Anatomie II

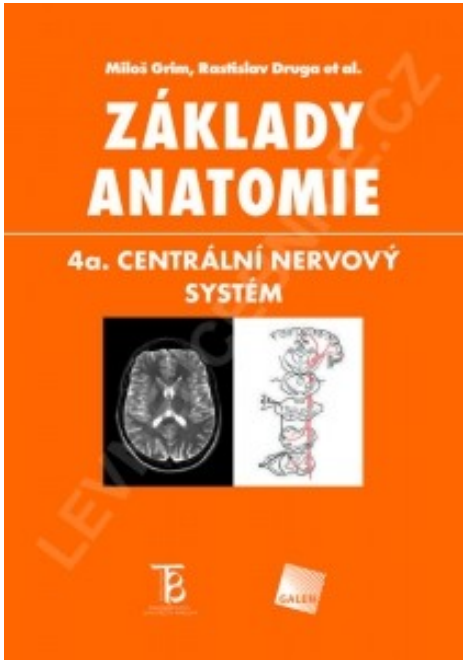
Rembrandt van Rijn 1632
The Anatomy Lesson of Dr. Nicolaes Tulp

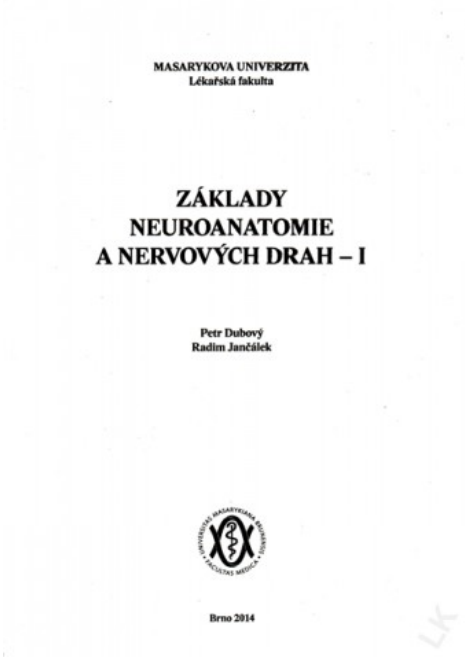
Rembrandt van Rijn 1656
The Anatomy Lesson of Dr. Deijman

Doporučena literatura

Petr Dubový: Základy neuroanatomie a nervových drah
https://telemedicina.med.muni.cz

DUBOVÝ, Petr and Radim JANČÁLEK.
Základy neuroanatomie a nervových drah - I.





ROZDĚLENÍ CNS

Mozek **Spinální mícha**

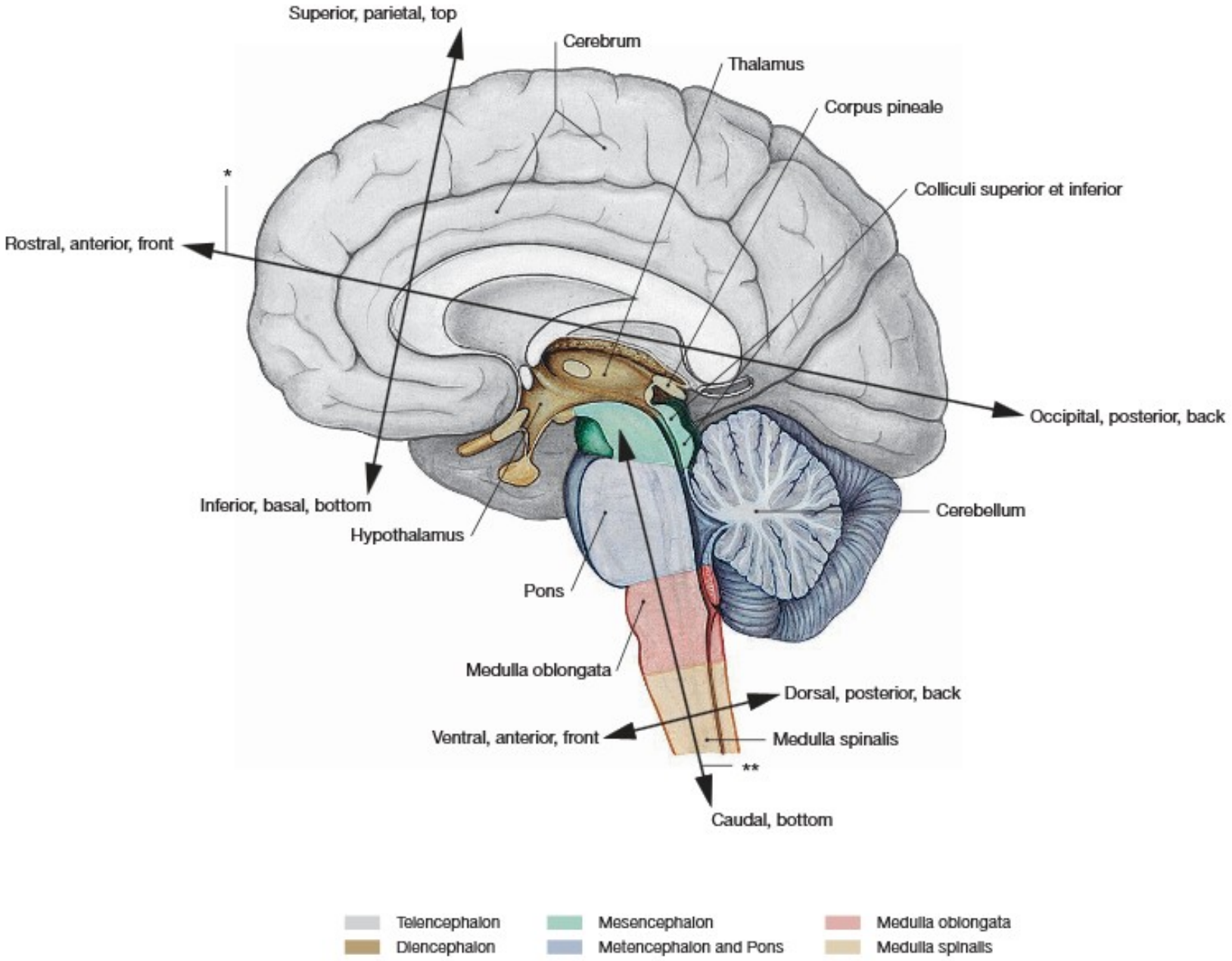
mozkový kmen

- **medulla oblongata (prodl. mícha)**
- **pons (most)**
- **mesencephalon (střední mozek)**
- **cerebellum (mozeček)**

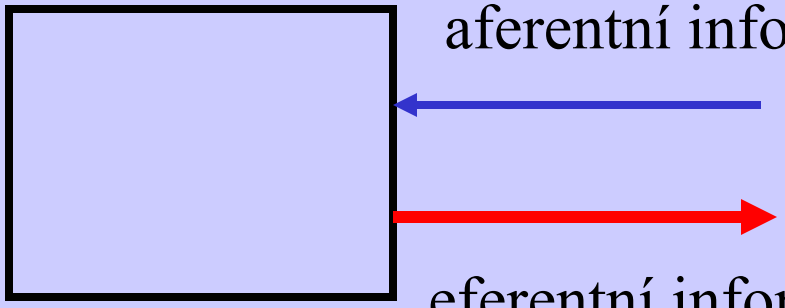
diencephalon (mezimozek)

telencephalon (koncový mozek)

Orientace na CNS

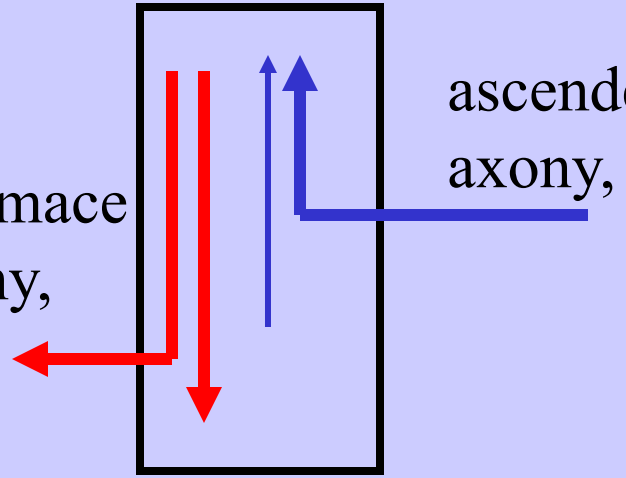


Základní pojmy



aferentní informace (nerv. vlákna, axony, dráhy)

eferentní informace (nerv. vlákna, axony, dráhy)



ascendentní informace (nerv. vlákna, axony, dráhy)

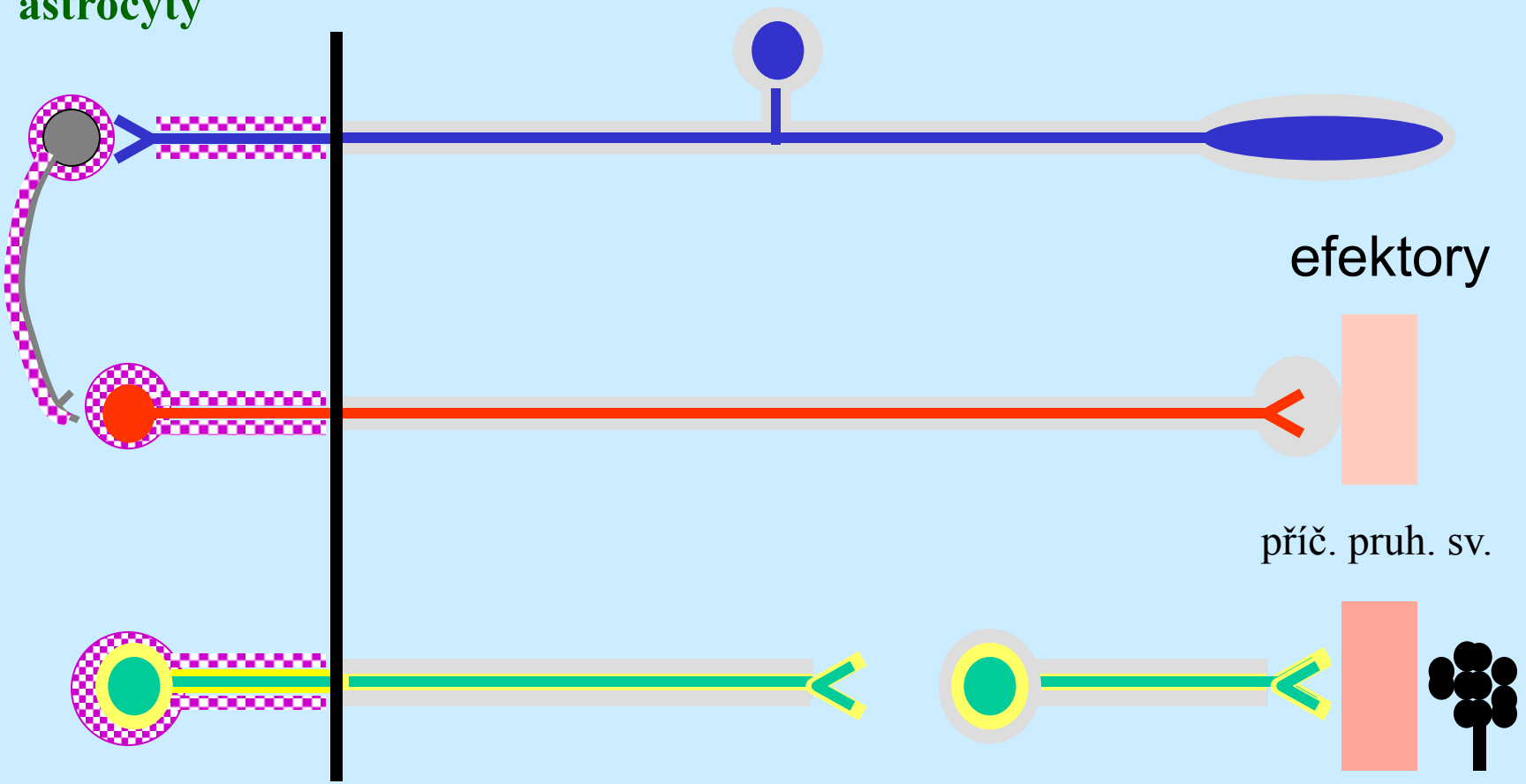
descendentní informace (nerv. vlákna, axony, dráhy)

ROZDĚLENÍ NERVOVÉ SOUSTAVY

CNS **PNS**

oligodendrocyty
astrocyty

Schwannovy bb. a její deriváty



ROZDĚLENÍ PNS

hlavové, kraniální nervy III.-XII. (I.- XII.)

- **prostupují přes bázi lební**

spinální nervy - 31 párů

- **prostupují přes foramina intervertebralia**

FUNKČNÍ TYPY AXONŮ V PNS

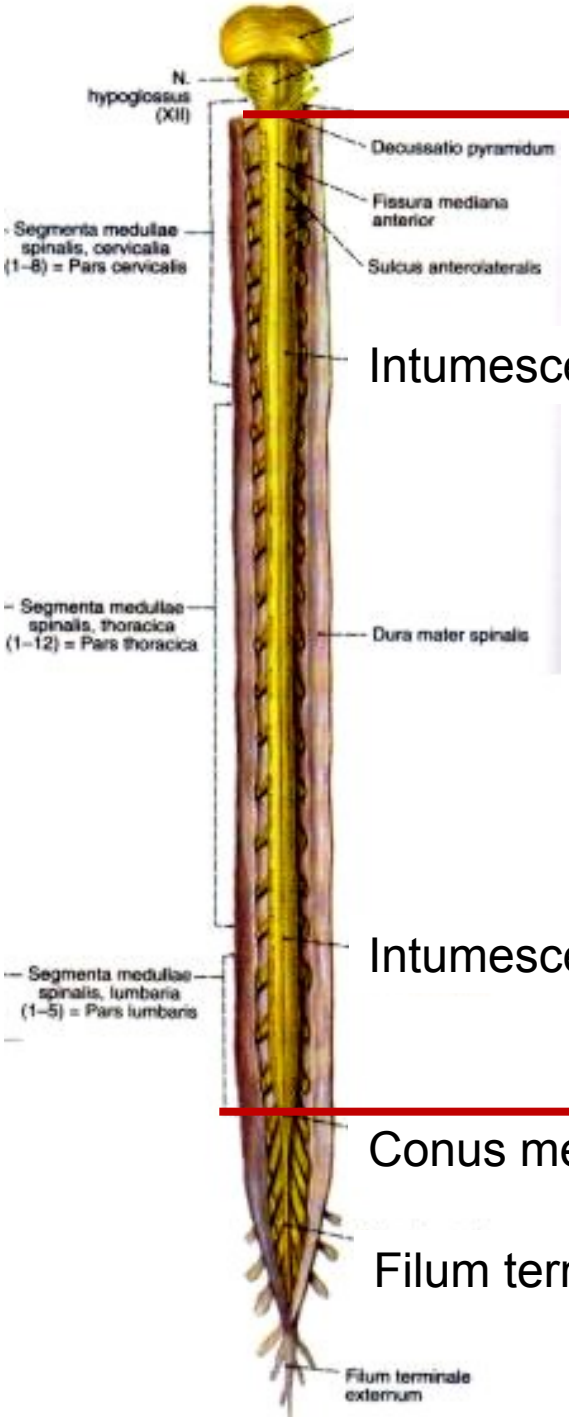
Aferentní

- **somatosenzorické** ← kožní čití, propriocepce, bolest
- **viscerosenzorické** ← mechanocepce, bolest
- **senzorické** ← aferentace chuti, sluchu, vestib. informací

Eferentní

- **somatomotorické** → příčně pr. svalovina
- **branchiomotorické** → příčně pr. svalovina
- **visceromotorické** → hladká svalovina
- **sympatické** → myokard
- **parasympatické** → žlázy

MEDULLA SPINALIS



Kraniální hranice

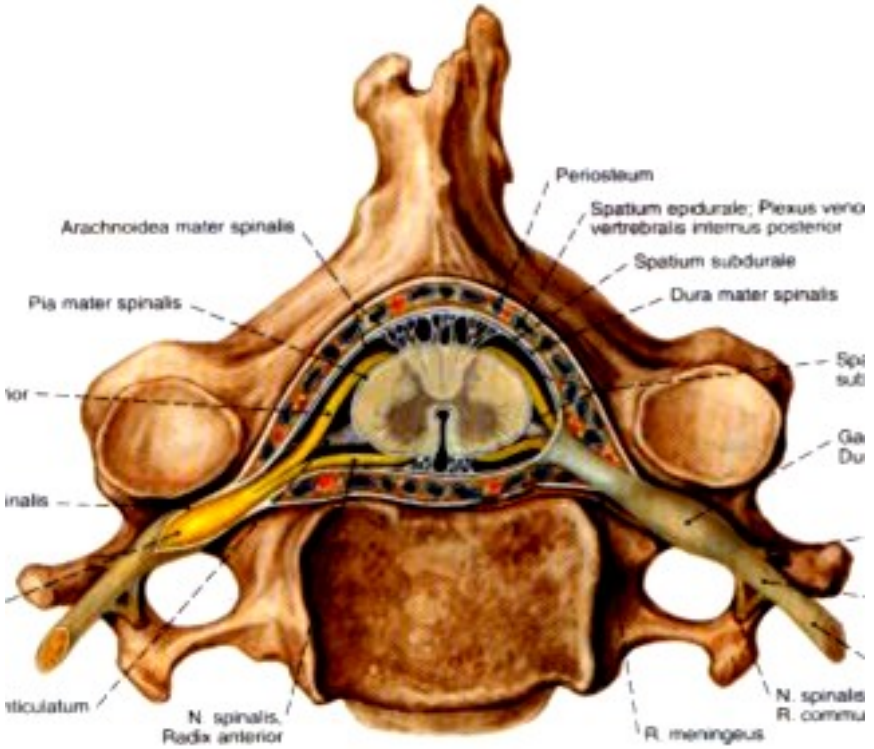
Intumescentia cervicalis

Intumescentia lumbalis

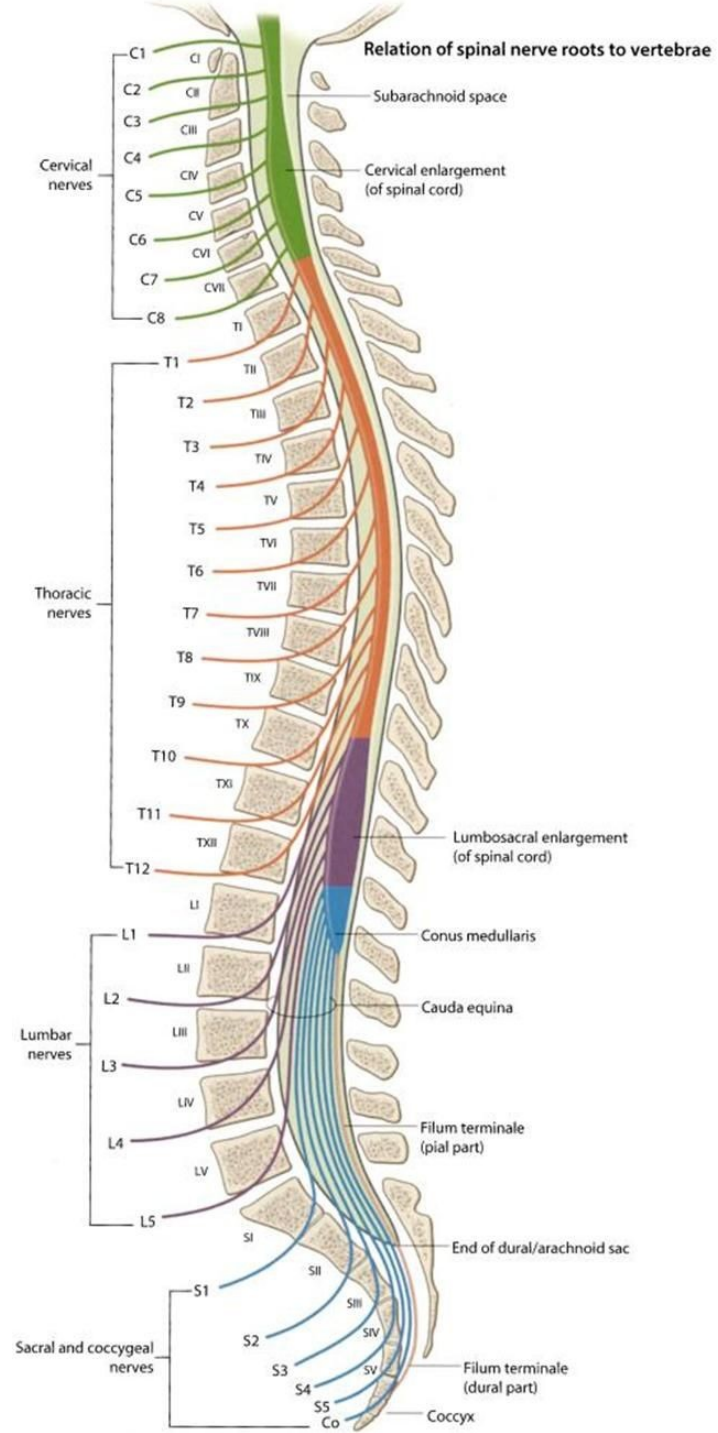
L2 – Kaudální hranice

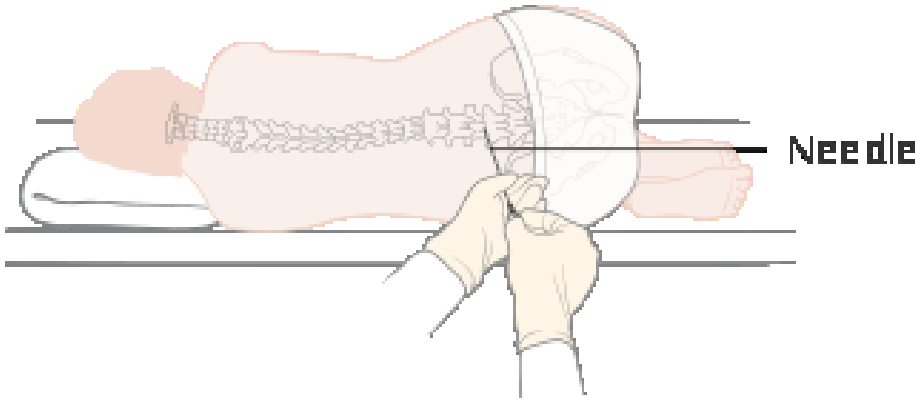
Conus medullaris

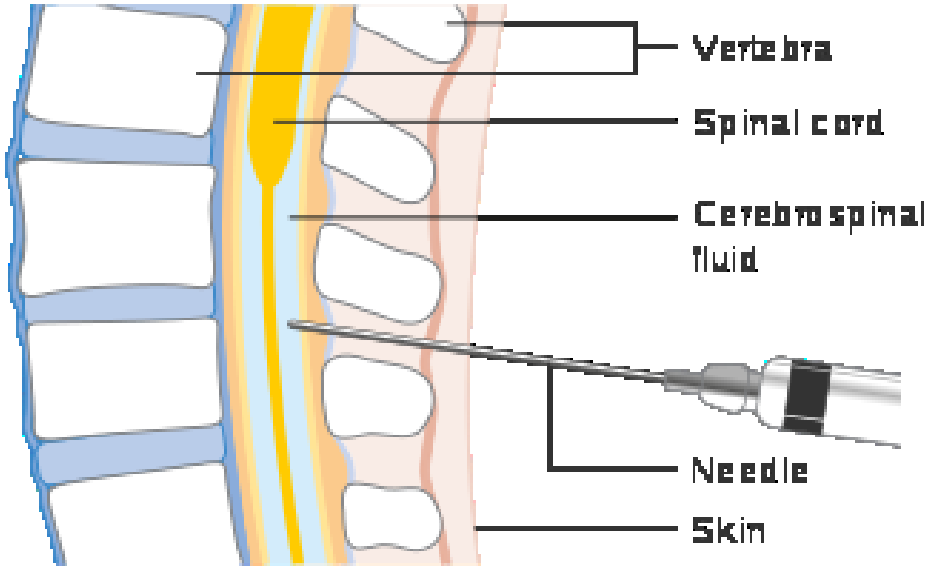
Filum terminale



Lumbální punkce

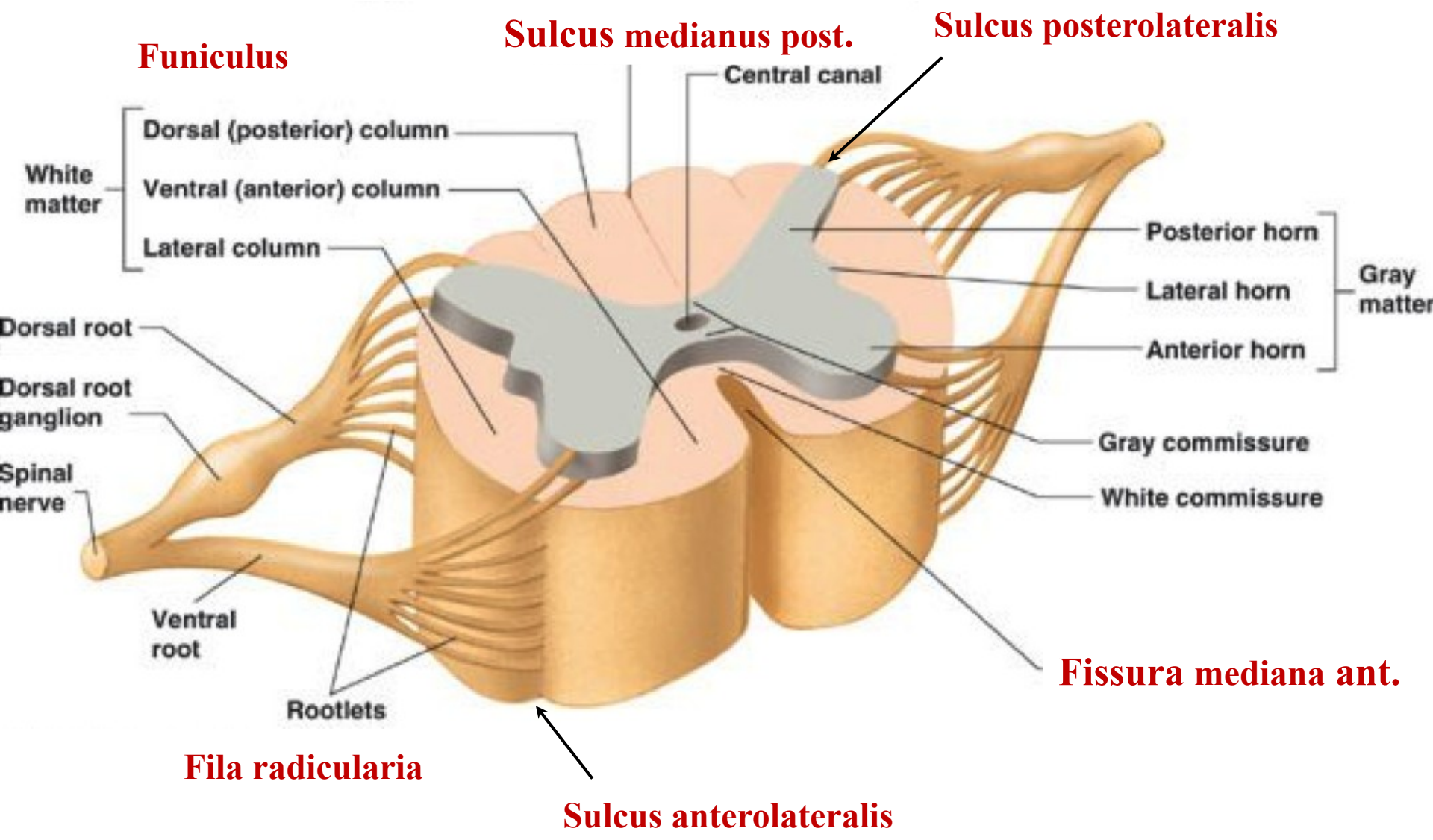




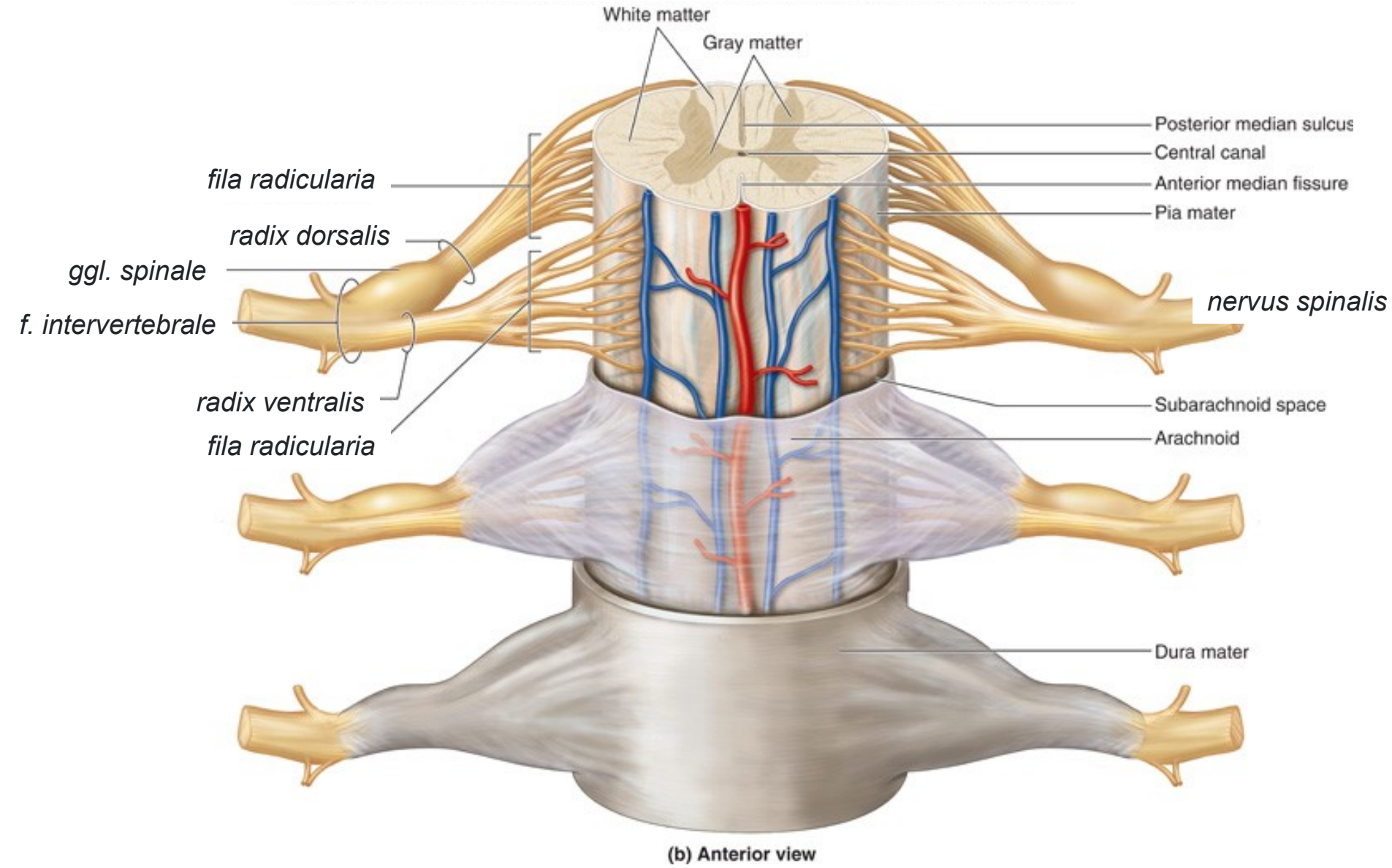


mezi L3-L4 nebo L4 a L5

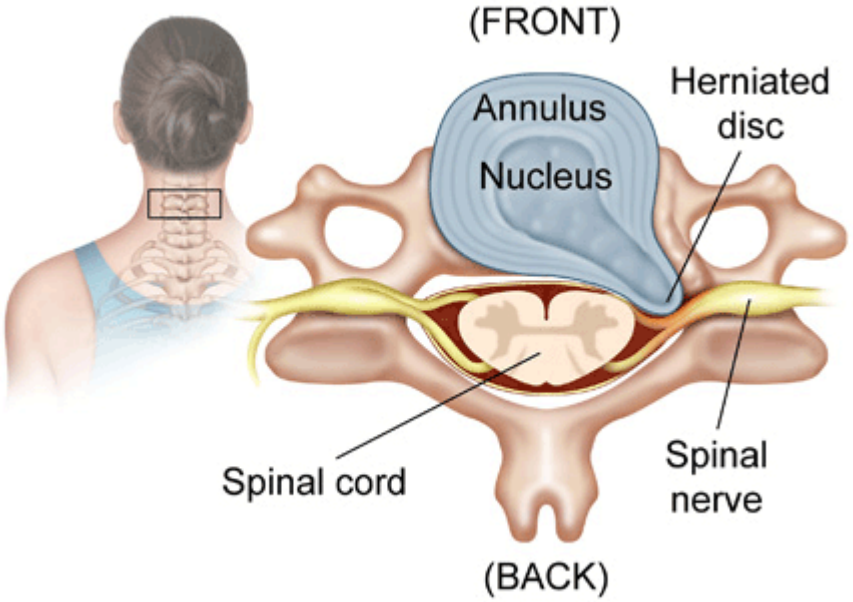
MEDULLA SPINALIS

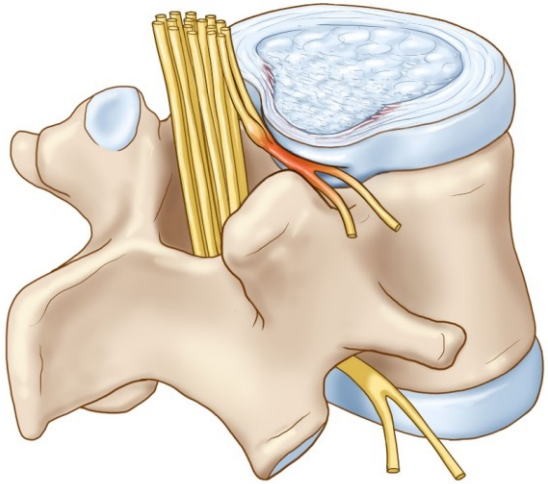


Mícha se míchá do všeho !!!

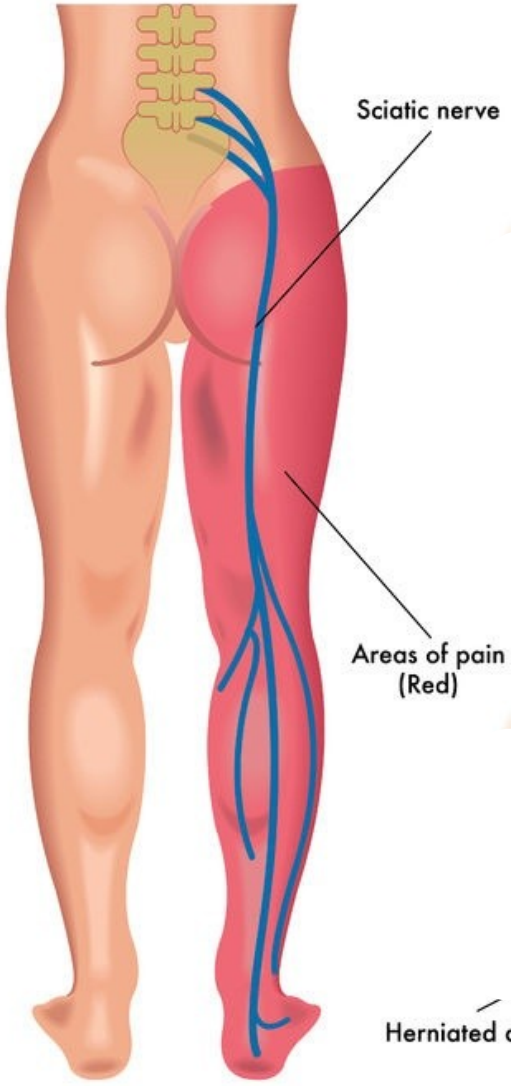


MEDULLA SPINALIS – klinická poznámka





lumbago (ischias)

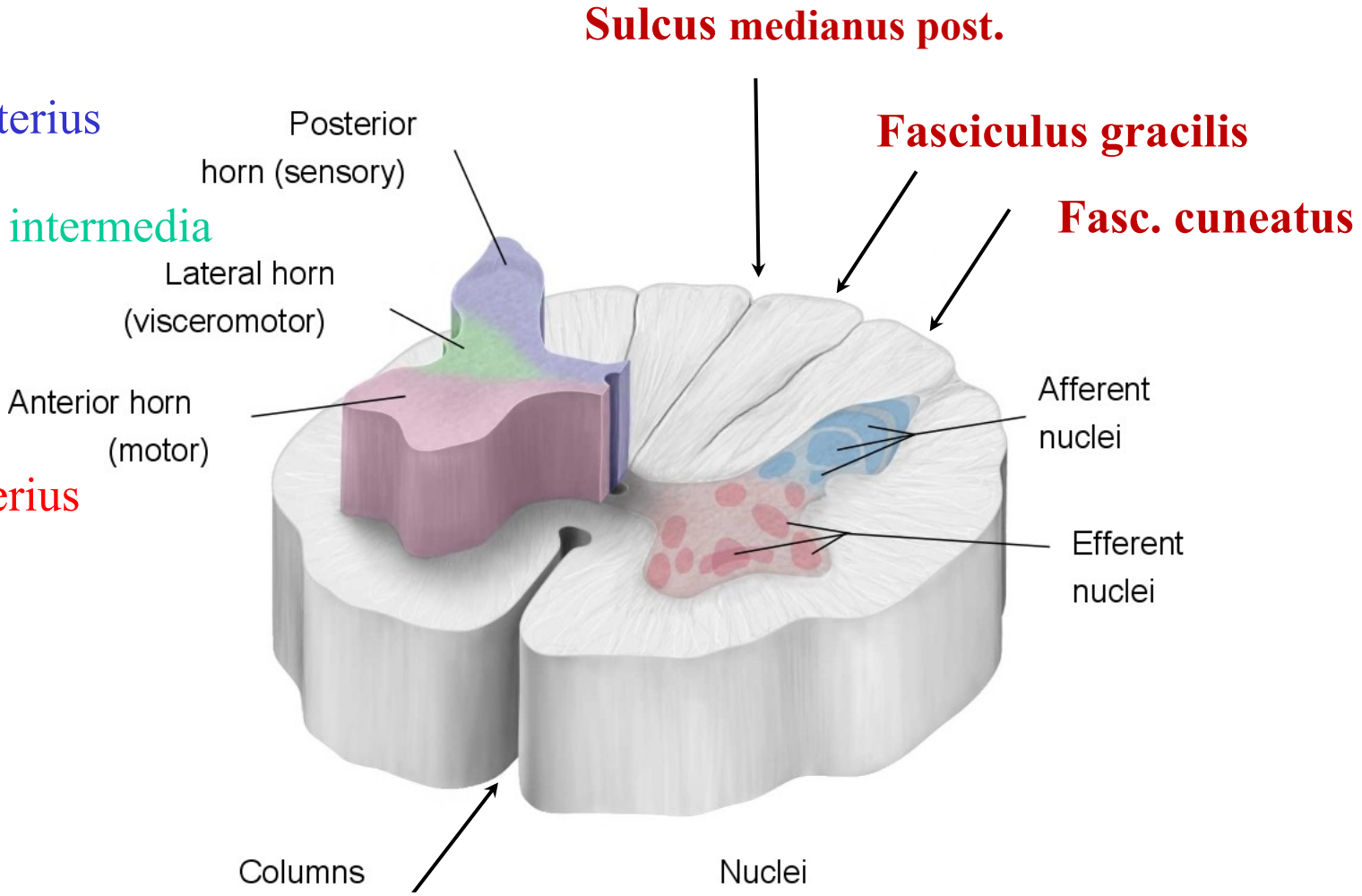


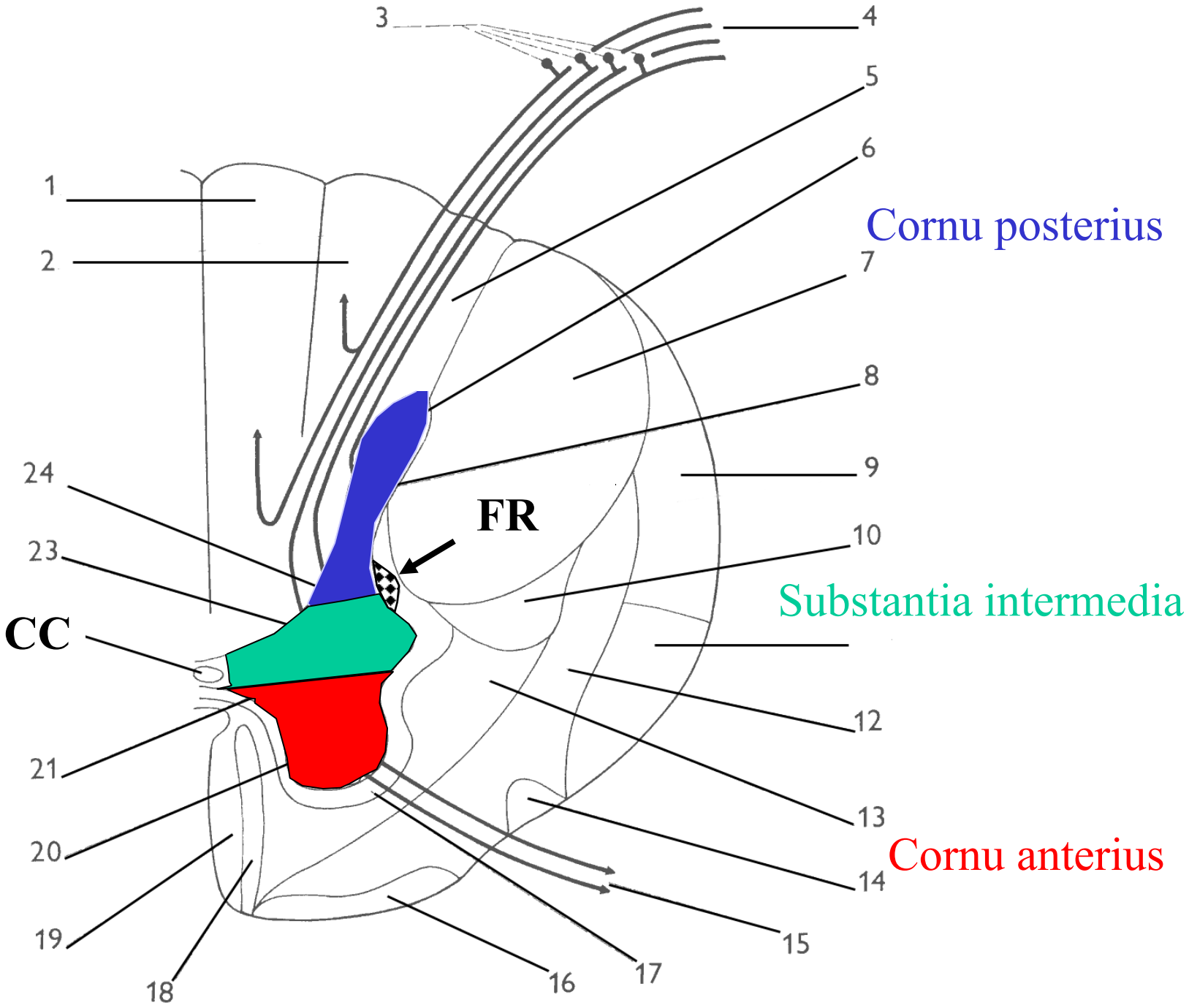
MEDULLA SPINALIS

Cornu posterius

Substantia intermedia

Cornu anterius

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Cornu posterius
7
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24
9
FR
23
10
CC
Substantia intermedia
12
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Cornu anterius
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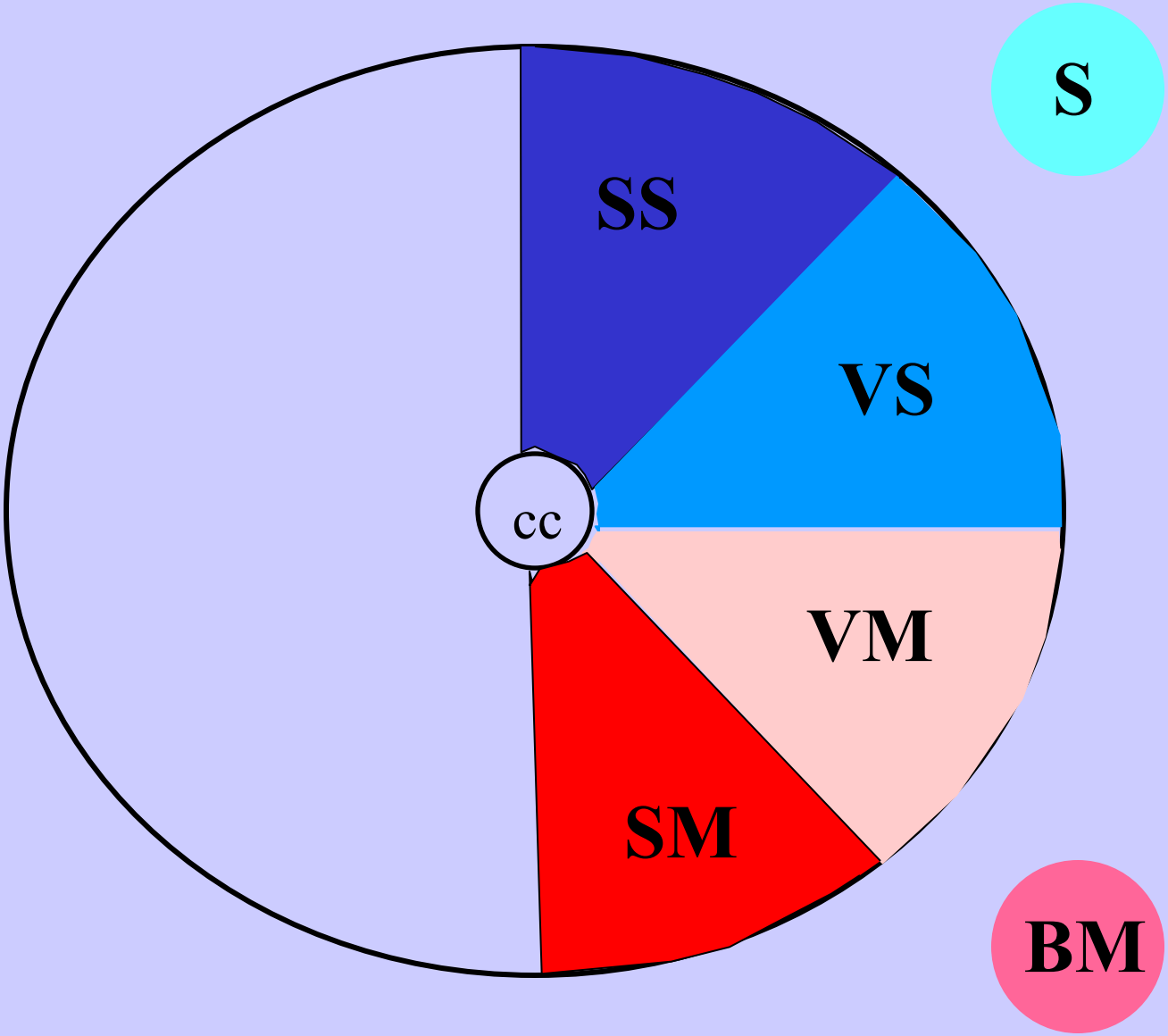
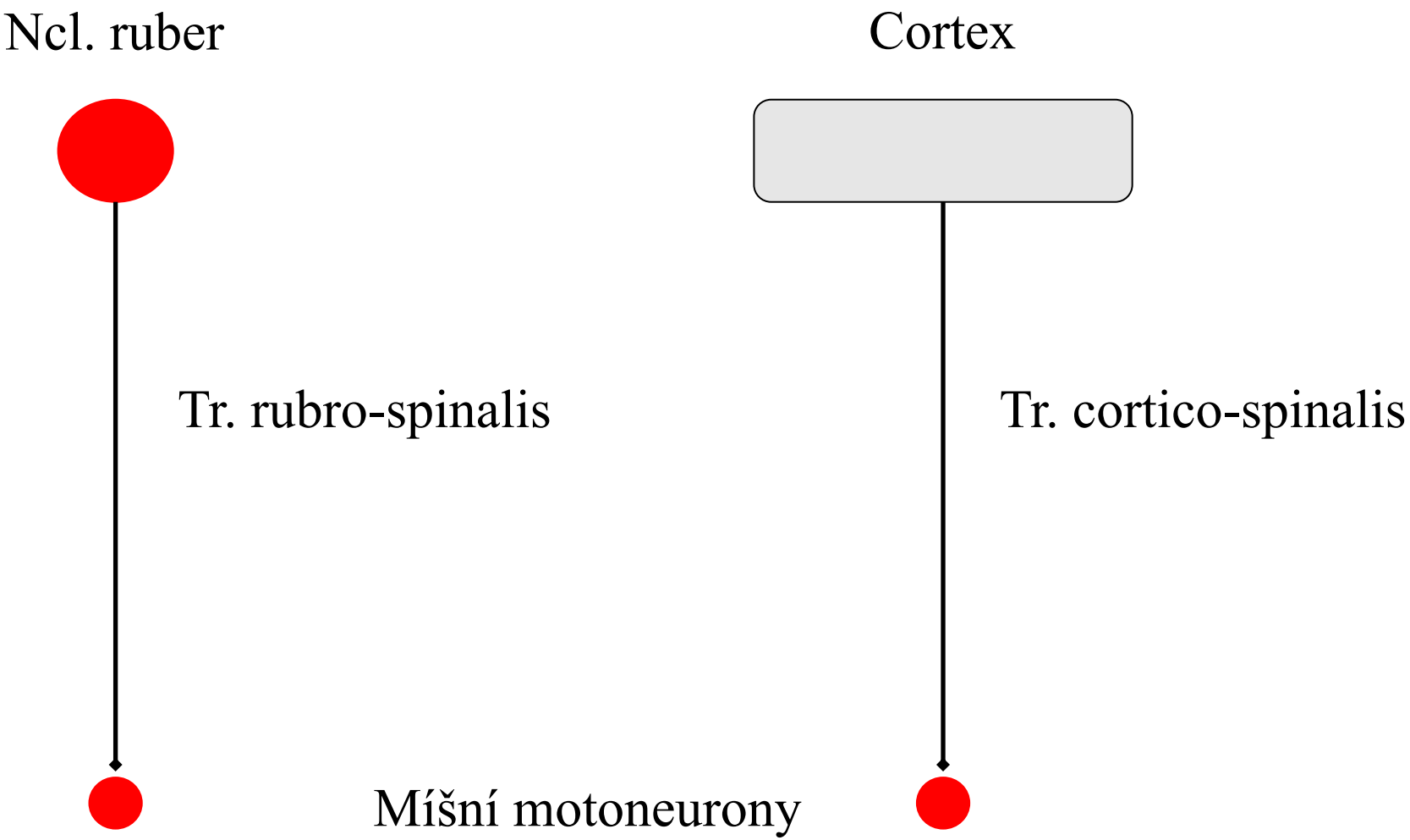
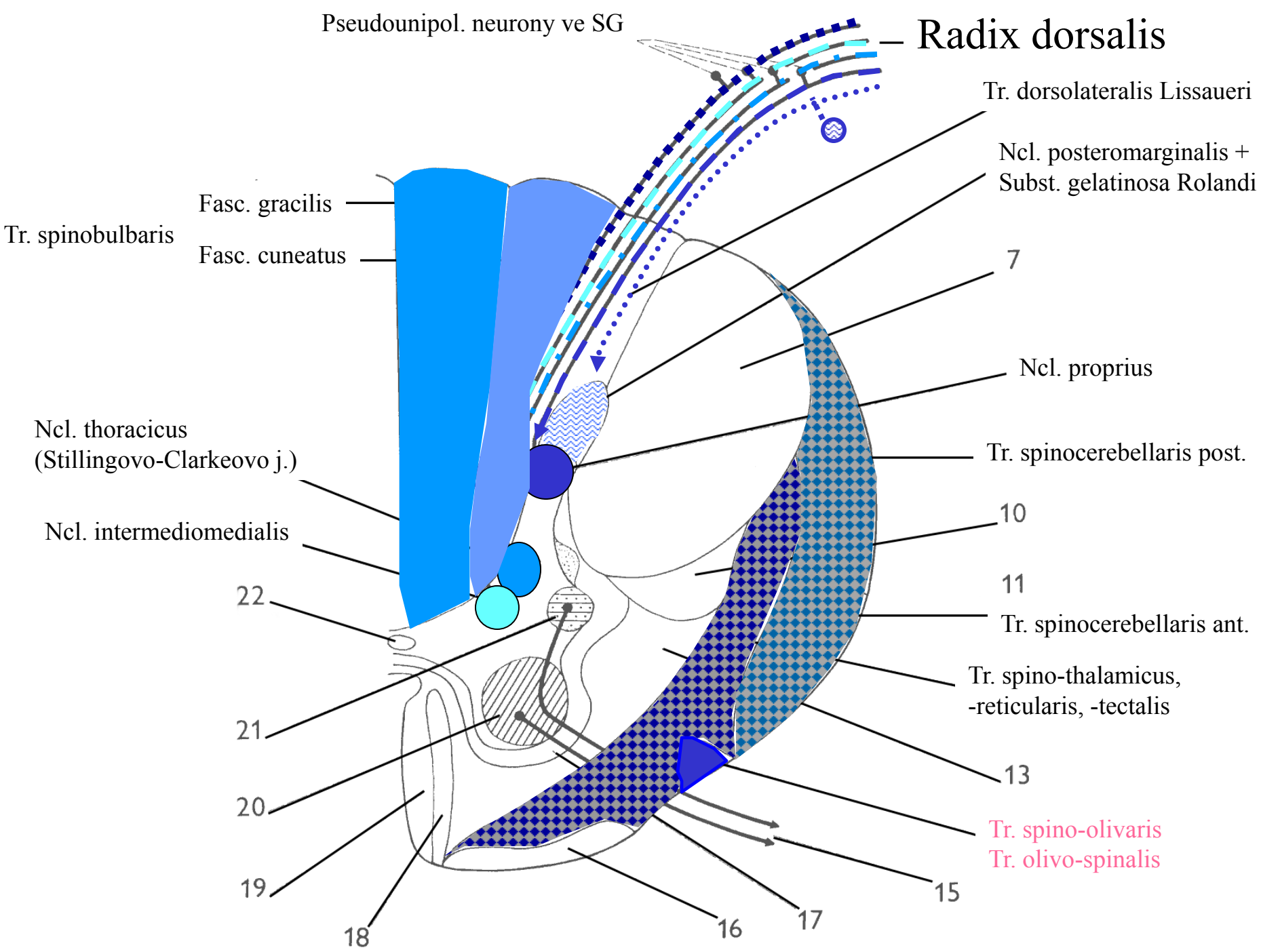
FUNKČNÍ ZÓNY NEURONŮ V CNS



Anatomická nomenklatura bílé hmoty




Pseudounipol. neurony ve SG
– Radix dorsalis
Tr. dorsolateralis Lissaueri
Ncl. posteromarginalis +
Subst. gelatinosa Rolandi
Fasc. gracilis
Tr. spinobulbaris
Fasc. cuneatus
7
Ncl. proprius
Ncl. thoracicus
(Stillingovo-Clarkeovo j.)
Tr. spinocerebellaris post.
10
Ncl. intermediomedialis
11
22
Tr. spinocerebellaris ant.
Tr. spino-thalamicus,
-reticularis, -tectalis
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Tr. spino-olivaris
Tr. olivo-spinalis
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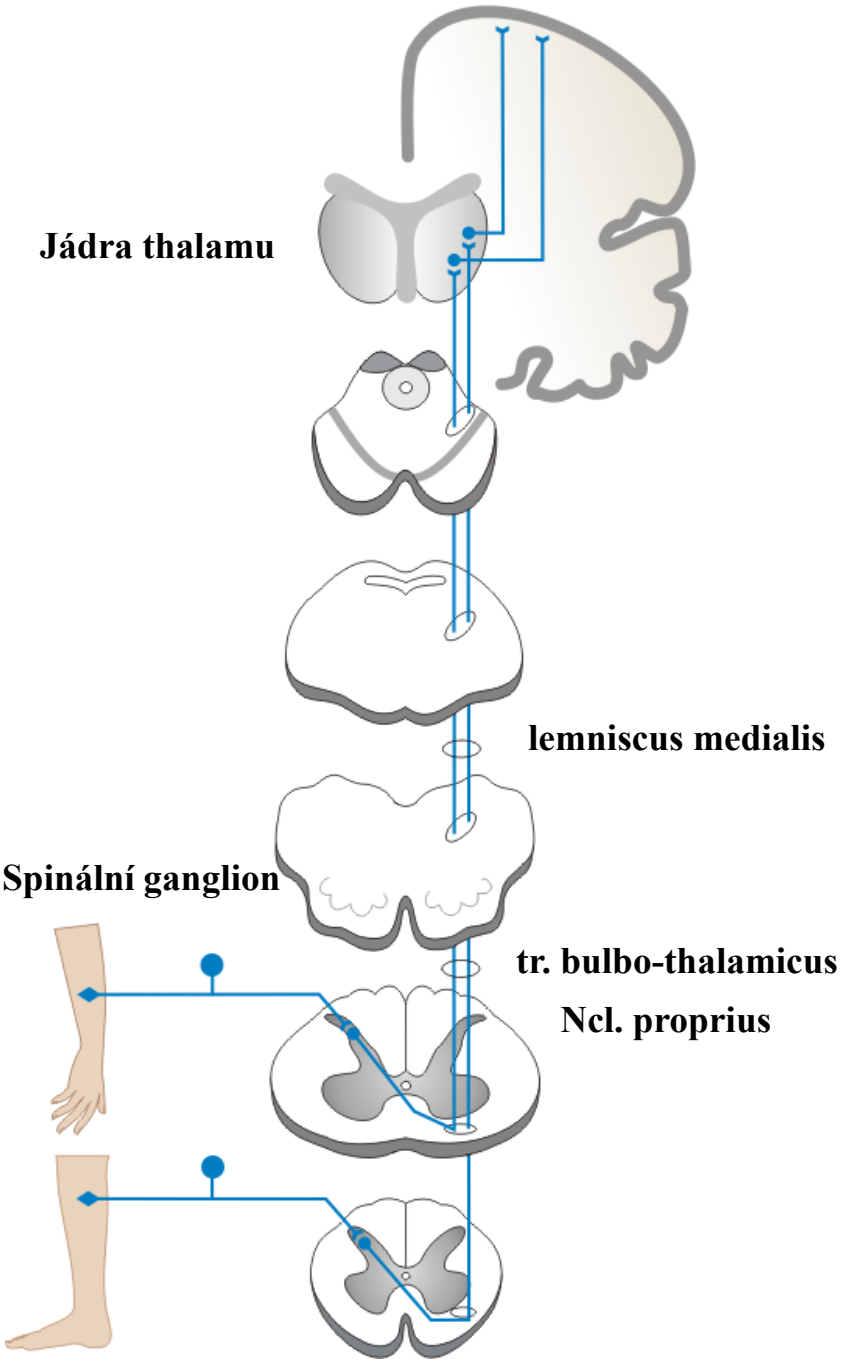
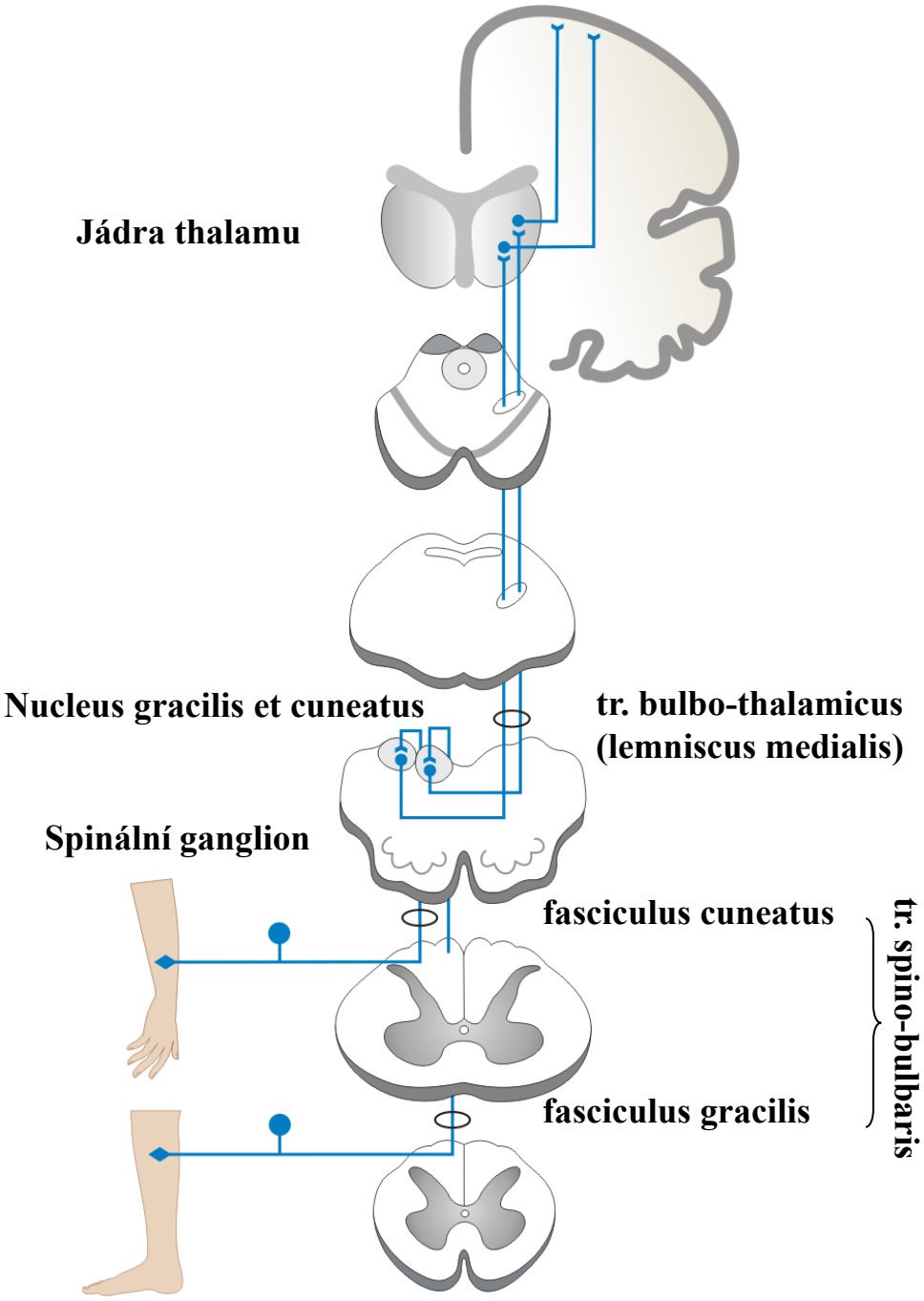
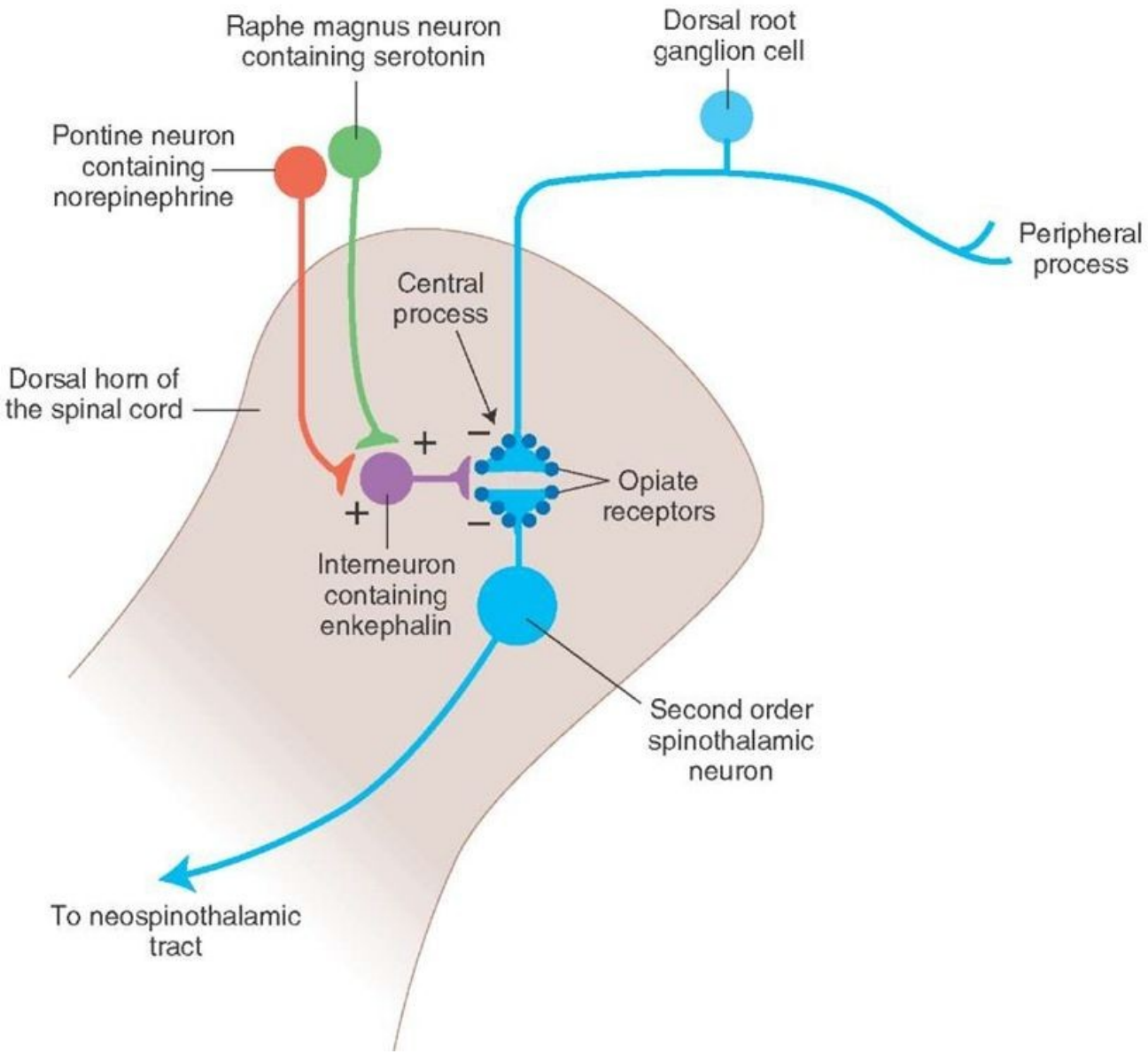
ANTEROLATERÁLNÍ SYSTÉM

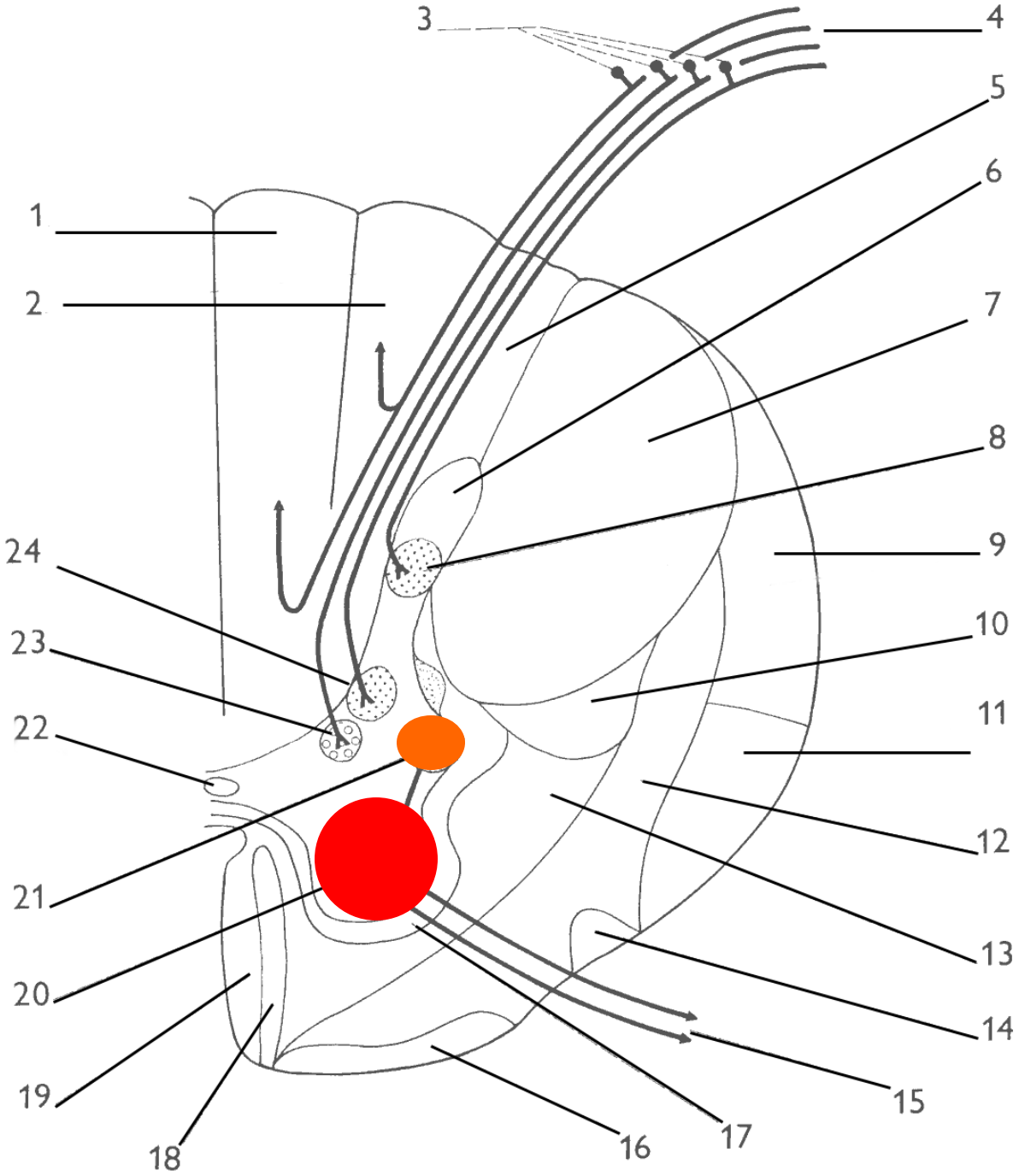


LEMNISKÁLNÍ SYSTÉM



Modulace aferentace bolesti v dorálním rohu míchy

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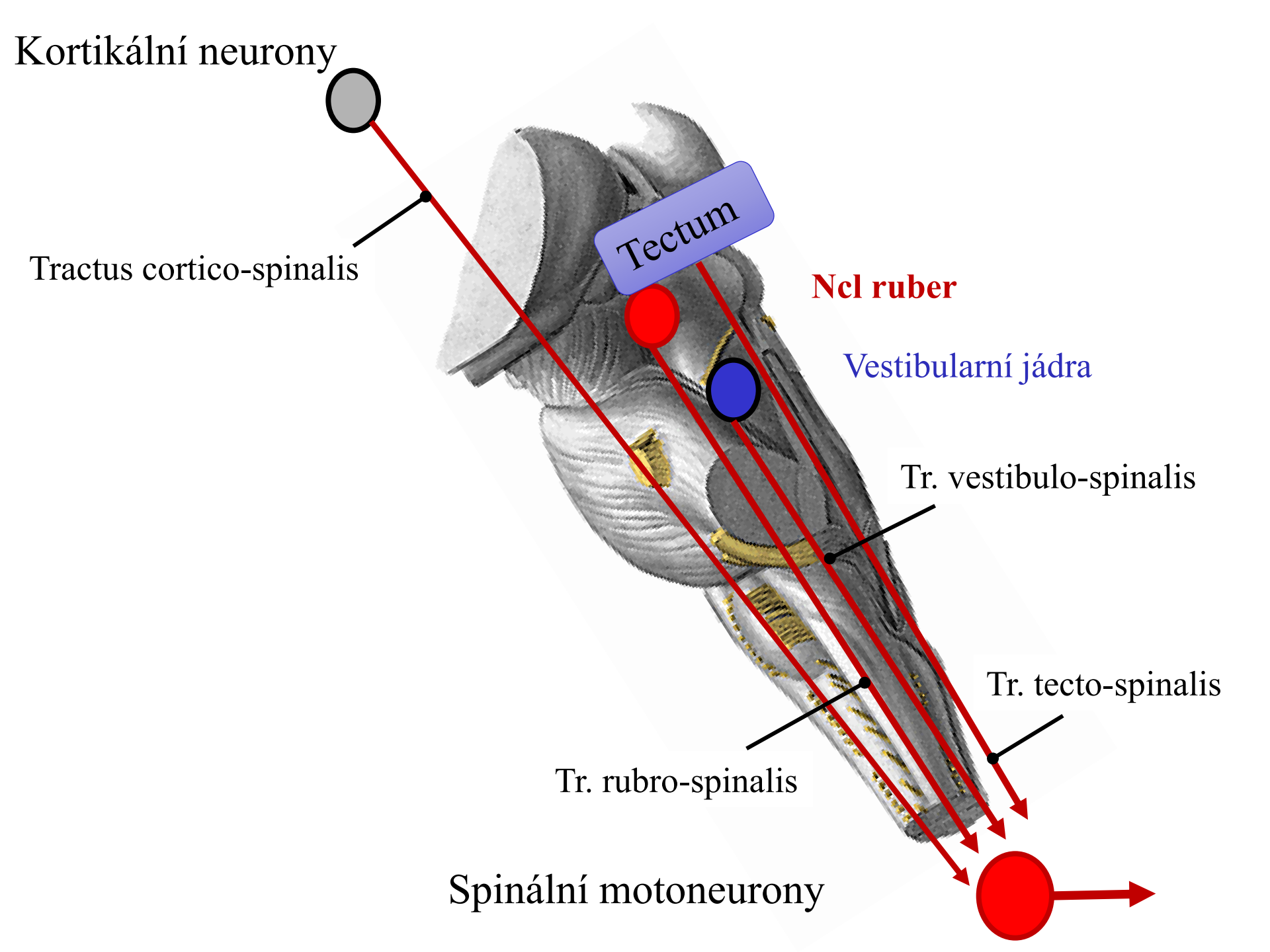
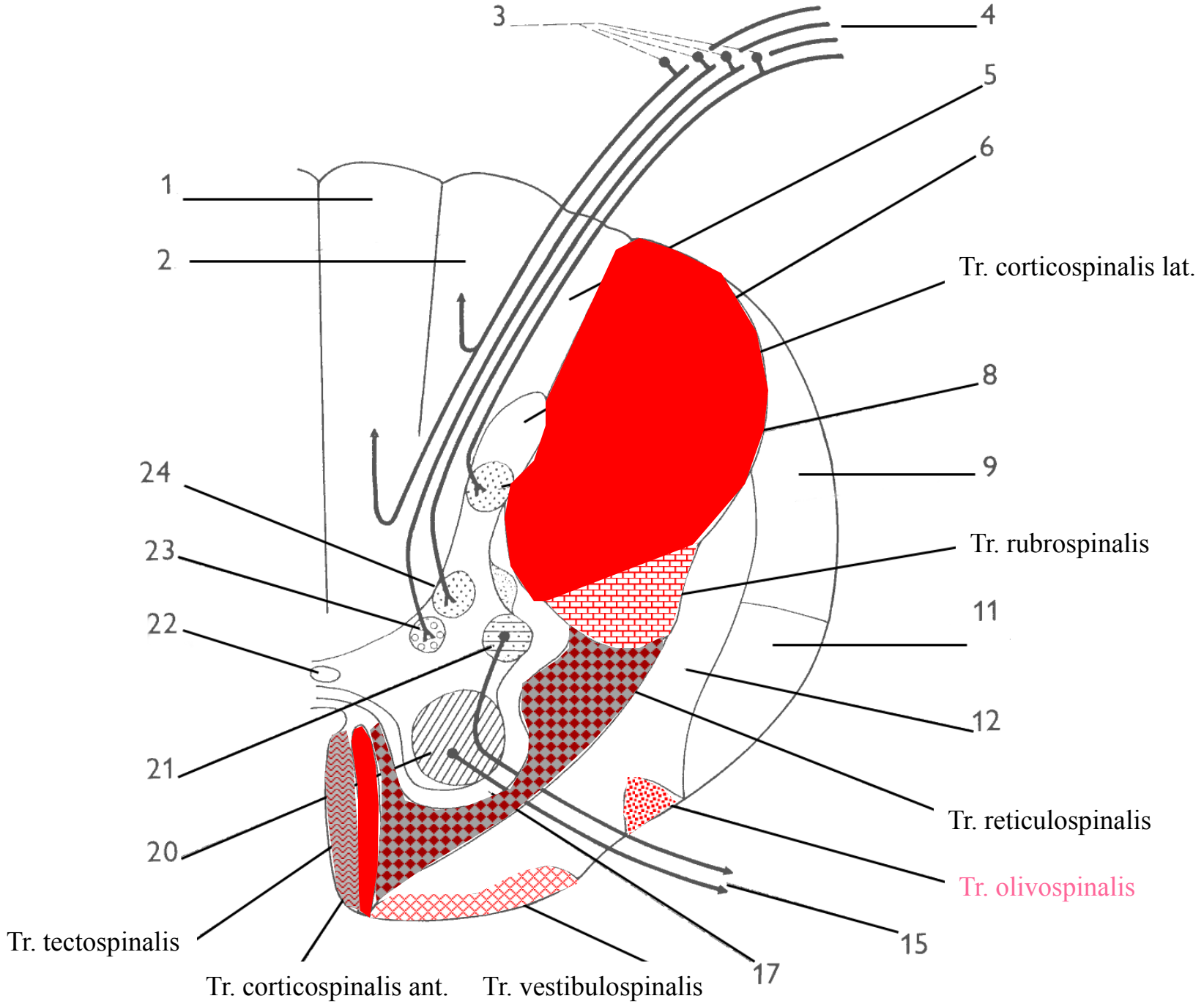

Kortikální neurony
Tractus cortico-spinalis
Tectum
Ncl ruber
Vestibularní jádra
Tr. vestibulo-spinalis
Tr. tecto-spinalis
Tr. rubro-spinalis
Spinální motoneurony


3
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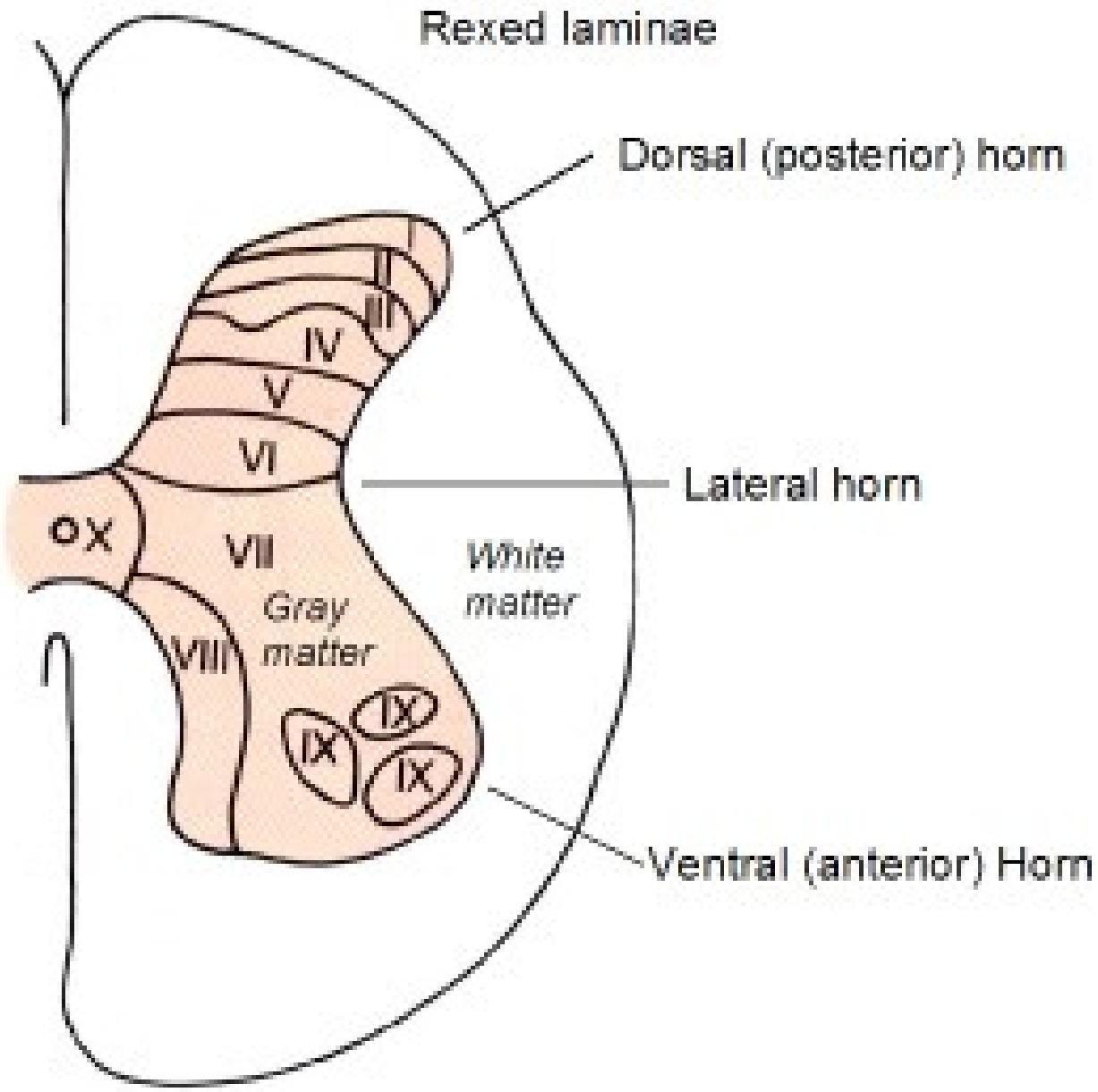
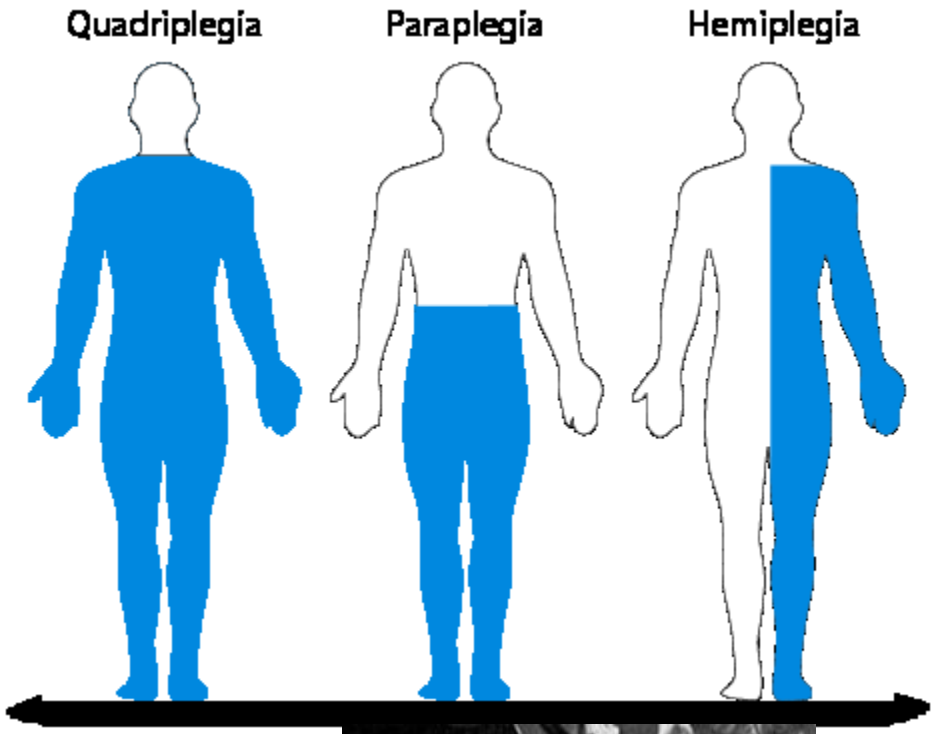
Tr. corticospinalis lat.
8
9
24
23
Tr. rubrospinalis
22
11
12
21
Tr. reticulospinalis
20
Tr. olivospinalis
Tr. tectospinalis
15
17
Tr. corticospinalis ant.
Tr. vestibulospinalis


Rexed laminae
Dorsal (posterior) horn
I
II
III
IV
V
VI
Lateral horn
X
VII
Gray matter
White matter
VIII
IX
IX
IX
Ventral (anterior) Horn

lamina (Rexed 1952)	jádra
I	ncl. apicalis (ncl. posteromarginalis)
II + III	substantia gelatinosa Rollandi
IV + V	ncl. proprius
VI	ncl. thoracicus (Stilling - Clarkeovo jádro) C8-L3
VII	skupina interneuronů v cornu anterius
VIII	mediální skupina motoneuronů
IX	lateralní skupina motoneuronů
X	zona centralis, šedá hmota kolem canalis centralis

MEDULLA SPINALIS – traumatické poškození míchy



tetraplegia