12 Cranial nerves

- Paired structures
- PNS
- trough foramina and fissure

I. Olfactory:

- smell
- Afferent
- through cribiform plate of ethmoid bone
  → through olfactory striae → brain

II. Optic

- Vision · afferent
- Bipolar neuron of retina → optic canal
  → optic chiasm

III. Oculomotor

- motor innervation
  - Levator palpebrae sup.
  - Inf. oblique
  - Sup. rectus
  - Inf. rectus
  - medial rectus
  - Eyelid
  - iris sphincter
  - ciliary m.
- Efferent!
  · midbrain → superior orbital fissure
  → bony orbit

IV. Trochlear

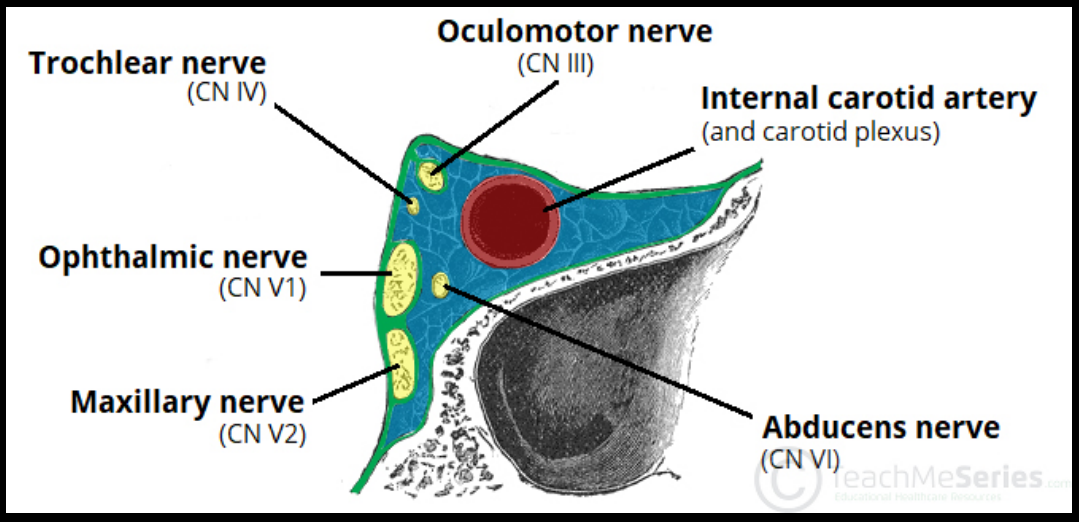
- Motor innervation
  - superior oblique (eye)
- posterior surf. brainstem → superior orbital fissure → bony orbit → sup oblique M.
  - only nerve on post. surf.

VI. Abducens

- Motor innervation
  - Lat. rectus M.
- Pons (middle of brainstem) → sup. orbital fissure → bony cavity → lat. rec. M.

Eye movement:

- CN III
- CN IV
- CN VI



V. Trigeminus

V1 Opthalmic

- Ant. half of scalp
- upper Eyelid
- dorsum of nose
- Orbital content
- nasal cavity
- frontal sinus

V2 Maxillary

- lower eyelid
- side of nose
- nasal cavity
- cheek
- nasopharynx
- upper lip
- maxillary teeth

V3 Mandibular

- lower lip
- ant 2/3 of tongue
- mandibular teeth
- mandible
- Ant. part of ear
- temporal region
- external acoustic meatus

Motor innervation

- Mastication: Temporal, masseter, med & lat pterygoid
- Mylohyoid
- Tensor tympani
- Ant belly of digastric
- Tensor veli palatini

Antero later surface of pons → big sensory root → ganglion → ophtalmic → superior orbital fissure
ganglion → maxillary → foramen rotundum
ganglion → mandibular → foramen ovale
pons → small motor → joins mandibular

VII. Facial

- Motor: facial expression
  - orbicularis oculi
  - zygomaticus maj/min
  - digastric muscle (post. belly)
  - stylohyoid
  - stapedius
- Parasympathetic:
  - salivary gland
  - Lacrimal gland
  - mucous gland (nose/oral cav.)
- sensory:
  - taste
  - external acoustic meatus
  - deep ear
- ant. surf. pons → stylomastoid foramen → facial expression M.

VIII. Vestibulocochlea

hearing and balance

- cochlear
  - cochlea → auditory info to brain
- vestibular
  - vestibula → balance info to brain

cochlear + vestibular → internal acustic meatus → lat. surface pons

IX. Glossopharyngeal

Sensory:

- carotid body & sinus
- post 1/3 of tongue (taste)
- palatine tonsil
- Oropharynx
- skin: external acoustic meatus
- tympanic membrane

Parasympathetic:

- Parotid salivary gland

Motor:

- stylopharyngeus

Anterolateral surface medulla oblongata (lower brain stem) →

→ jugular foramen

X. Vagus

Sensory:

- heart
- lungs
- palate
- pharynx
- larynx
- trachea
- bronchi
- external ear
- taste: epiglottis, pharynx

Parasympathetic:

- smooth muscle & gland: pharynx, larynx
- organs of thorax & foregut/midgut
- rest & digest responds
- biggest parasympathetic single nerve

Motor:

- palatoglossus
- soft palate
- pharynx
- larynx

medulla oblongata → jugular foramen

longest!

XI. Accessory

Motor: - Sternocleidomastoid - Trapezius

Spinal cord → enter from foramen magnum → exit jugular foramen

XII. Hypoglossal

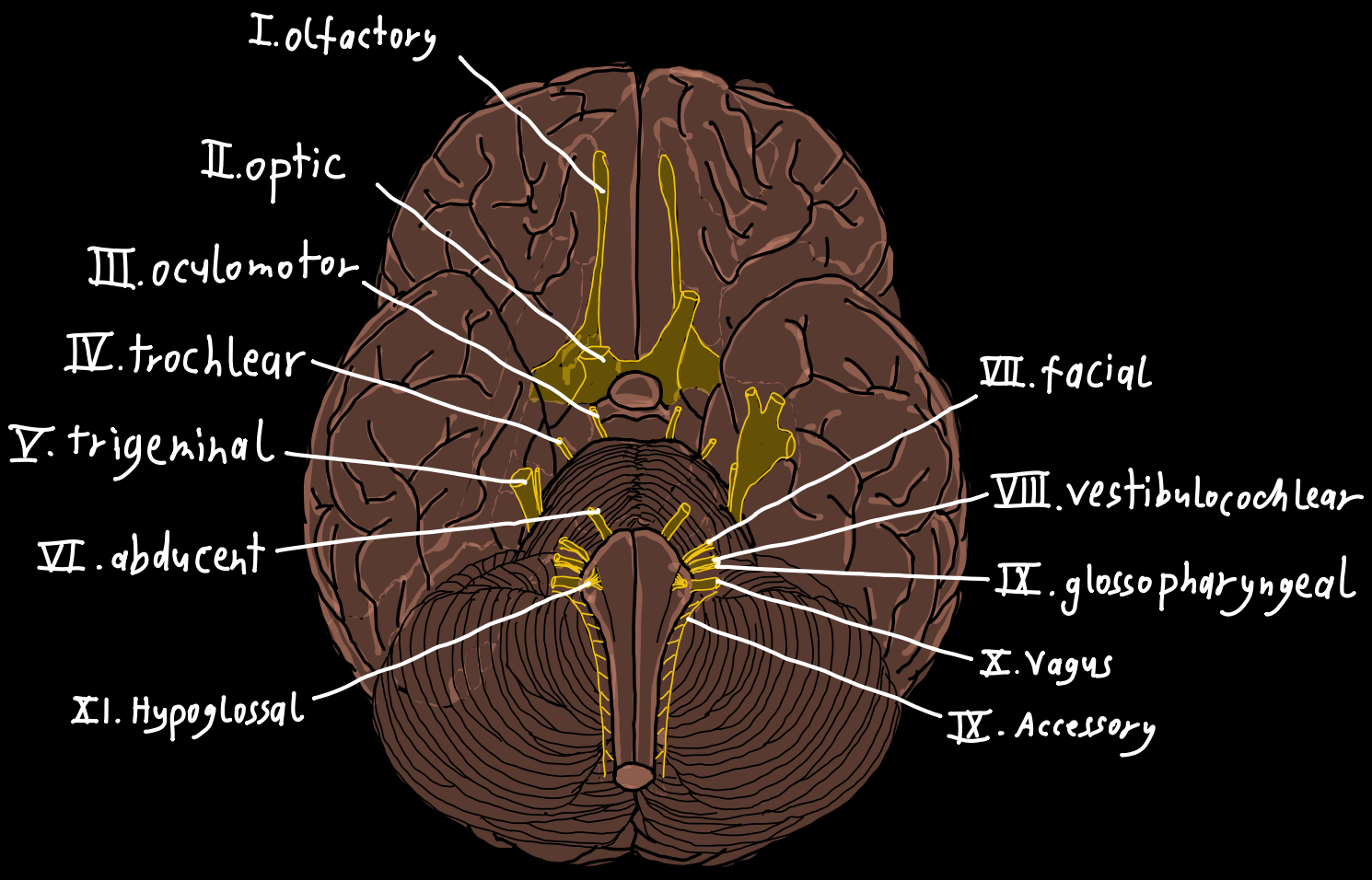
Motor: - intrinsic & extrinsic tongue

ant. surface medulla oblongata → hypoglossal canal → tongue

(XIII: Nervus terminalis O/N
- med. to olfactory
- exit by cribiform plate
- for reproductive behaviour
- pheromones)

Mnemonic: Old Opie occasionally tries trigonometry and feels very gloomy vague and hypoactive

Some Say Money Matters, but my bestie says big Brain matters most | S - sensory M - Motor B - both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