



FMVZ USP

Anatomia Descritiva dos Animais Domésticos I

VCI 1101

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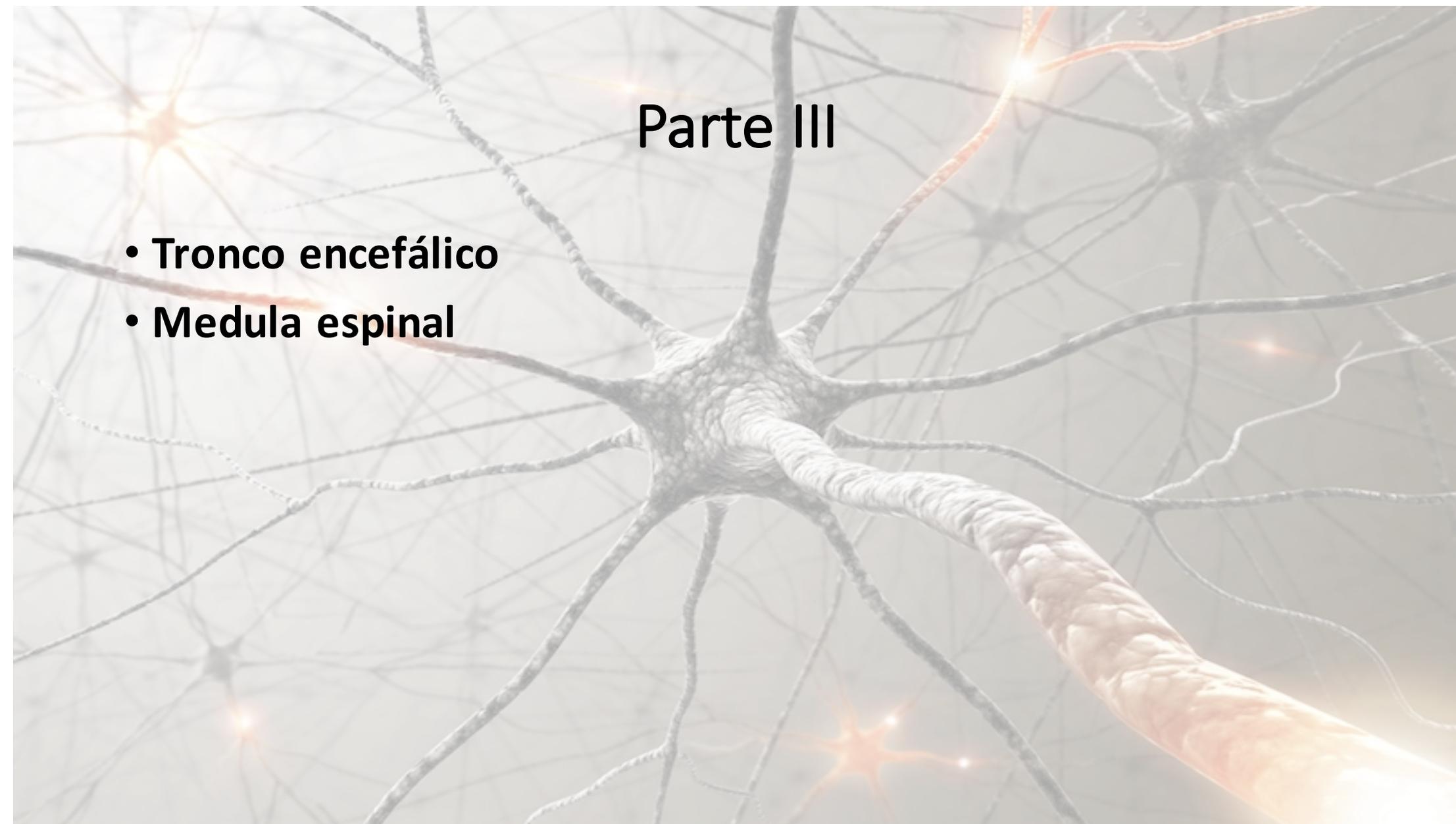
Anatomia do Sistema Nervoso

VCI – 1101 – Anatomia Descritiva dos Animais Domésticos I

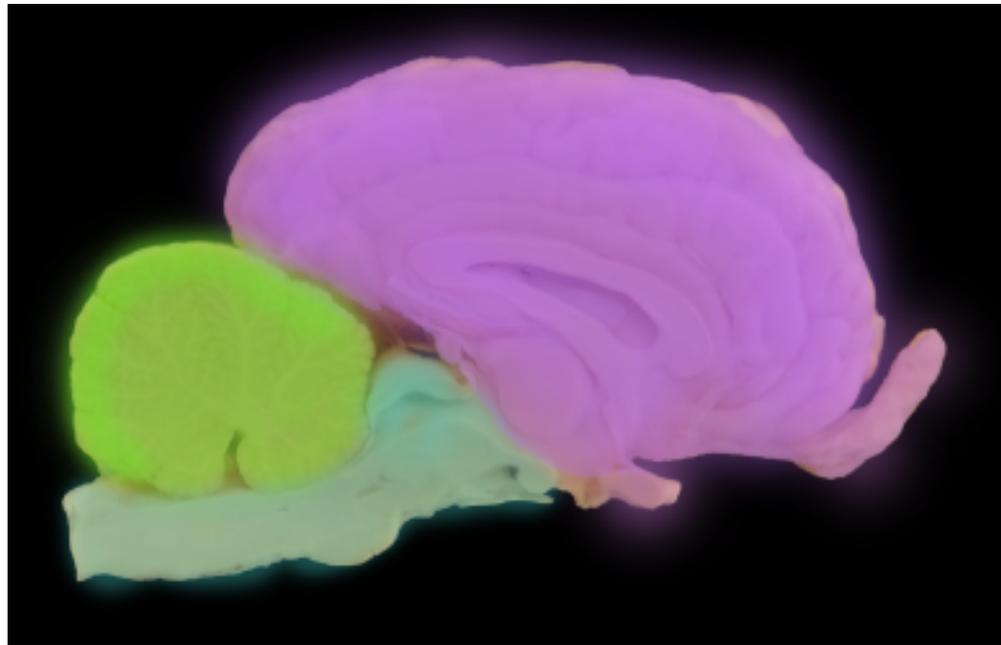
Profa. Dra. Tais Harumi de Castro Sasahara
Depto de Cirurgia – Setor de Anatomia
FMVZ-USP

Parte III

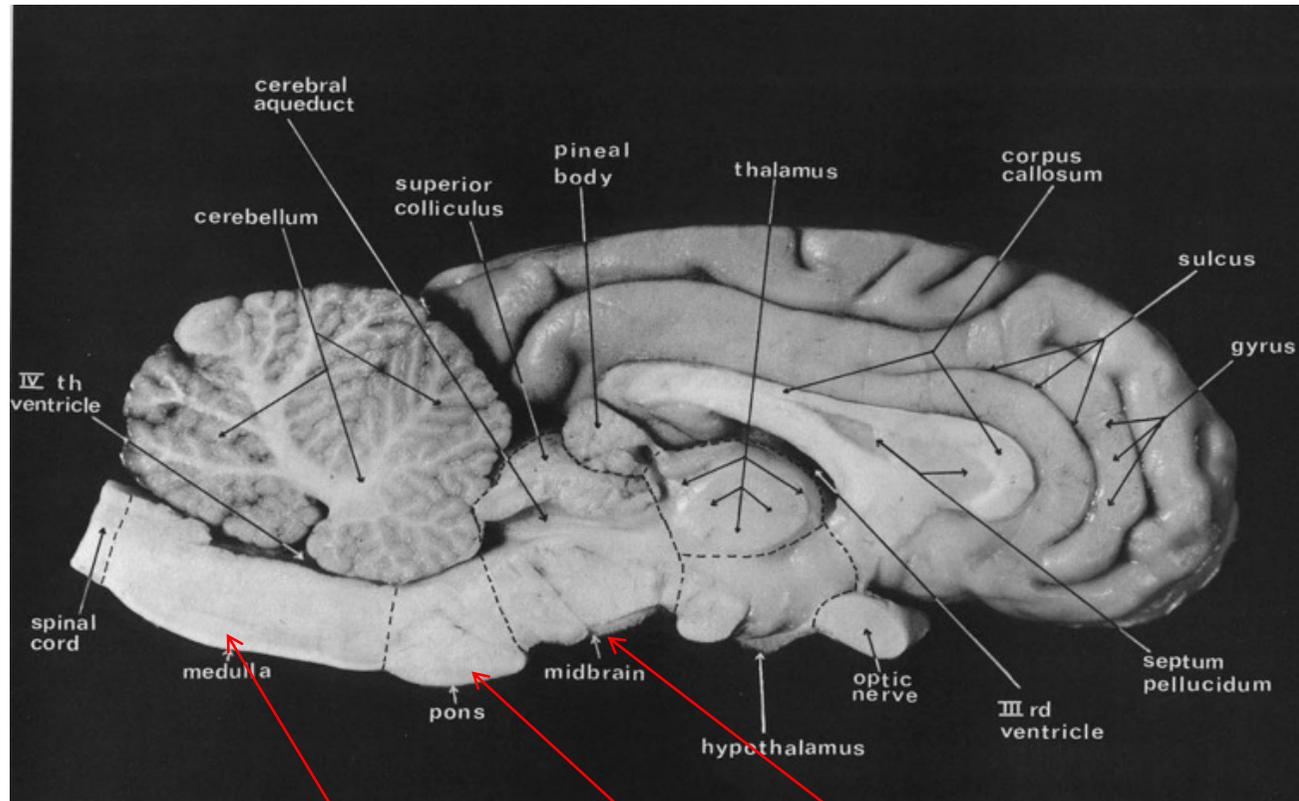
- **Tronco encefálico**
- **Medula espinal**



Tronco encefálico



TRONCO ENCEFÁLICO



Mesencéfalo

Ponte

Medula oblonga ou bulbo

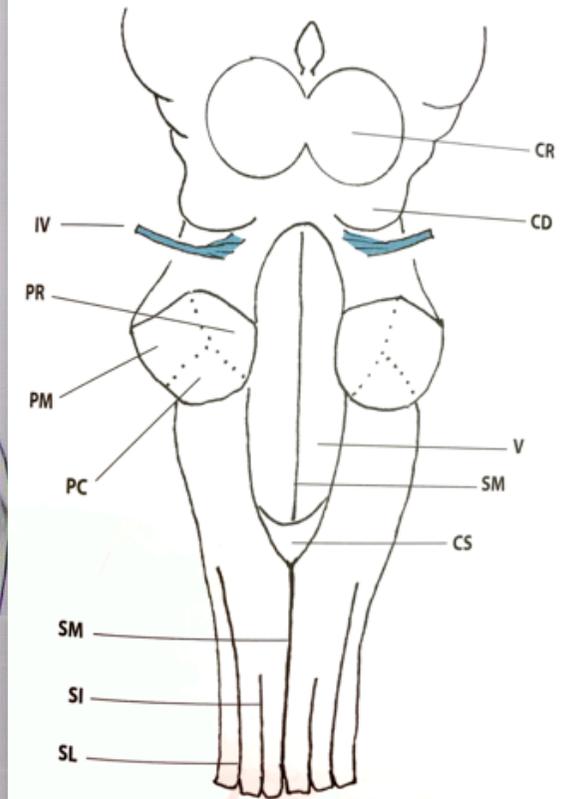
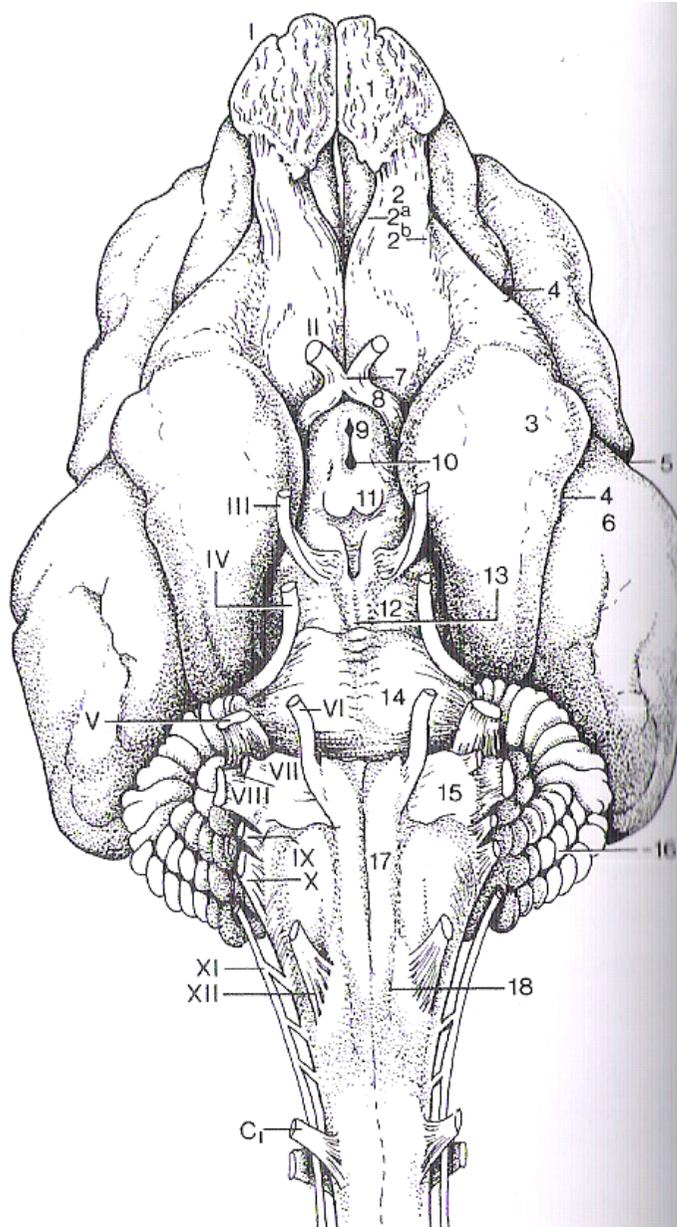
Tronco encefálico

- Mesencéfalo
- Ponte
- Bulbo (Medula oblonga)



Tronco encefálico

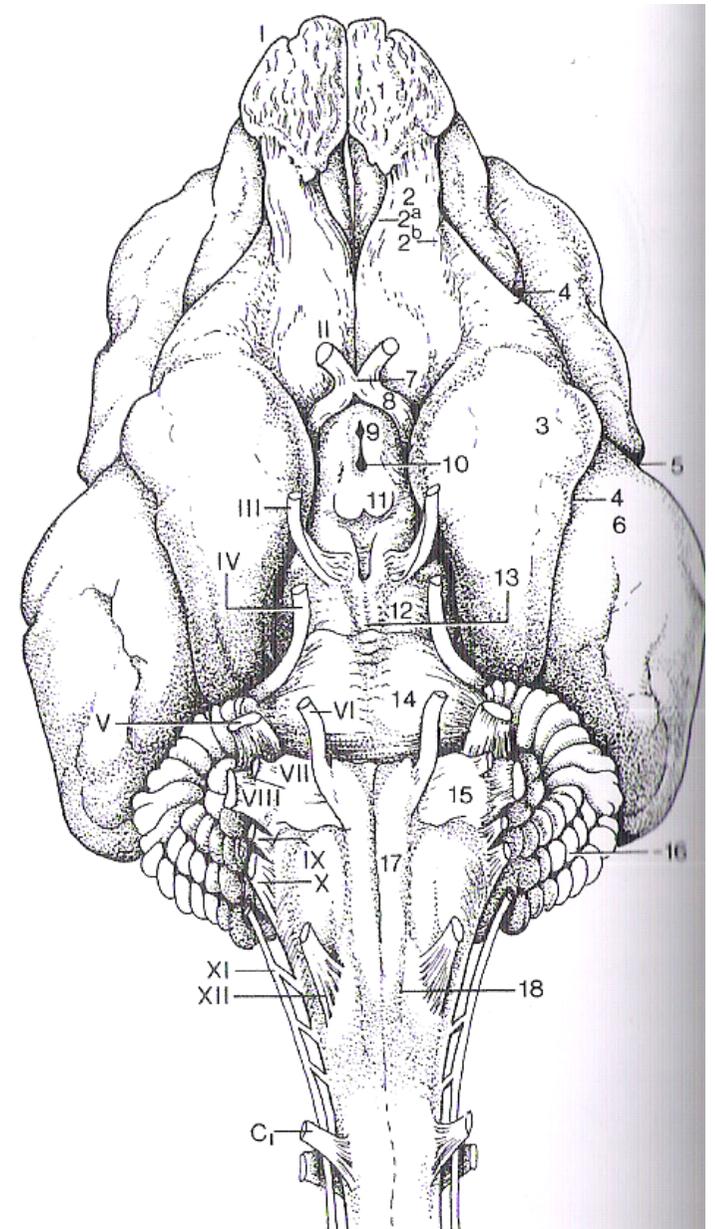
- O tronco encefálico faz conexão com 10 dos 12 pares de nervos cranianos
- III ao XII – todos com **origem aparente** – superfície ventral
- IV – ligação com a superfície dorsal do tronco encefálico



(Prada, 2014)

Tronco encefálico

- III e IV – mesencéfalo
- V, VI, VII, VIII – ponte
- IX, X, XI, XII - bulbo



Mesencéfalo

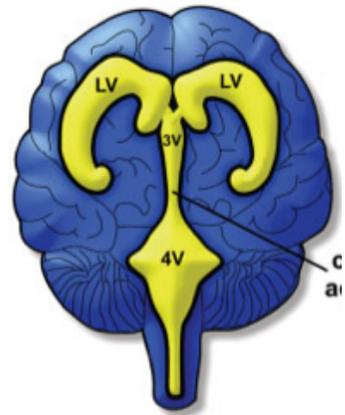
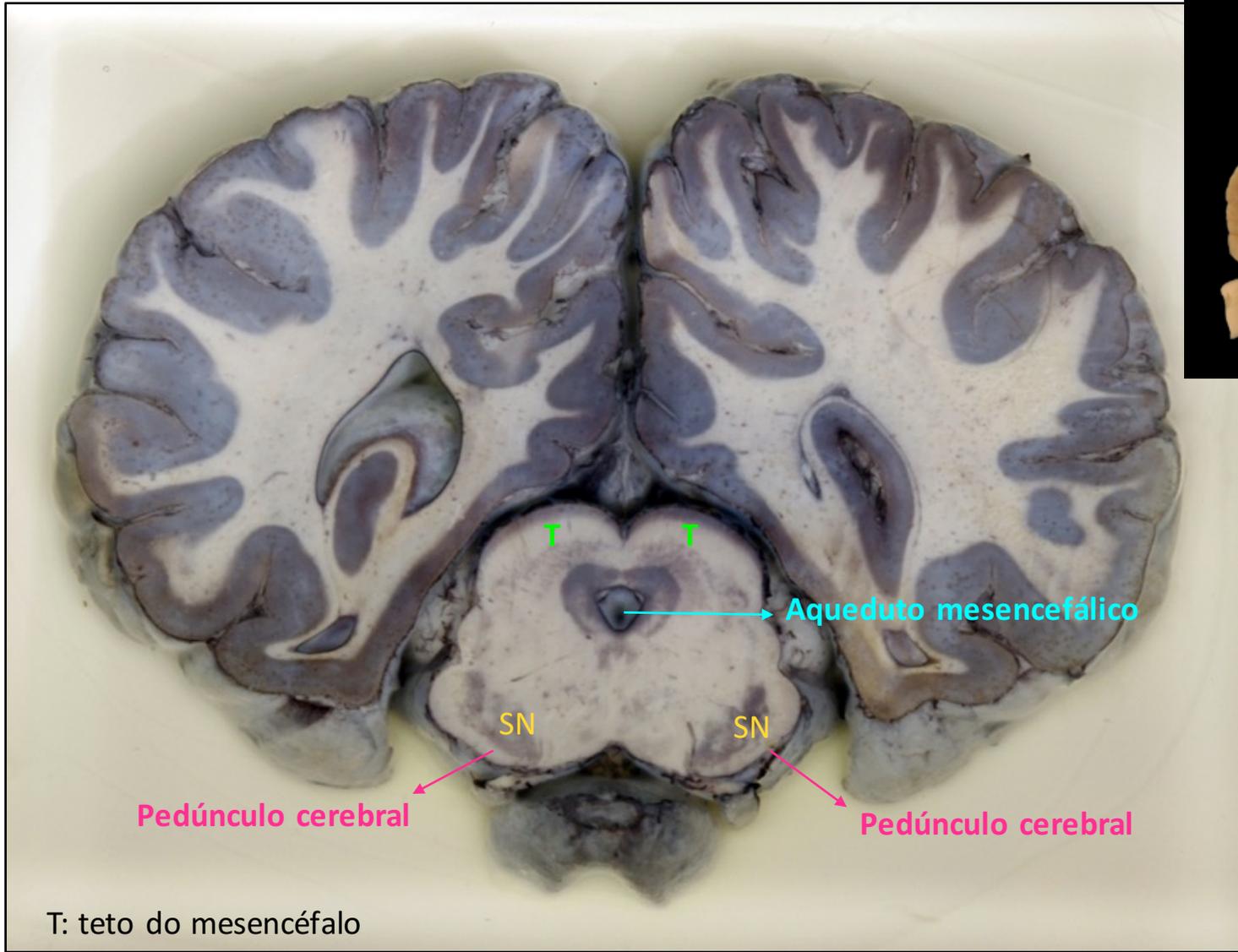
- É constituído pelo teto mesencefálico
- Pedúnculos cerebrais
- Está relacionado coordenação motora



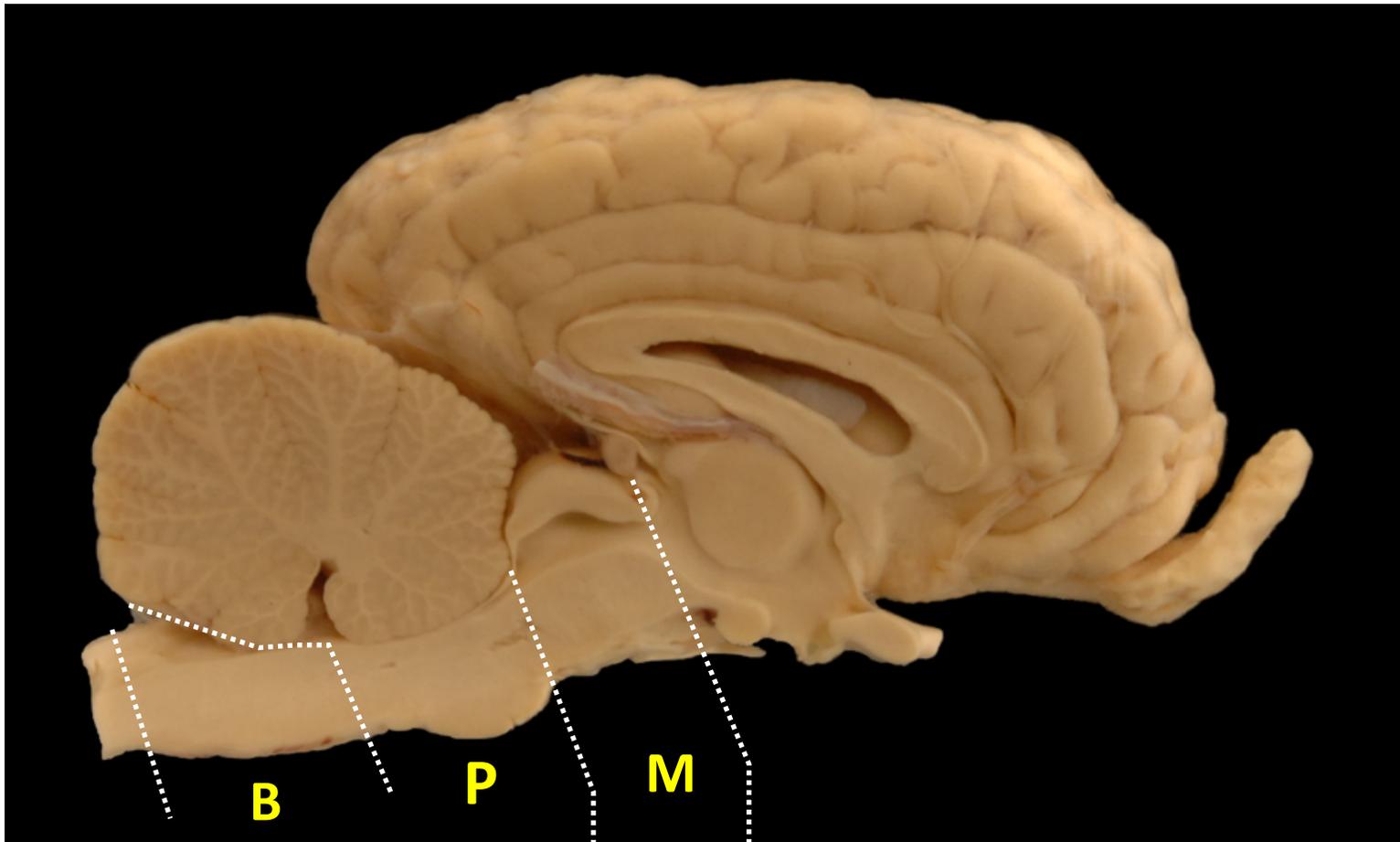
Vista ventral



Vista dorsal

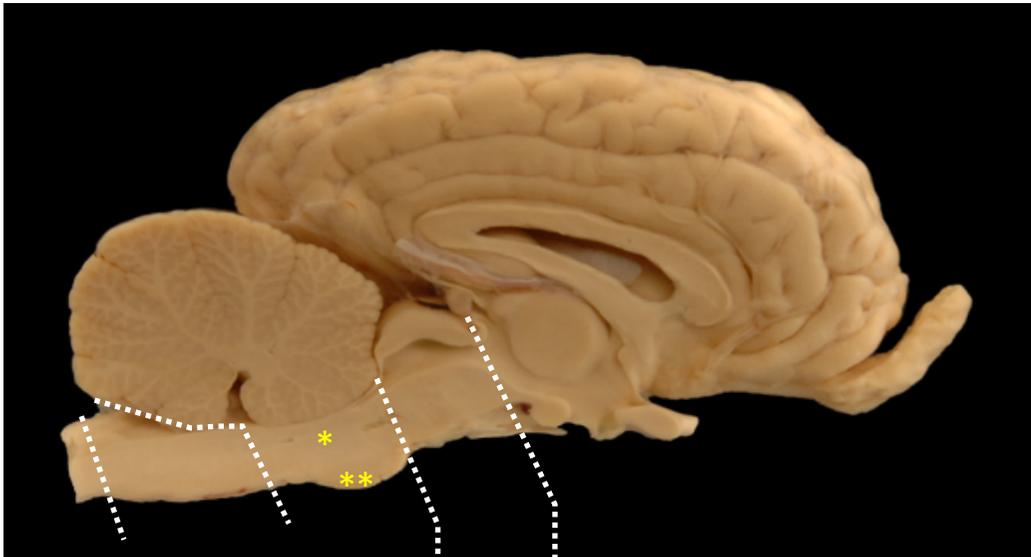


Ponte

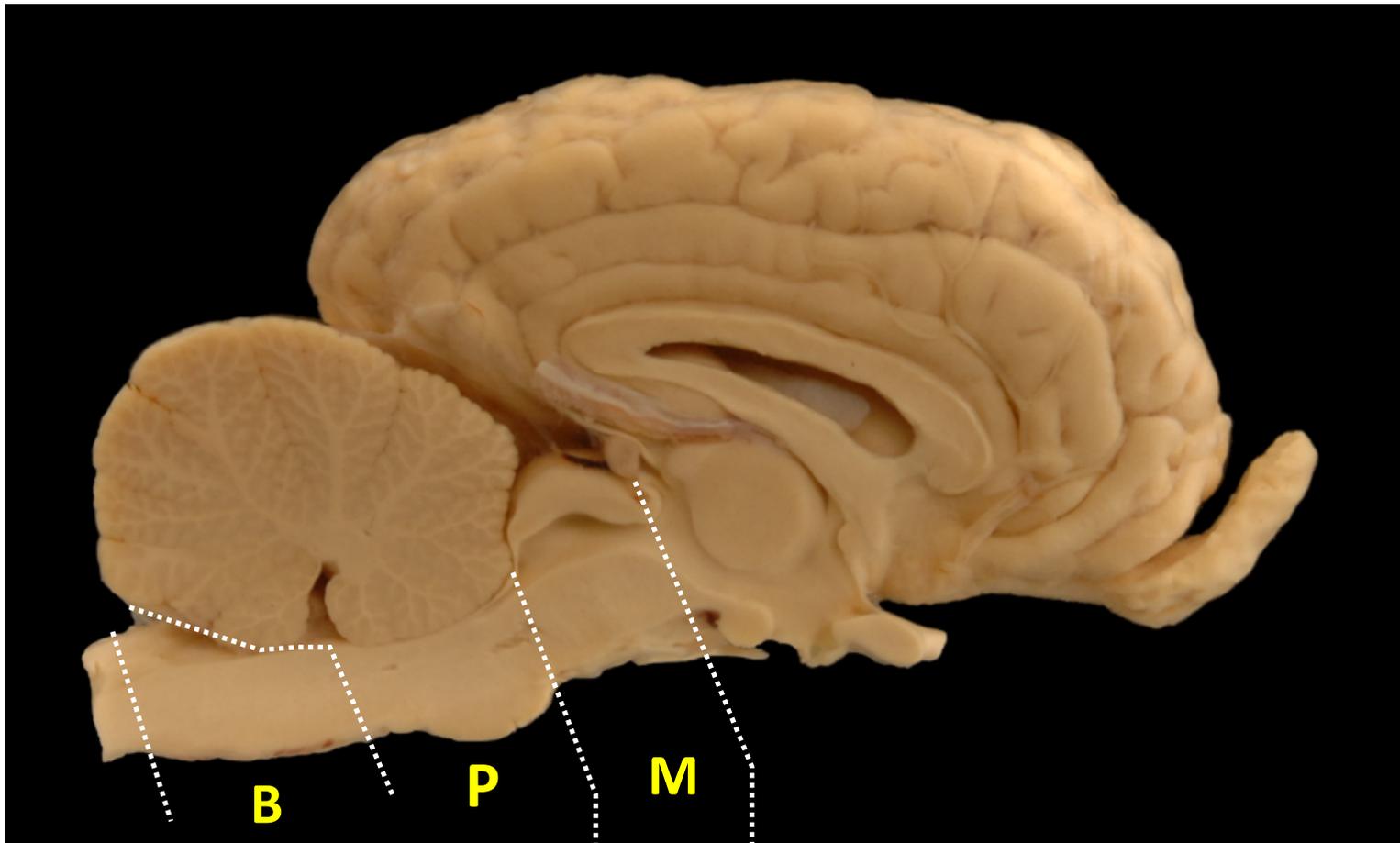


Ponte

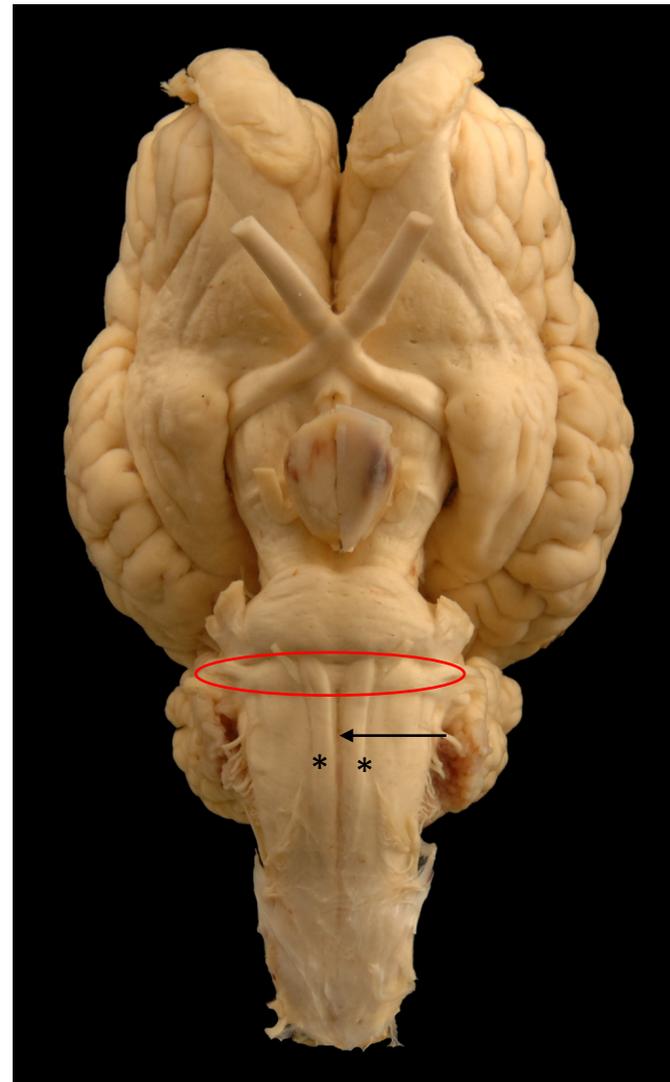
- Formada por uma **parte dorsal**, o **tegmento**, e uma **parte ventral** a **base**



Bulbo (medula oblonga)



Bulbo (medula oblonga)



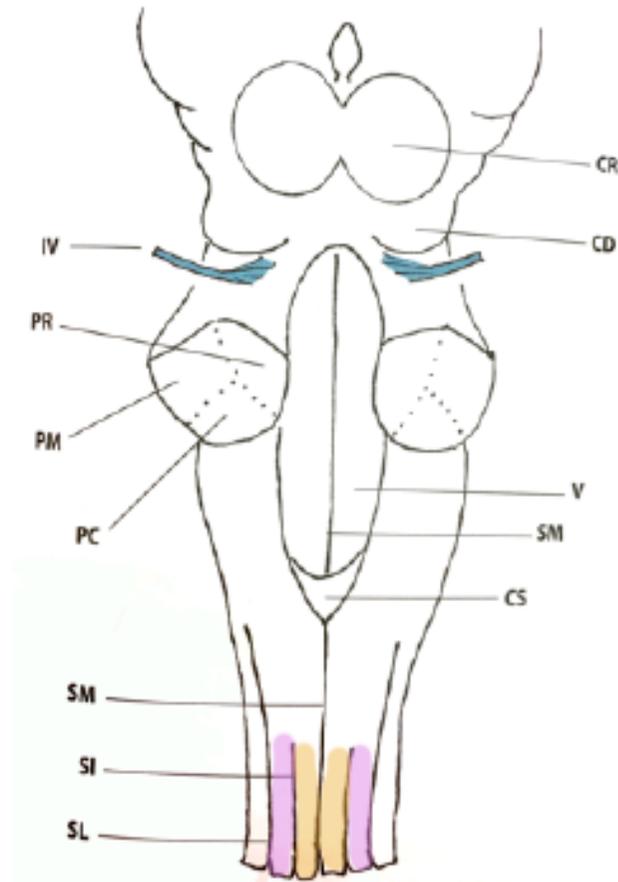
* Pirâmides

Bulbo (medula oblonga)

- Porção aberta (caudal ao quarto ventrículo)
- Porção fechada (rostral à medula espinal)
- Pirâmides (vista ventral) (**)
- Centro respiratório
- Centro vasomotor
- Centro do vômito



Bulbo (medula oblonga)



-  Fascículo grácil
-  Fascículo cuneiforme

(Prada, 2014)

Bulbo (medula oblonga)

Medula espinal

Dorsal

Ventral

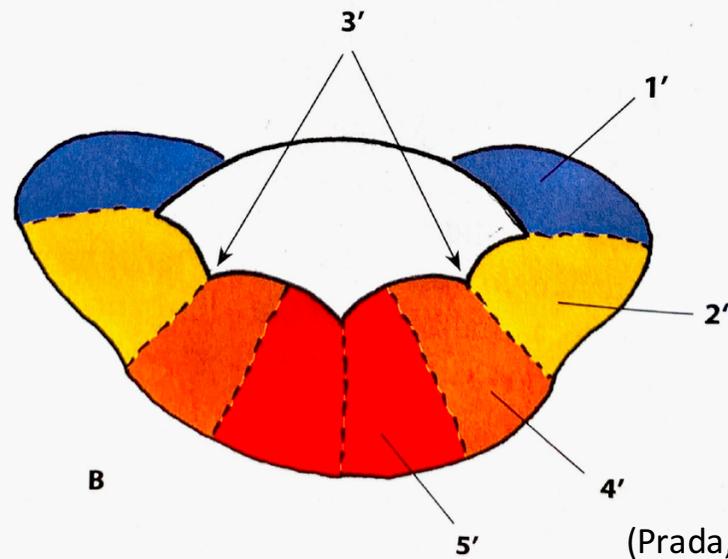
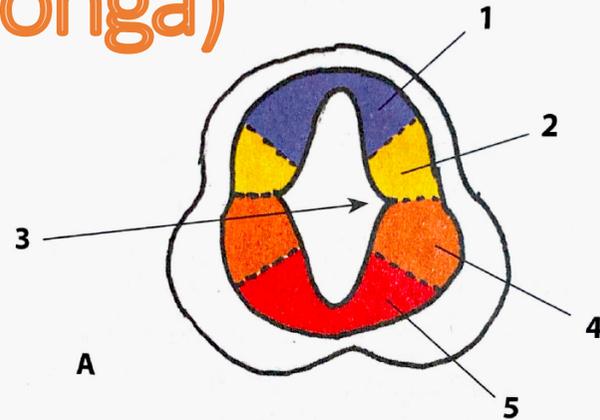


Lateral

Medial

Bulbo

-  Região sensitiva somática
-  Região sensitiva visceral
-  Região motora visceral
-  Região motora somática



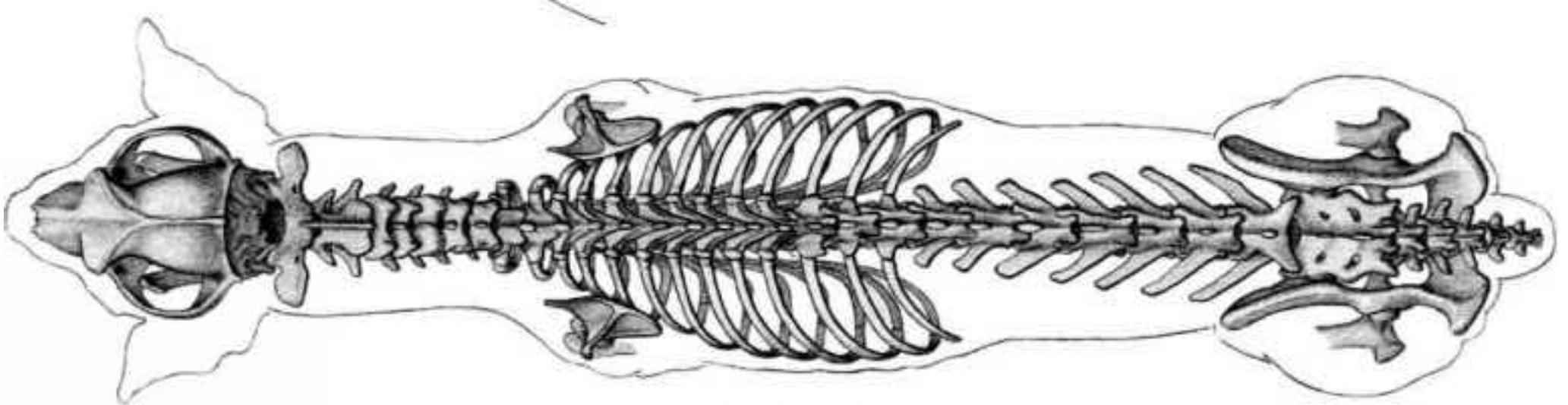
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Medula espinal

Bulbo

Medula espinal



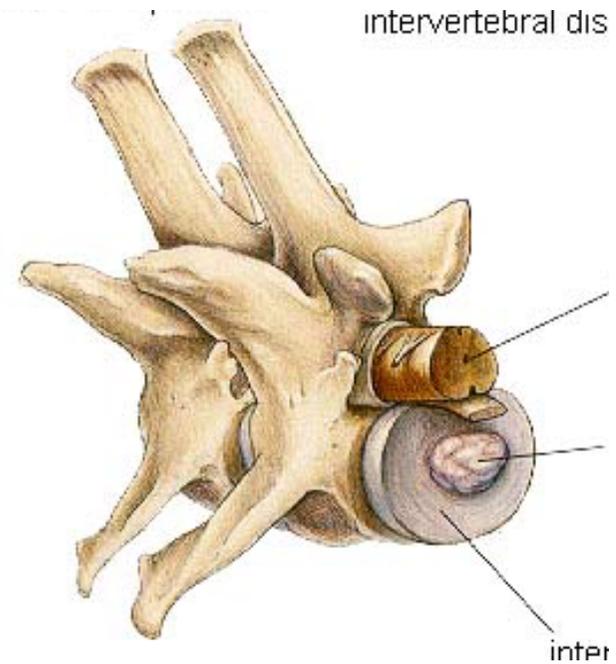
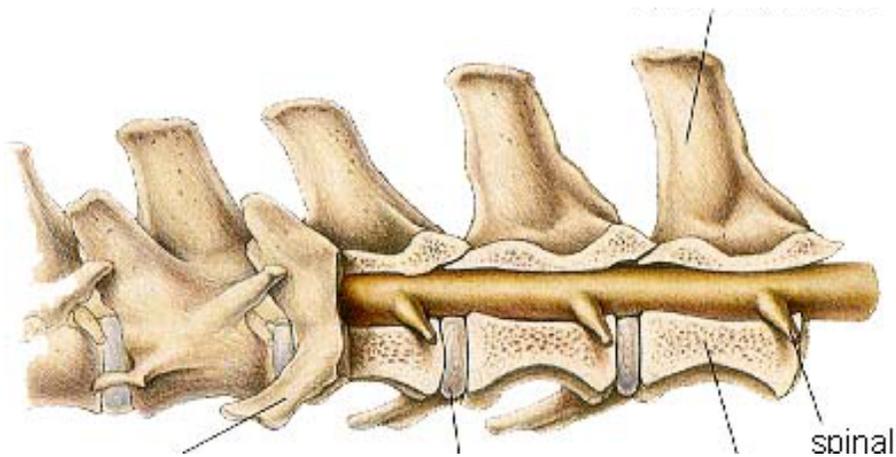


Cavidade craniana

Canal vertebral

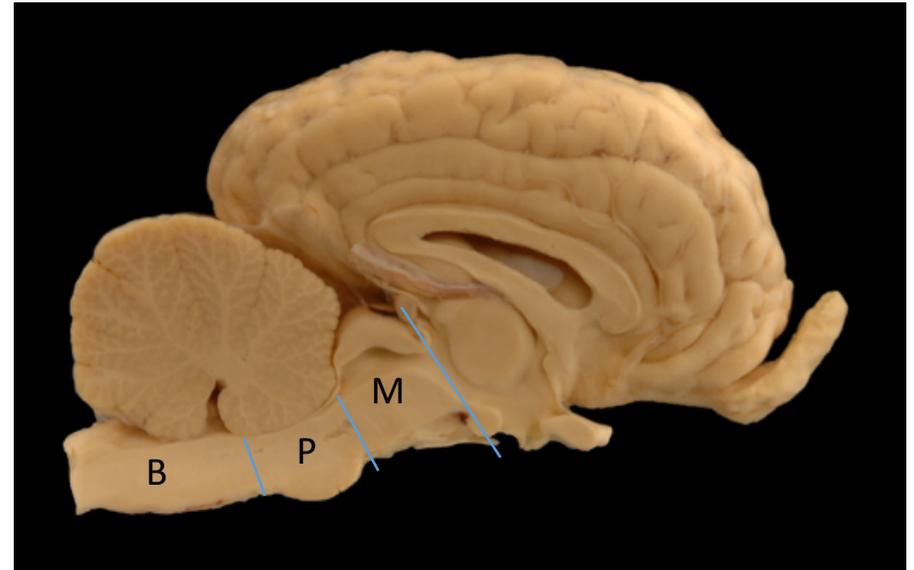
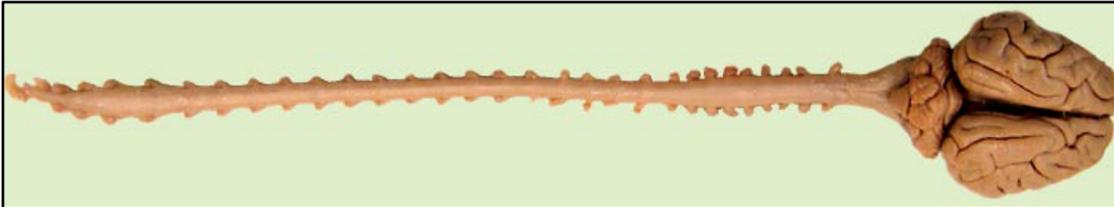
Medula espinal

- Medula - do latim *Medulla*: miolo
- Alojada dentro do canal vertebral



Limites da medula espinal

- ROSTRAL:
 - Bulbo



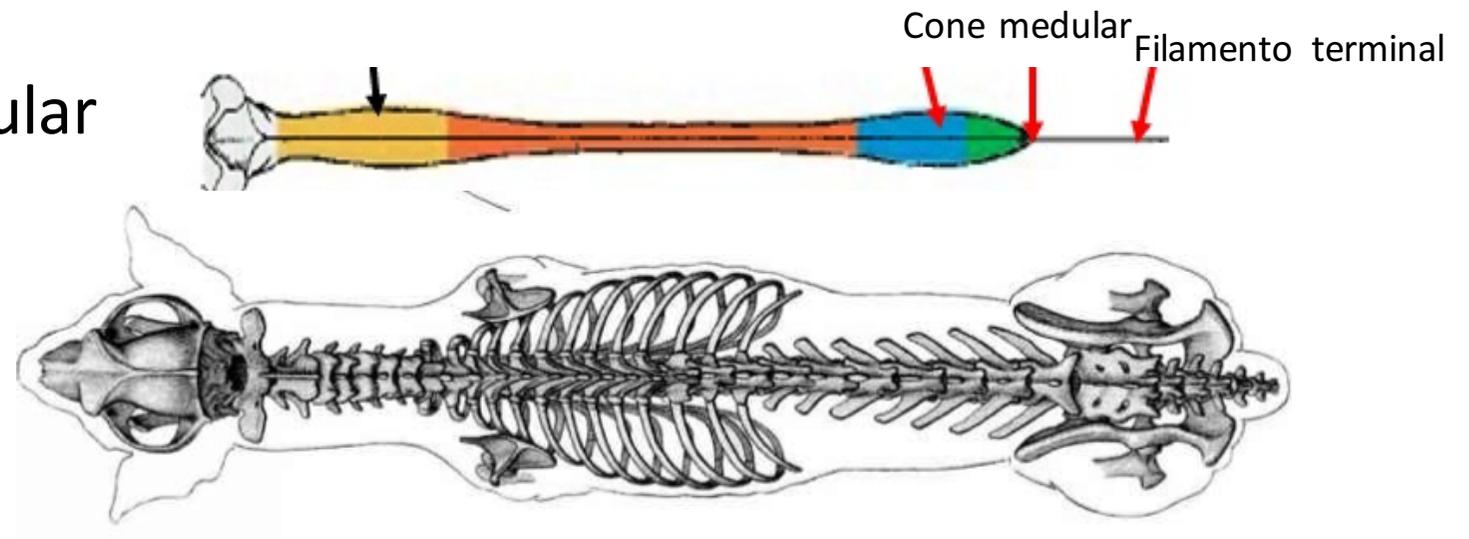
TRONCO ENCEFÁLICO

- Mesencéfalo
- Ponte
- **Bulbo (medula oblonga)**

Limites da medula espinal

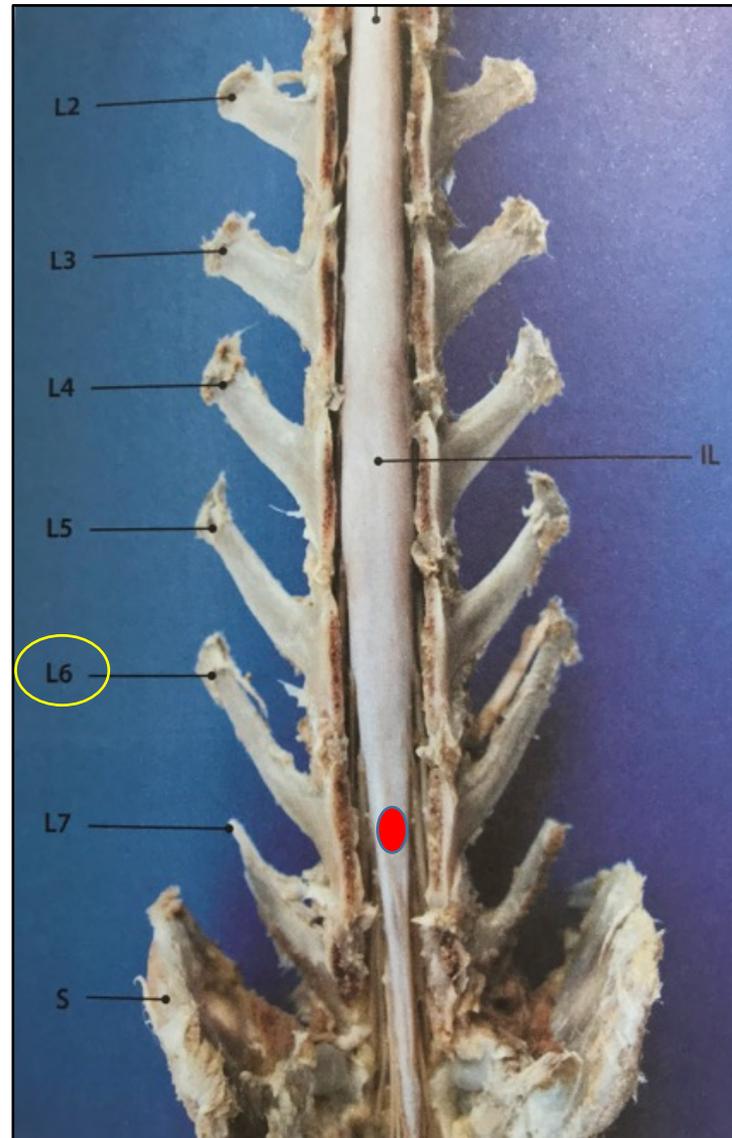
- CAUDAL

- Cone medular



CONE MEDULAR

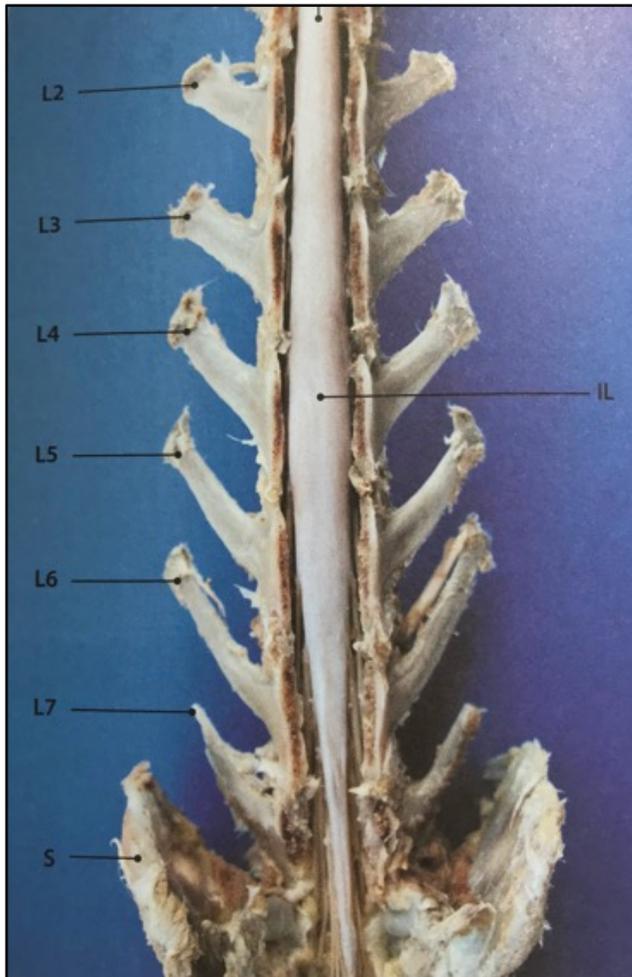
- **Equinos e suínos**
 - S1-S2
- **Bovinos**
 - L4-L5
- **Cães**
 - L6



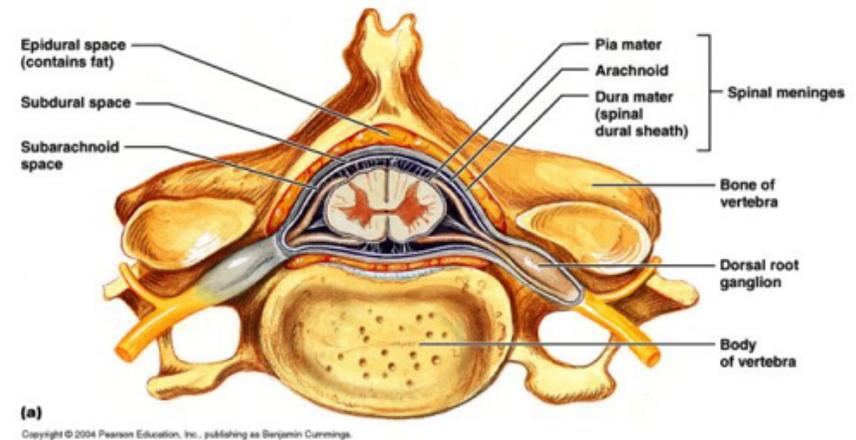
CÃO

MEDULA

- **Não** preenche todo o canal vertebral – **comprimento**
- **Não** preenche todo o diâmetro do canal vertebral - **largura**



Prada, 2014

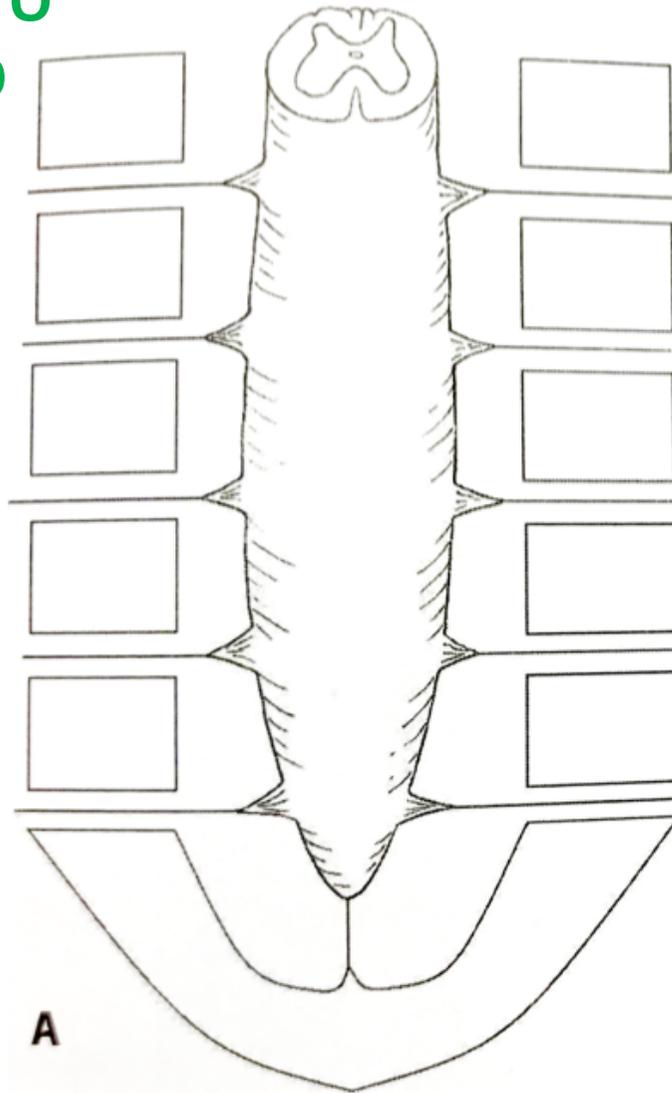


(a)

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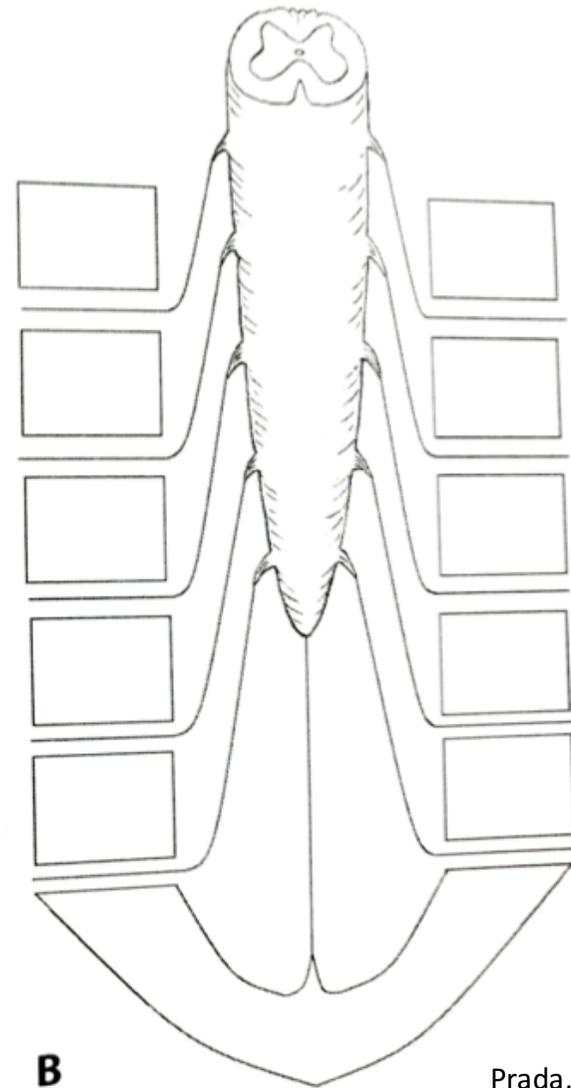
DESENVOLVIMENTO EMBRIOLÓGICO

Estágio inicial



A

Estágio final

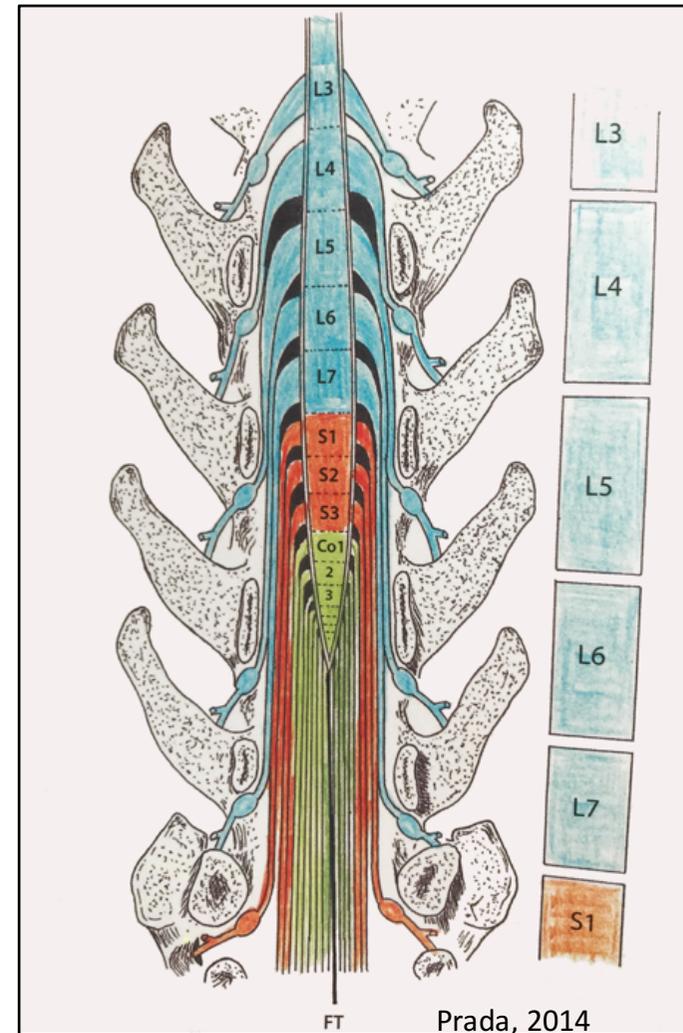


B

Prada, 2014

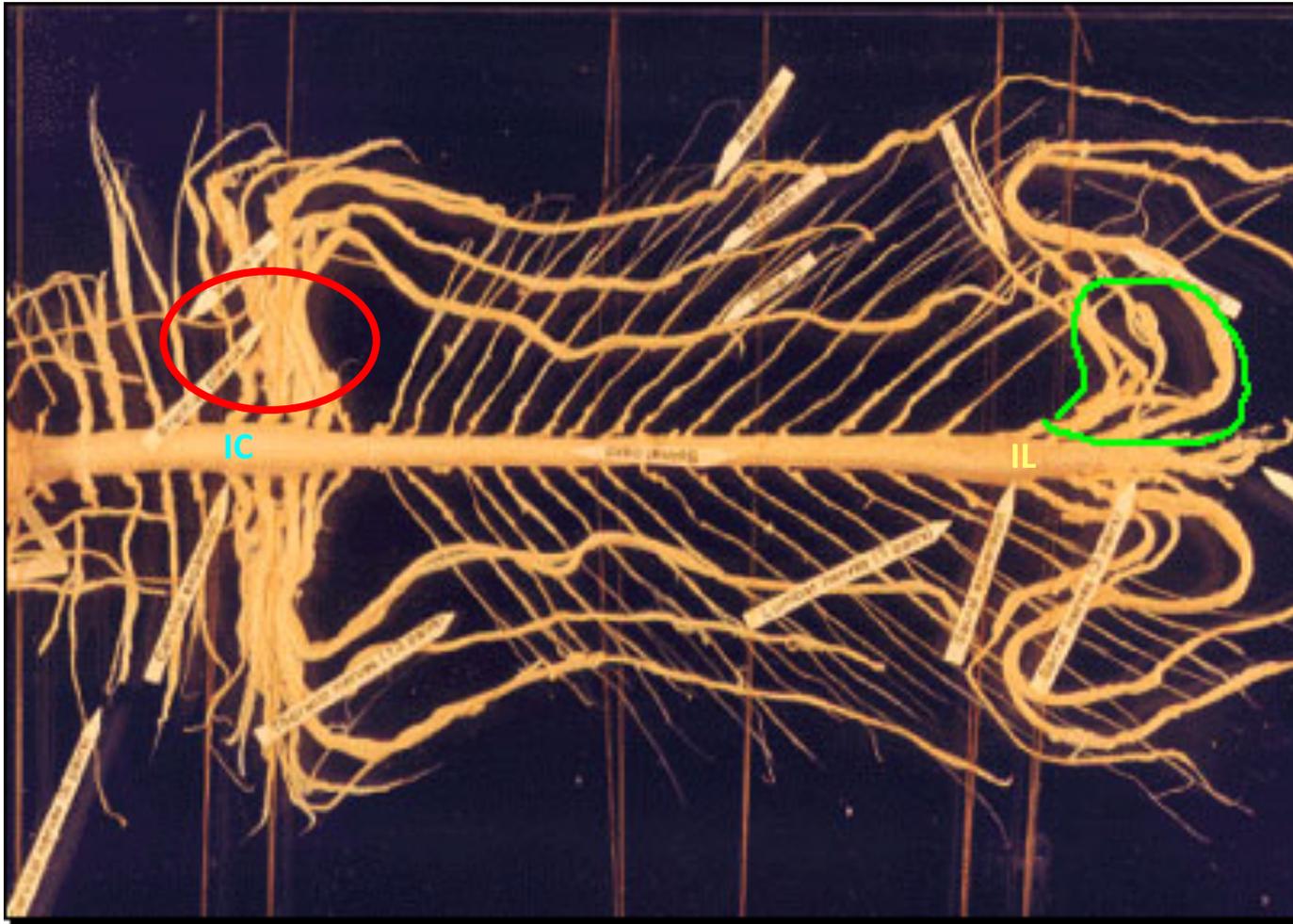
CAUDA EQUINA

- Conjunto de radículas dos últimos **nervos lombares**, **sacrais**, **coccígeos** dispostos ao redor do **cone medular** e do **filamento terminal**



Forma e intumescências



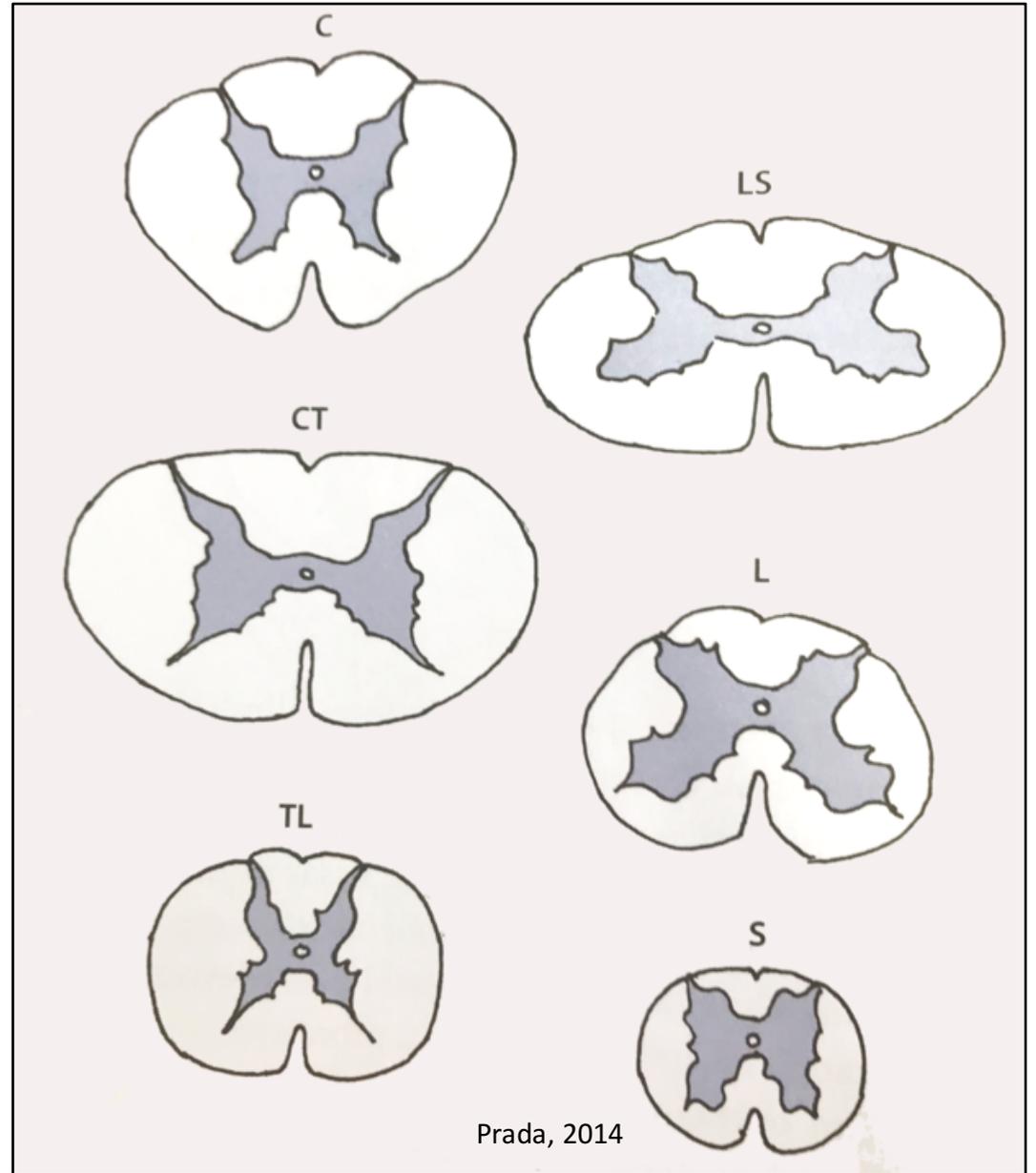
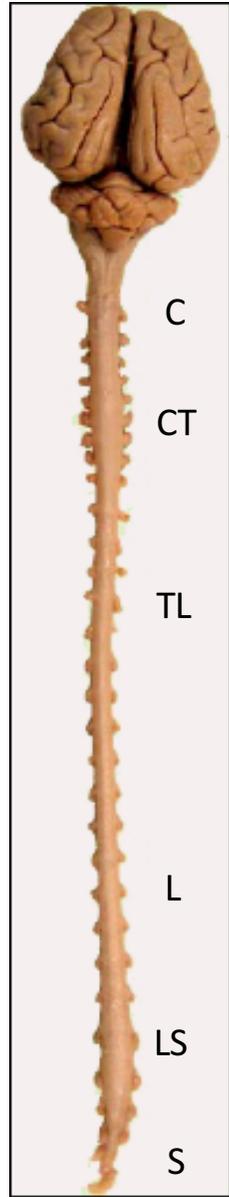
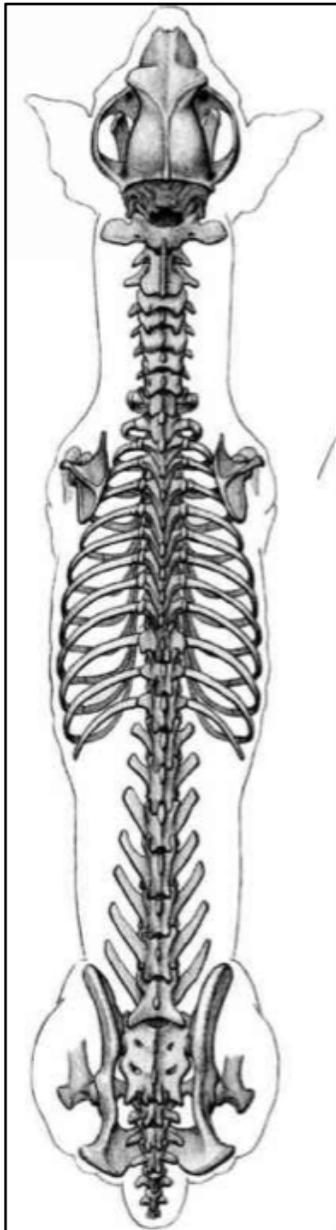


Intumescência cervical (IC)

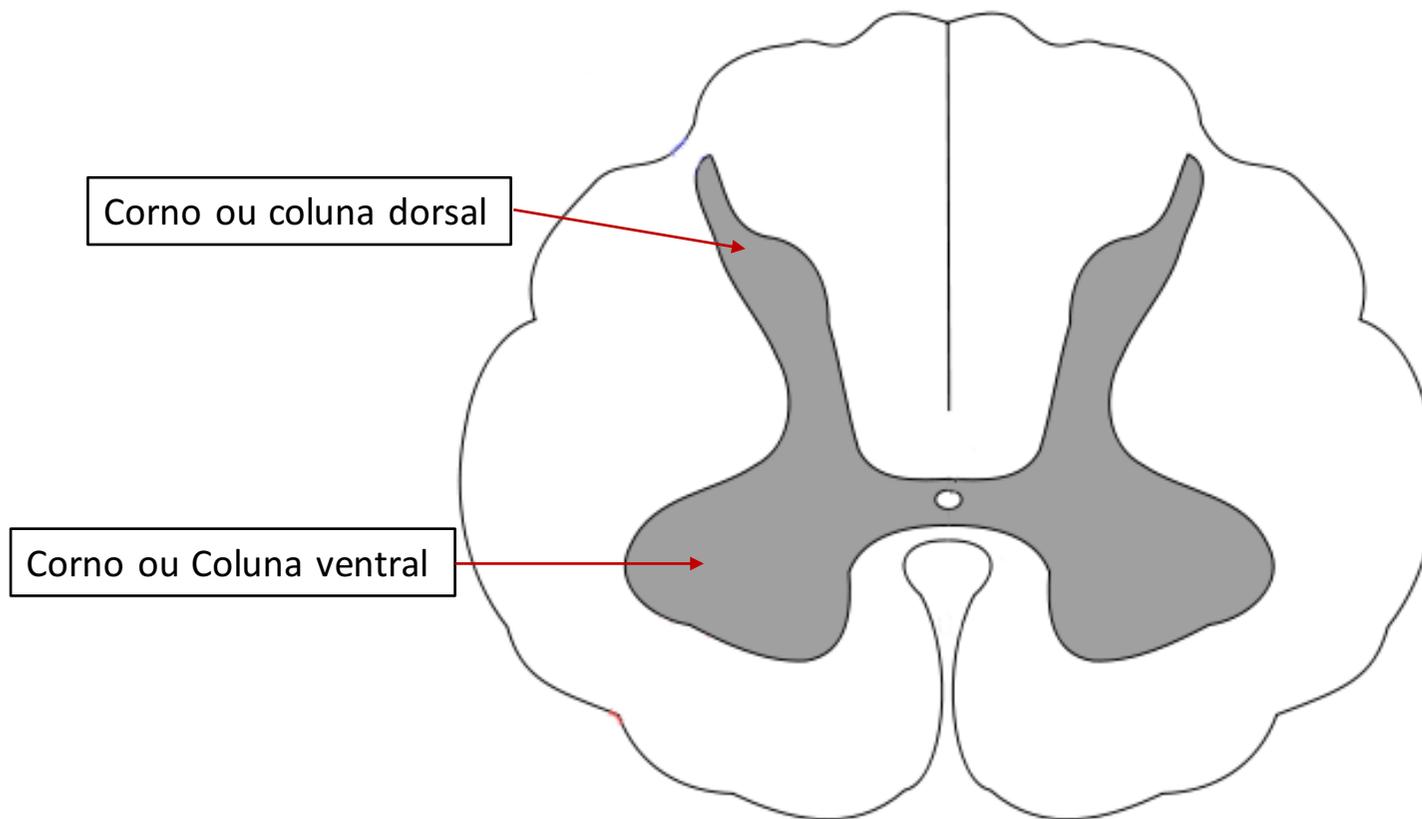
Intumescência lombar (IL)

Plexo braquial

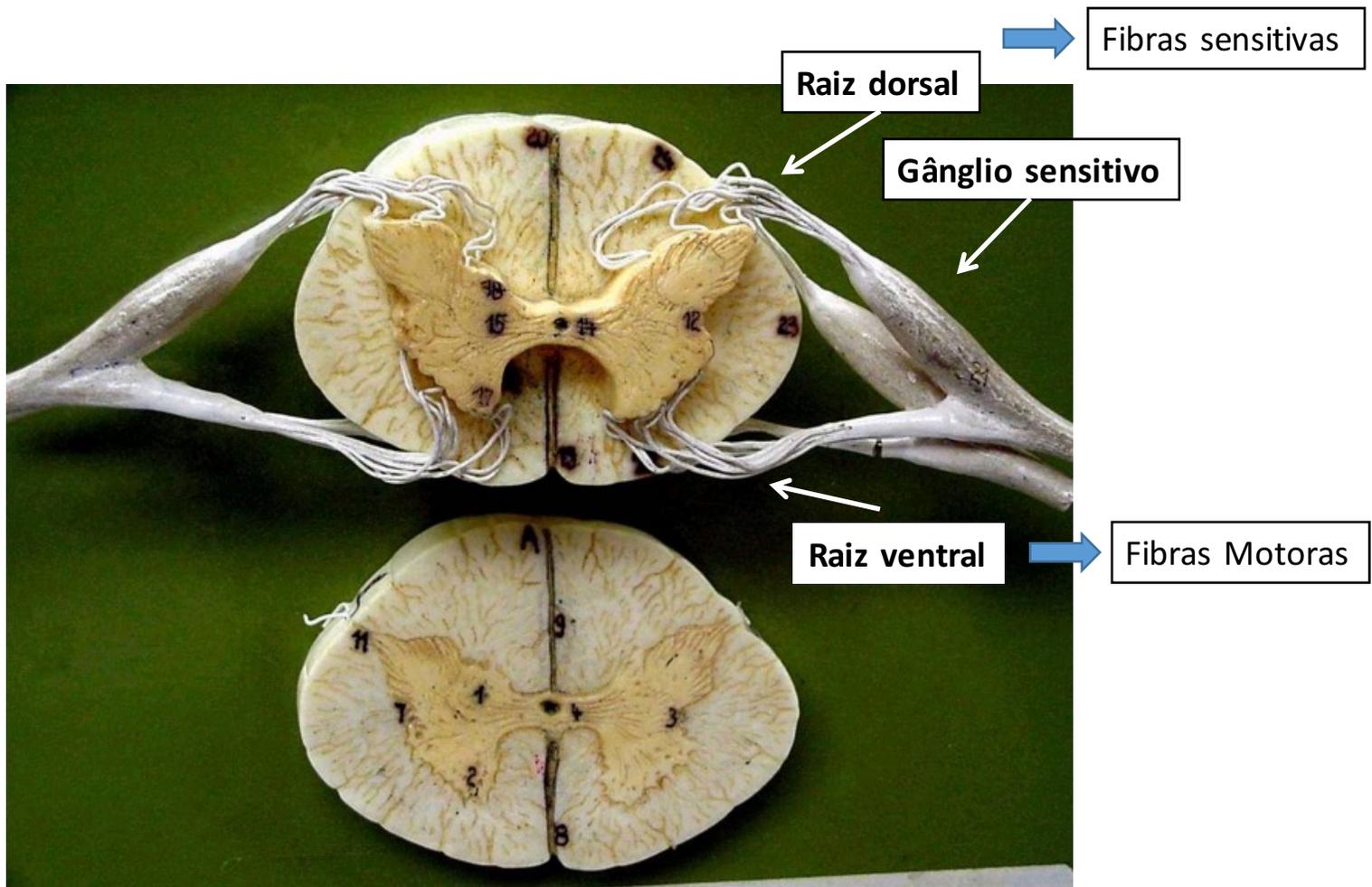
Plexo lombossacral



Medula espinal



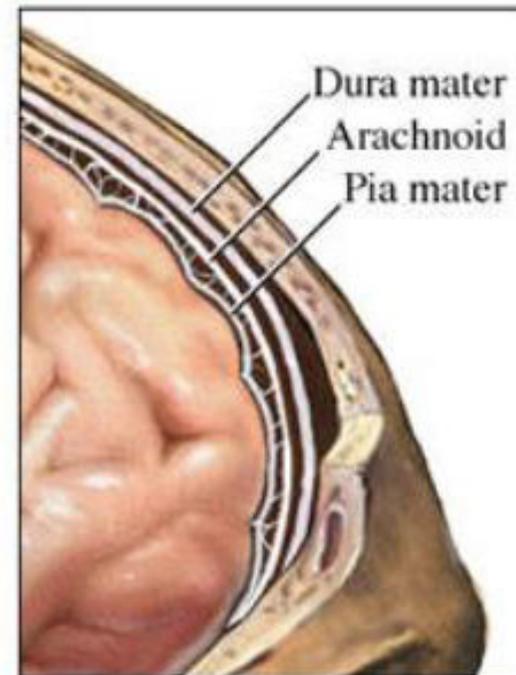
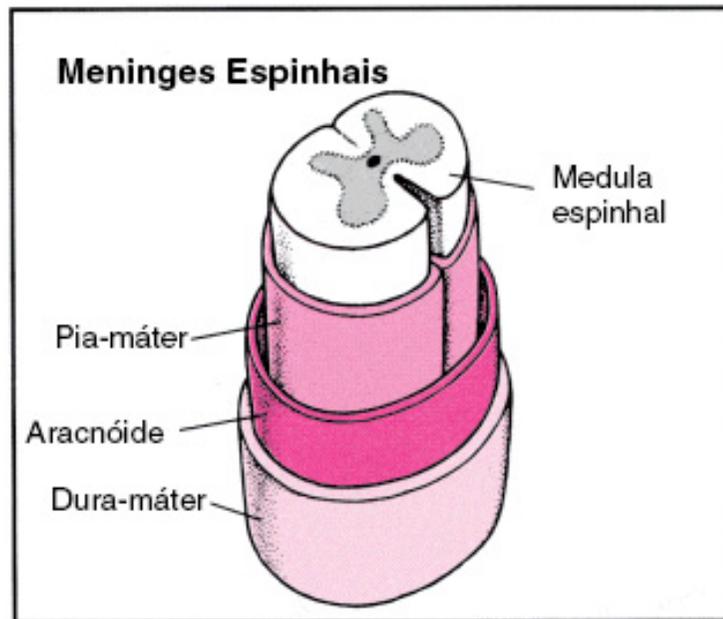
H



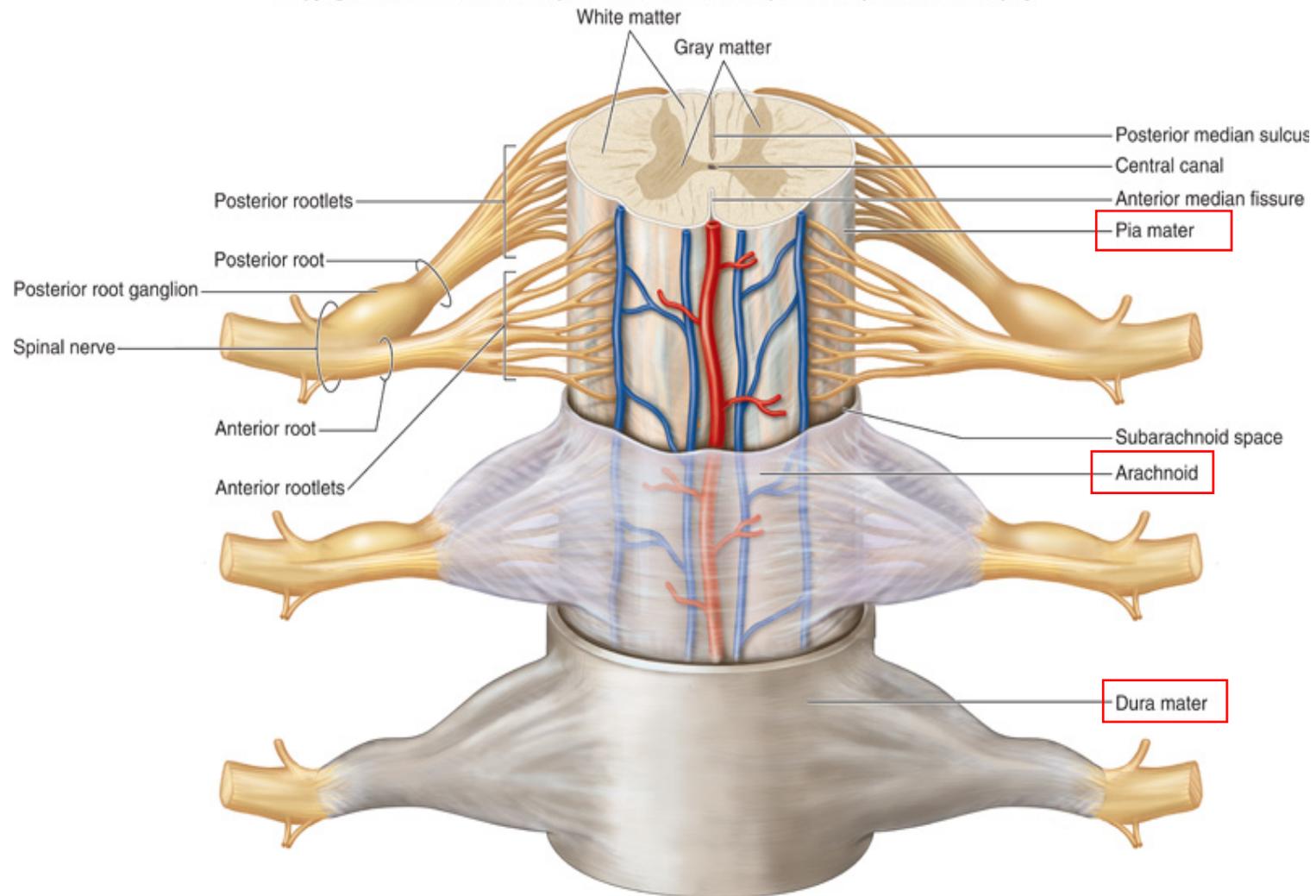
MEMBRANAS DO SISTEMA NERVOSO CENTRAL

Meninges

Meninges: são as membranas do encéfalo e medula espinal



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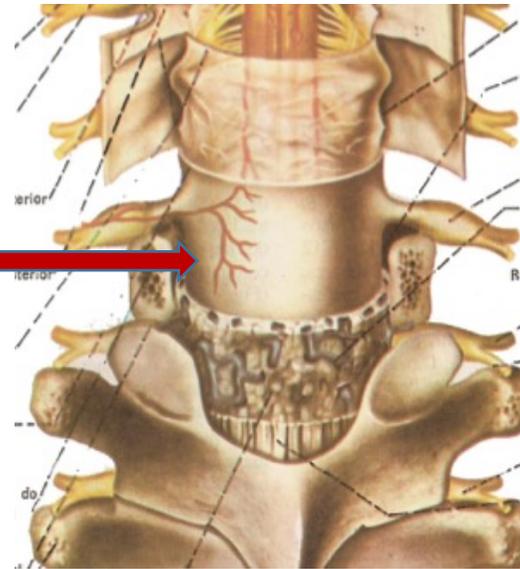


(b) Anterior view

Dura-máter

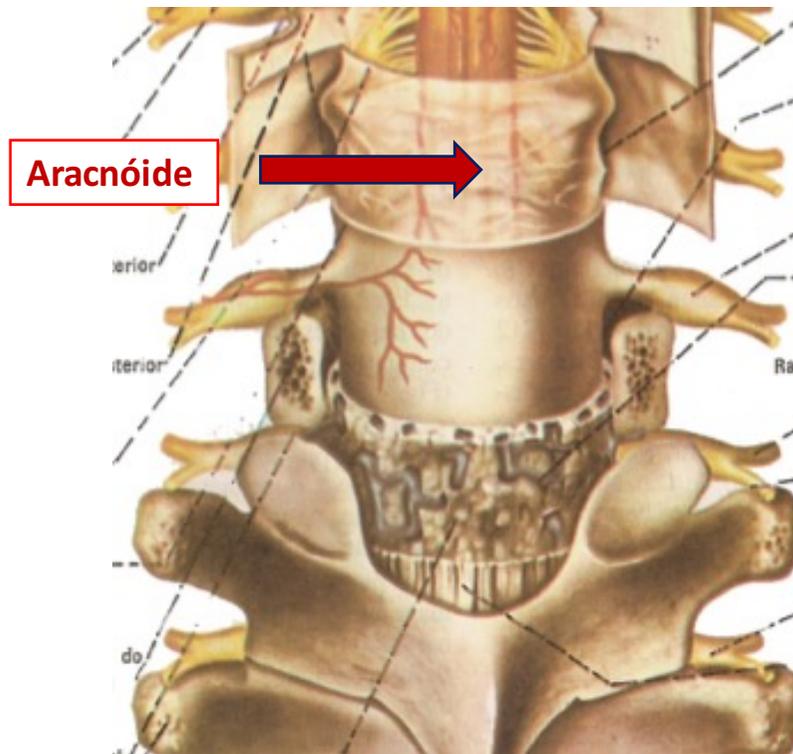
- É a meninge mais externa e muito espessa. Devido a isso, é conhecida como **Paquimeninge**, por ser **muito resistente** e **rica em vasos e nervos**.

Dura-máter



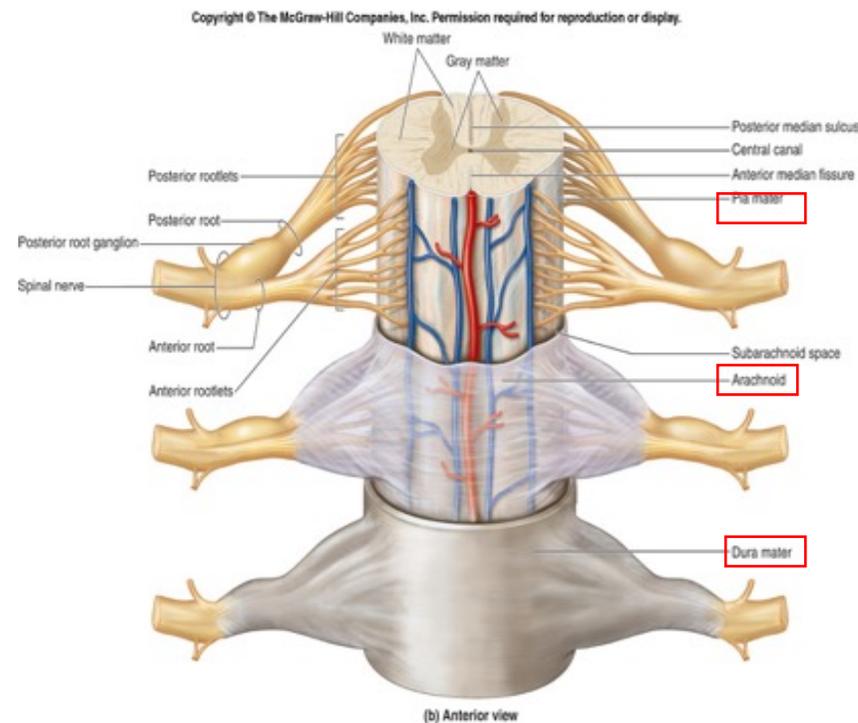
Aracnóide

- Textura delicada e não contém vasos e nervos.

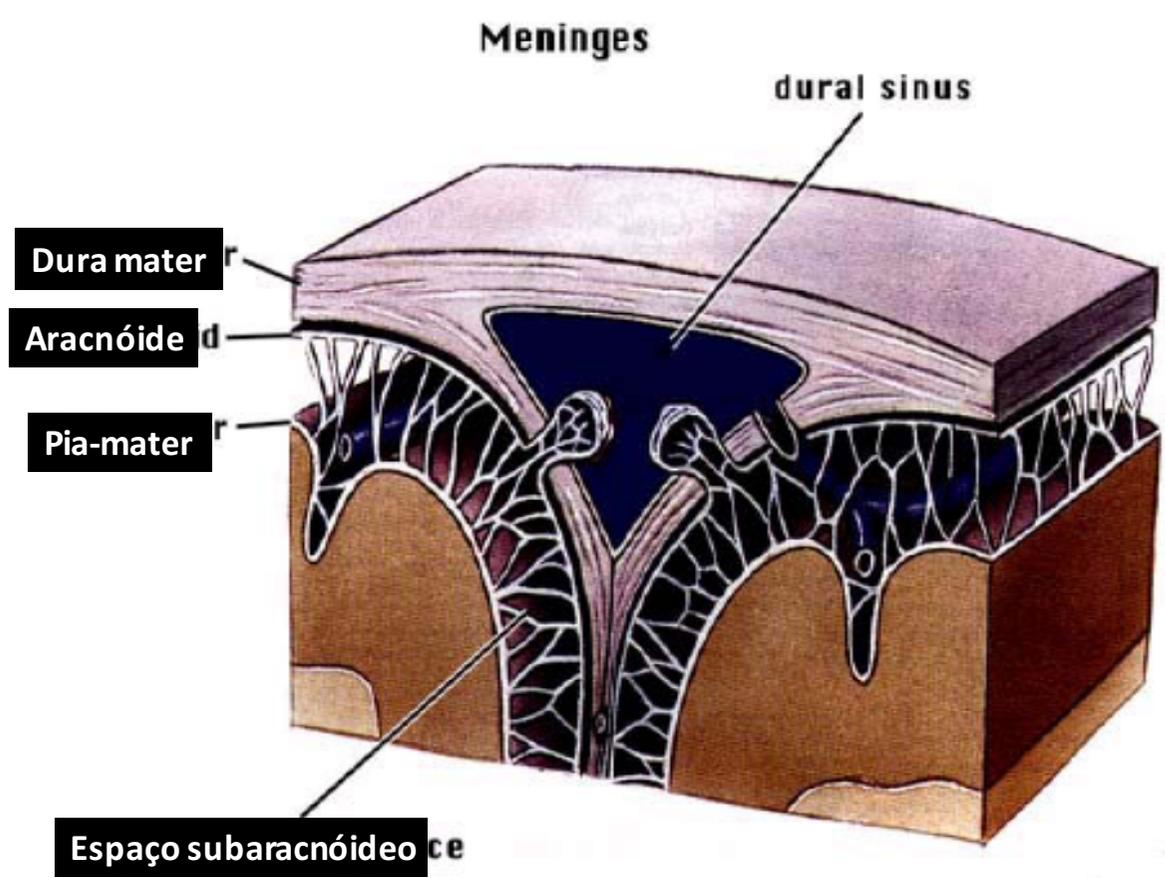


Pia-máter

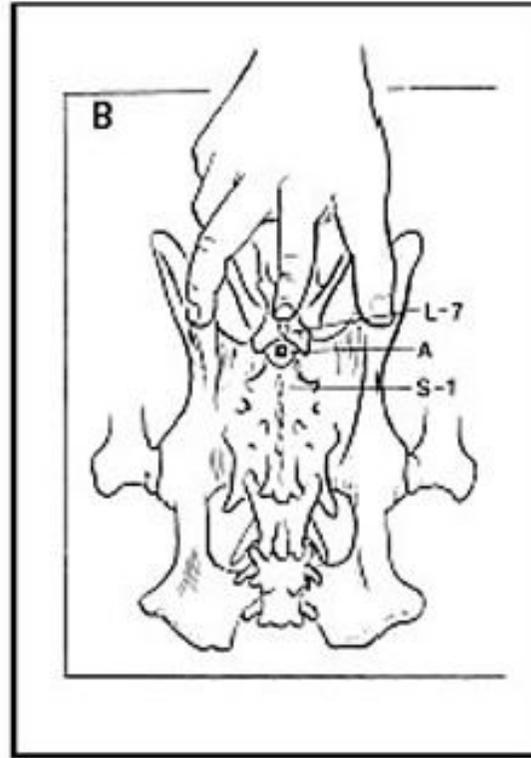
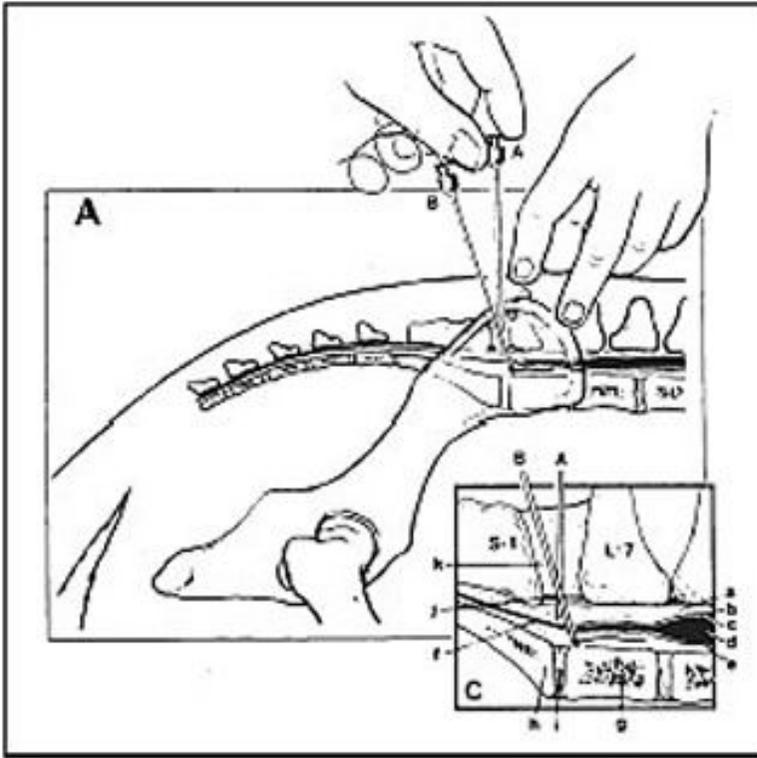
- Delicada e **rica em vasos e nervos**; se justapõe ao SN.



- Espaço epidural
 - Espaço subdural
 - Espaço subaracnóideo
- Canal vertebral
 - Dura-máter
 - Aracnóide
 - Pia-máter



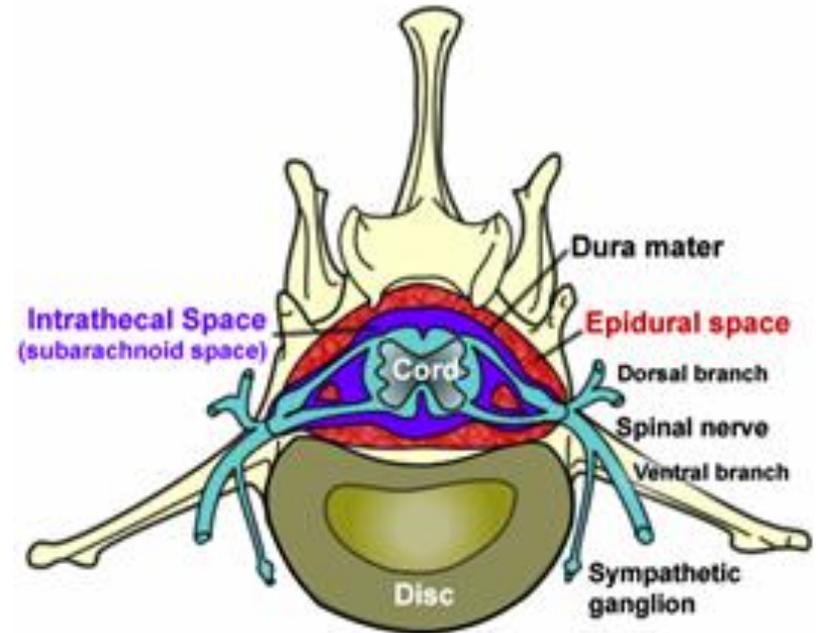
Modified from Prentice Hall: Martini/ Timmons 1997



Espaço epidural lombossacral

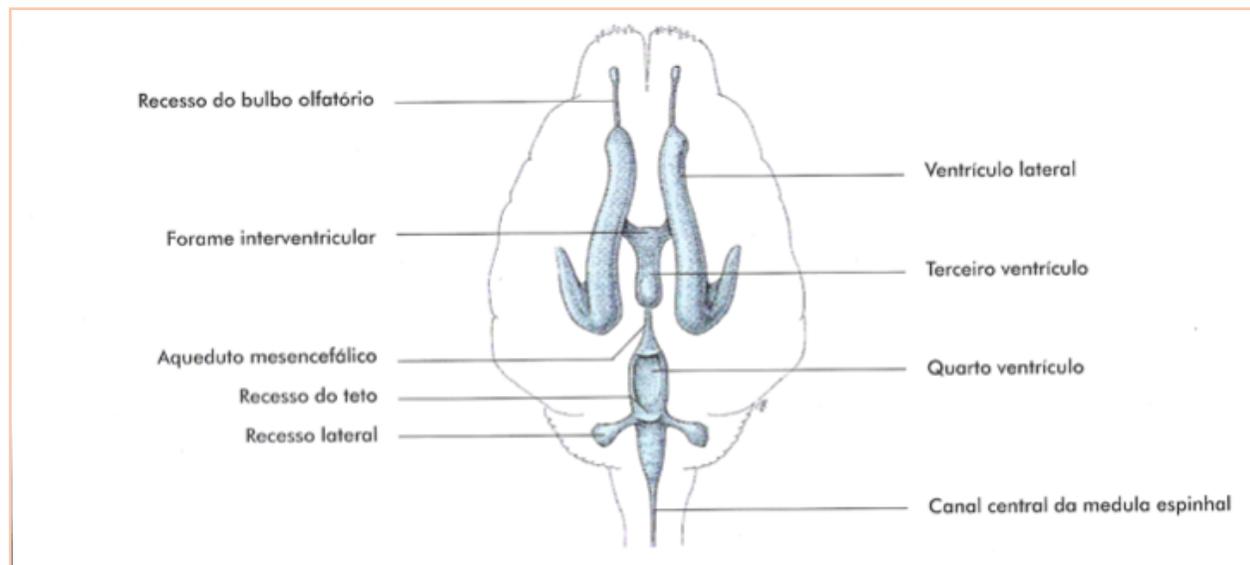


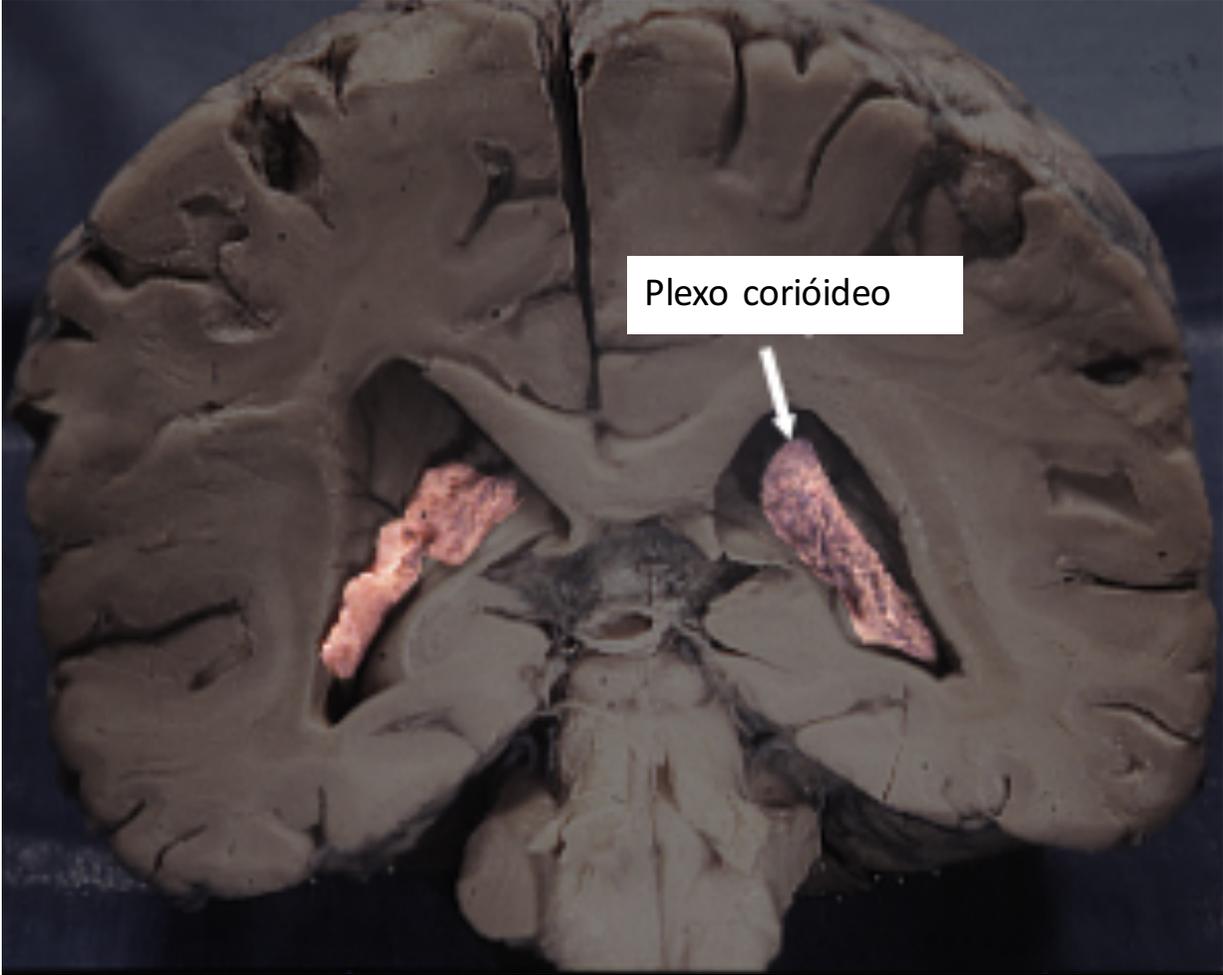
Bloqueio anestésico



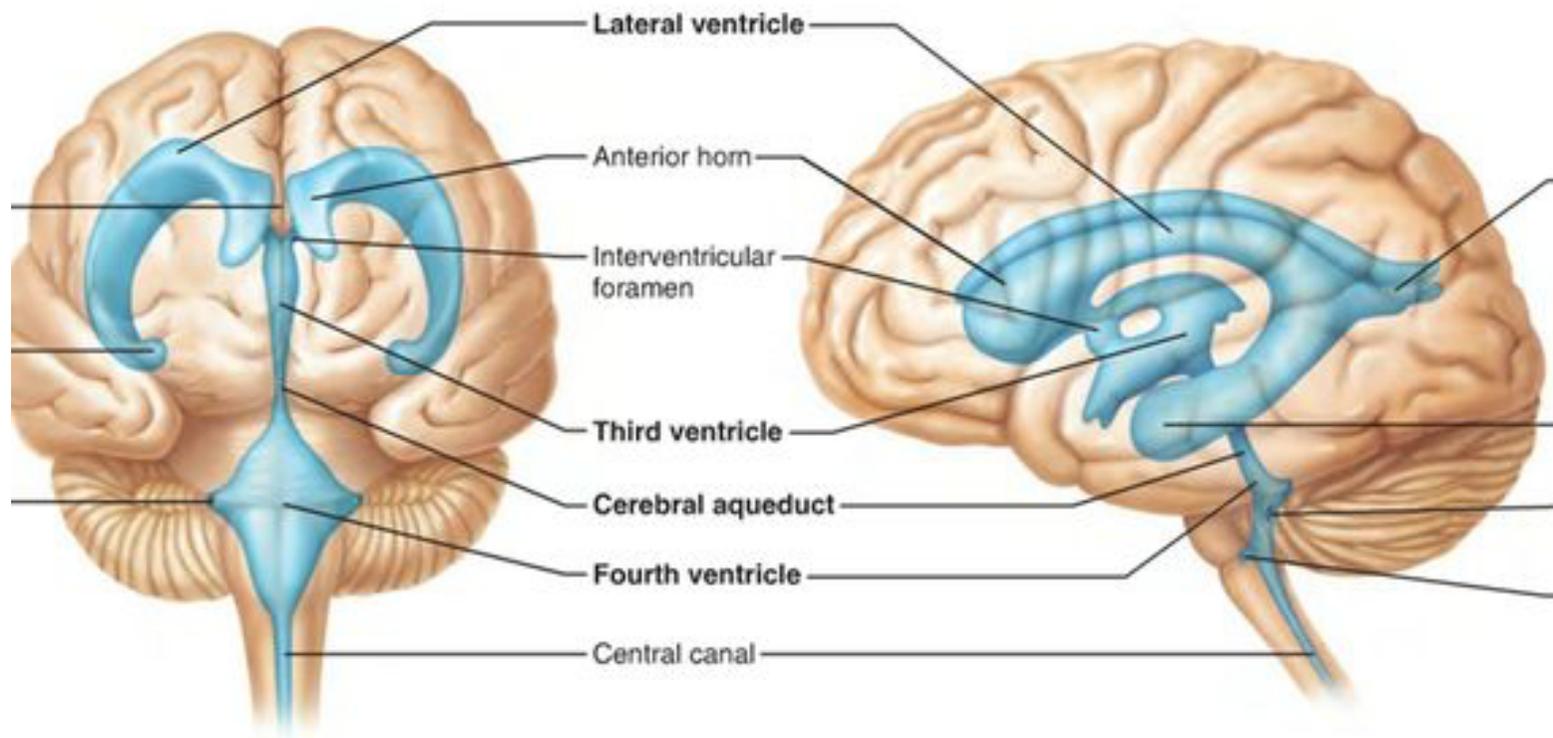
Líquido cerebroespinal (liquor)

- Líquido cerebroespinal
- É um fluido incolor que ocupa o espaço subaracnóideo e as cavidades dos ventrículos
- Função: proteção mecânica, biológica, transporta nutrientes e elimina produtos de degradação.
- É produzido continuamente pelo plexo coriáceo.



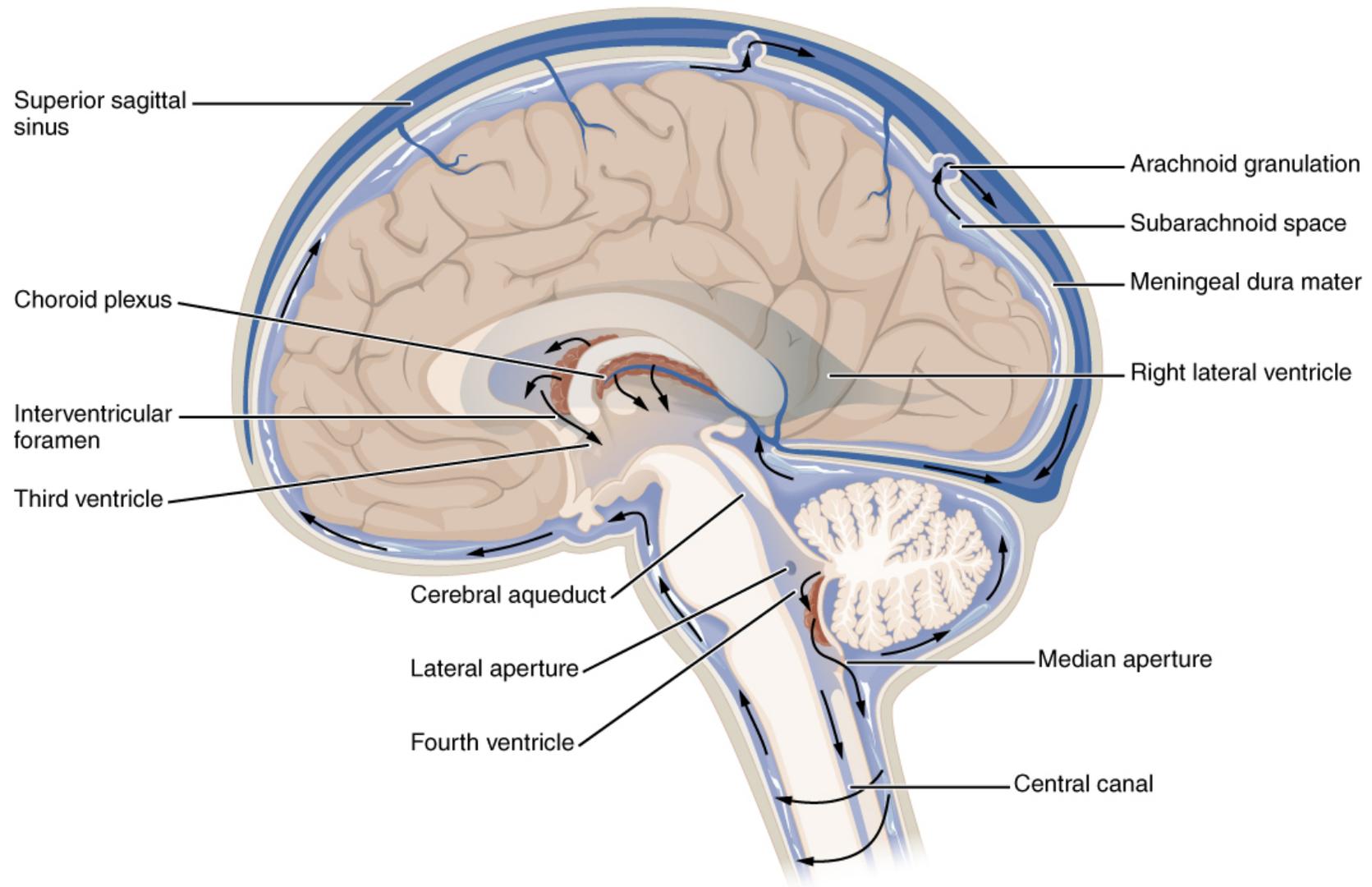


Plexo coriídeo



(a) Anterior view

(b) Left lateral view



Referências

- Prada, Irvênia. Neuroanatomia Funcional em Medicina Veterinária com Correlações Clínicas – Jaboticabal: Terra Molhada, 1 ed, 2014.
- Machado, Angelo. Neuroanatomia Funcional – São Paulo: Atheneu, 2 ed, 2006.