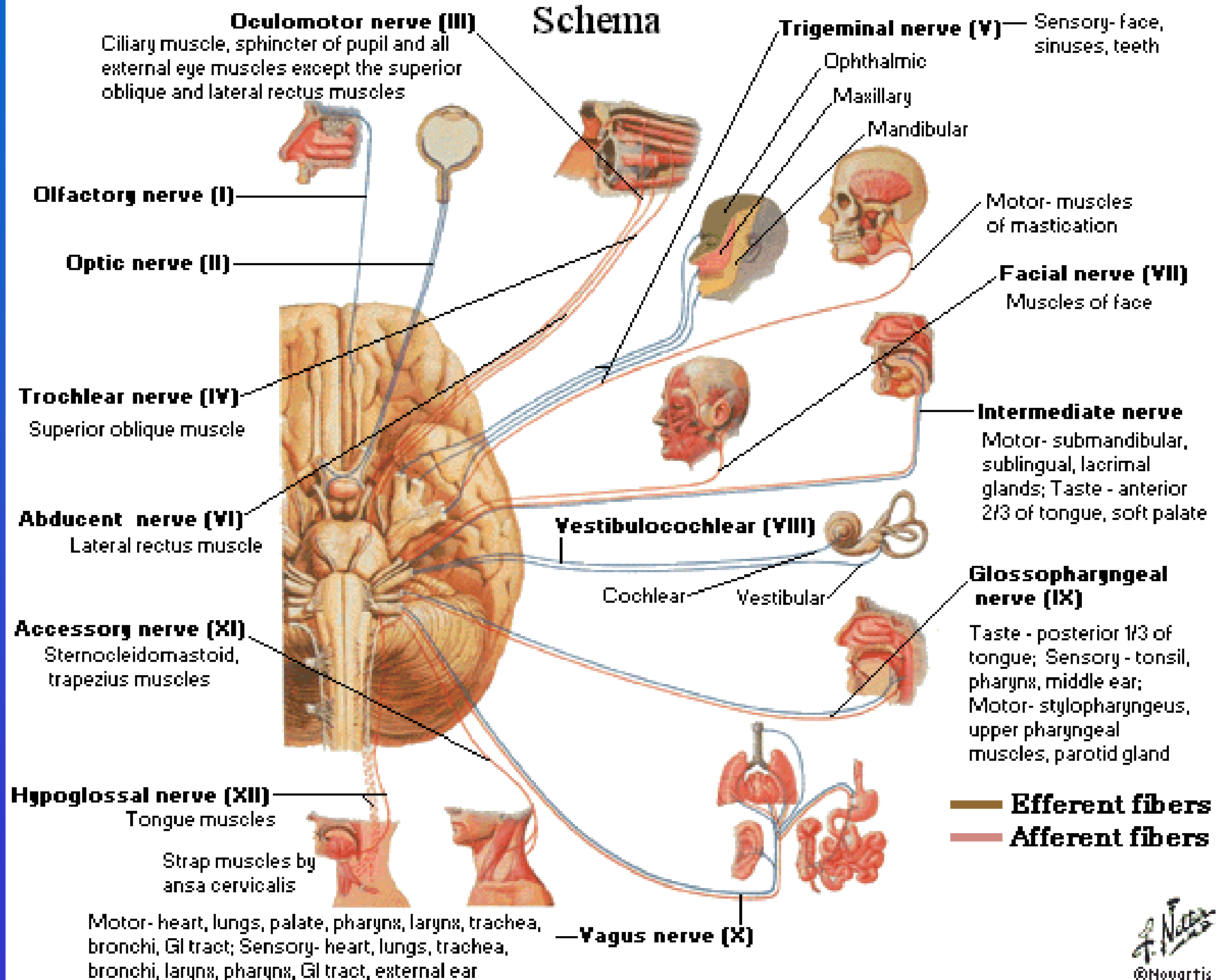
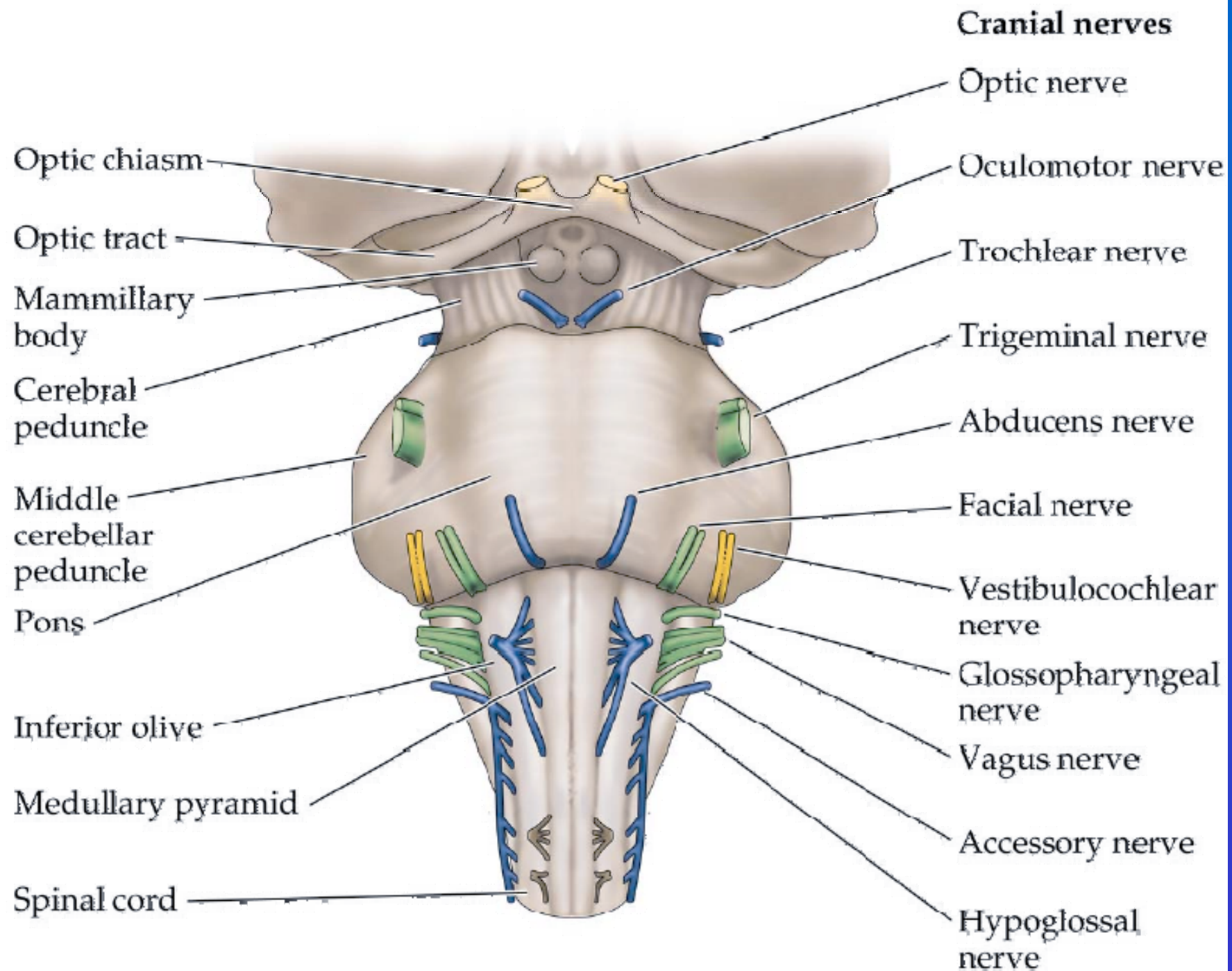
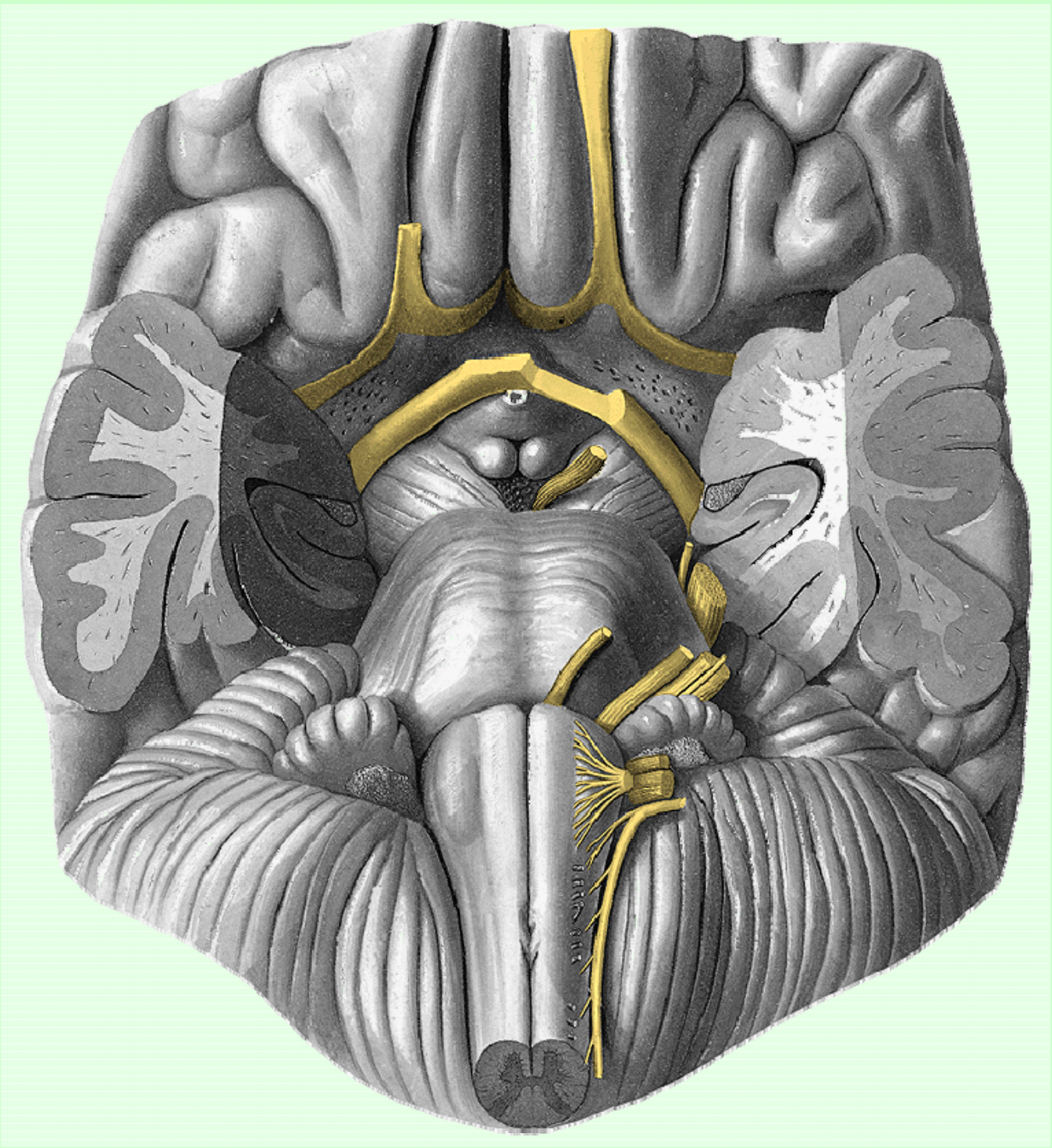


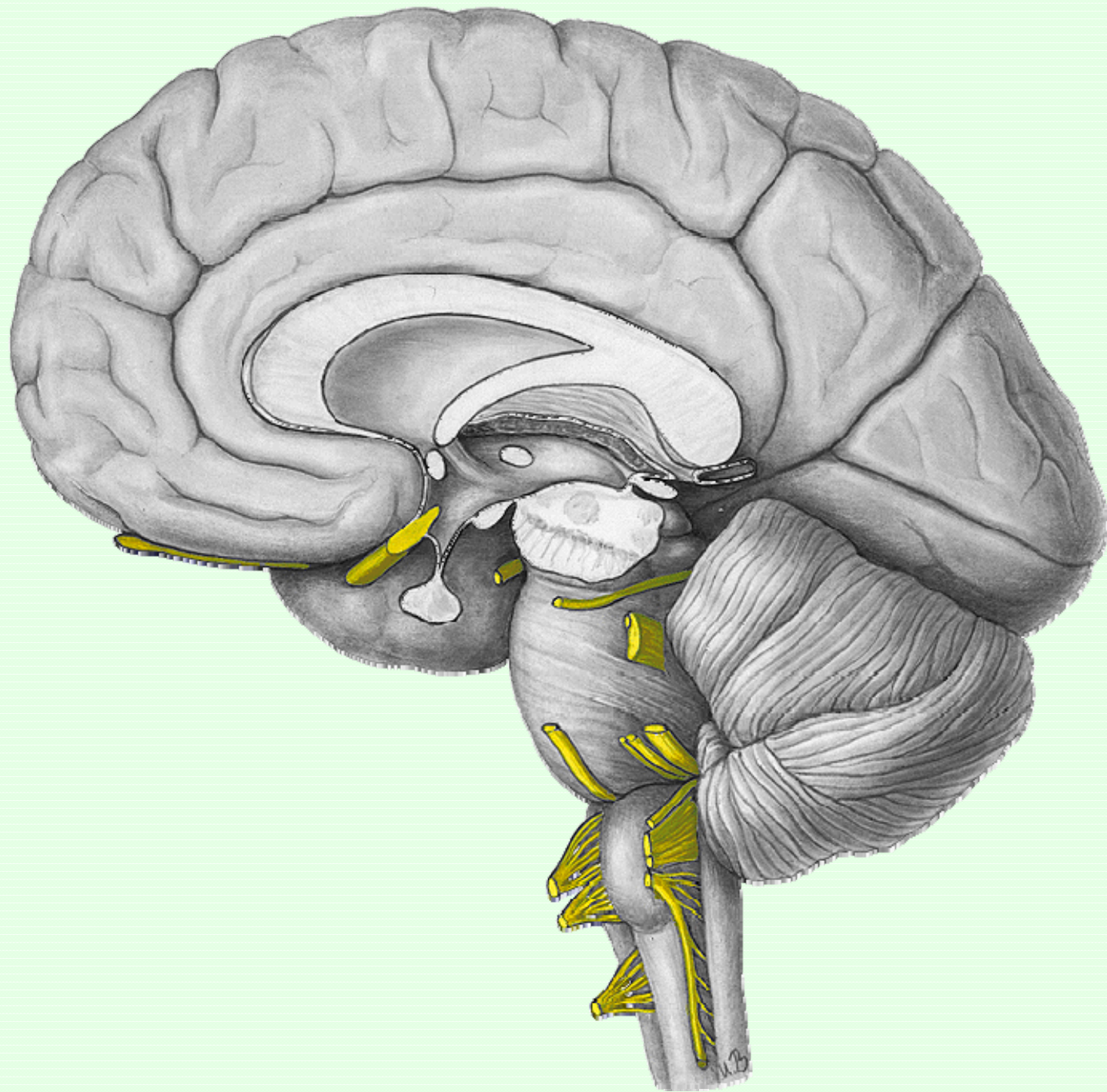
Functional organization of cranial nerves

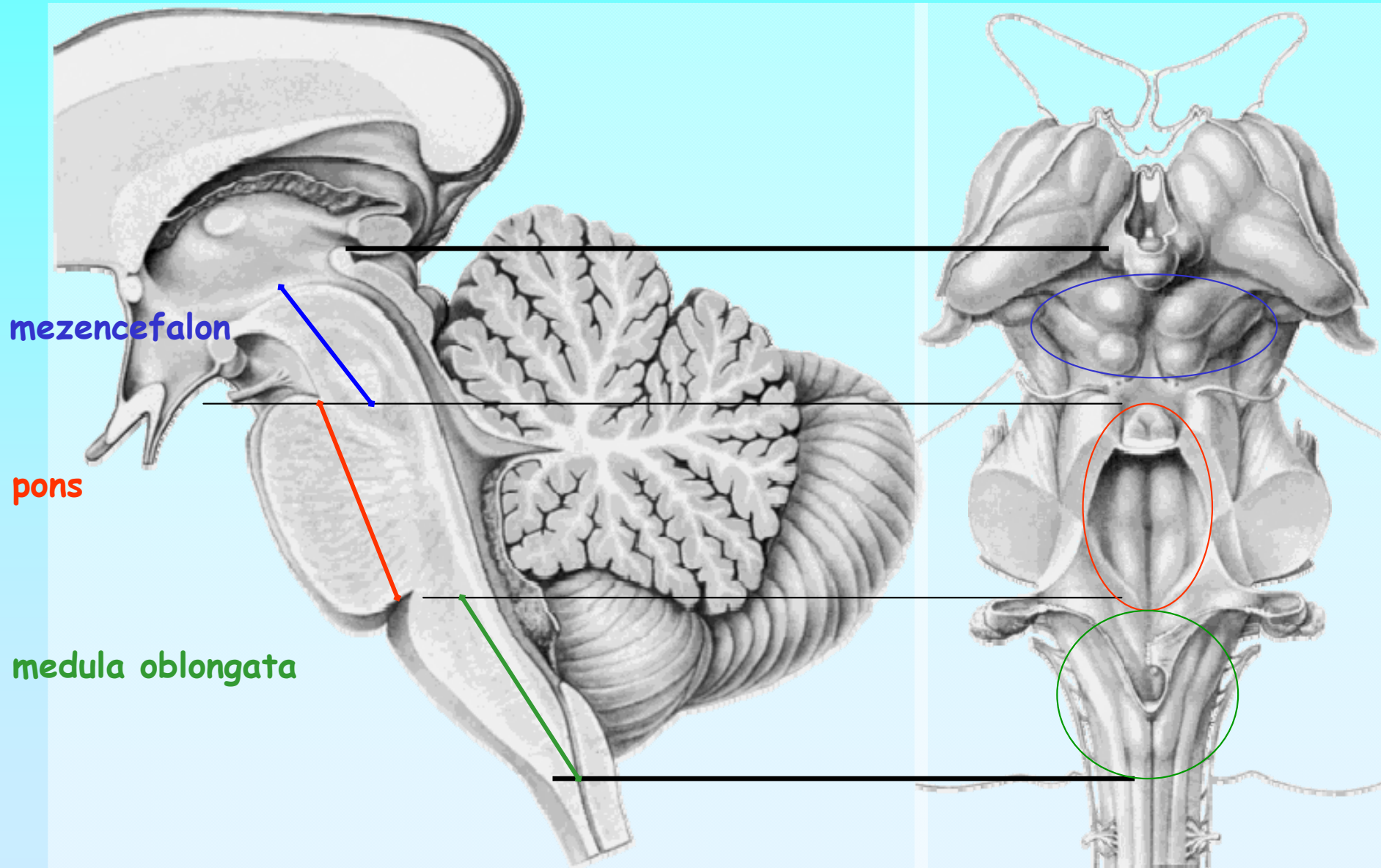
Cranial Nerves [Motor and Sensory Distribution]

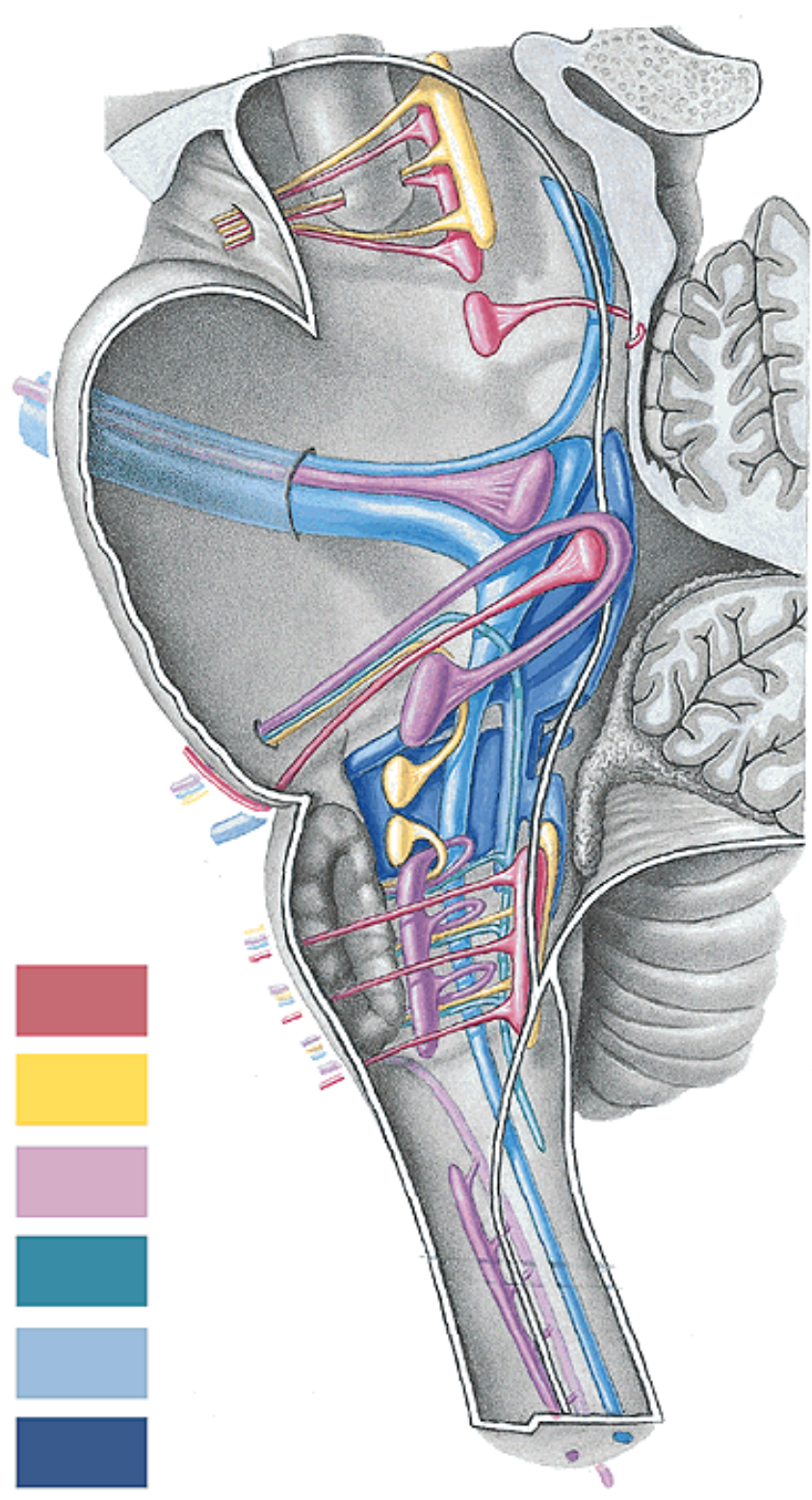
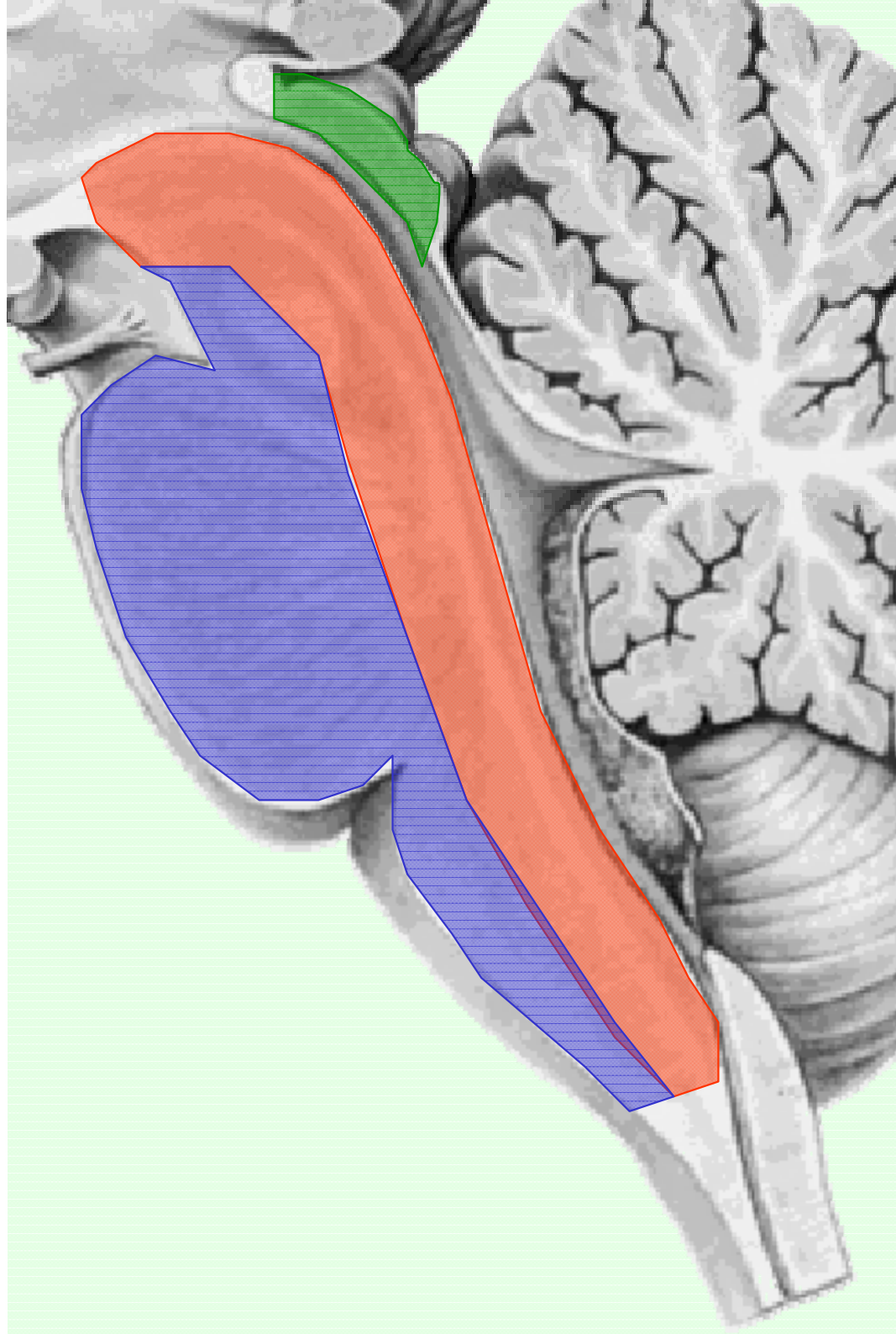




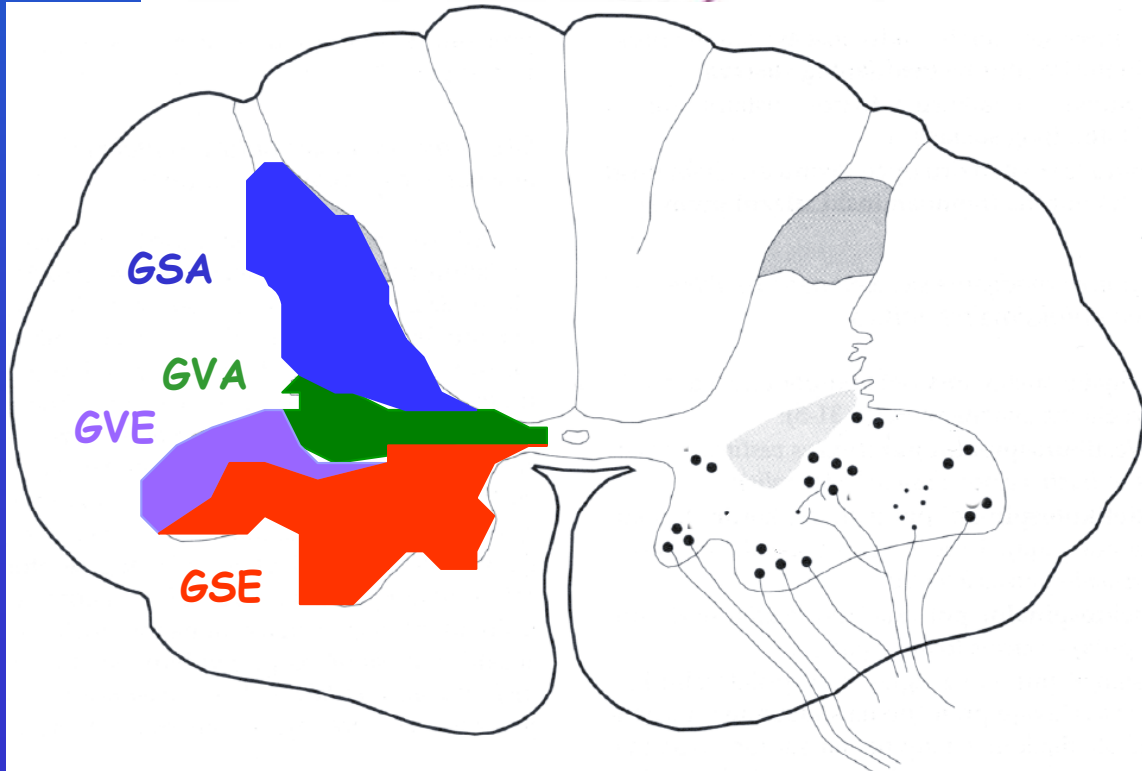
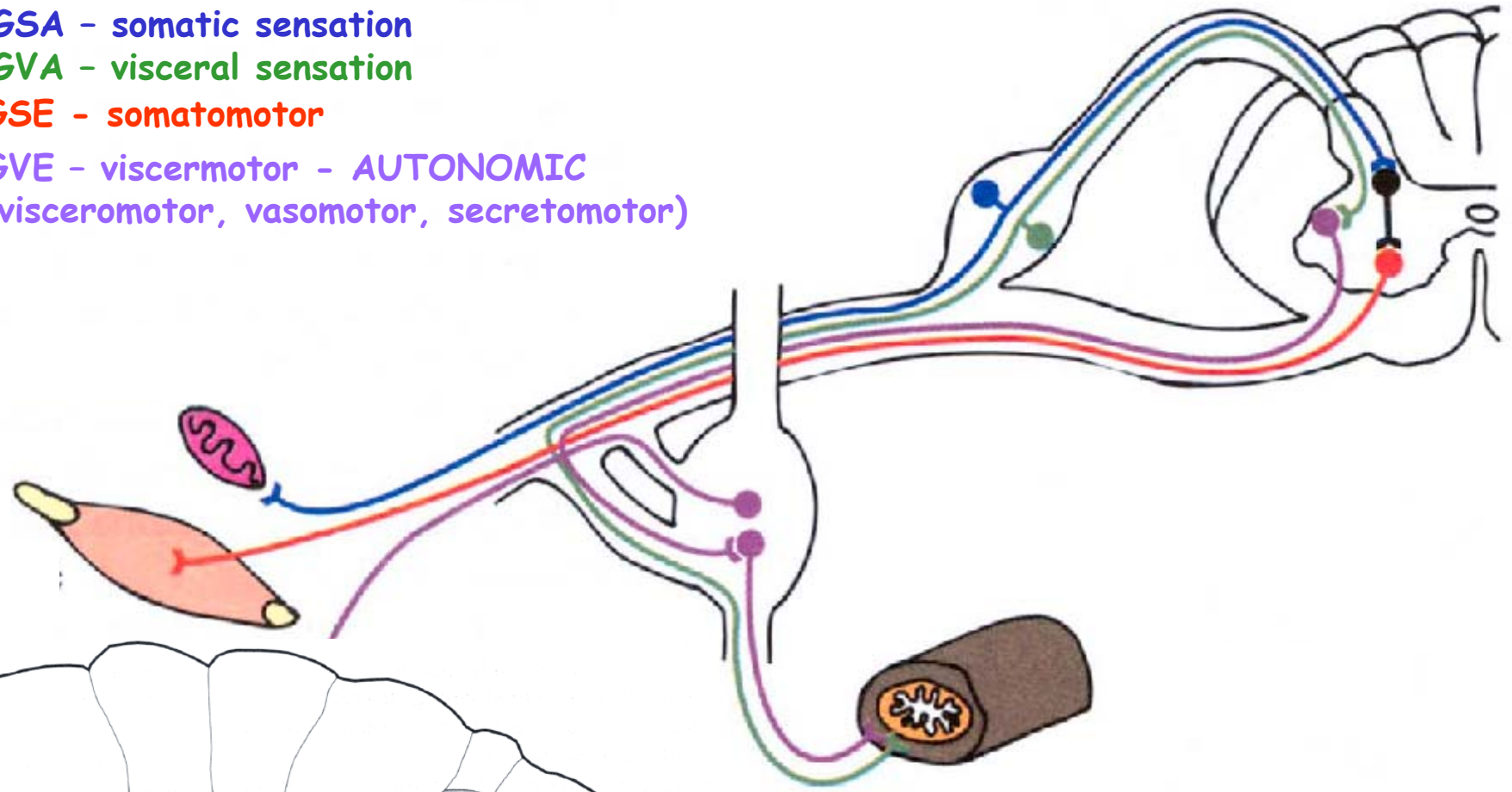


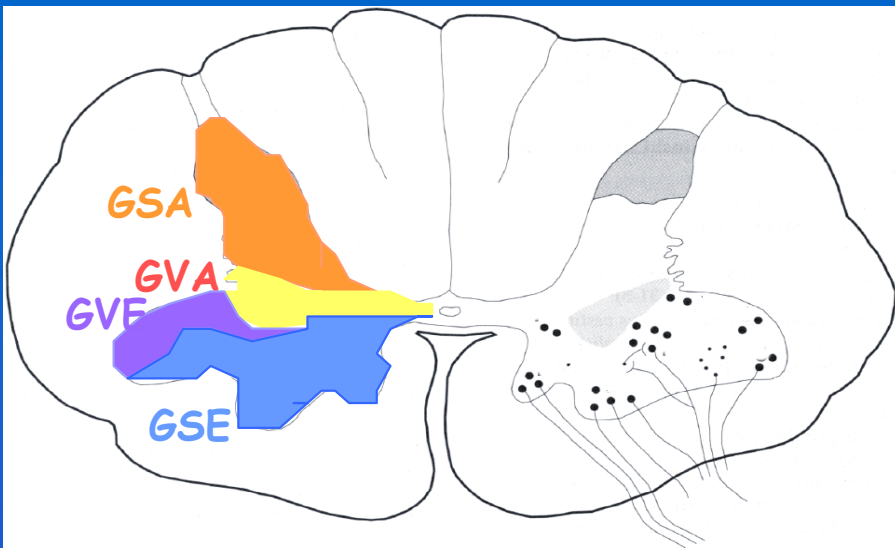






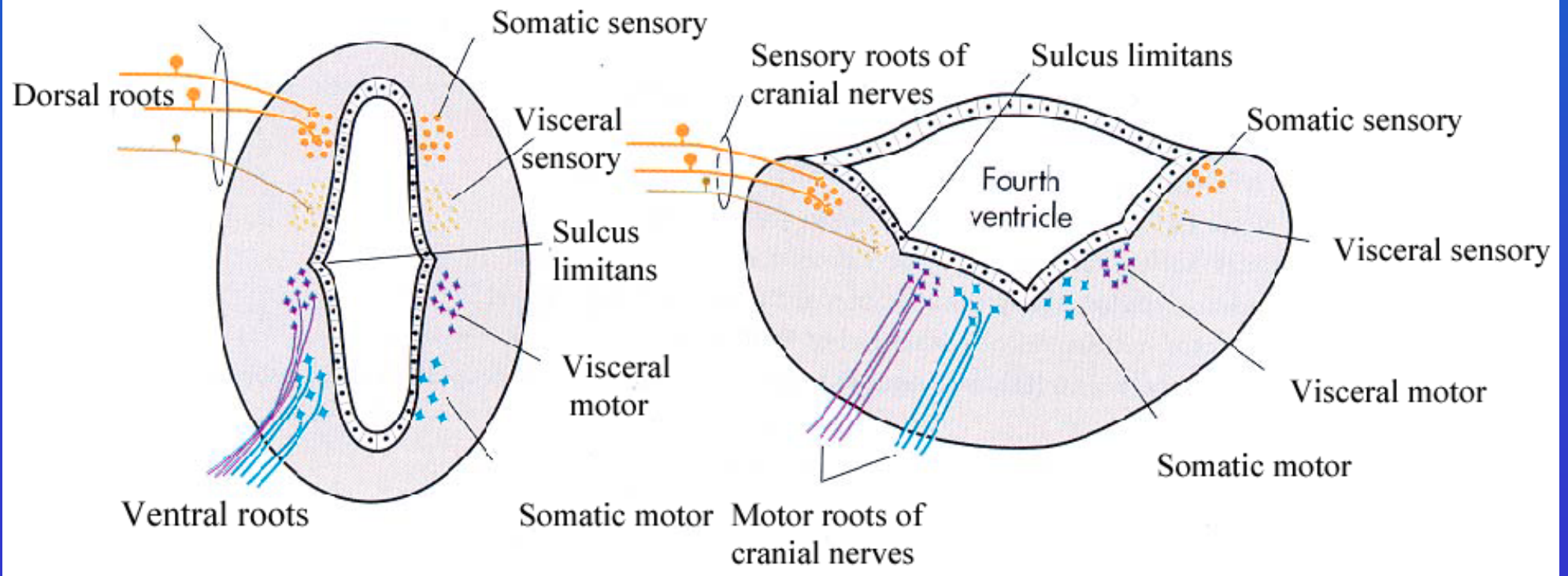
- **GSA** - somatic sensation
- **GVA** - visceral sensation
- **GSE** - somatomotor
- **GVE** - visceromotor - AUTONOMIC
(visceromotor, vasomotor, secretomotor)

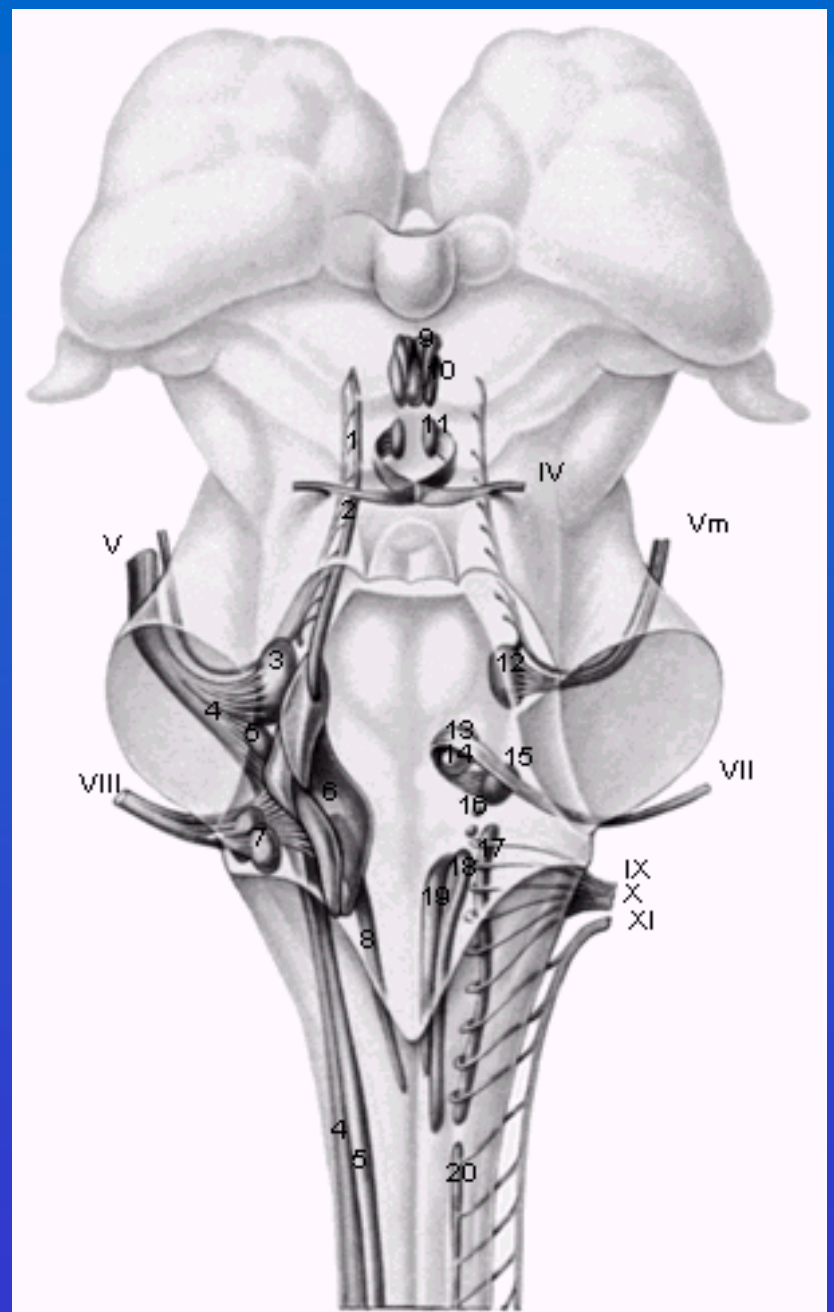
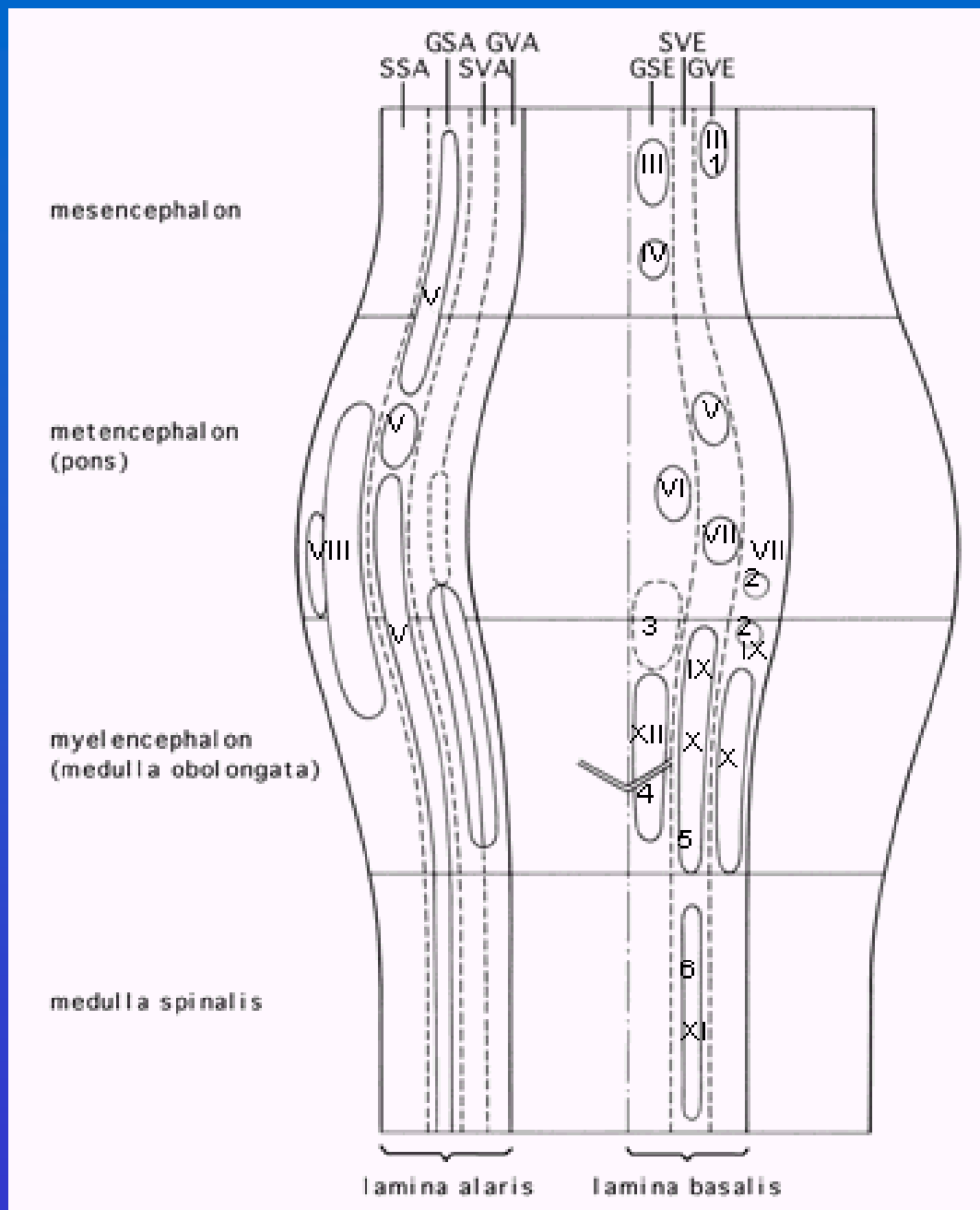


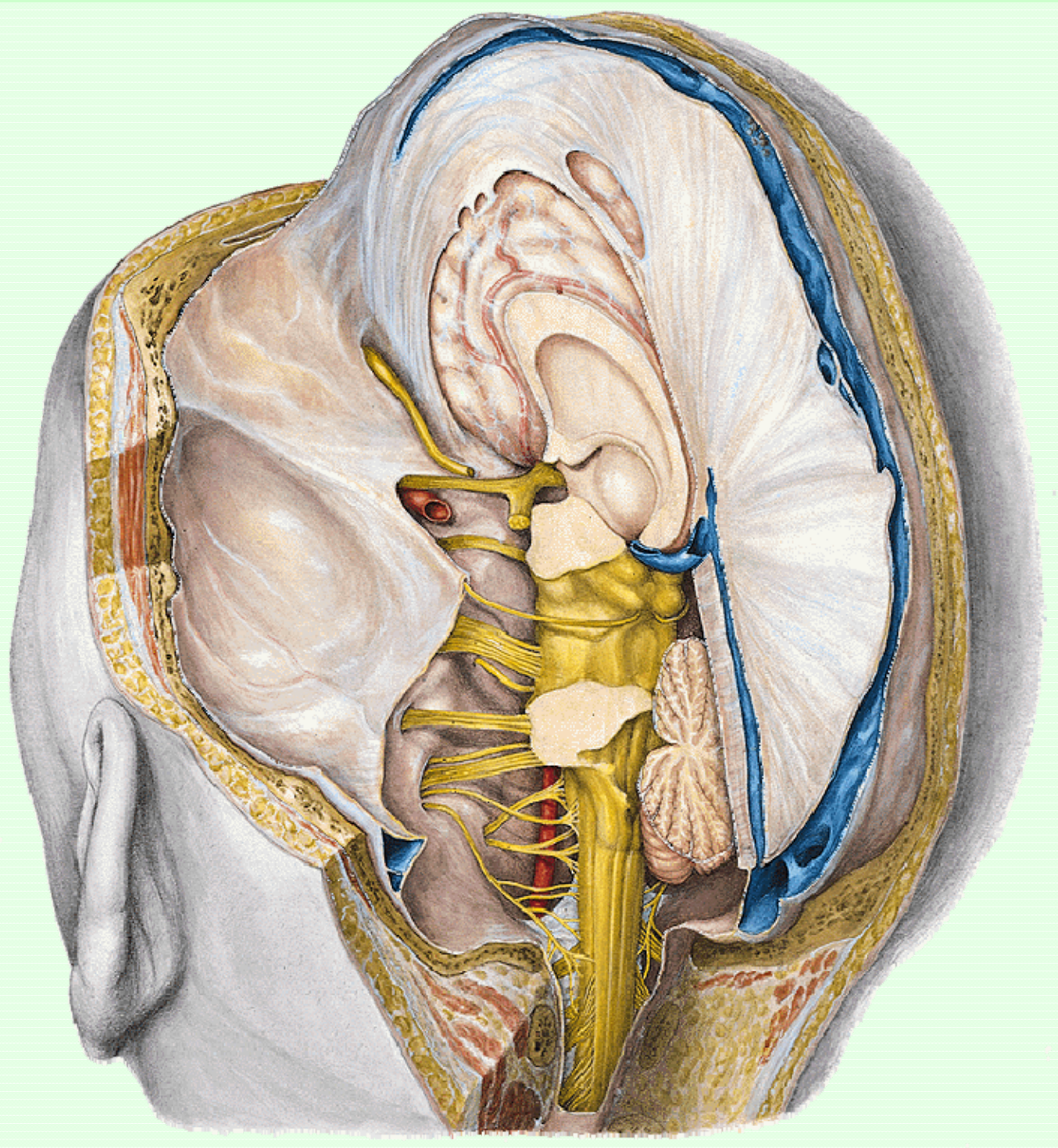


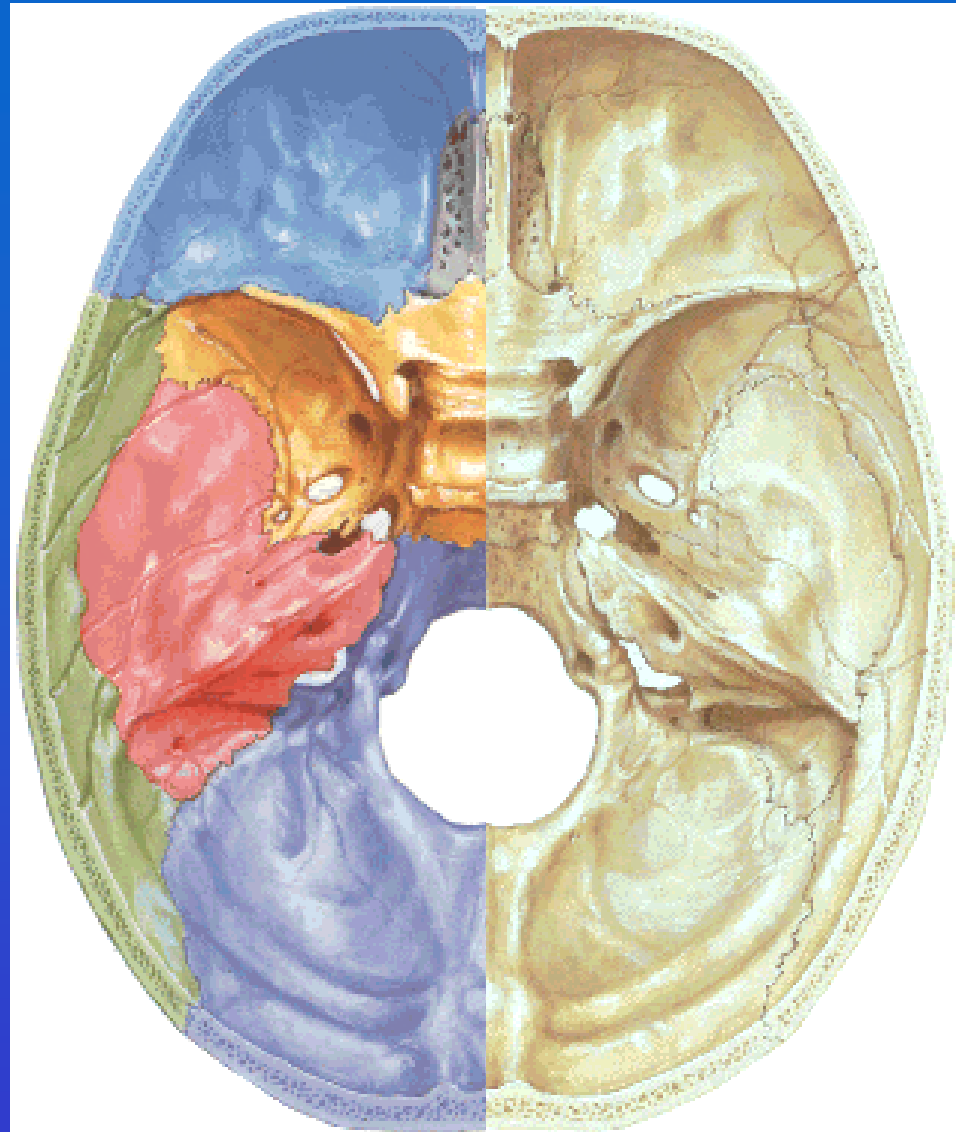
SPECIAL SENSE:
Visceral - SVA
Somatic - SSA

BRAHIO-MOTOR
MOTOR !!! - but - SVE







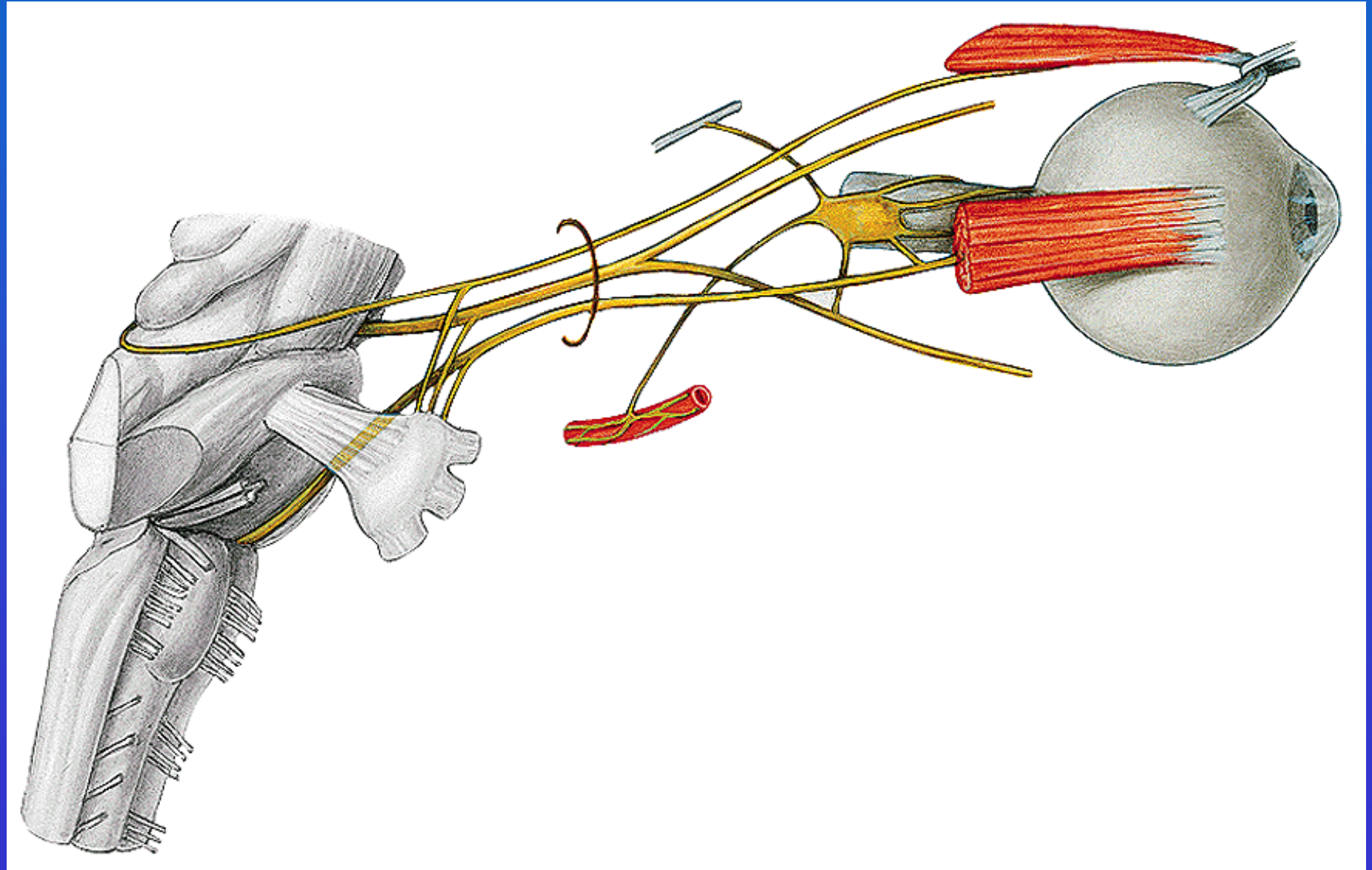


Oculomotor nerves:

n. oculomotorius – III

n. trochlearis – IV

n. abducens - VI



N. oculomotorius [III]

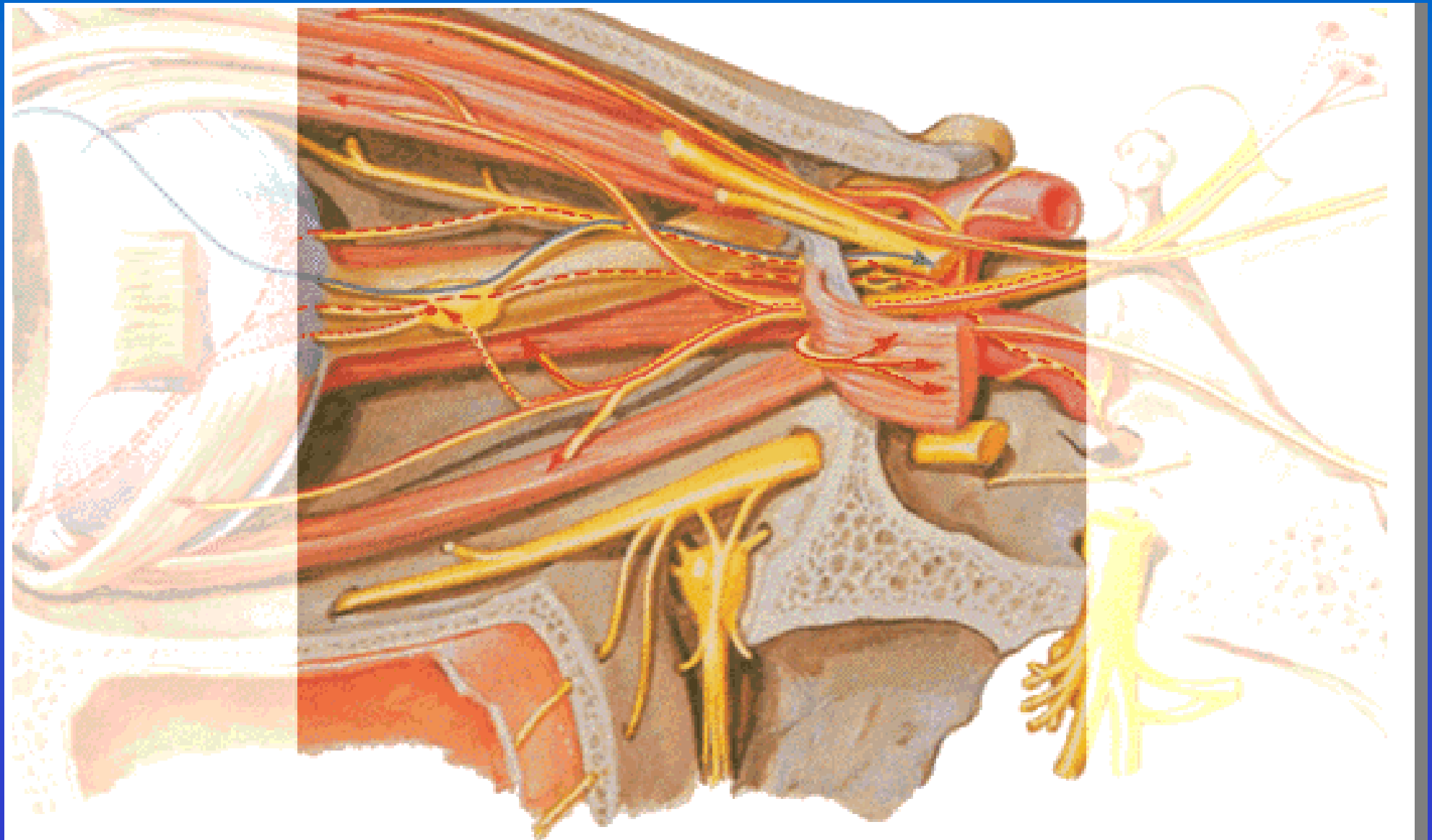
Jezgre (vrsta)	<ul style="list-style-type: none">• nucl. n. III, parna glavna i neparna sporedna jezgra (OSE)• nucl. oculomotorius accessorius (OVE) → ggl. ciliare
Izlazište iz mozga	unutarnja strana moždanih pedunkula, pedunculus cerebri
Položaj u subarahnoidalnom prostoru	cisterna basalis, cisterna interpeduncularis
Ulazak u duru mater	krov kavernoznog sinusa
Prolazak kroz bazu lubanje	fissura orbitalis superior
Opskrbno područje	<ul style="list-style-type: none">• motorno: m. levator palpebrae sup., mm. recti sup., med. et inf.; m. obliquus inf.• parasimpatički: - m. ciliaris, m. sphincter pupillae
Dodatna vlakna (sekundarno pristupaju na živac)	<ul style="list-style-type: none">• senzibilne niti n. nasocilijarisa (V/1)• simpatičke niti iz spleta oftalmičke arterije, plexus ophthalmicus

N. trochlearis [IV]

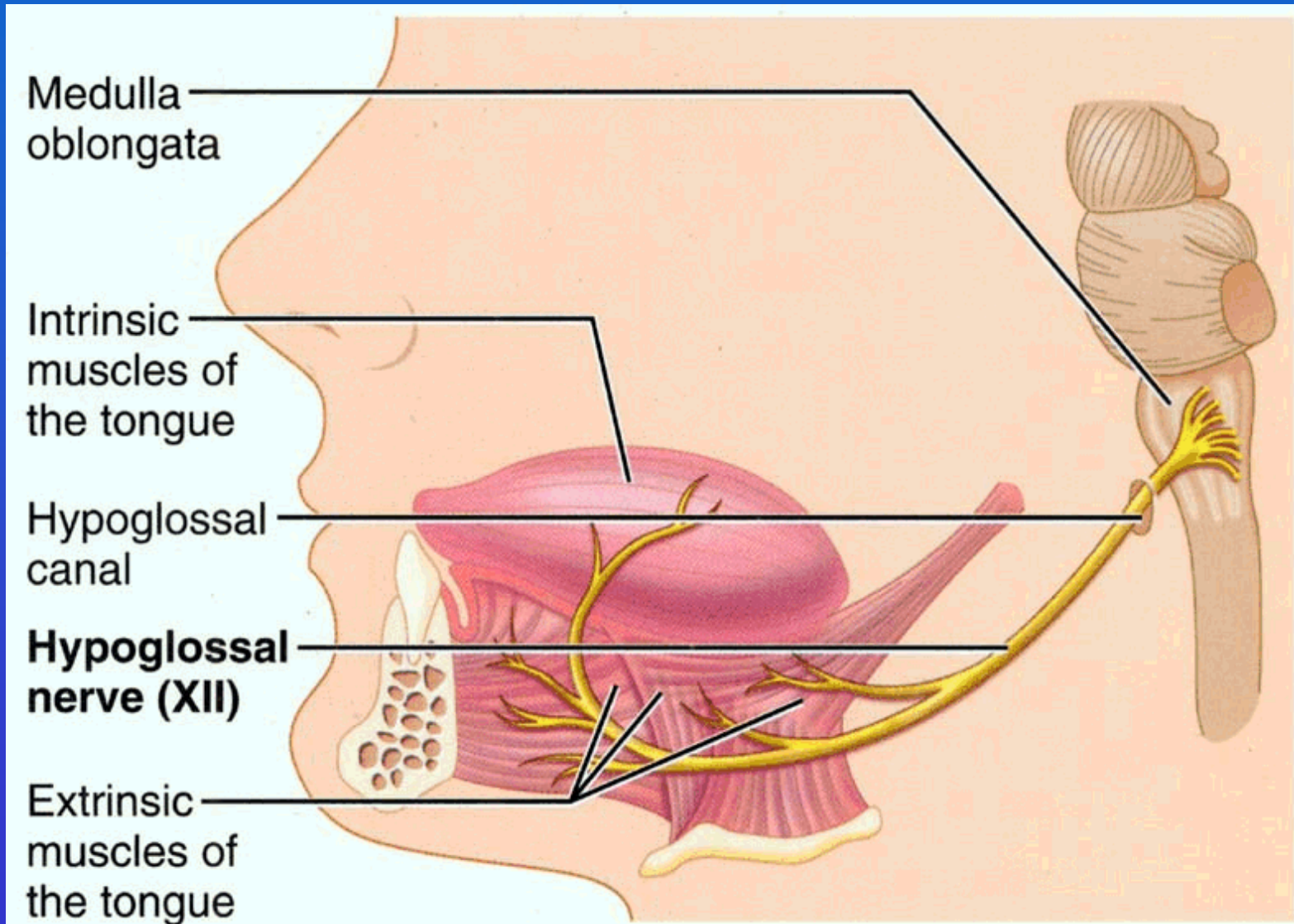
Jezgre (vrsta)	<ul style="list-style-type: none">• nucl. n. IV (OSA)
Izlazište iz mozga	u donjoj razini donjih kolikula
Položaj u subarahnoidalnom prostoru	cisterna ambiens, cisterna basalis
Ulazak u duru mater	između prednjeg i stražnjeg petroklinoidnog nastavka, plicae petroclinoideae
Tijek u duru mater	lateralni zid kavernoznog sinusa
Prolazak kroz bazu lubanje	fissura orbitalis superior
Opskrbno područje	<ul style="list-style-type: none">• motorno: - m. obliquus superior

N. abducens [VI]

Jezgre (vrsta)	<ul style="list-style-type: none">• nucl. N. VI (OSE)
Izlazište iz mozga	između ponsa i piramide
Položaj u subarahnoidalnom prostoru	cisterna basalis
Ulazak u duru mater	gornja trećina klivusa
Tijek u duru mater	preko vrha piramide, apex pars petrosus ossis temporalis, slobodno kroz kavernozi sinus, lateralno od unutarnje karotidne arterije
Prolazak kroz bazu lubanje	fissura orbitalis superior
Opskrbno područje	<ul style="list-style-type: none">• motorički: -m. rectus lateralis

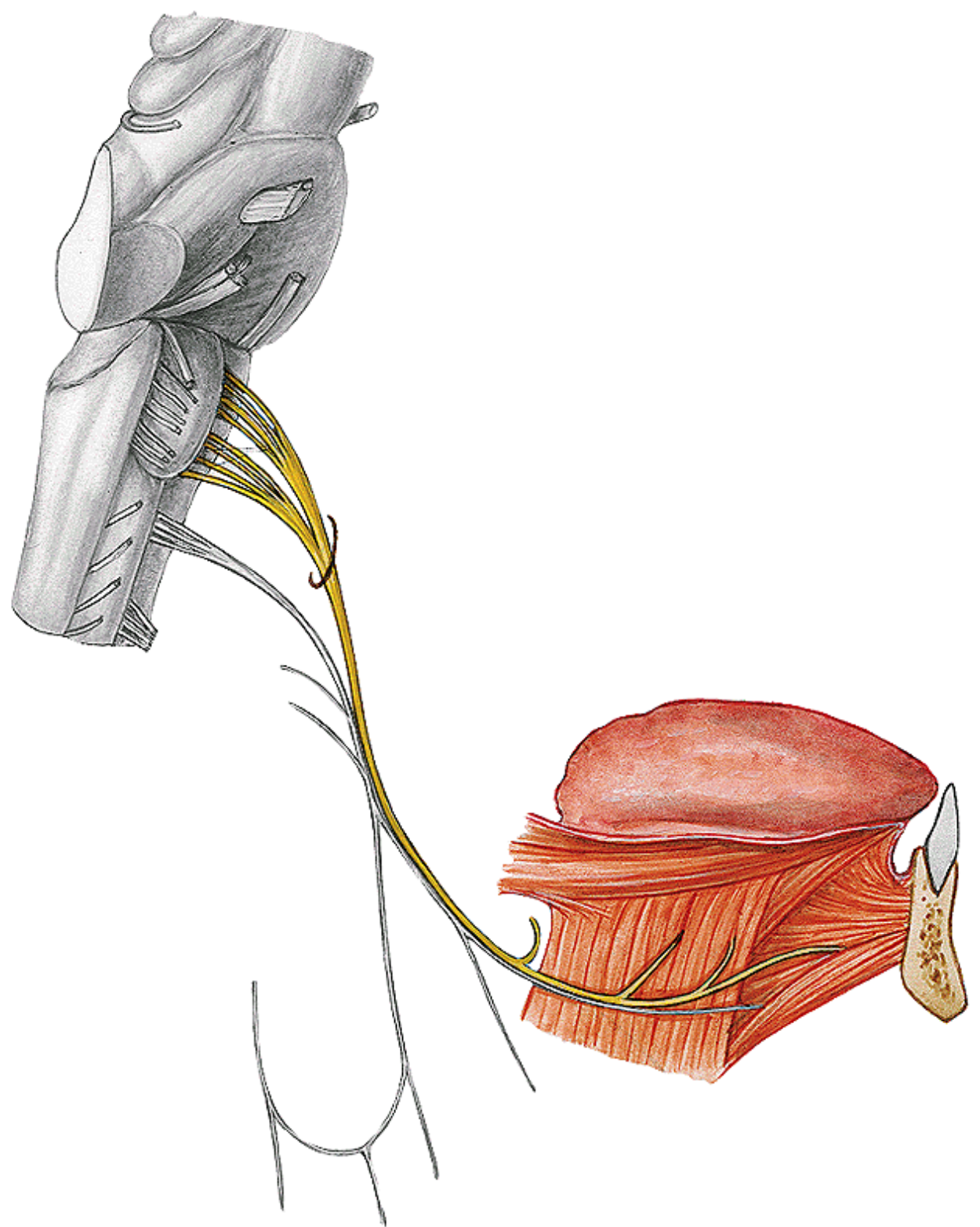


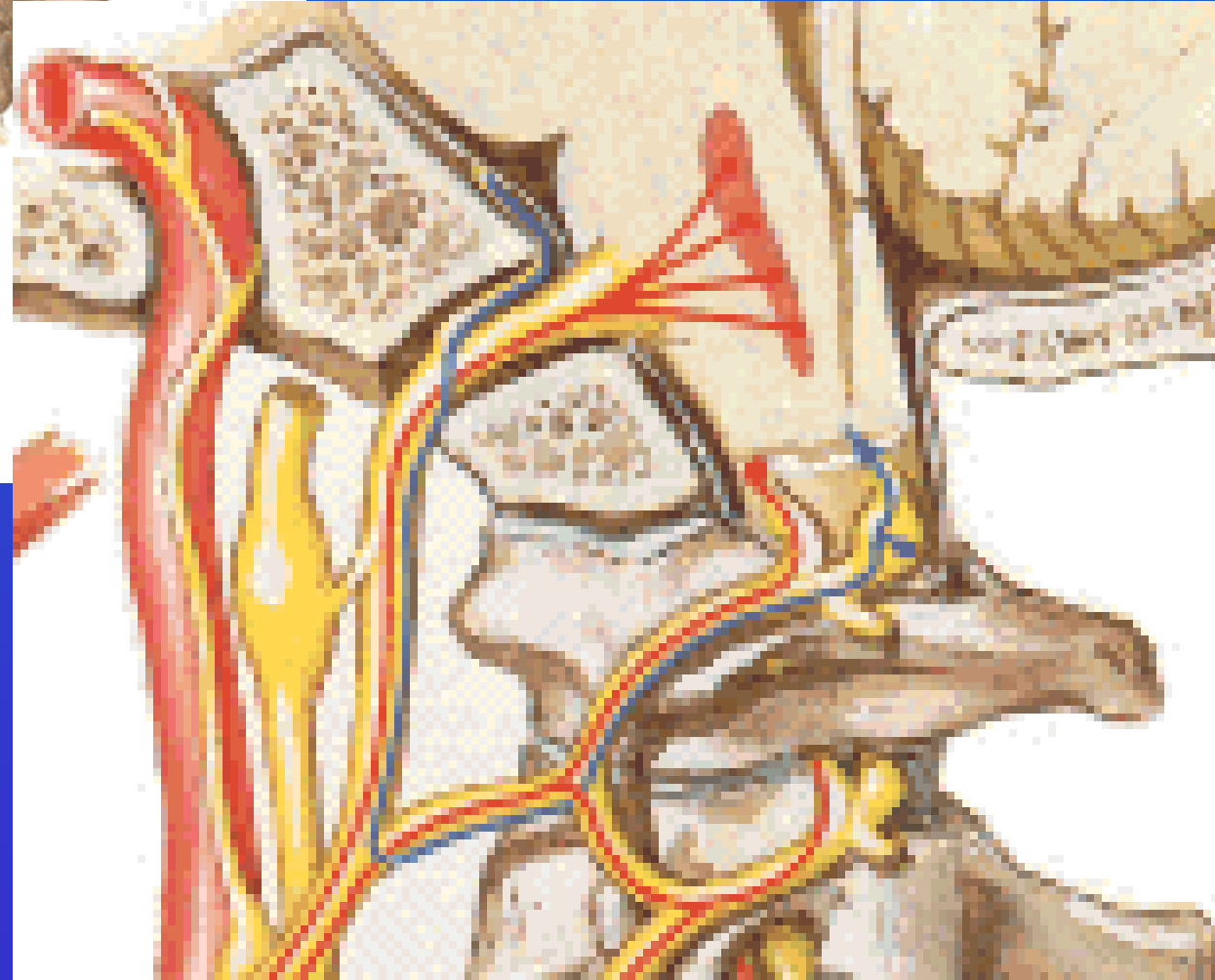
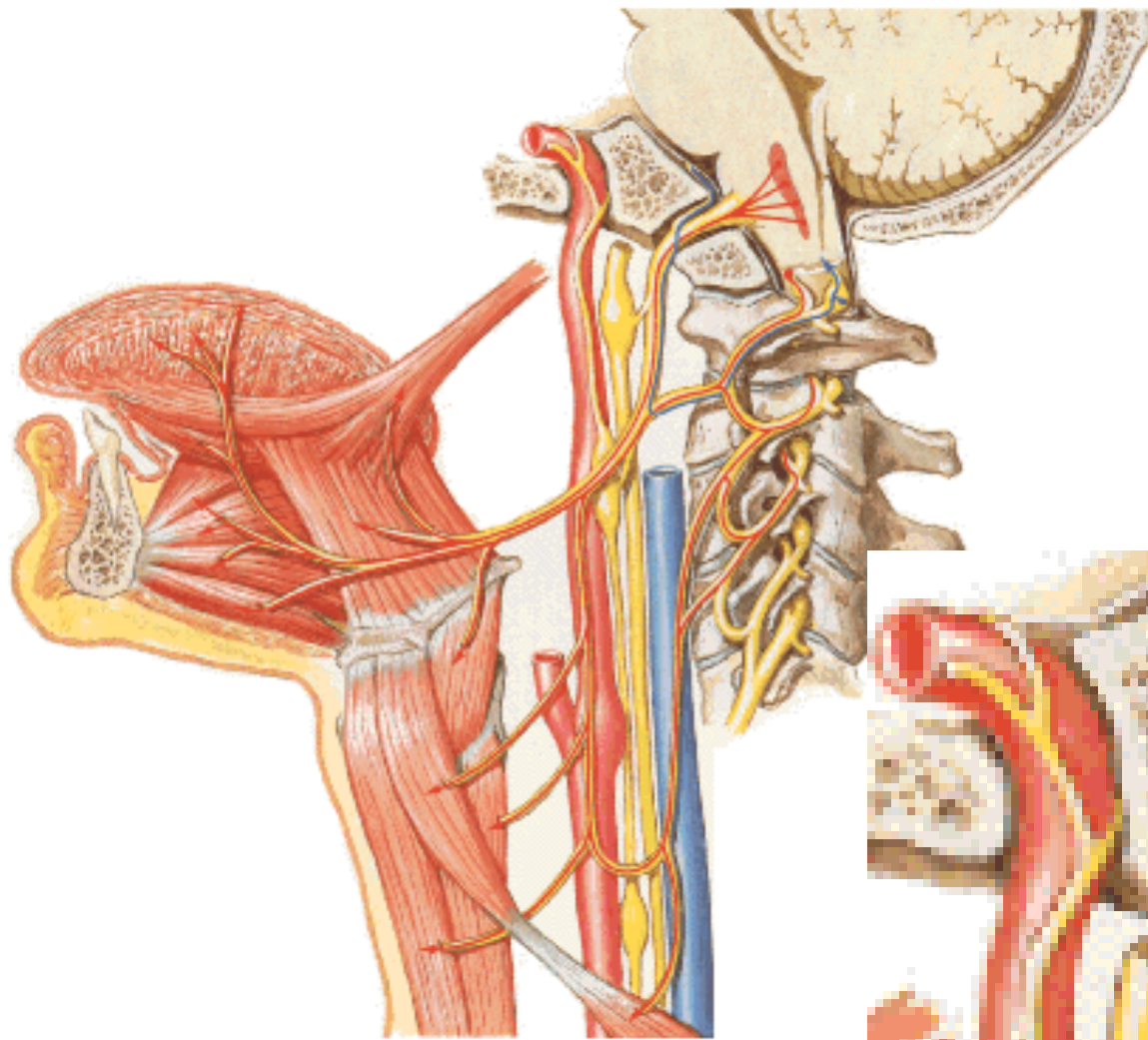
Hypoglossal nerve XII



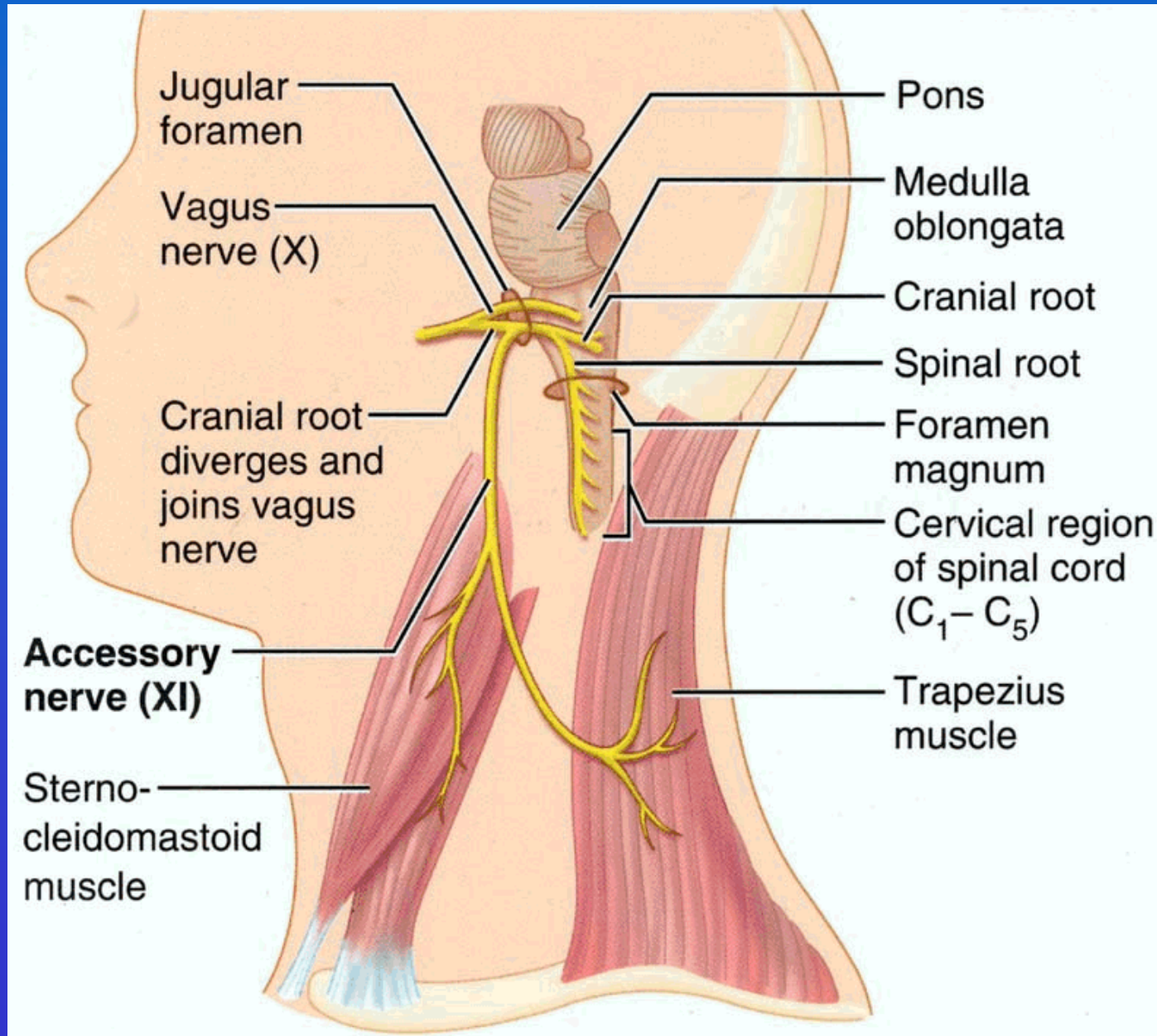
Composition of *hypoglossal* *nerve XII*

Motor – supplies
intrinsic and majority
of extrinsic muscles
of the tongue



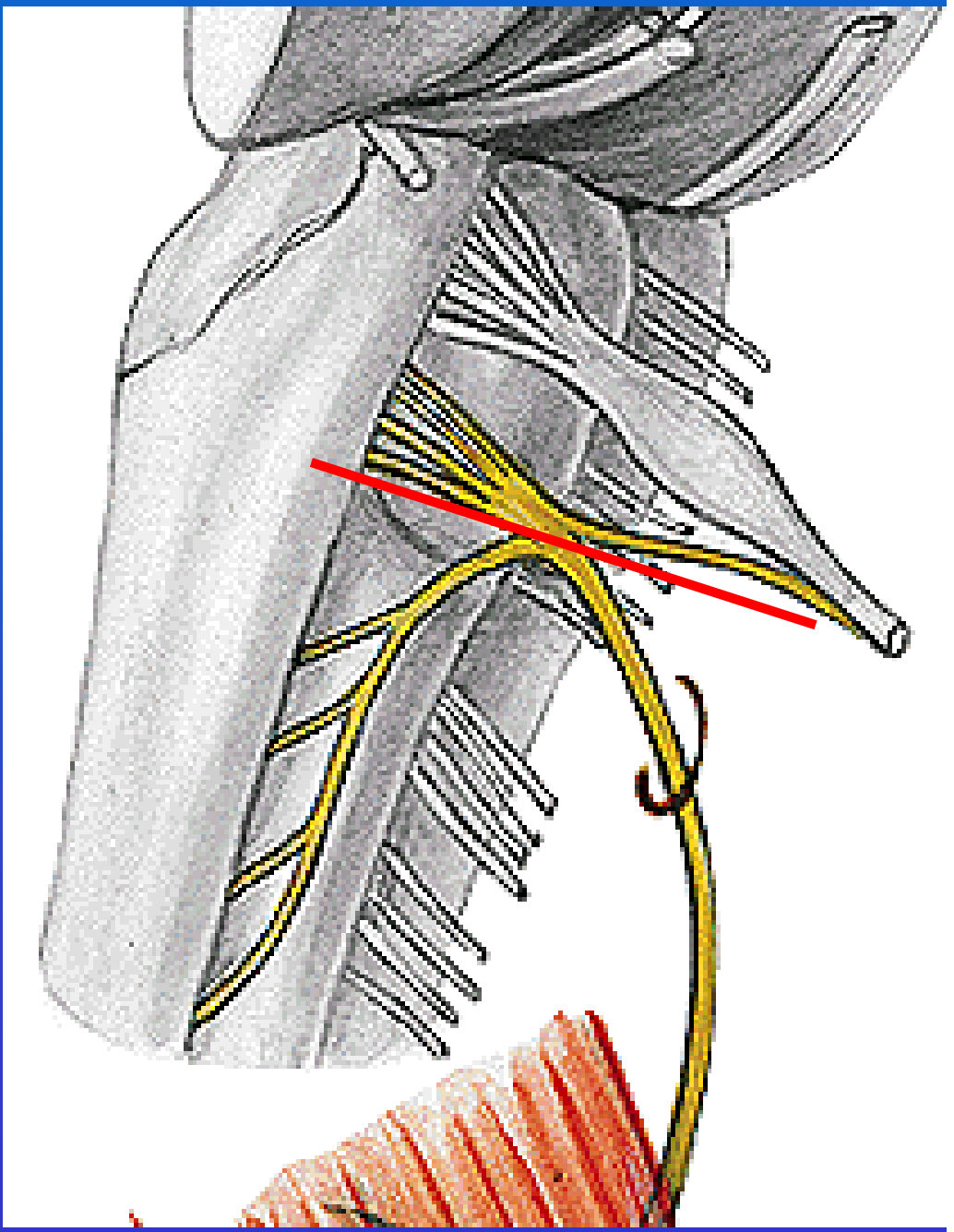


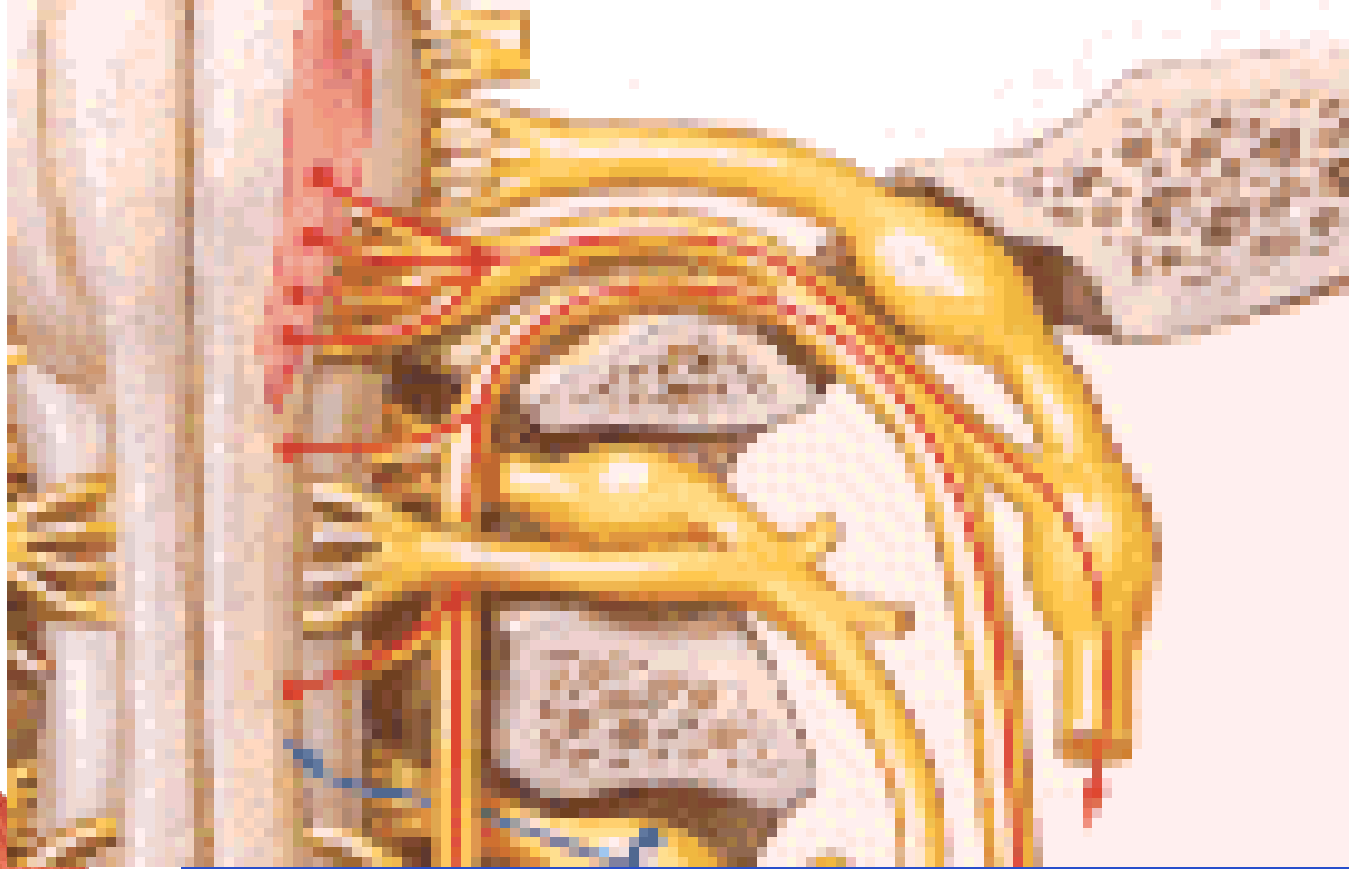
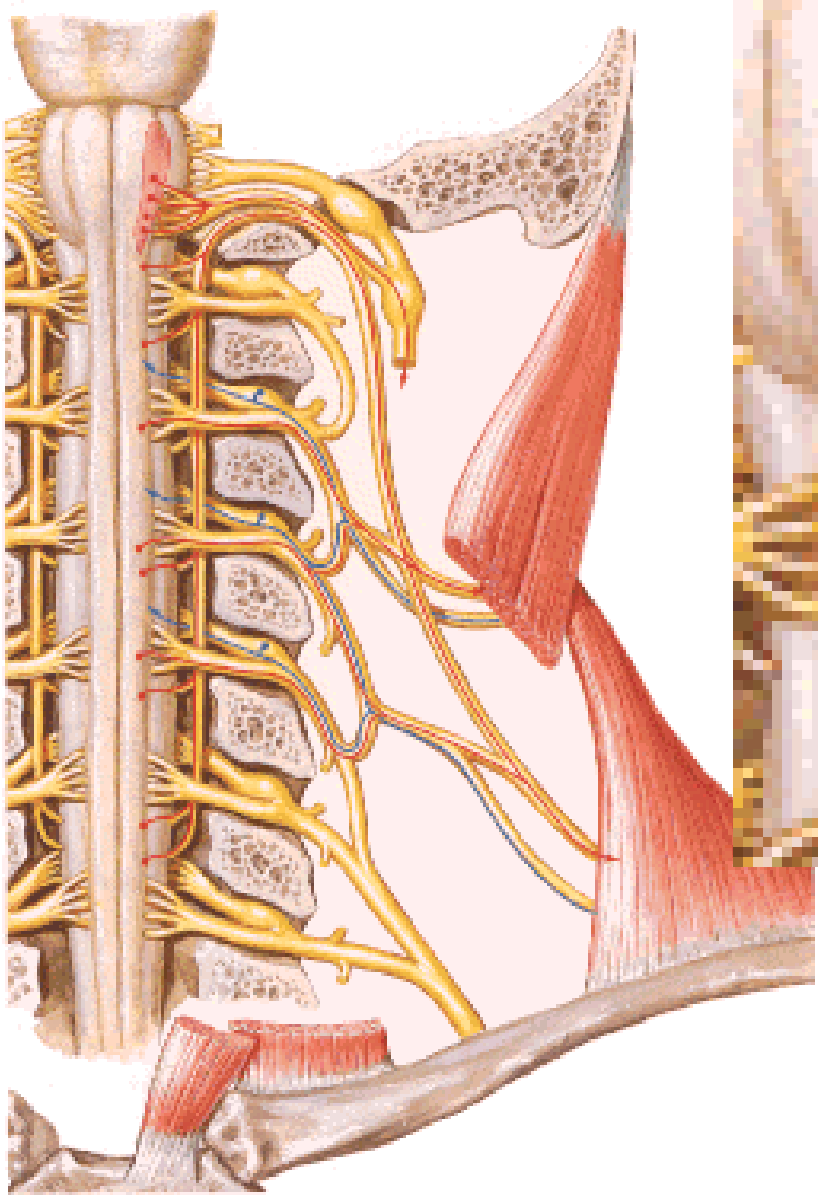
Accessory nerve XI



Composition of **accessory nerve XI**

Motor – supplies sternomastoid muscle (rotates head)
supplies trapezius muscle (elevates shoulders)



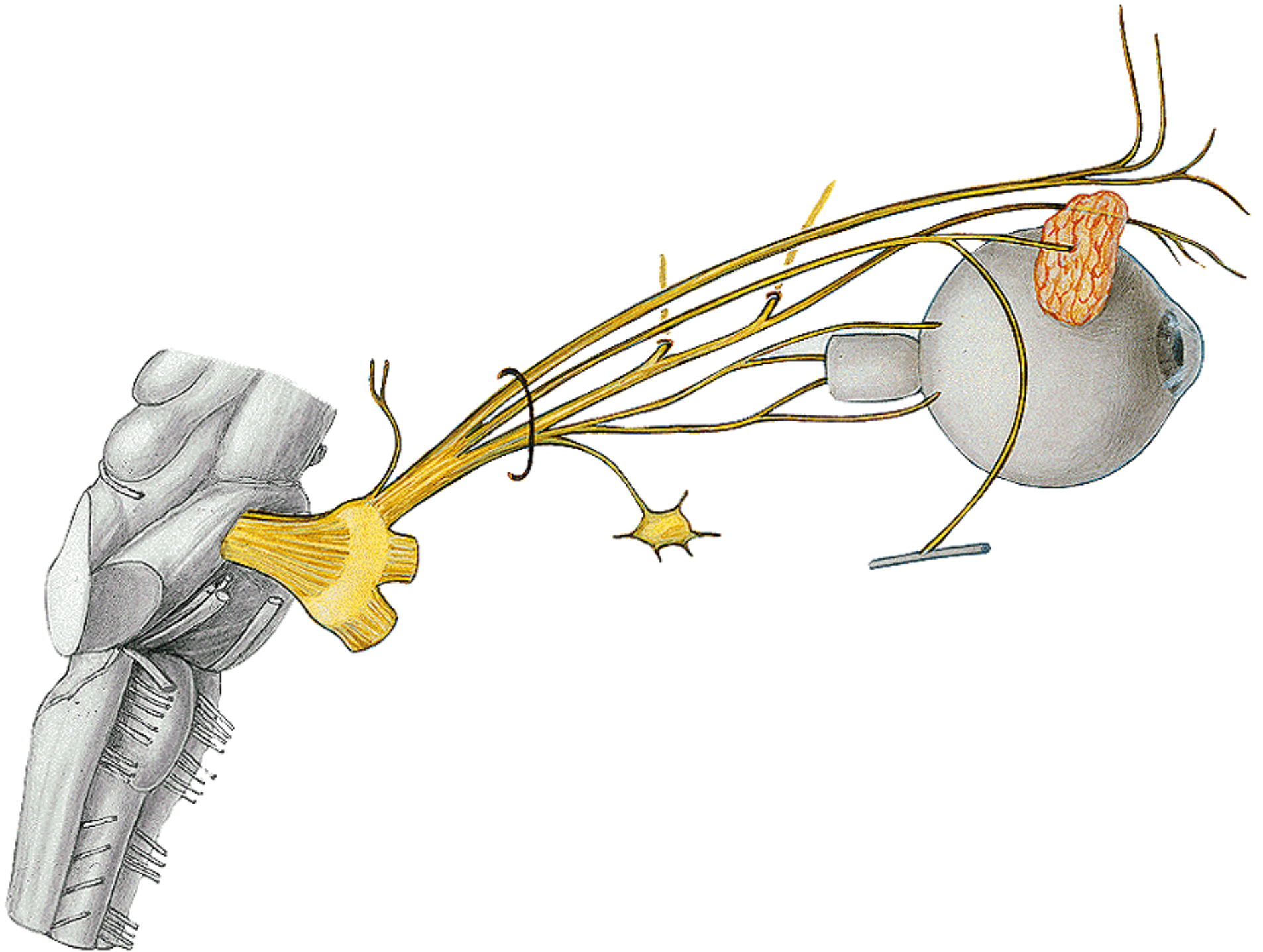


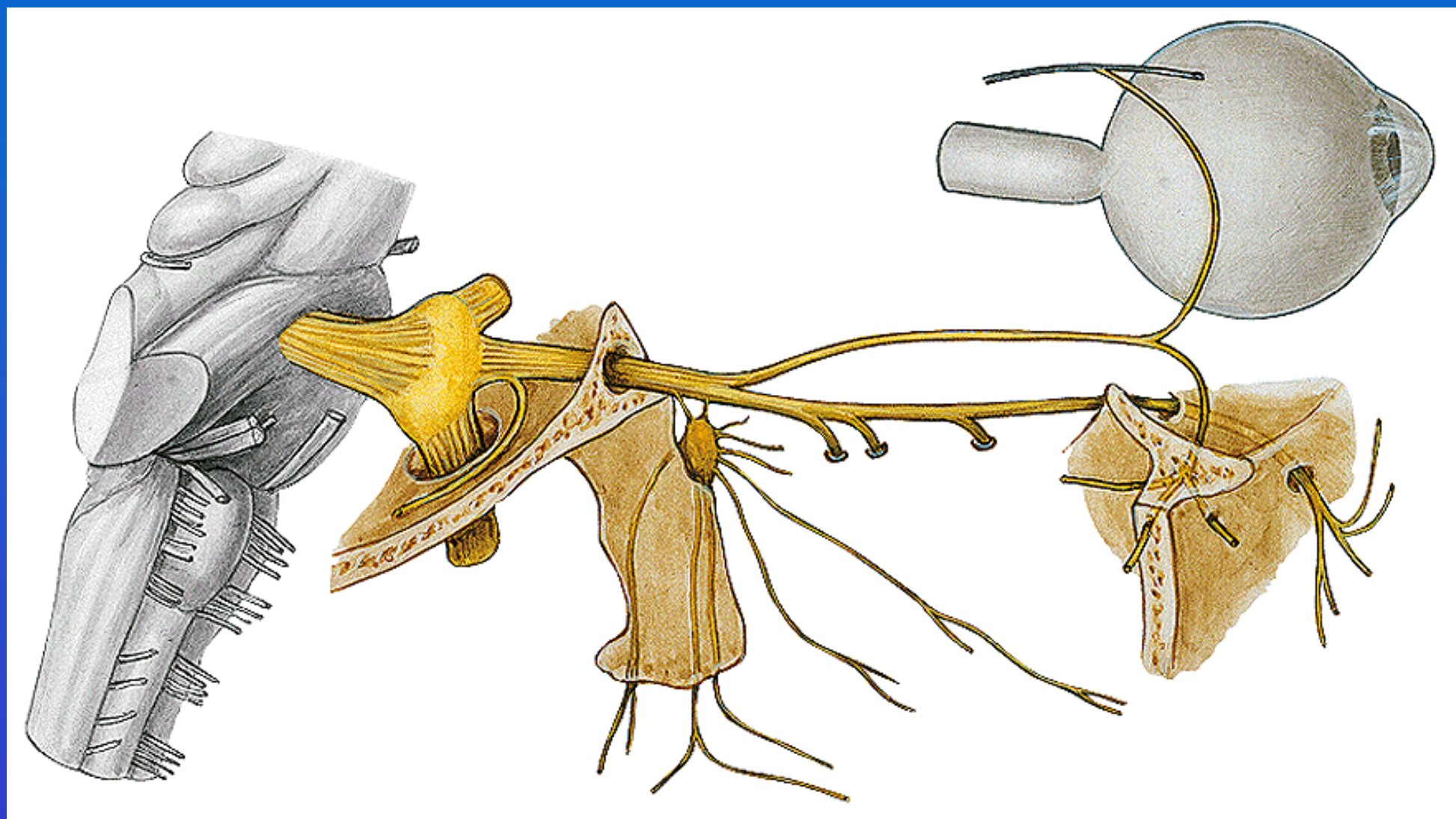
Trigeminal nerve V

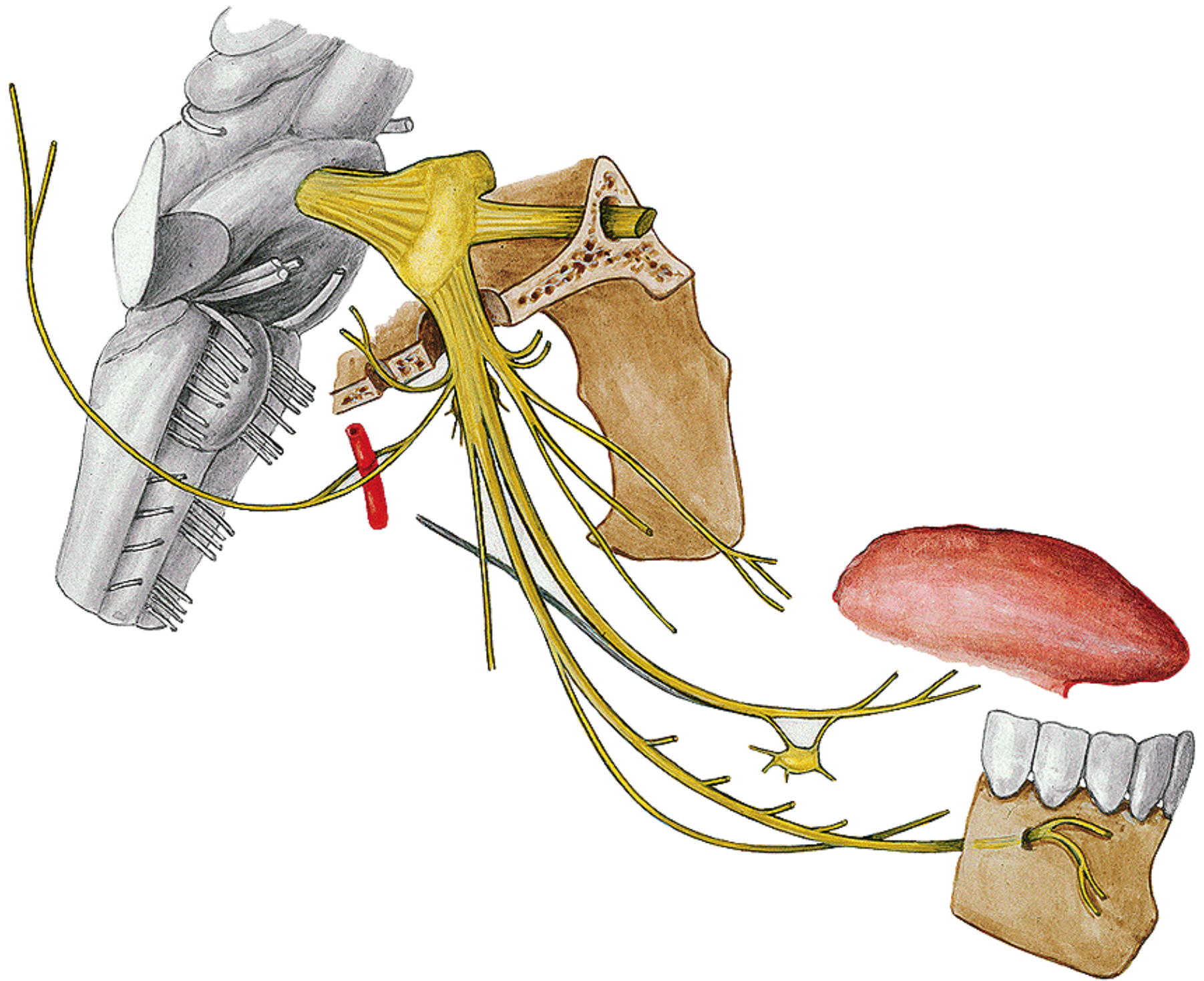
Composition of trigeminal nerve

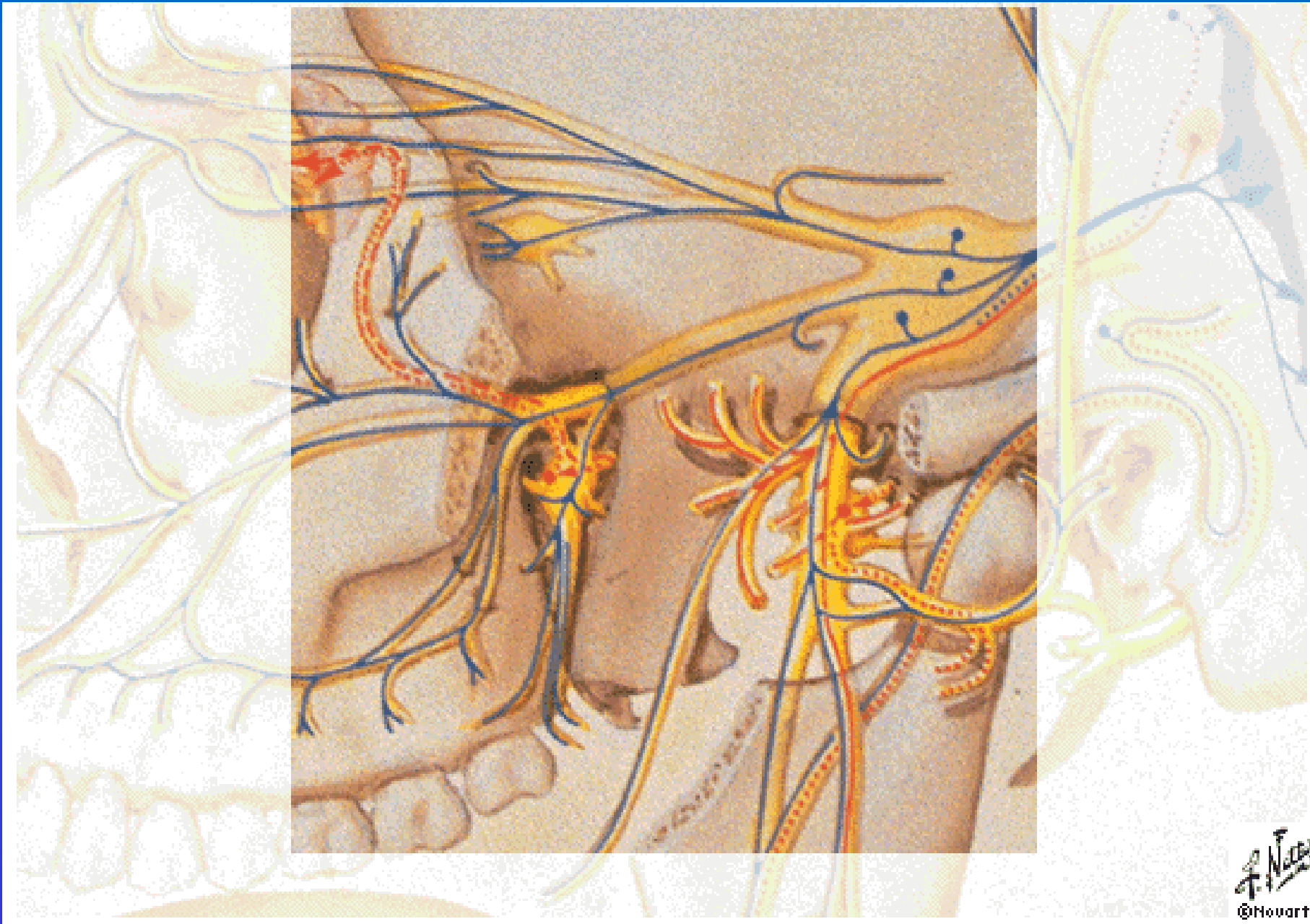
Sensible – majority of skin, oral and nasal cavity

n. V3 – n. mandibularis – in addition motor - innervation of masticatory muscles

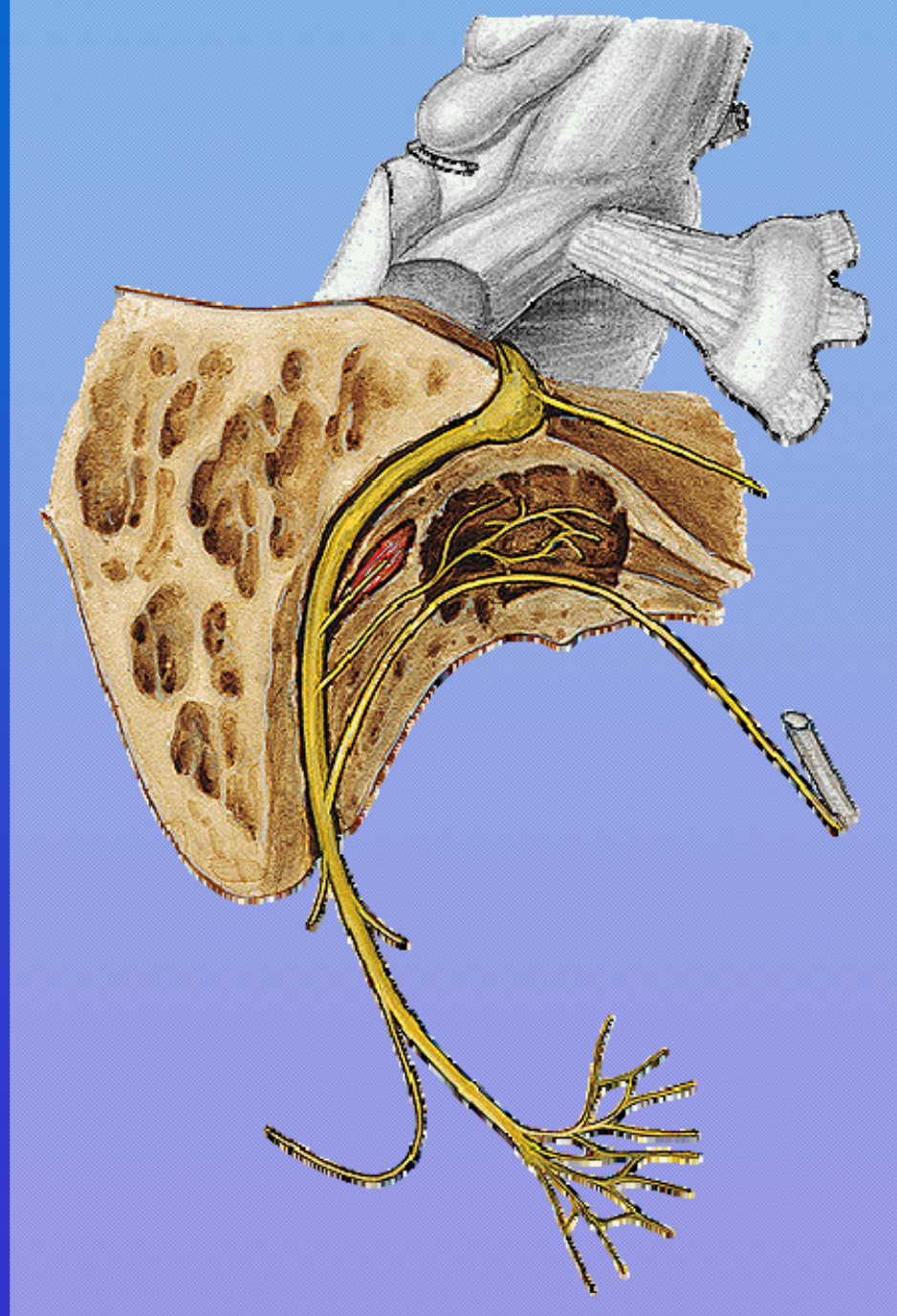






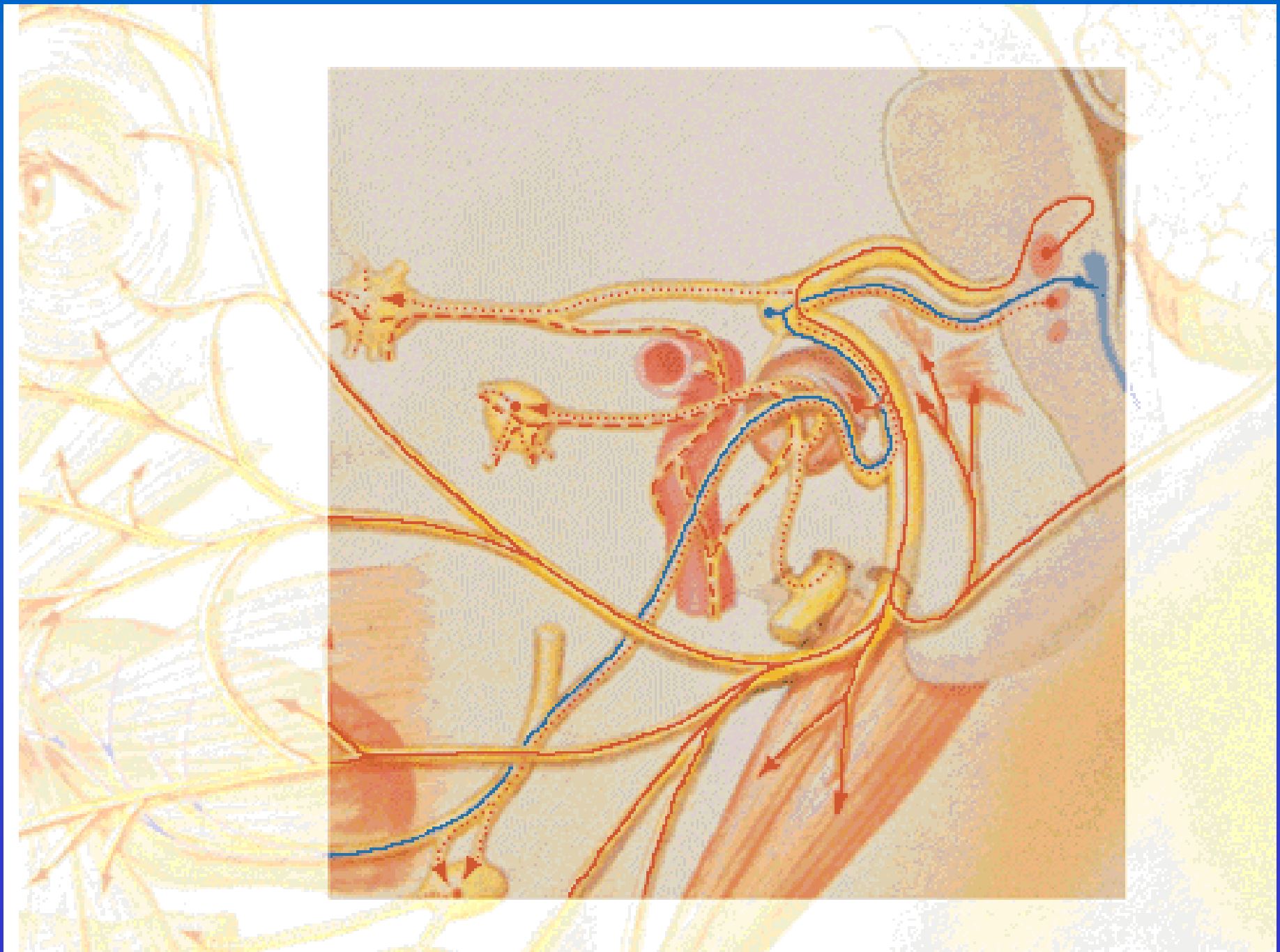


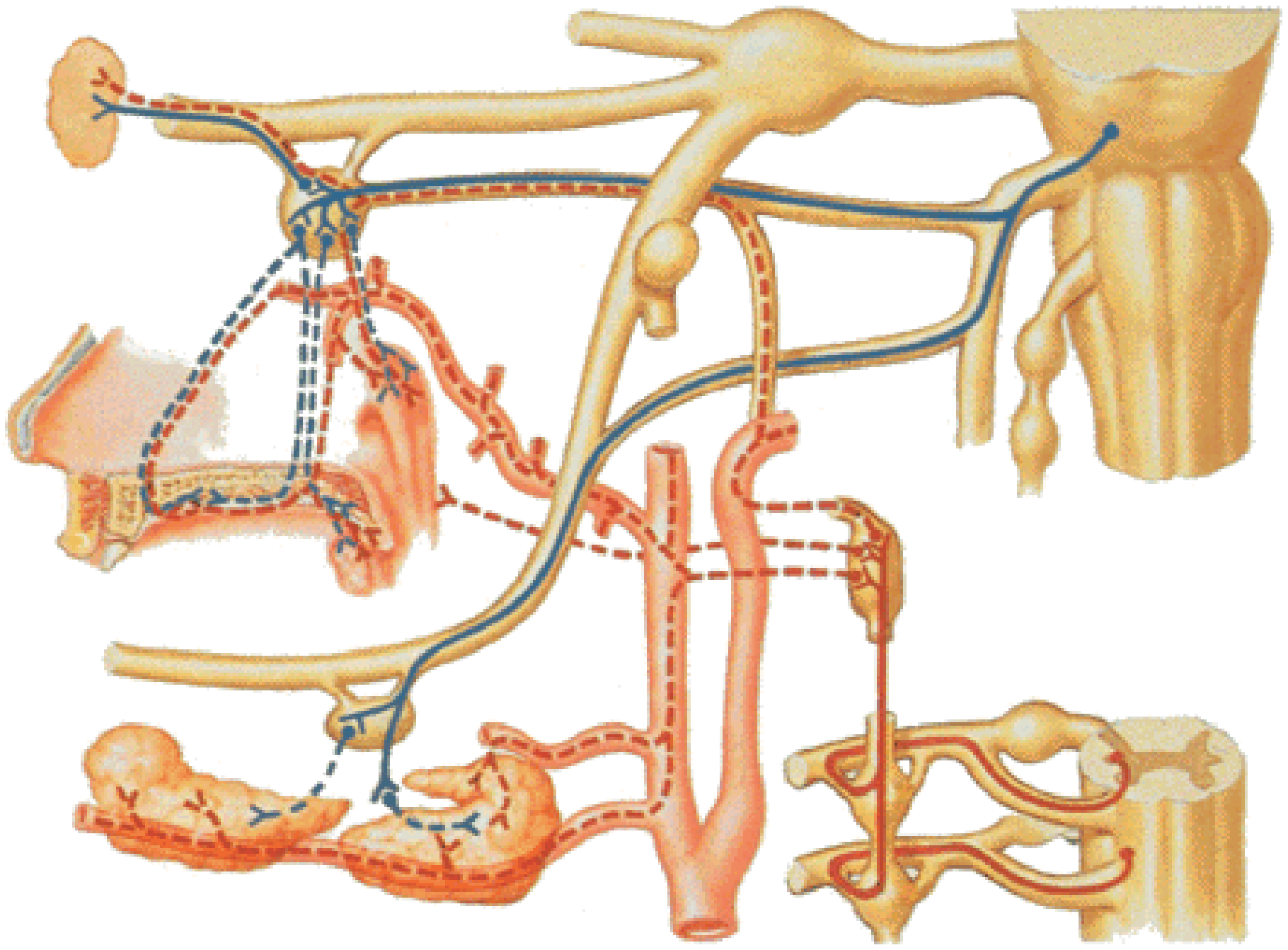
Facial Nerve VII

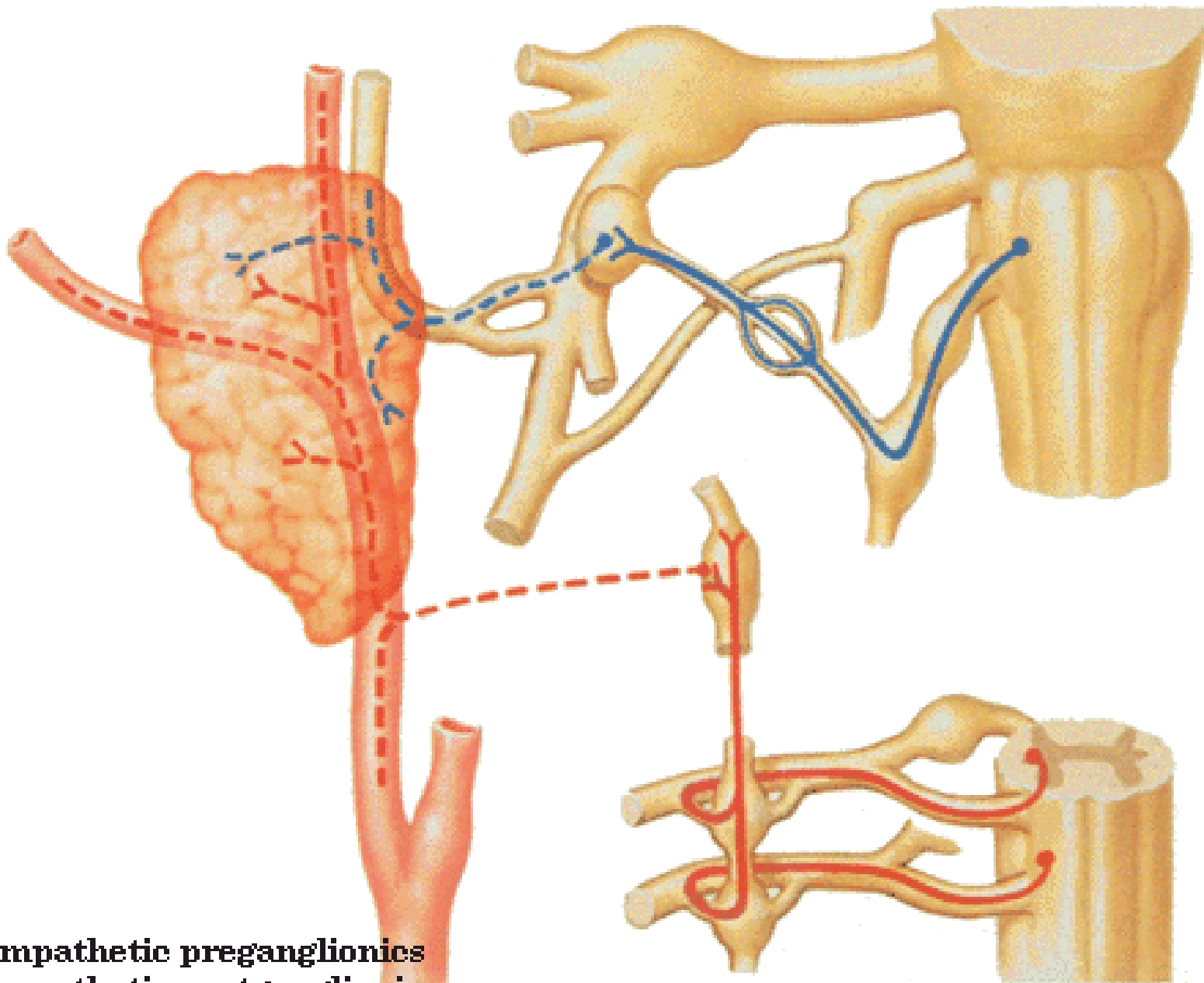


N. facialis [VII]

Jezgre (vrsta)	<ul style="list-style-type: none">• nucl. n. VII (PVE)• nucl. salivatorius superior (OVE)• nucl. solitarius (PVA)
Izlazište iz mozga	pontocerebelarni kut
Položaj u subarahnoidalnom prostoru	cisterna basalis, cisterna pontis
Izlazište iz dure mater i ulazište u bazu lubanje	fundus meatus acustici interni
Tijek unutar baze lubanje	canalis nervi facialis
Izlazak iz baze lubanje	foramen stylomastoideum
Opskrbno područje	<ul style="list-style-type: none">• motorički:<ul style="list-style-type: none">- mimični mišići, mm. auriculares- m. digastricus (venter posterior), m. stylohyoideus- m. stapedius• senzorički (okusno):<ul style="list-style-type: none">-prednje dvije trećine jezika• parasimpatički:<ul style="list-style-type: none">glandula lacrimalis, glandulae nasales, palatinae (preko ggl. pterygopalatinum), glandulae submandibularis et sublingualis (preko ggl. submandibulare)
Dodatna vlakna (sekundarno pristupaju na živac)	<ul style="list-style-type: none">• senzibilni ogranci n. trigemina pristupaju na parotidni splet n. facijalisa, plexus parotideus

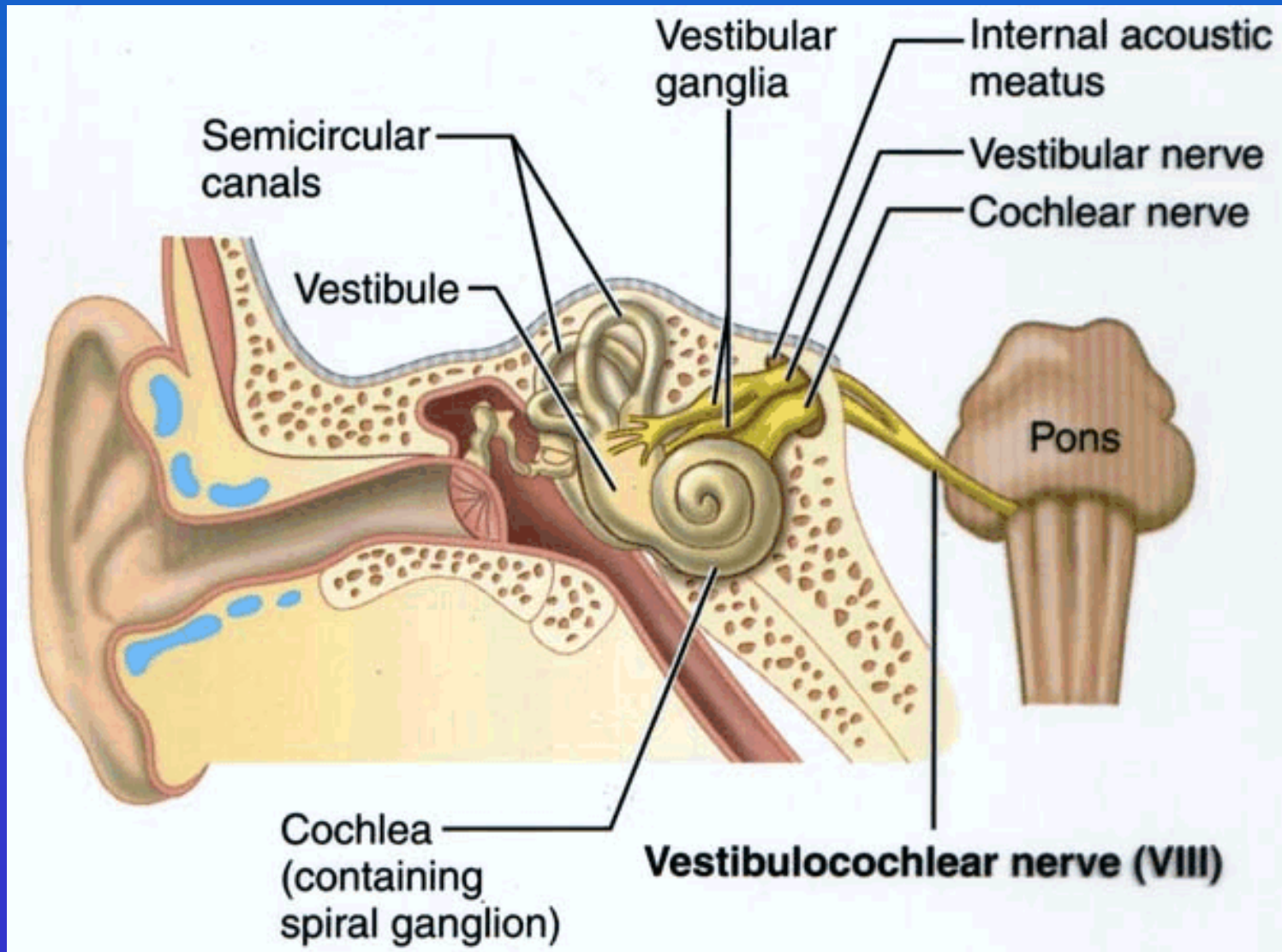




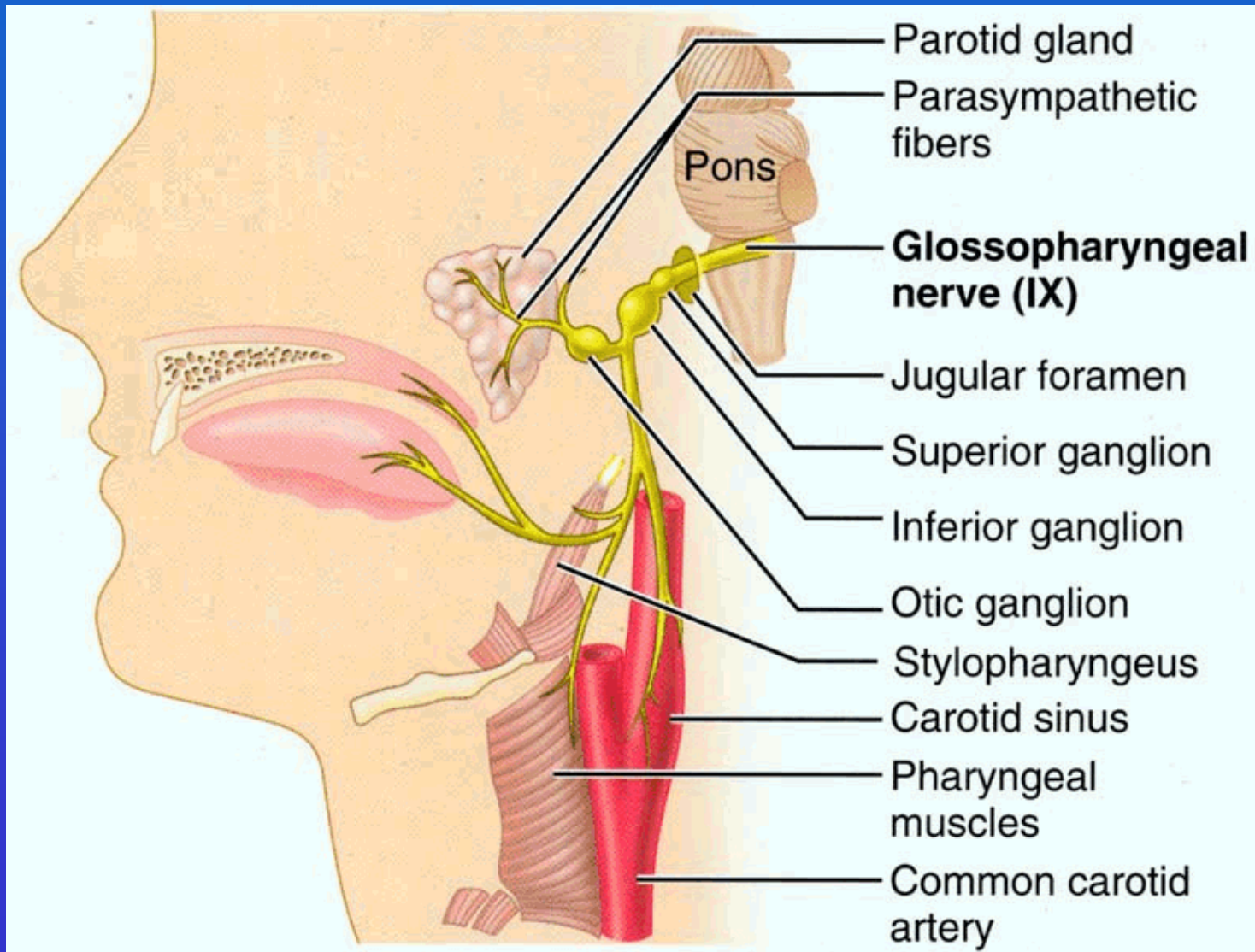


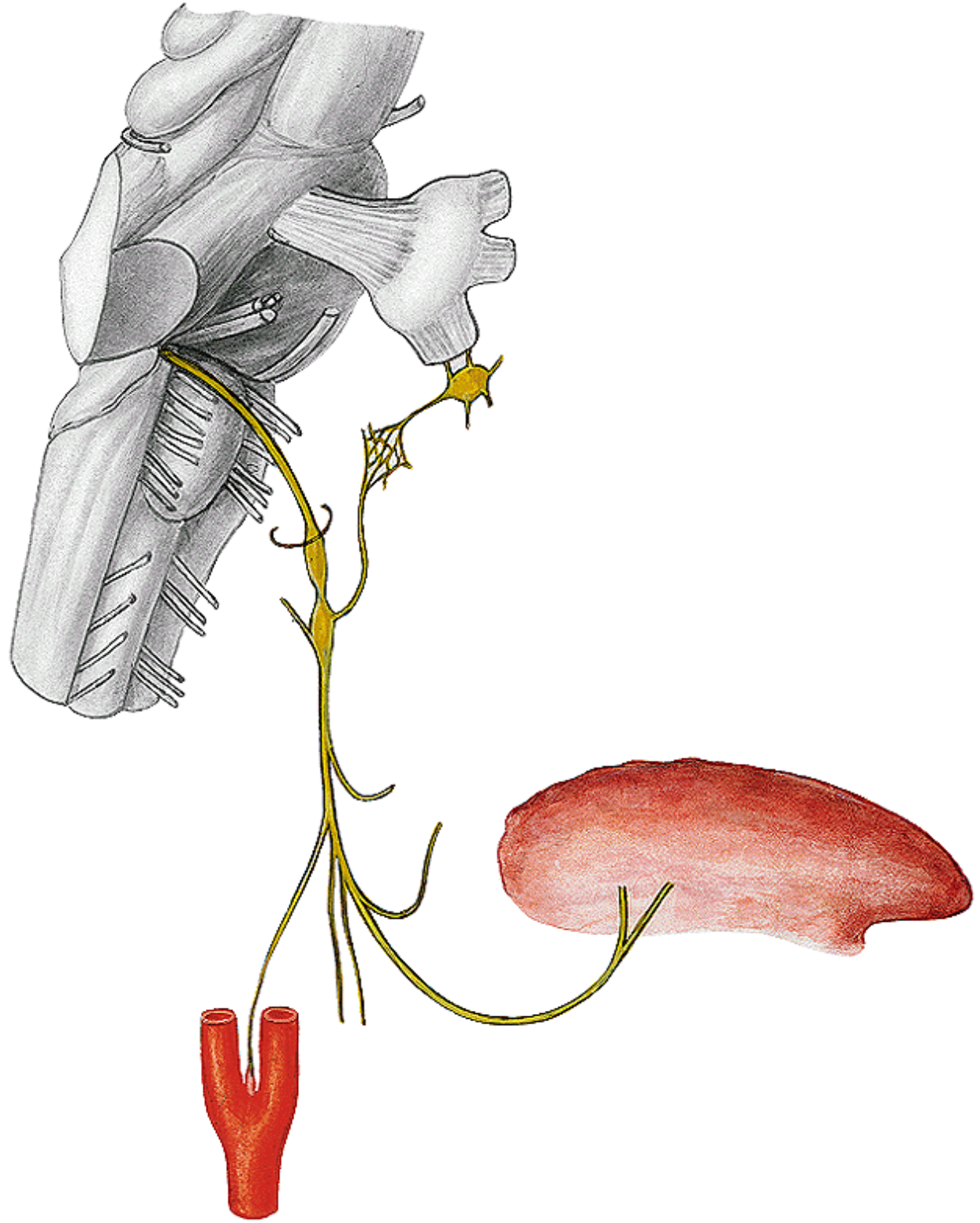
- Sympathetic preganglionics
- - - Sympathetic postganglionics
- Parasympathetic preganglionics
- - - Parasympathetic postganglionics

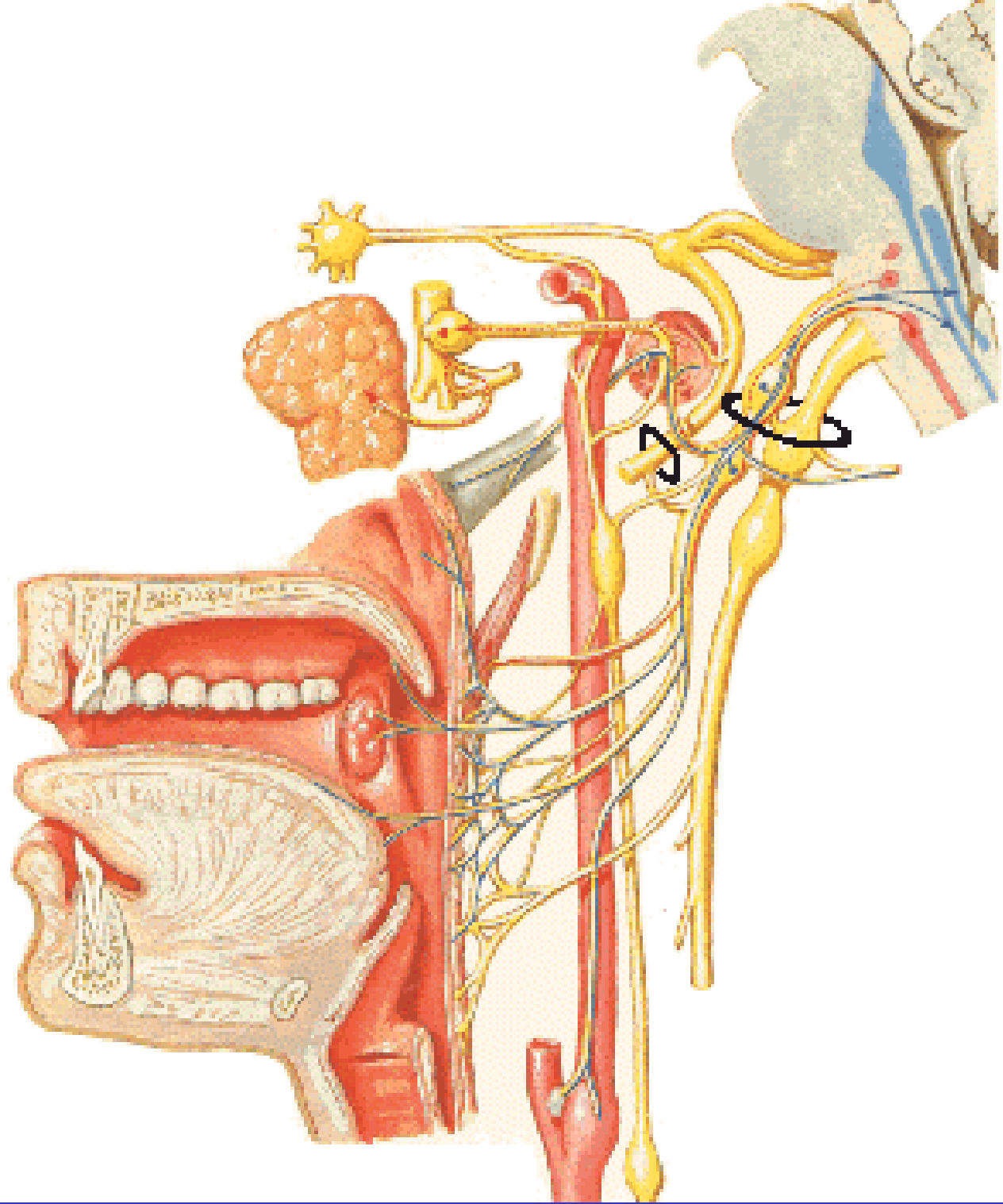
Vestibulocochlear Nerve VIII



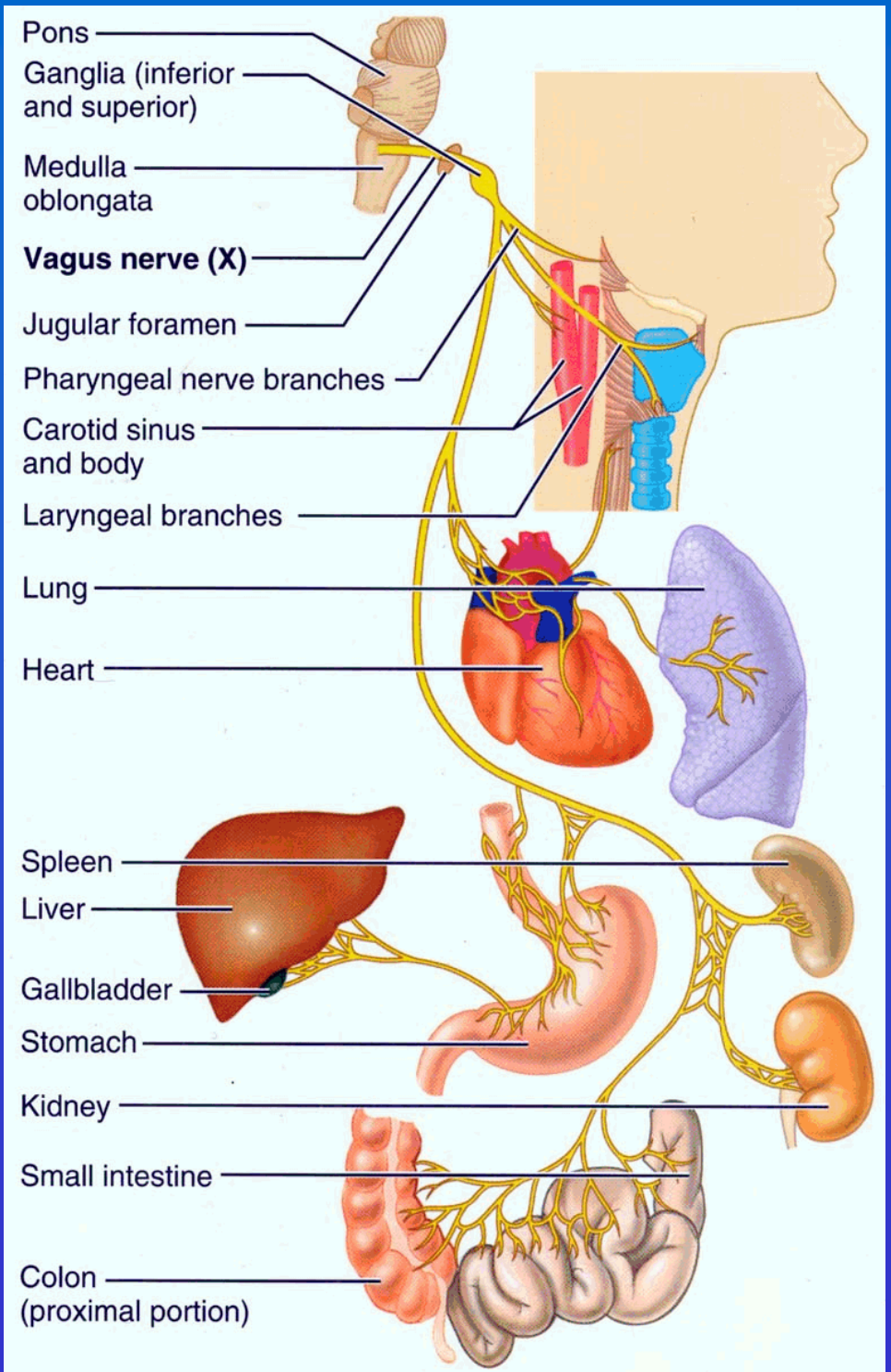
Glossopharyngeal Nerve IX

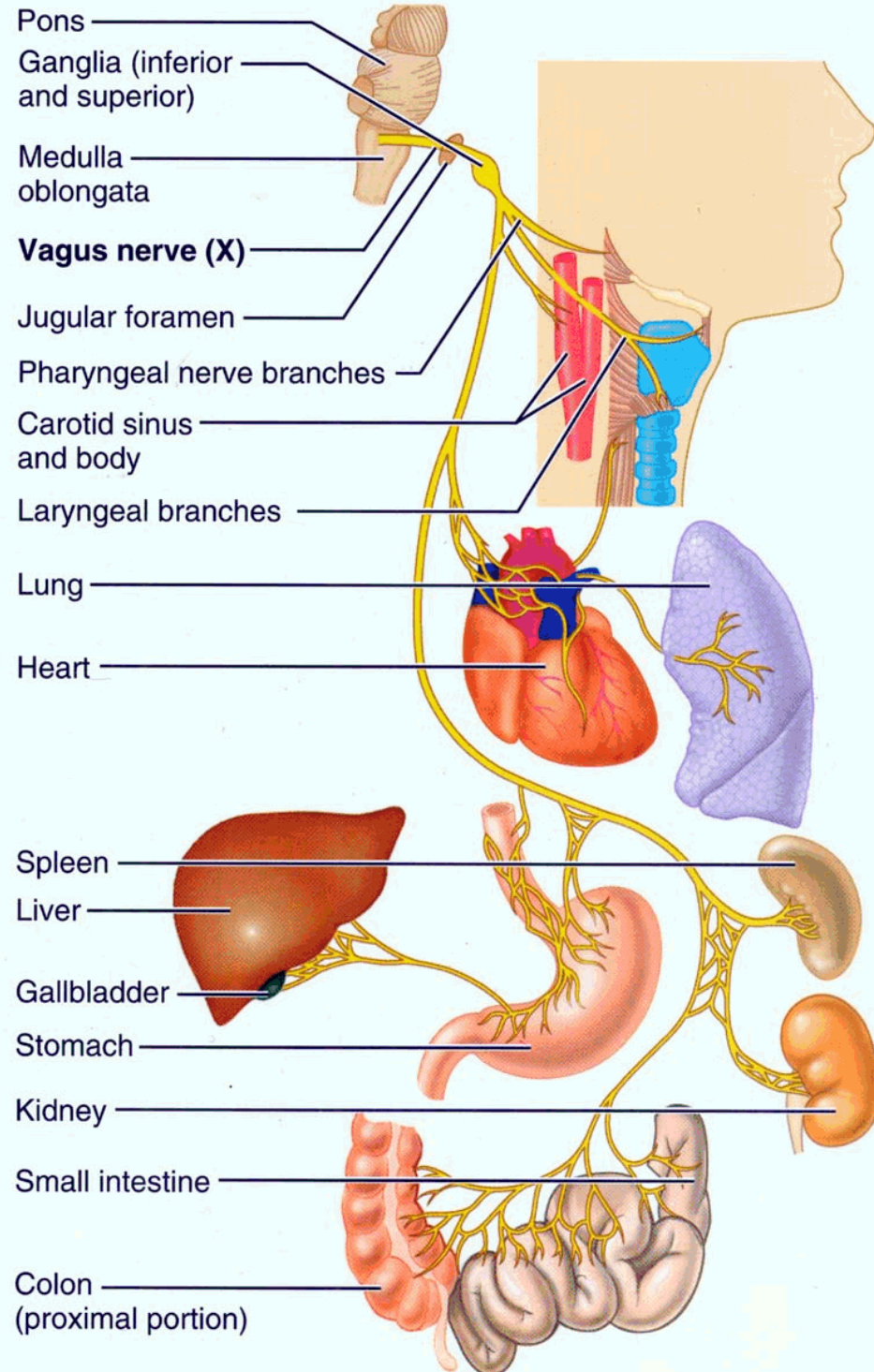
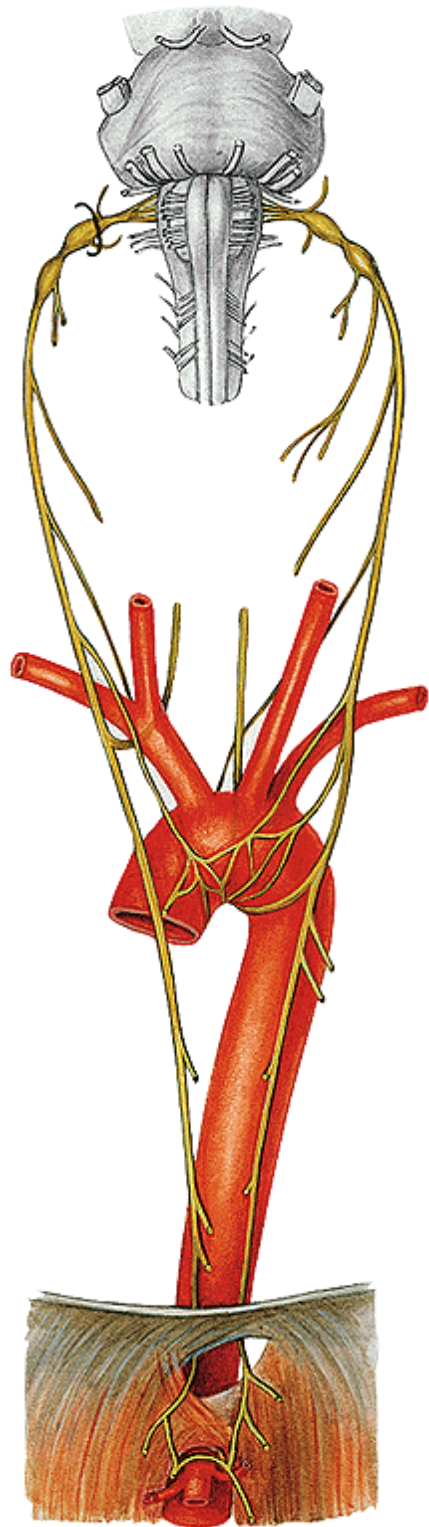


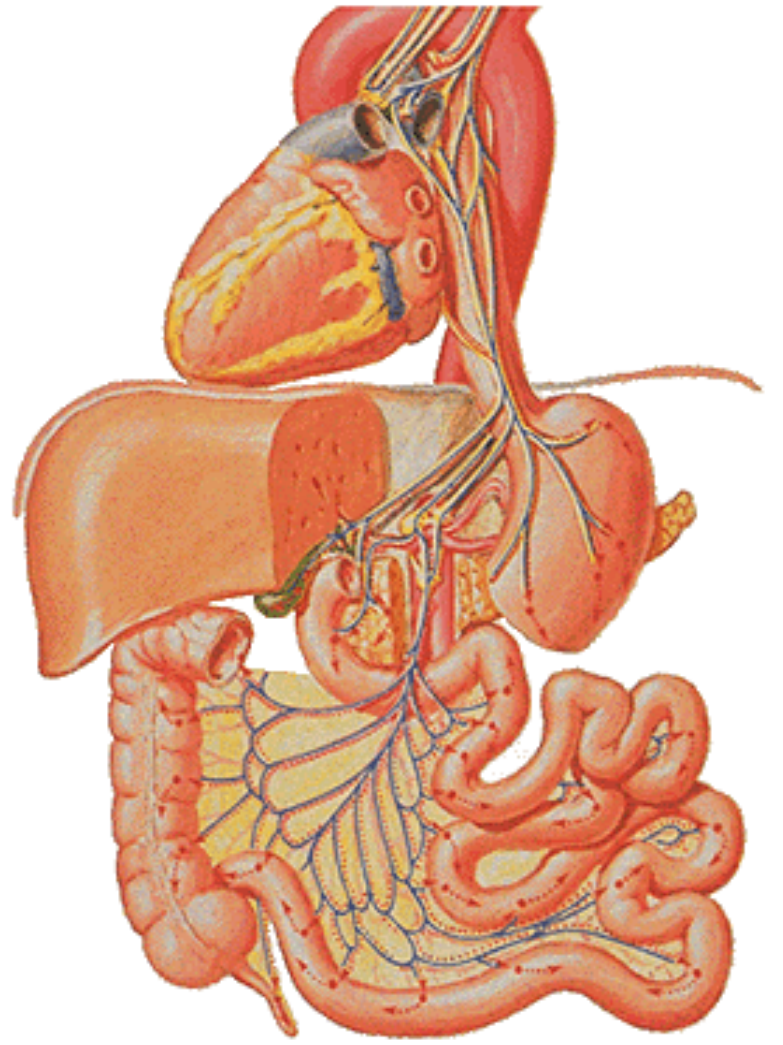
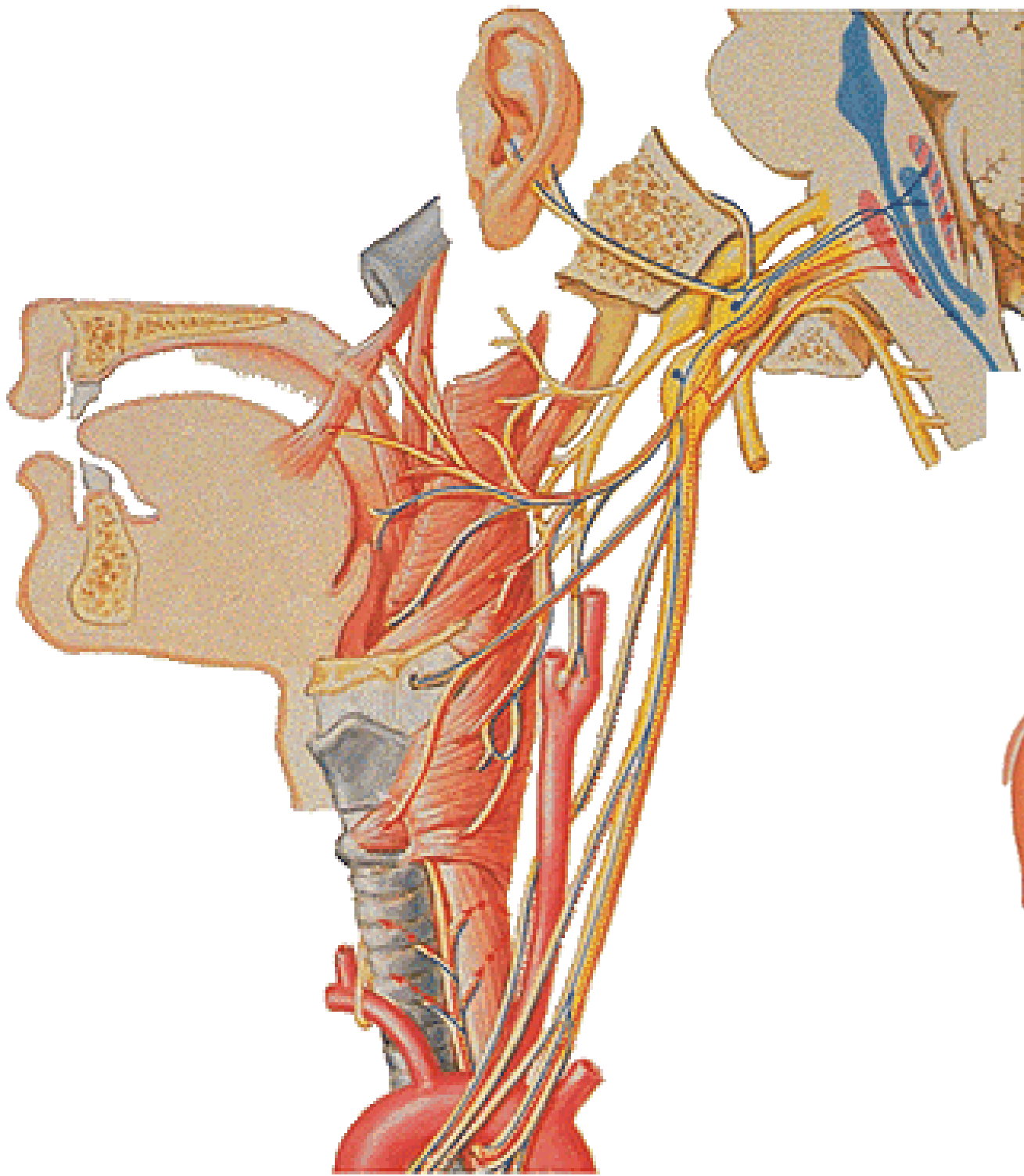


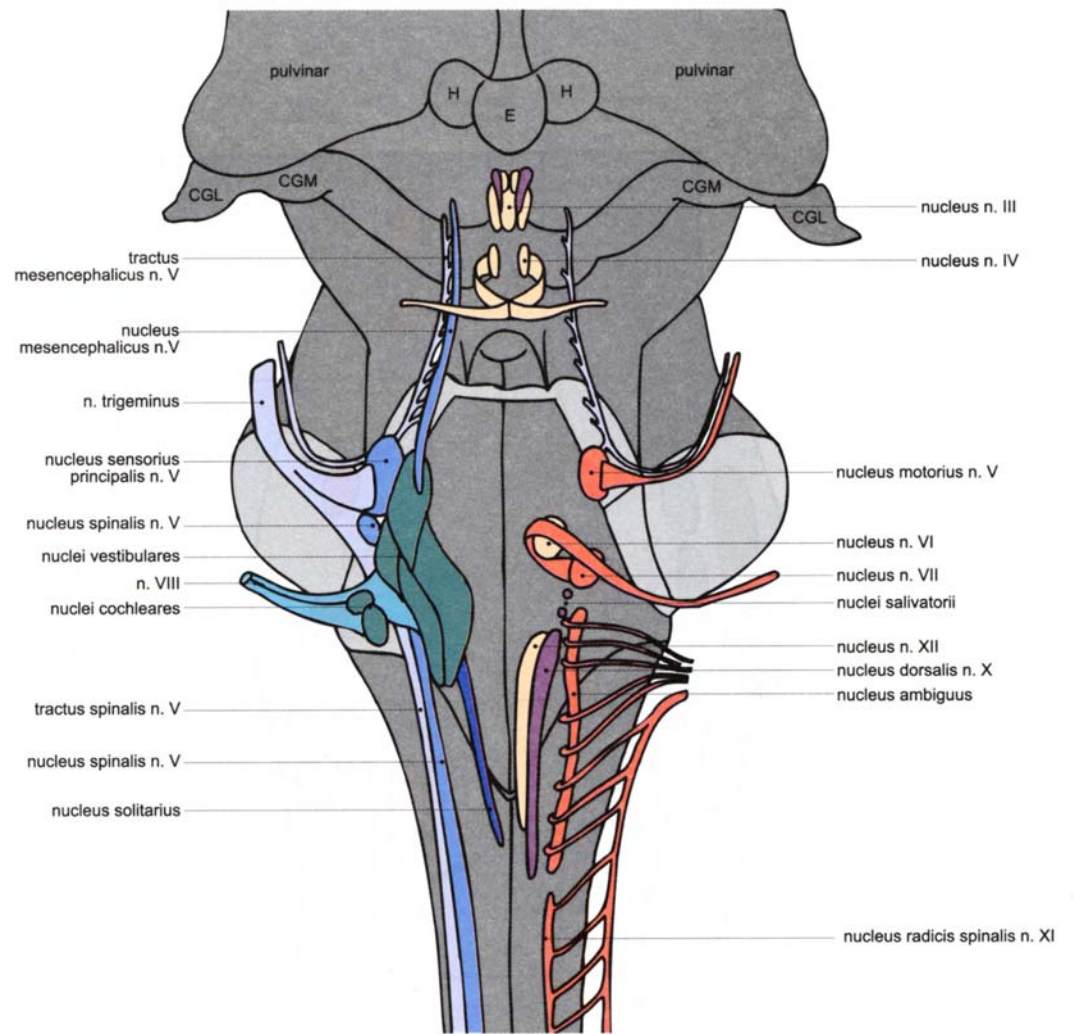
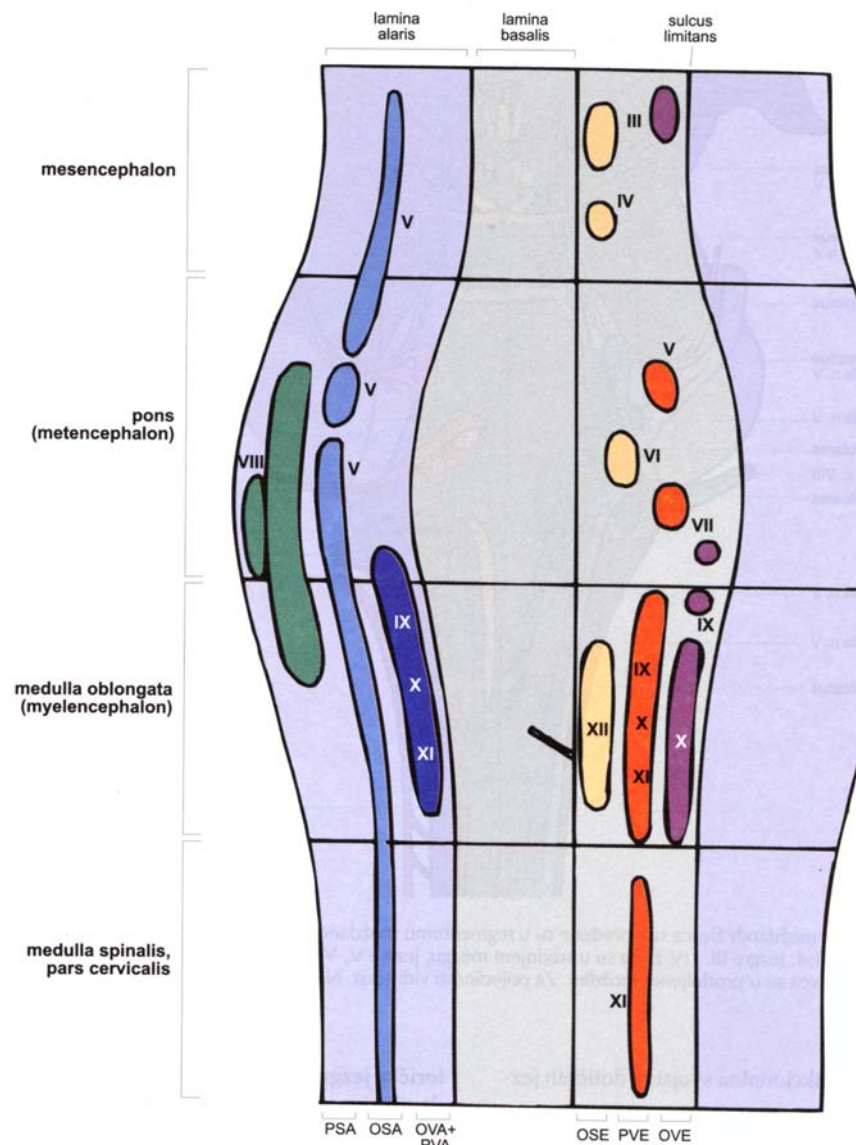


Vagus Nerve X









Slika 15-9. Jezgre deset moždanih živaca rasporedene su u tegmentumu moždanog debla u sedam uzdužnih nizova (vidi i sl. 15-10), te po načelu 2:4:4. Jezgre III. i IV. živca su u srednjem mozgu, jezgre V., VI., VII. i VIII. živca su uglavnom u mostu, a jezgre IX., X., XI. i XII. živca su u produljenoj moždini. Za pojedinosti vidi tekst. Nacrtao, uz izmjene, prema Nieuwenhuys i sur. (1988).

PSA (n. VIII)

nuclei cochleares:
nucleus cochlearis dorsalis
nucleus cochlearis ventralis

nuclei vestibulares:
nucleus vestibularis medialis
nucleus vestibularis lateralis
nucleus vestibularis superior
nucleus vestibularis inferior

OSA

nucleus mesencephalicus nervi trigemini
nucleus sensorius principalis n. trigemini
nucleus spinalis n. trigemini (n. V, VII, IX, X)

OVA + PVA

nucleus solitarius (n. V, VII, IX, X)

OSE

nucleus nervi oculomotorii
nucleus nervi trochlearis
nucleus nervi abducentis
nucleus nervi hypoglossi

PVE

nucleus motorius nervi trigemini
nucleus nervi facialis
nucleus ambiguus (n. IX, X, XI)

OVE

nucleus accessorius n. oculomotorii
nucleus salivatorius superior (n. VII)
nucleus salivatorius inferior (n. IX)
nucleus dorsalis nervi vagi

Slika 15-10. Jezgre moždanih živaca i vlakna koja iz njih polaze ili u njima završavaju. Za pojedinosti vidi tekst.