. greater/lesser palatine

V3 - mandibular
1. meningeal
2. auriculotemporal
3. buccal
4. lingual
5. inferior alveolar

Function: *V1 - ophthalmic (sensory)*
1. meninges
2. orbit (cornea conjuctiva)
3. nasal cavity lining
4. forehead
5. middle nose
6. frontal air sinuses

Function: *V2 - maxillary (sensory)*
1. meninges
2. maxillary air sinus
3. gums/teeth of upper jaw
4. bony part of cheek

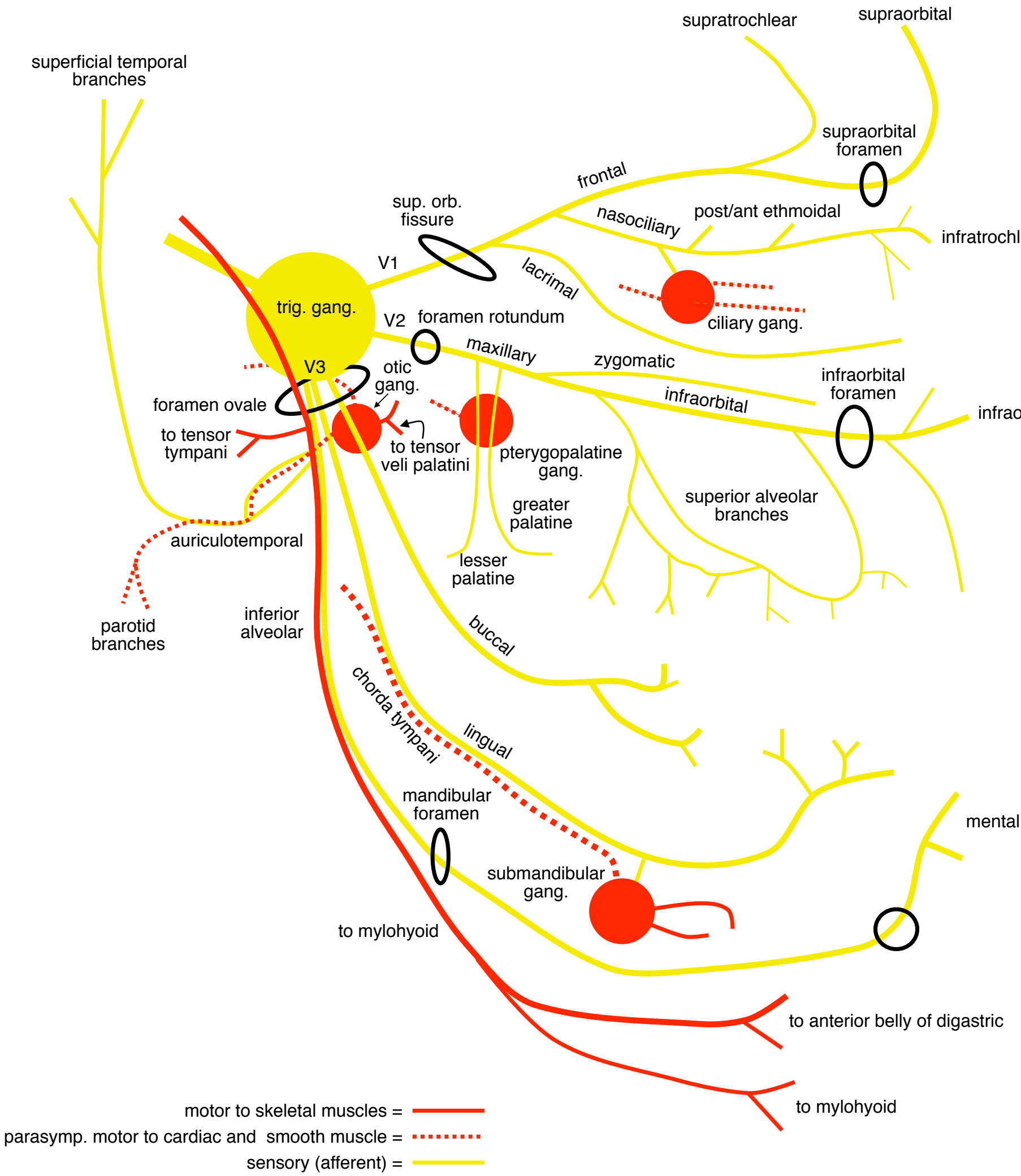
V3 - mandibular (sensory)
1. meninges
2. mucosa of oral cavity/palate
3. ant. 2/3 of tongue (general)
4. gums/teeth of lower jaw
5. soft part of cheek/mandible

V3 - mandibular (motor)
1. masseter
2. buccinator
3. lateral pterygoid
4. medial pterygoid

} muscles of mastication

5. tensor tympani
6. tensor palatini
7. mylohyoid
8. ant. belly of digastric

Cranial Nerve V (cont...)



Cranial Nerve VI

Name: Abducens

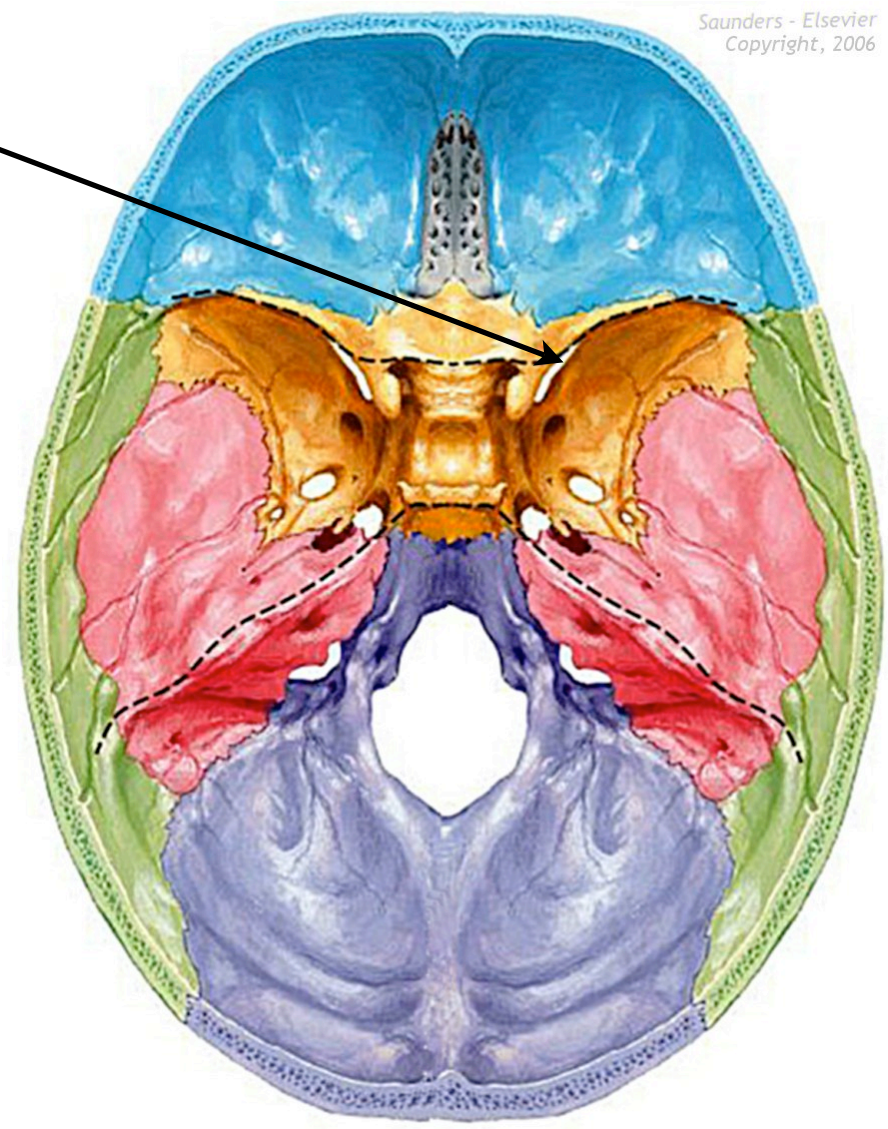
Foramen: Superior orbital fissure

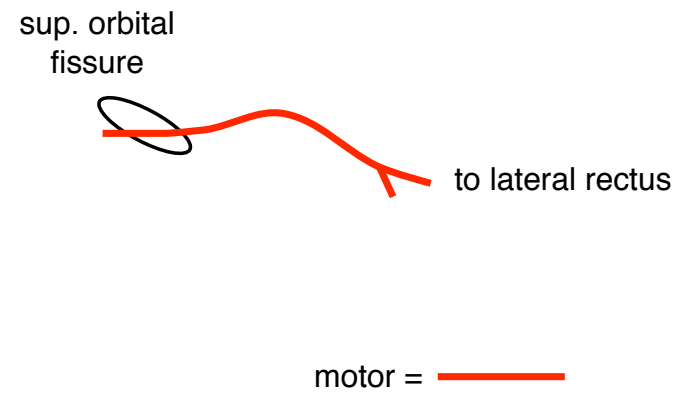
Fiber Type: General somatic motor

Function: *General somatic motor:*
1. lateral rectus

Branches: None

Embryo: Metencephalon





Cranial Nerve VII

Name: Facial

Foramen: Internal acoustic meatus

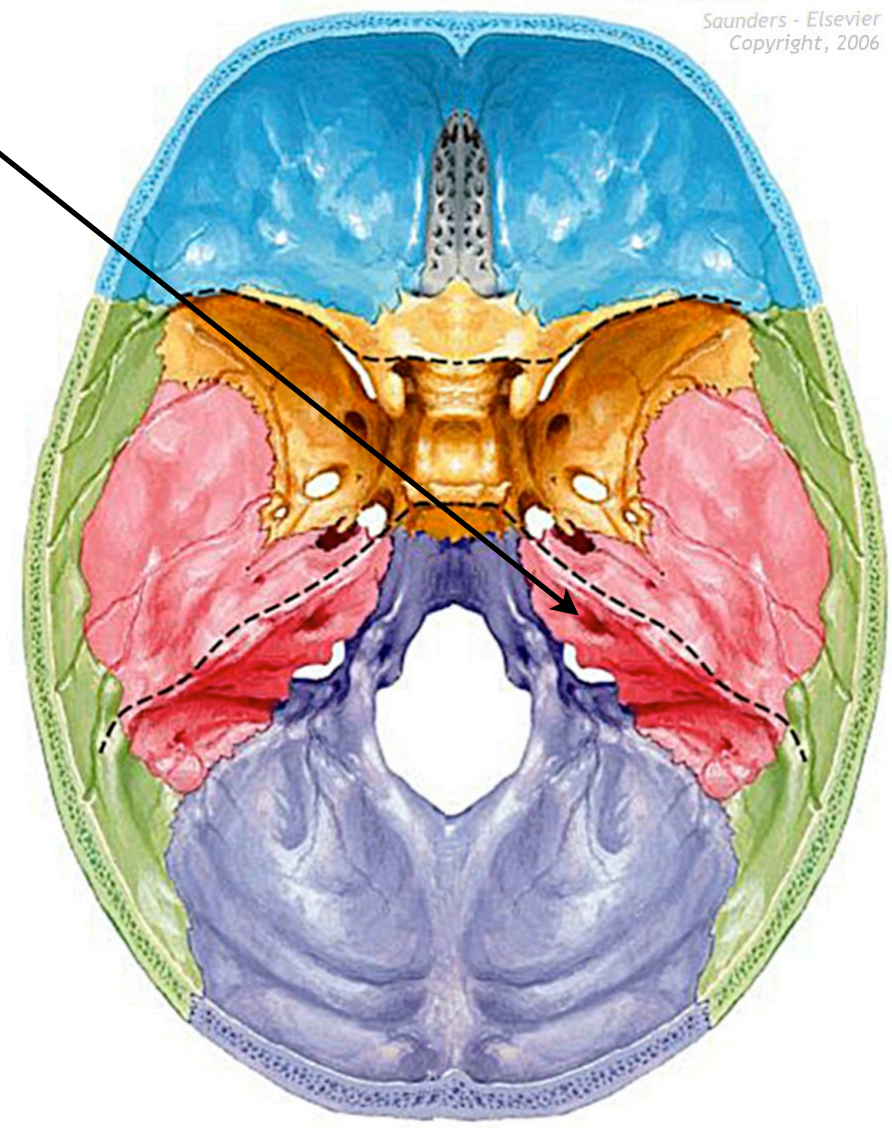
Fiber Type: Special sensory
General sensory
Branchiomotor
Parasympathetic motor

Function: *Branchiomotor:*
1. muscles of facial expression
2. post. belly of digastric
3. stylohyoid

Special sensory:
1. taste ant. 2/3 of the tongue

General sensory:
1. skin of auricle
2. skin of small area behind ear

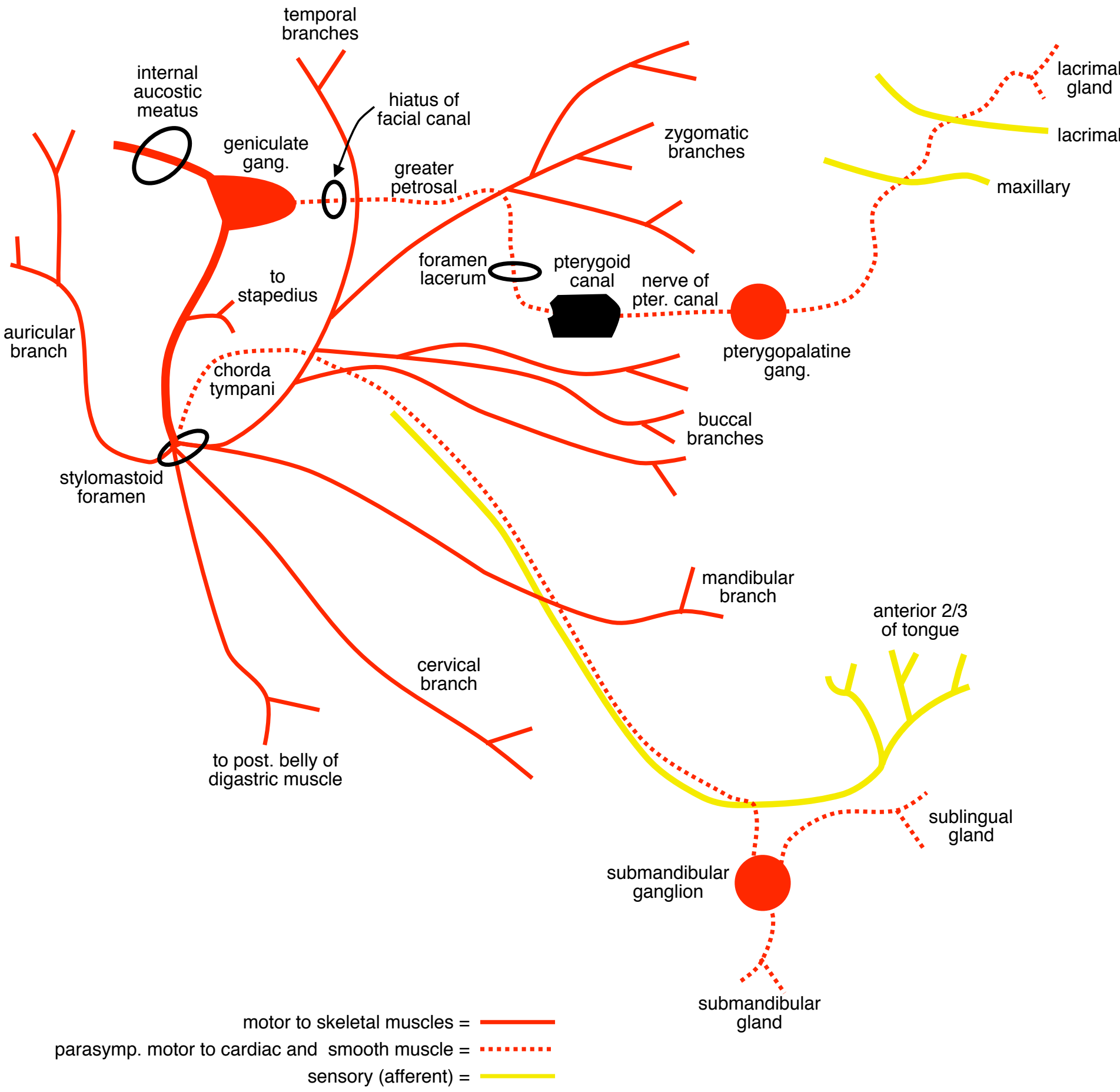
Parasympathetic:
1. lacrimal gland
2. submandibular gland
3. sublinguial gland
4. mucous membranes of nasopharynx, hard and soft palate



Branches: *Branchiomotor:*
1. temporal
2. zygomatic
3. buccal
4. mandibular
5. cervical
6. post. auricular
7. branch to post. belly of digastric
8. stylohyoid

Embryo: Metencephalon

Cranial Nerve VII (cont...)



Cranial Nerve VIII

Name: Vestibulocochlear

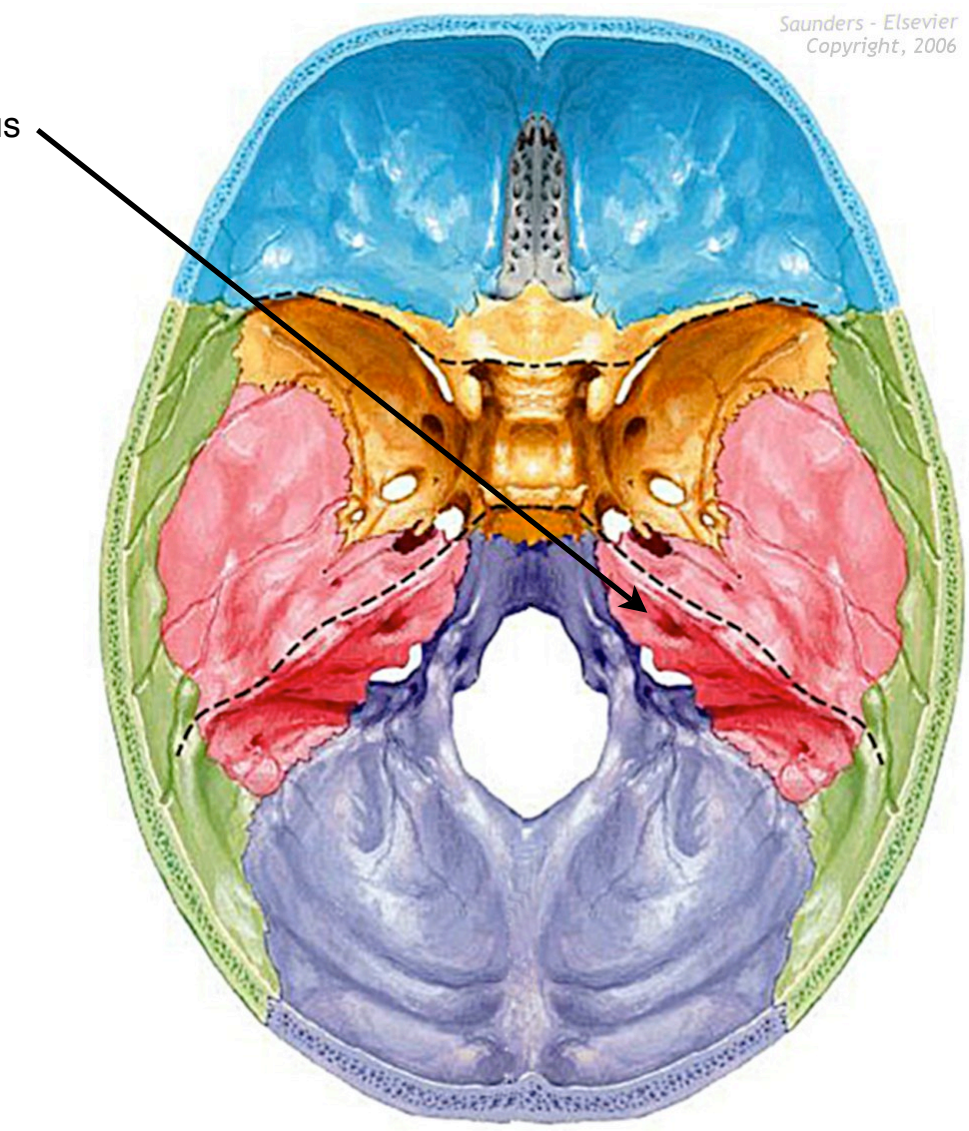
Foramen: Internal acoustic meatus

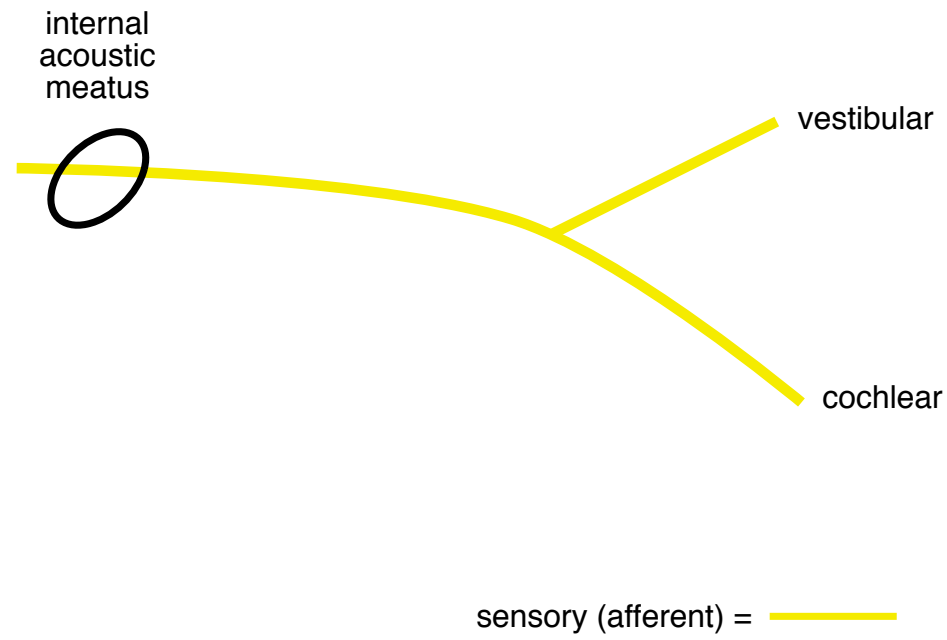
Fiber Type: Special sensory

Function: *Special sensory*
1. hearing
2. balance

Branches: None

Embryo: Metencephalon





Cranial Nerve IX

Name: Glossopharyngeal

Foramen: Jugular foramen

Fiber Type: Special sensory
General sensory
Branchiomotor
Parasympathetic

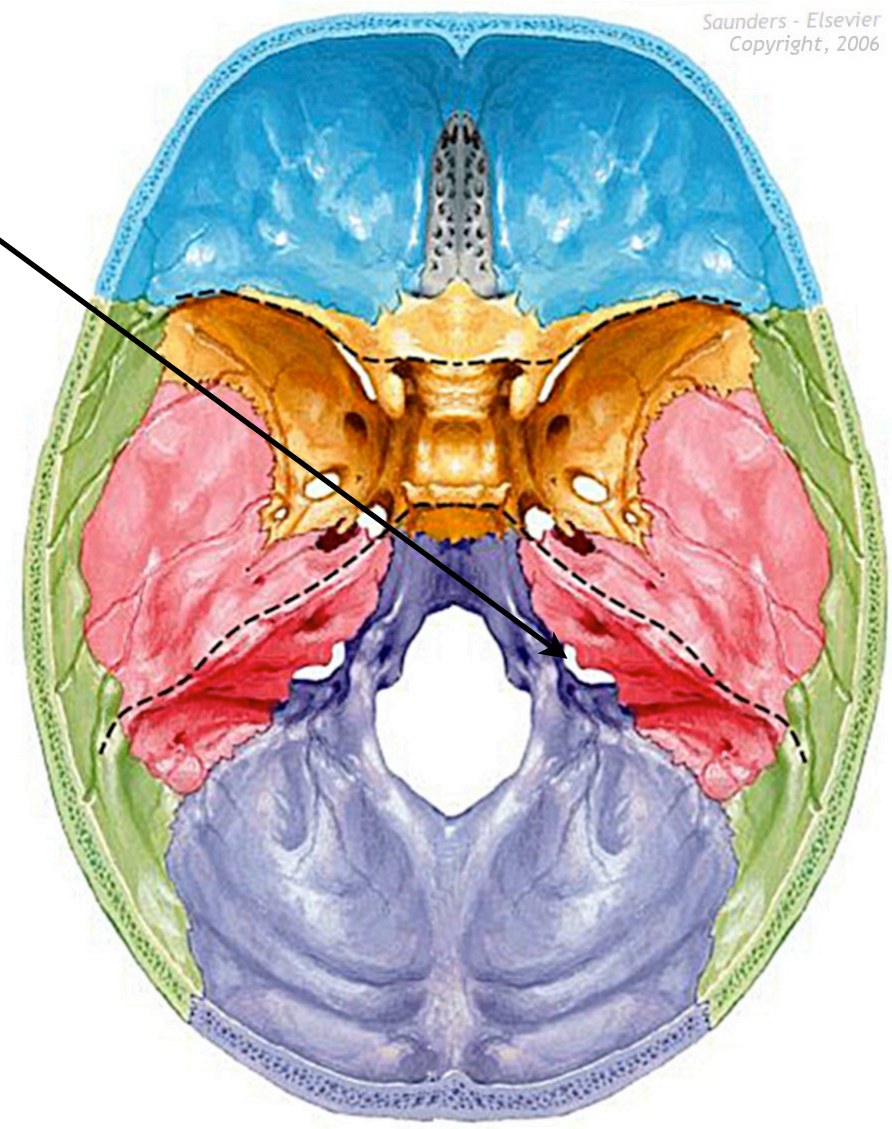
Function: *Special/general sensory*
1. taste to post. 1/3 of tongue
2. pharynx
3. carotid sinus
4. carotid body

Branchiomotor
1. stylopharyngeus

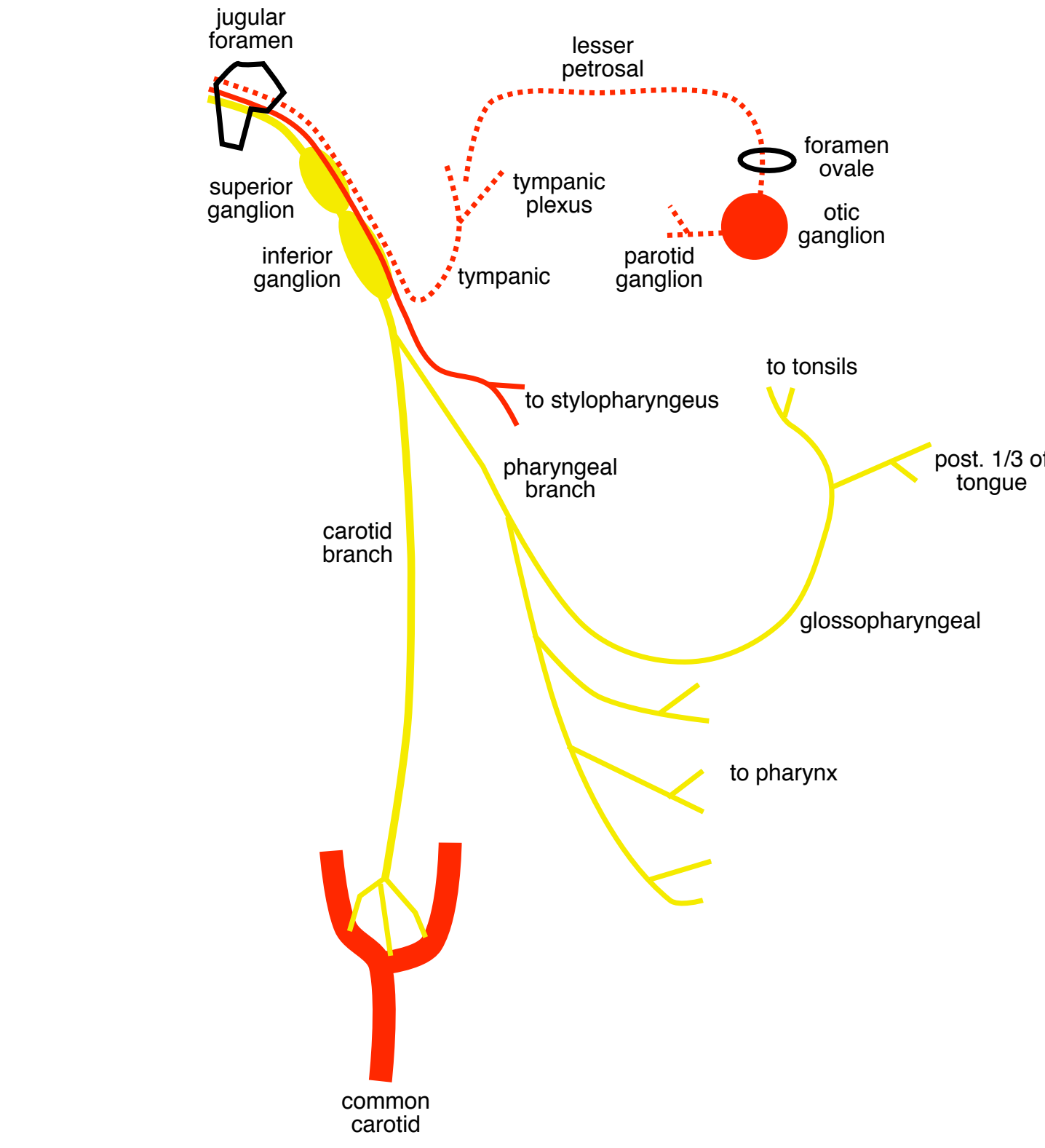
Parasympathetic
1. parotid gland

Branches: None

Embryo: Myencephalon



Cranial Nerve IX (cont...)



motor to skeletal muscles =

parasymp. motor to cardiac and smooth muscle =

sensory (afferent) =

Cranial Nerve X

Name: Vagus

Foramen: Jugular foramen

Fiber Type:
General sensory
Visceral sensory
Special sensory
Branchiomotor
Parasympathetic

Function:

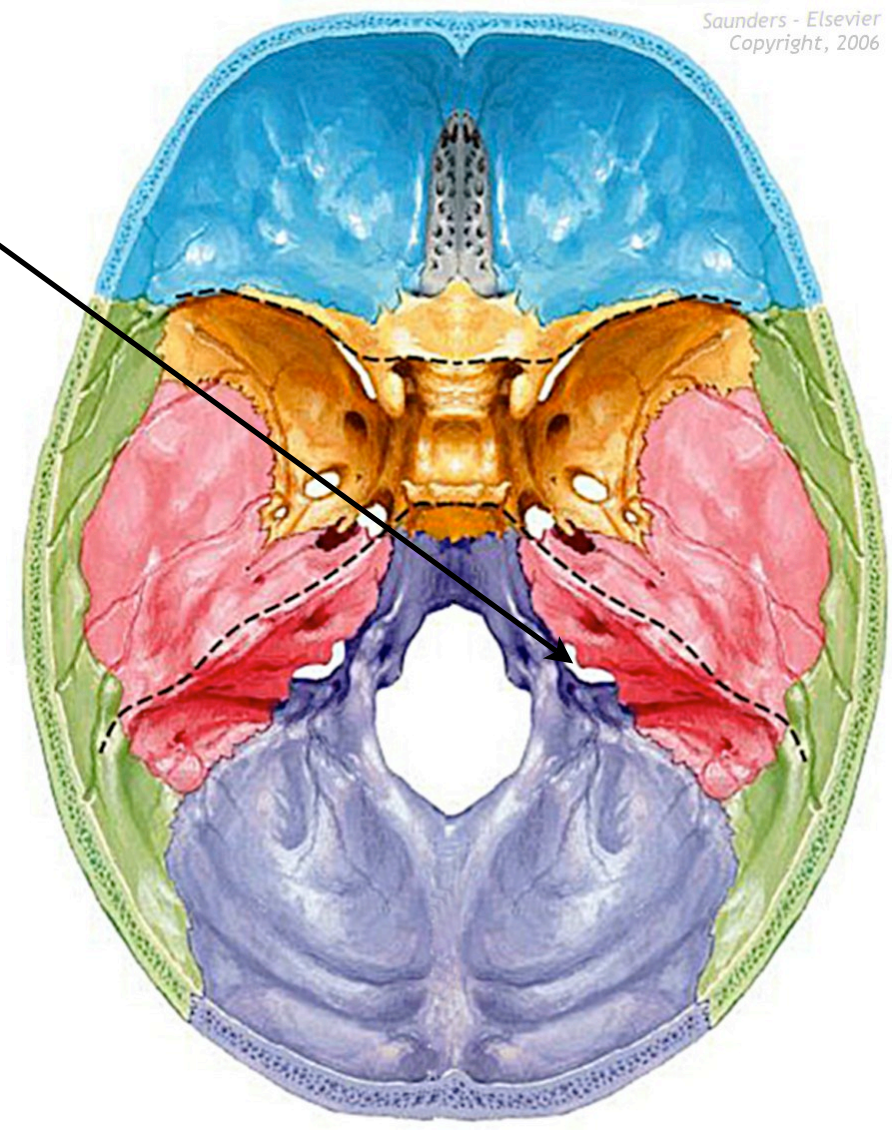
Sensory
1. larynx mucosa
2. epiglottic taste

Motor
1. pharynx
2. larynx
3. soft palate
4. upper 2/3 of esophagus (for speech/swallowing)

Parasympathetic
1. Preganglionic fiber to thoracic and abdominal smooth muscle, viscera, glands

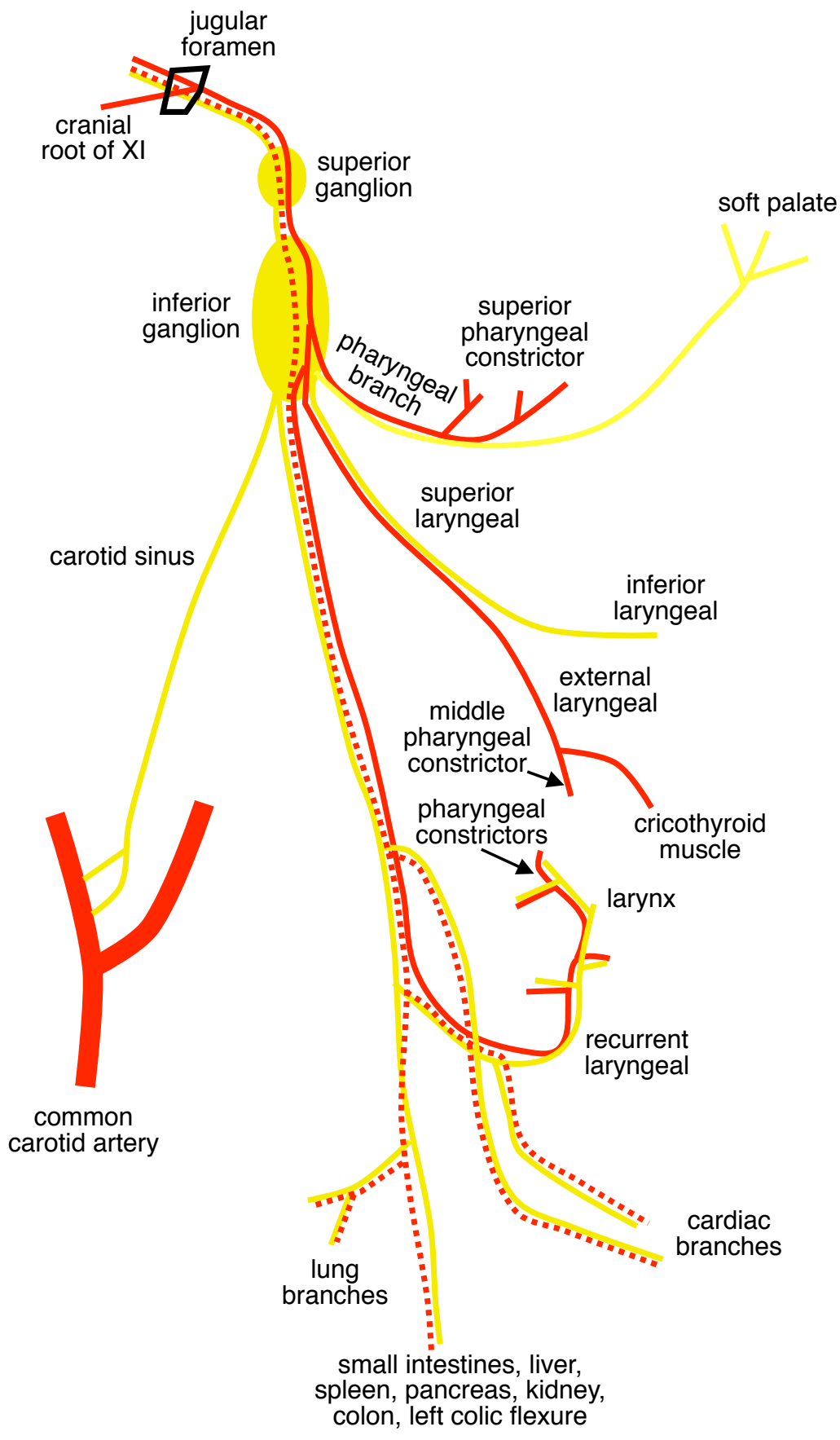
Branches: None

Embryo: Myencephalon



motor =

Cranial Nerve X (cont...)



motor to skeletal muscles =

parasymp. motor to cardiac and smooth muscle =

sensory (afferent) =

Cranial Nerve XI

Name: Spinal accessory

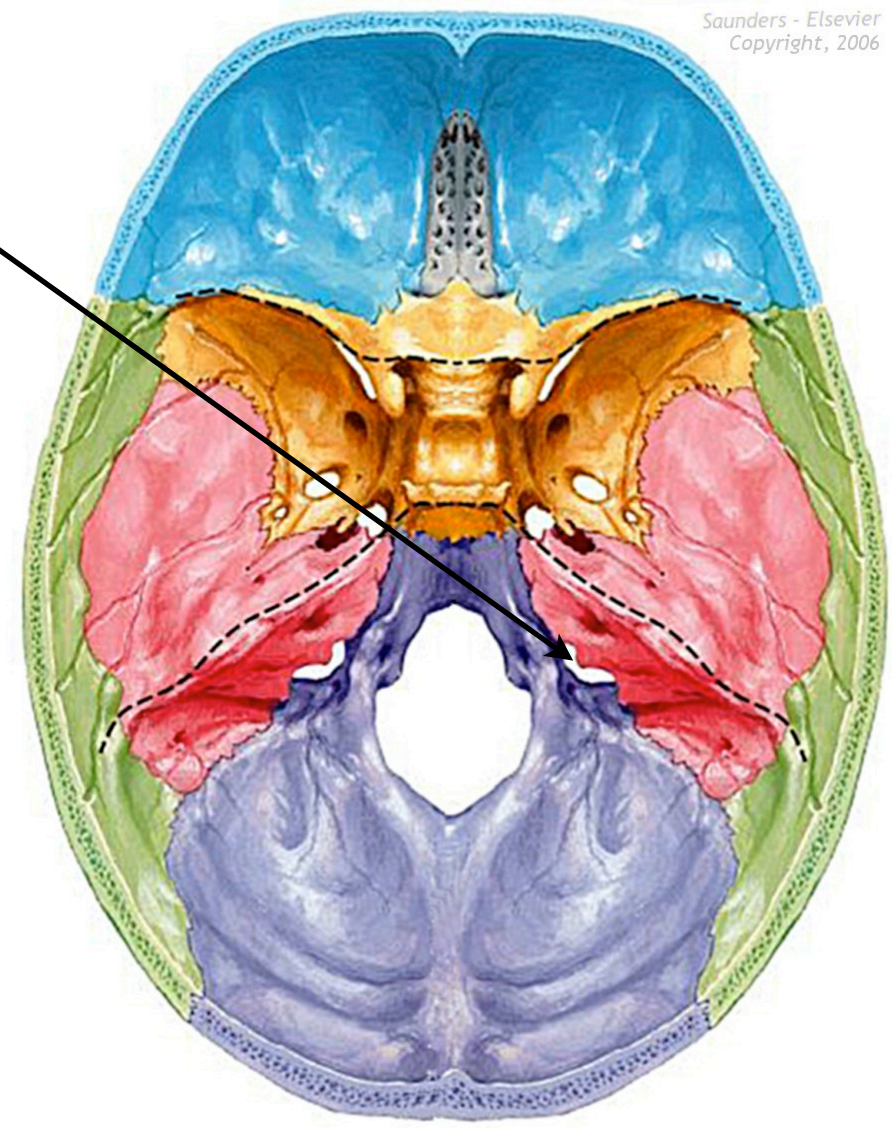
Foramen: Jugular foramen

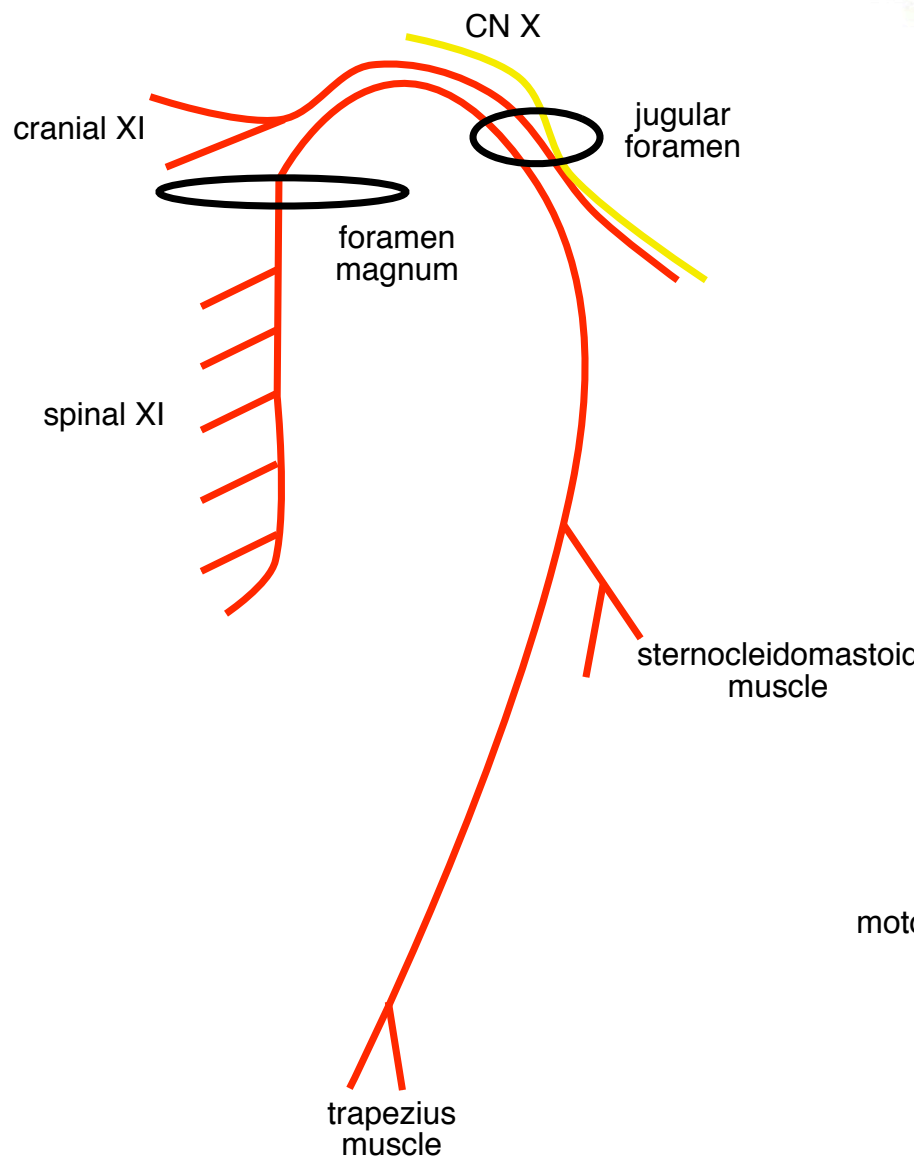
Fiber Type: Motor

Function: *Motor*
1. sternocleidomastoid
2. trapezius

Branches: Muscular

Embryo: Certical spine





Cranial Nerve XII

Name: Hypoglossal

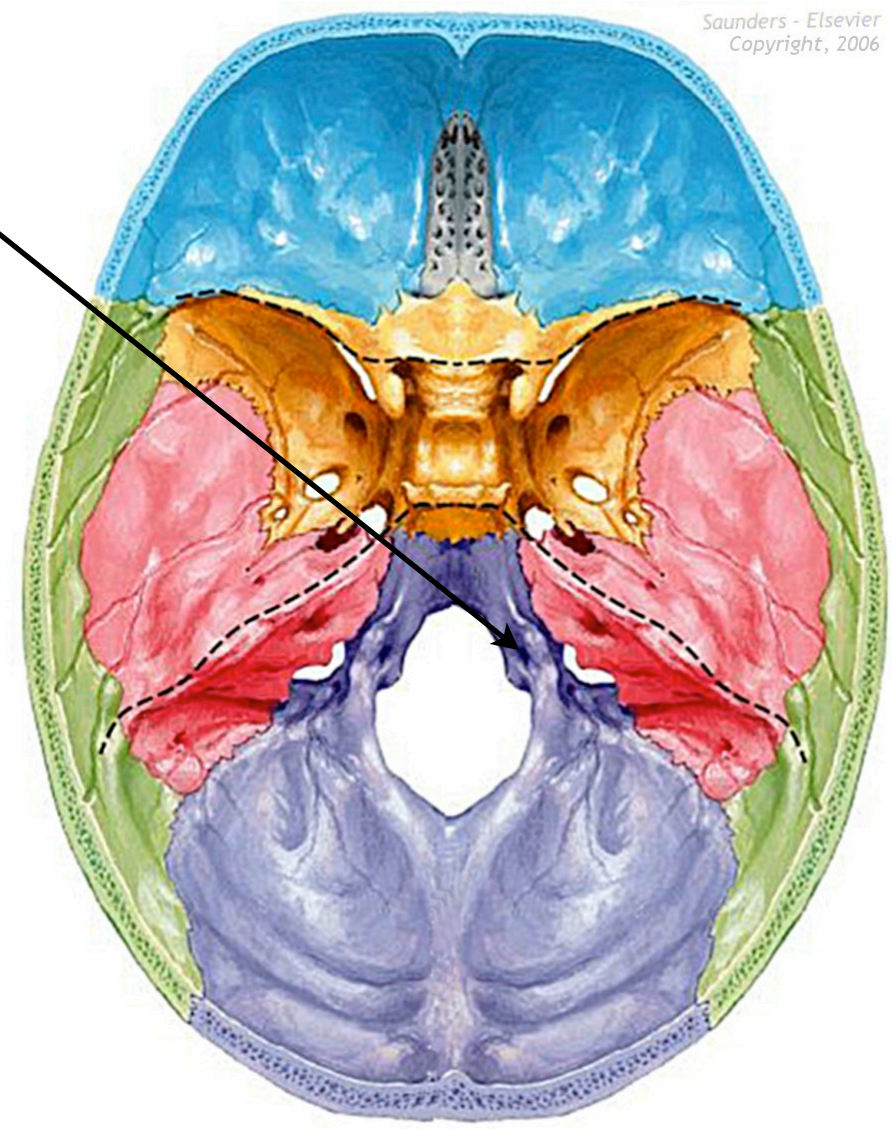
Foramen: Hypoglossal canal

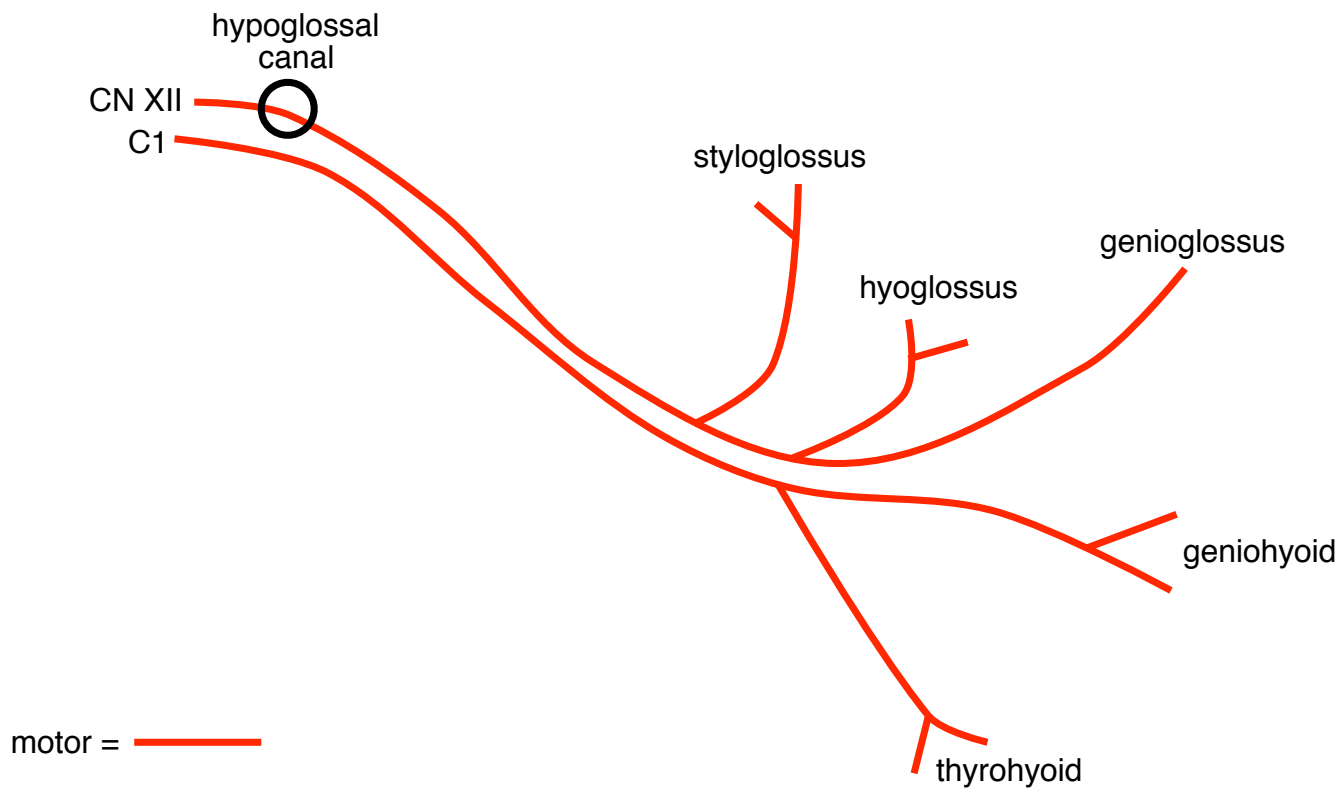
Fiber Type: General somatic motor

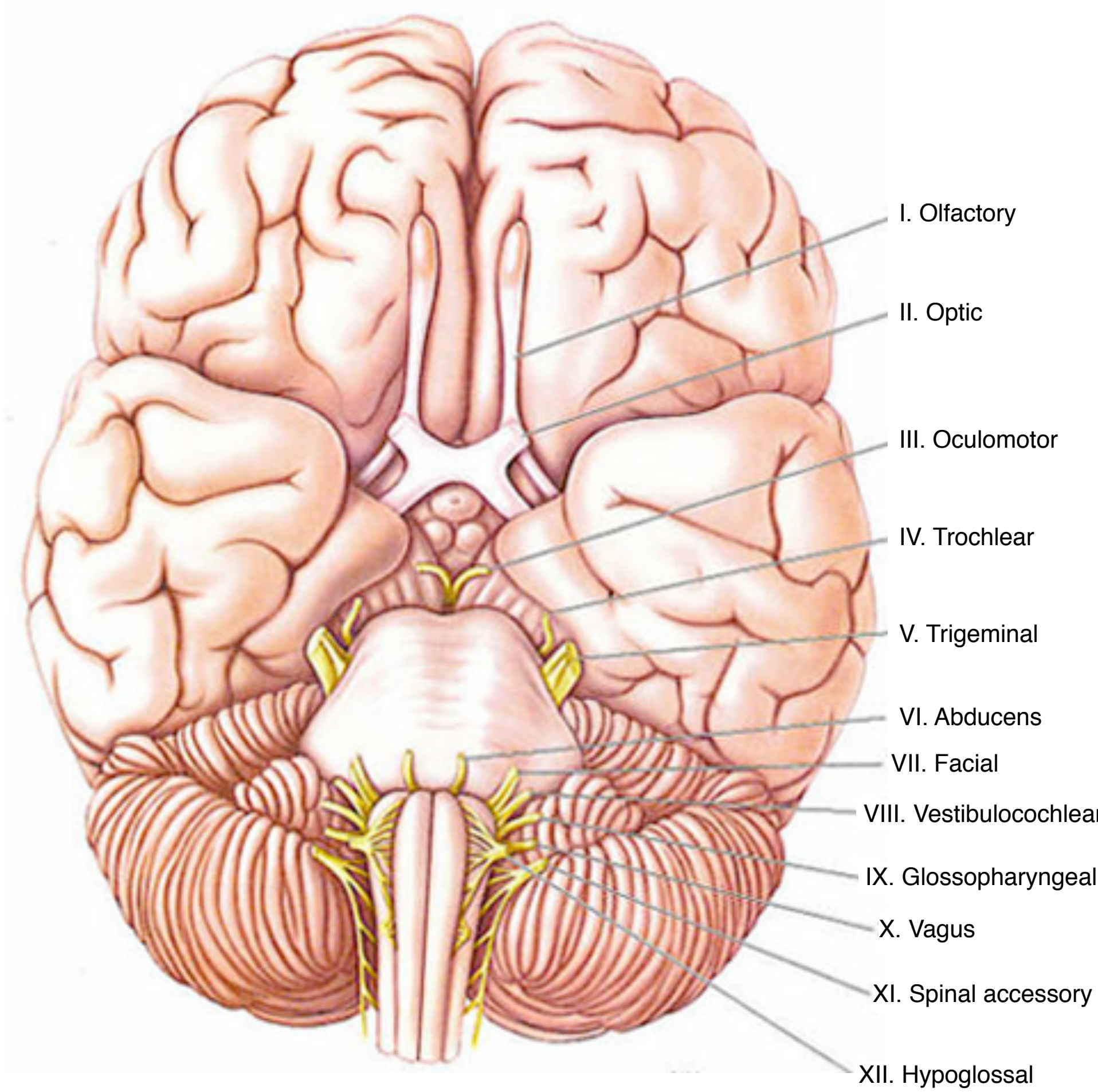
Function: *General somatic motor:*
1. All tongue muscles except palatoglossus

Branches: None

Embryo: Myencephalon






I. Olfactory
II. Optic
III. Oculomotor
IV. Trochlear
V. Trigeminal
VI. Abducens
VII. Facial
VIII. Vestibulocochlear
IX. Glossopharyngeal
X. Vagus
XI. Spinal accessory
XII. Hypoglossal