ANATOMI BATANG TUBUH (THRUNCUS)

T I M

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OSTEOLOGI

Vertebra Cervicalis

Vertebra thoracalis

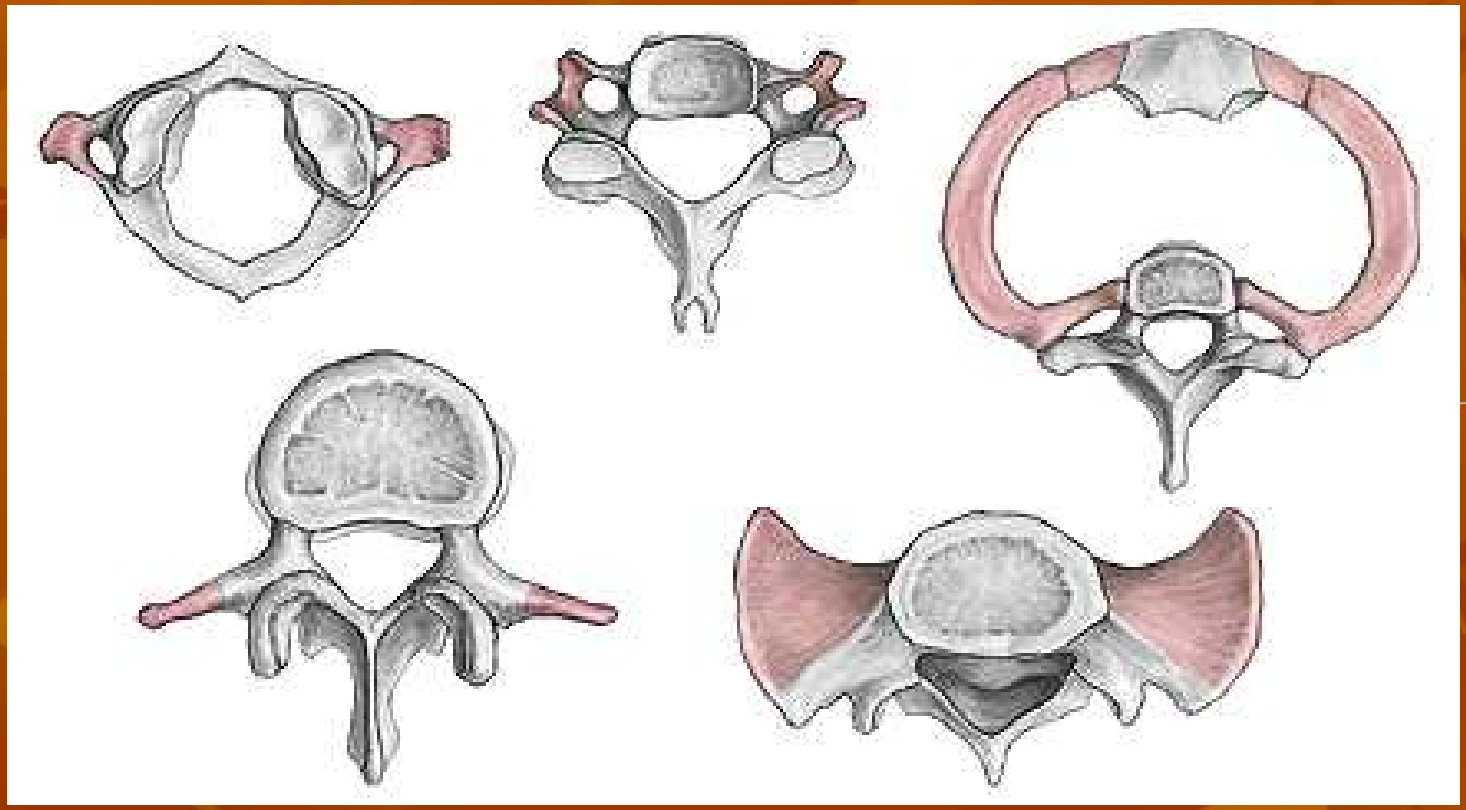
Vertebra lumbalis

Vertebra sacralis (sacrum)

coxigeum

Vertebra cervicalis

Vertebra thoracalis



Vertebra lumbalis

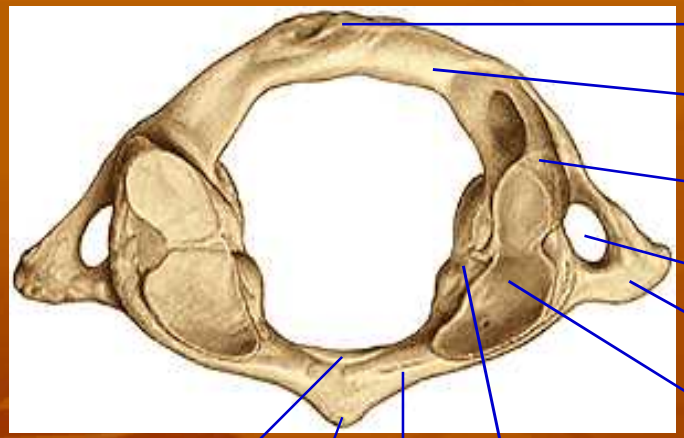
Vertebra sacralis

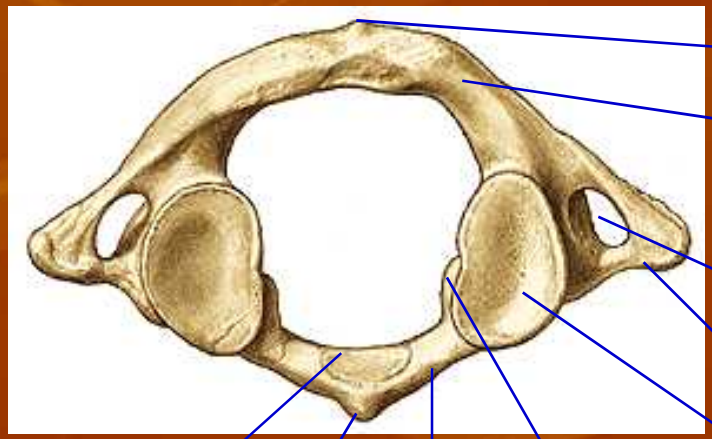
Permukaan atas

Permukaan bawah

V. CERVICALIS I

(atlas)





1. Tuberculum posterius
2. Arcus posterior
3. Sulcus arteria vertebralis
4. Fovea articularis superior
5. Fovea articularis inferior

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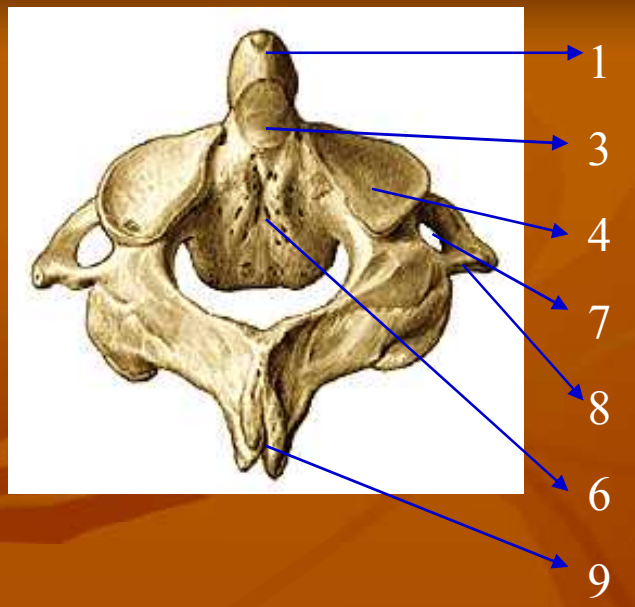
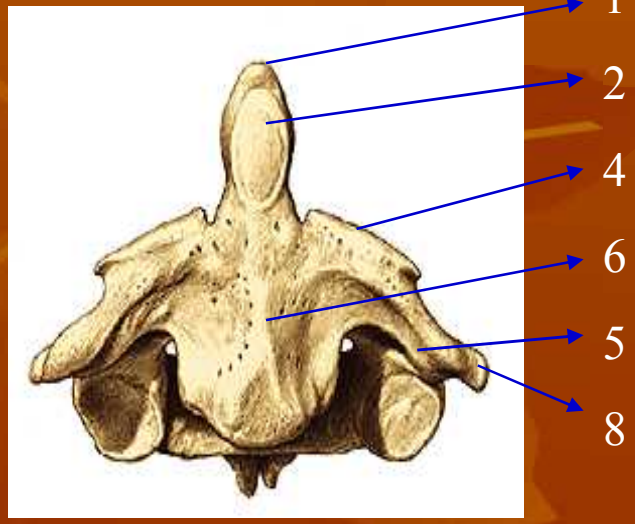
6. Foramen transversarium
7. Procesus transversus
8. Massa lateralis
9. Arcus anterior
10. Fovea dentis
11. Tuberculum anterius

V. CERVICALIS II

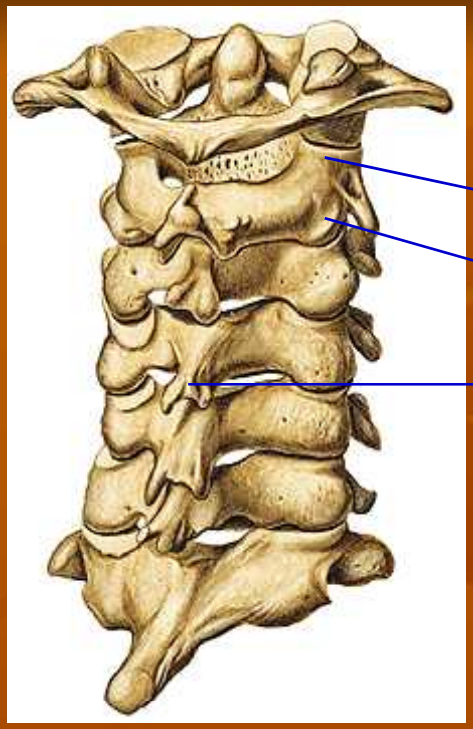
(axis/epistropheus)



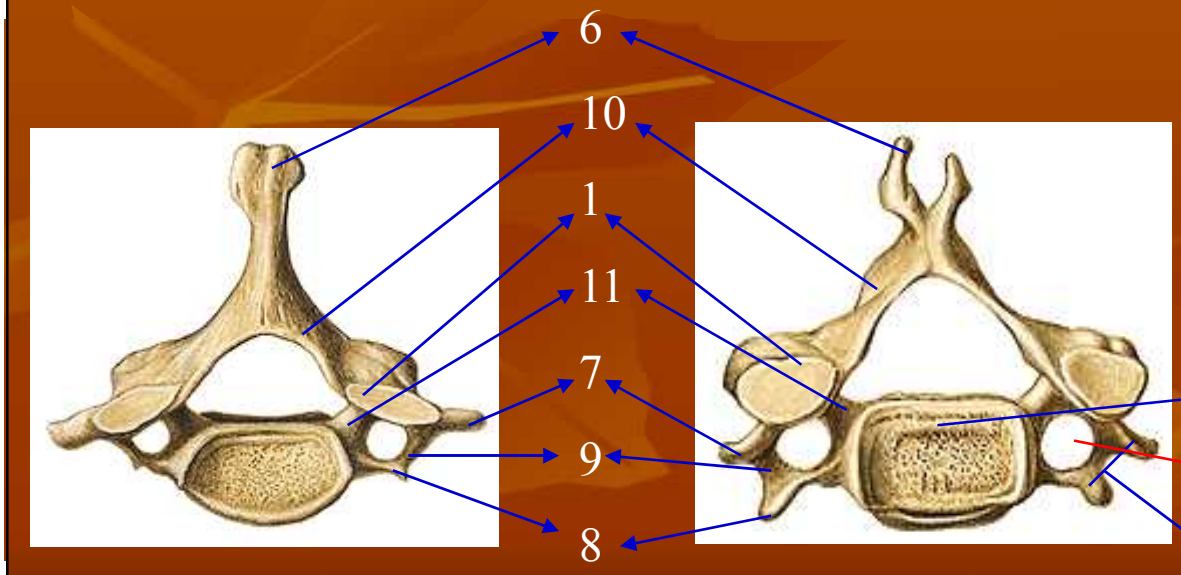


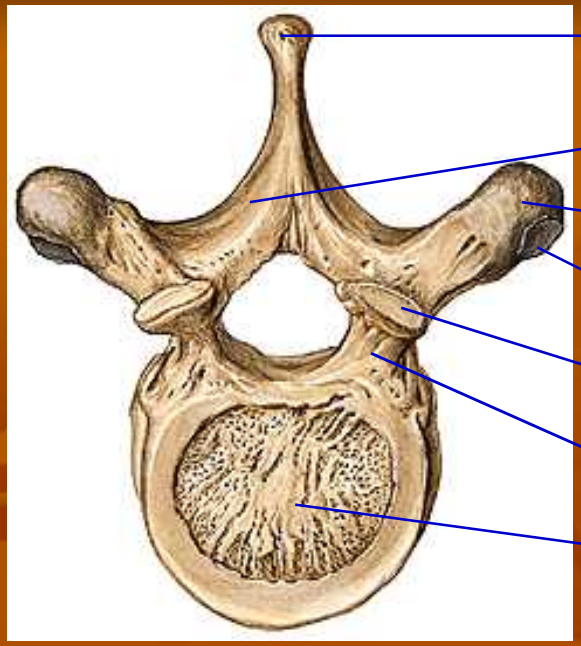
1. Dens epistropheus
2. Facies articularis anterior
3. Facies articularis posterior
4. Facies articularis superior
5. Processus articularis inferior
6. Corpus
7. Foramen transversarium
8. Processus transversus
9. Processus spinosus

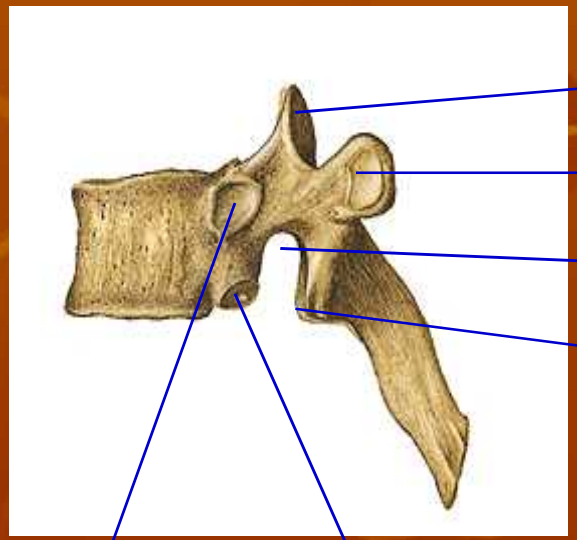
VERTEBRA CERVICALIS



1. Processus articularis superior
2. Processus articularis inferior
3. Corpus vertebrae
4. Foramen transversarium
5. Processus transversus
6. Processus spinosus
7. Tuberculum posterius
8. Tuberculum anterius
9. Sulcus nervi spinalis
10. Lamina arcus vertebrae
11. Incisura vertebralis superior

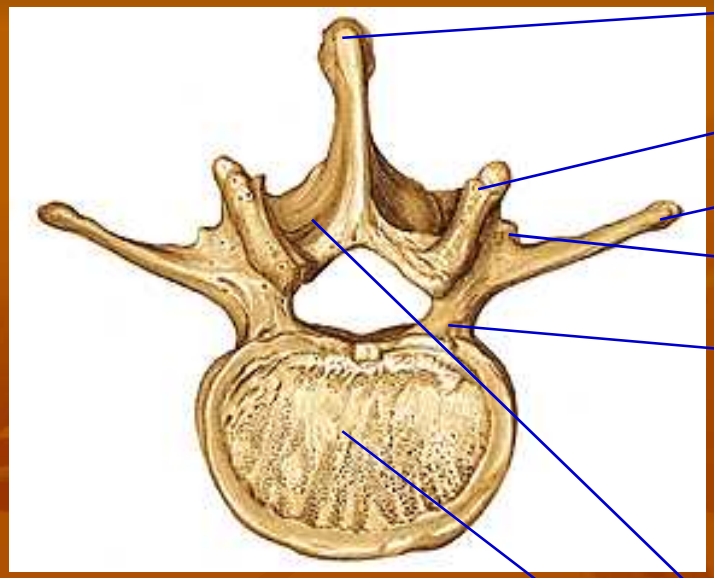


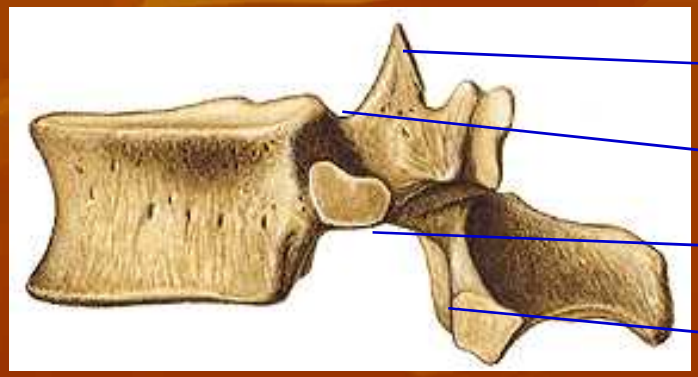




VERTEBRA THORACALIS

1. Processus spinosus
2. Processus transversus
3. Fovea costalis transversalis
4. Pediculus arcus vertebrae
5. Lamina arcus vertebralis
6. Incisura vertebralis superior
7. Incisura vertebralis inferior
8. Fovea costalis superior
9. Fovea costalis inferior
10. Corpus vertebrae
11. Processus articularis superior
12. Processus articularis inferior

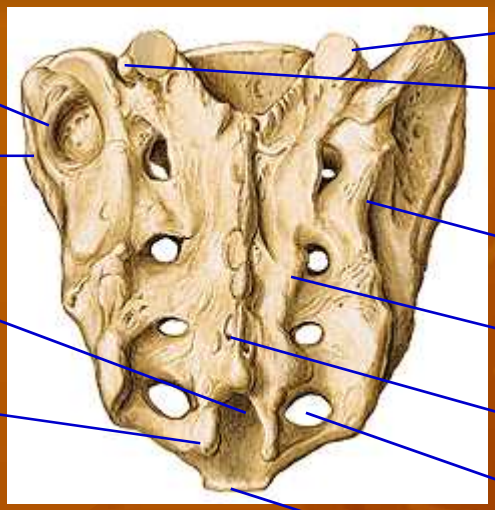


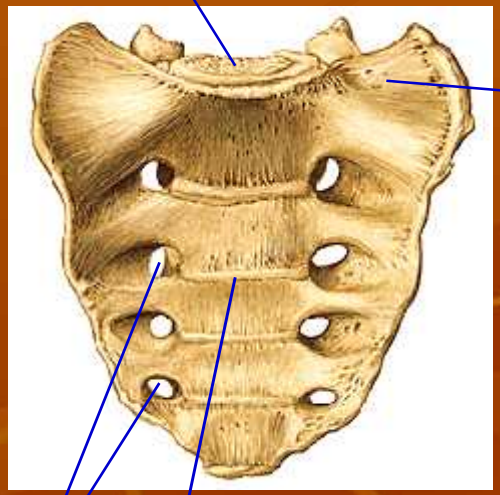


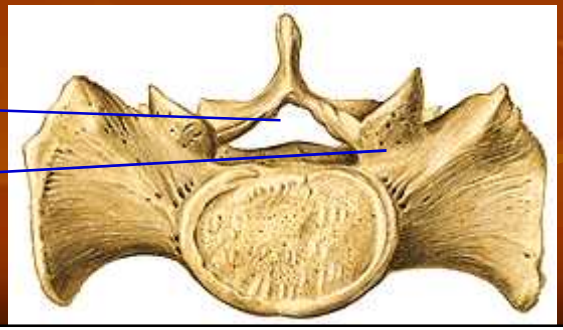
VERTEBRA LUMBALIS

1. Processus spinosus
2. Processus transversus/costarius
3. Processus accecorius
4. Pediculus arcus vertebrae
5. Lamina arcus vertebralis
6. Incisura vertebralis superior
7. Incisura vertebralis inferior
8. Corpus vertebrae
9. Processus articularis superior
10. Processus articularis inferior

VERTEBRA SACRALIS

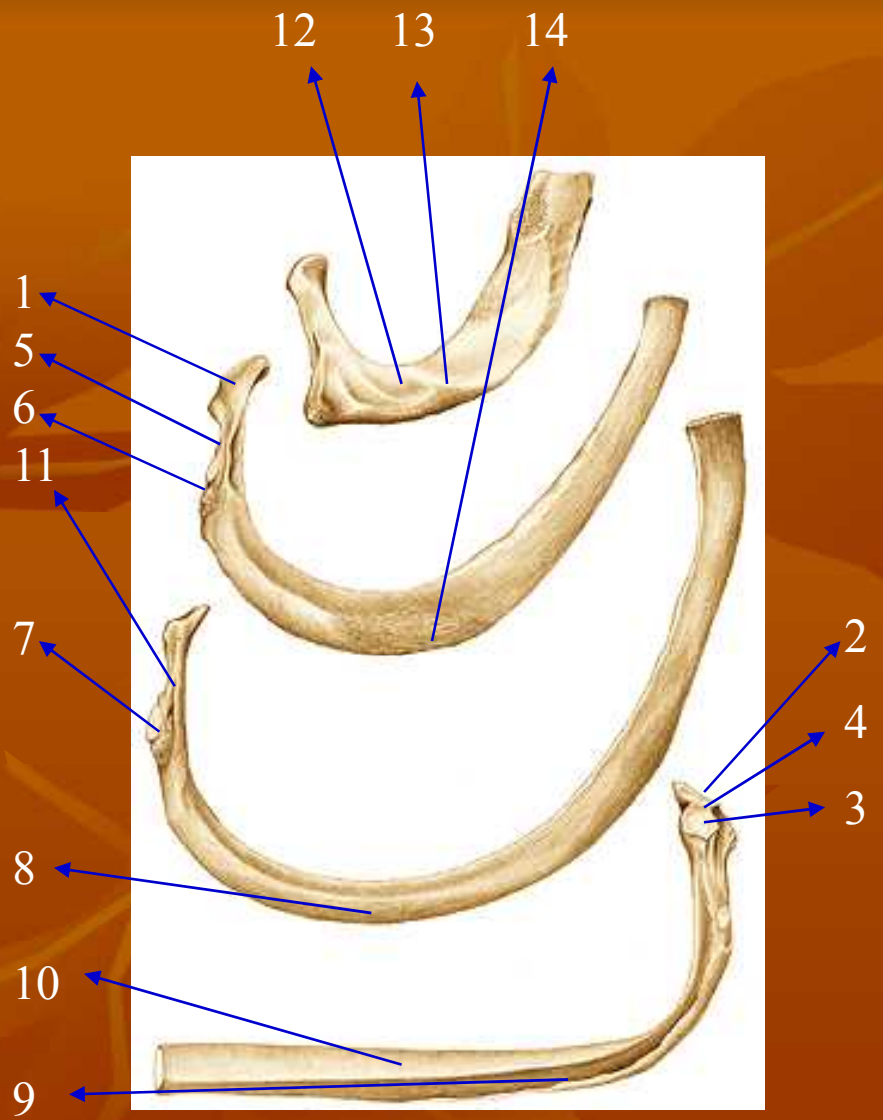






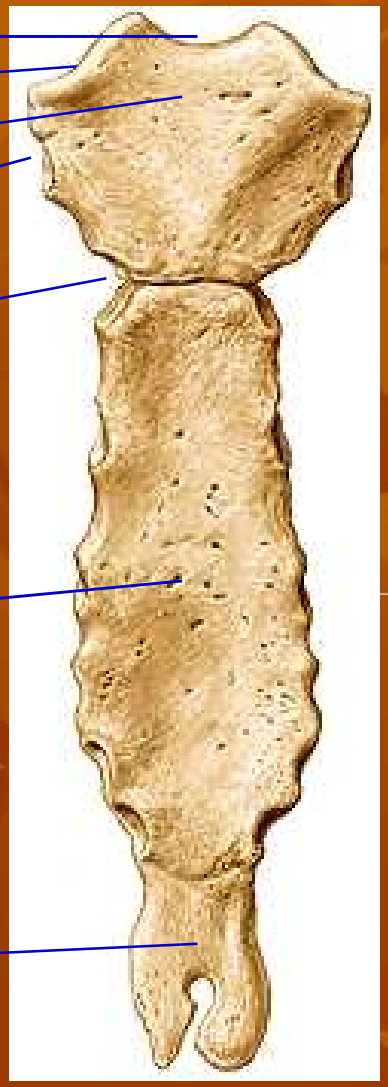
1. Processus articularis superior
2. Processus mamillaris
3. Pars lateralis
4. Tuberositas sacralis
5. Facies auricularis
6. Crista sacralis lateralis
7. Crista sacralis intermedia
8. Crista sacralis mediana
9. Foramen sacrale dorsale
10. Hiatus sacralis
11. Cornu sacralis
12. Apex sacralis
13. Basis sacralis
14. Incisura vertebralis superior
15. Foramina sacralia pelvina
16. Lineae transversae
17. Canalis sacralis

OS COSTAE



1. Caput
2. Facies articularis capitis costae sup.
3. Facies articularis capitis costae inf.
4. Crista capitis costae
5. Collum costae
6. Tuberculum costae
7. Facies articularis tuberculi costae
8. Angulus costae
9. Sulcus costae
10. Corpus costae
11. Crista coli costae
12. Sulcus arteria subclavia
13. Tuberculum m. scaleni anterior
14. Tuberositas m. serrati anterioris

STERNUM



1. Incisura jugularis
2. Incisura clavicularis
3. Incisura costalis I
4. Incisura costalis II
5. Manubrium sterni
6. Corpus sterni
7. processus xiphoideus
8. Angulus sterni

SISTEM ALAT GERAK
BATANG BADAN

A. TULANG BELAKANG (Columna Vertebralis)

- Tersusun atas 33-34 ruas
  - 7 ruas v. cervicalis
  - 12 ruas v. thoracalis
  - 5 ruas v. lumbalis
  - 5 ruas v. sacralis
  - 4-5 ruas v. coccygealis
- Antar ruas vertebra “pra sacral” dipisahkan oleh “discus intervertebralis” → “vertebrae verae”
- Bentuk keseimbangan tlg belakang:
  - lordosis : cervical & lumbal
  - kyphosis : thoracal & sacral
  - skoliosis : ‘abnormal”
- Lengkung →pegas

HUBUNGAN ANTAR VERTEBRAE:

Terdapat 2 macam persendian antar vertebrae verae: (DIARTHROSIS & SYNARTHROSIS)

1. DIARTHROSIS:

- Antara facies artic superior (vertebra bawah) dengan facies artic inferior (vertebra atas).

2. SYNCHONDROSIS:

- Hubungan antara corpus vertebra diatas dan dibawahnya
- Diantaranya terdapat "discus intervertebralis":
  - tepi : berbentuk cincin → "anulus fibrosus"
  - inti : lunak/cairan → "nucleus pulposus"

3. SYNDESMOSIS:

- Hubungan antar corpus vertebrae krn adanya ligamentum (jar ikat):

1. L. Flavum : menghubungkan 2 arcus vertebr.
2. L. Interspinale : ,, 2 proc. Spinosus
3. L. supraspinale : ,, puncak ,,
4. L. longitudinale anterius : pd permukaan depan kolumna vertebrae
5. L. longitudinale posterius: pada canalis vertebr di permukaan blkng canalis verebrae
6. L. intertransversarium : menghubungkan 2 prosesus transversus

- Terdapat 2 gaya:
  1. Meregangkan : discus intervertebr.
  2. Memendekkan : ligamentum2

  → bentuk keseimbangan yang kuat.

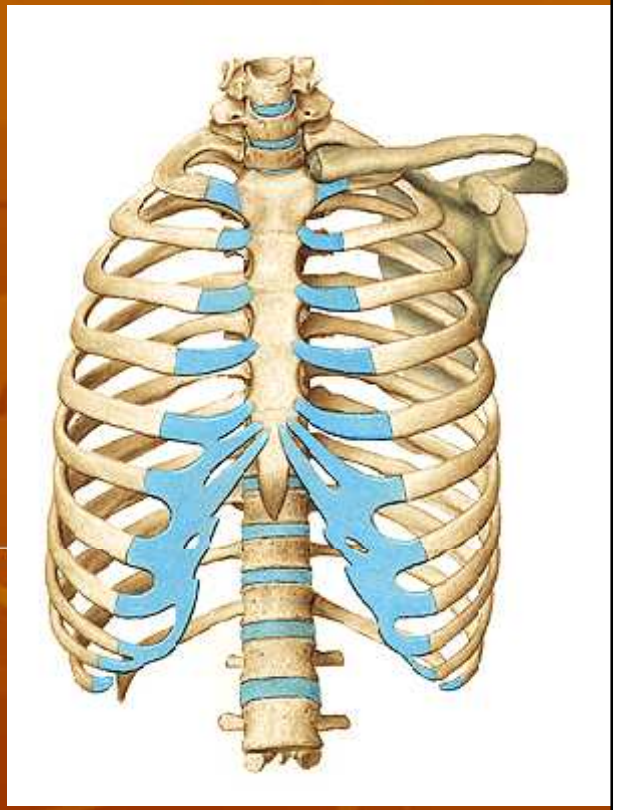
  → menghemat kerja otot

PERNAPASAN (RESPIRATIO)

- Ada 2 tingkatan:
  1. Inspirasi : pembesaran rongga dada → tekanan negatif
  2. Ekspirasi : rongga dada diperkecil → tekanan positif

- Membesar/mengecilnya rongga dada ← - kontraksi otot dinding dada
  - struktur tulang & sendi
  - kekenyalan organ2 pnpsn.

- Dada (thorax) dibentuk oleh:
  - 12 pasang tlg iga (costae)
    a. costa I-VII : costae verae/vertebrosternalis
    b. costa VIII-XII: costae spuriae, tdd:
      b1. CS Affixae : VIII-X
      b2. CS Fluctuantes : XI-XII
  - 12 vertebra thoracales
  - sternum

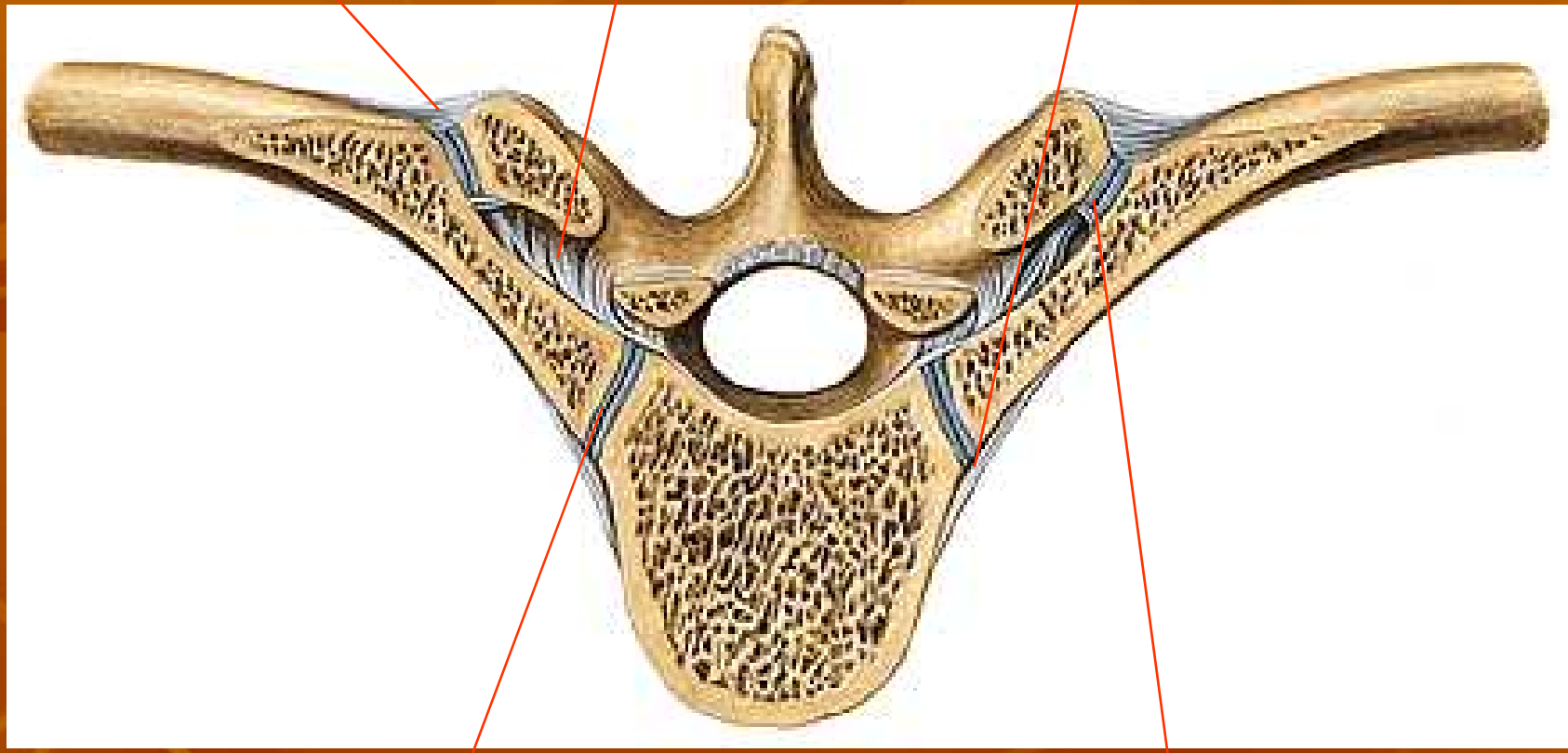


- Hubungan antara costa & vertebra:
  1. Diarthrosis → Art. Costovertebralis
     Art. Costotransversaria
  2. Synarthrosis → ligamentum yg melekat sekitar sendi (syndesmosis)

Lig. Tuberculi costae

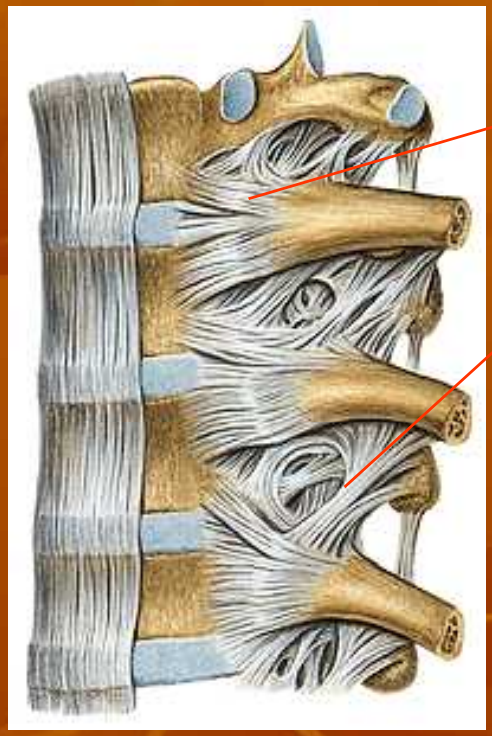
lig. Coli costae

lig capituli costae radiatum



rongga sendi art costovertebralis

rongga sendi art costotransversalis

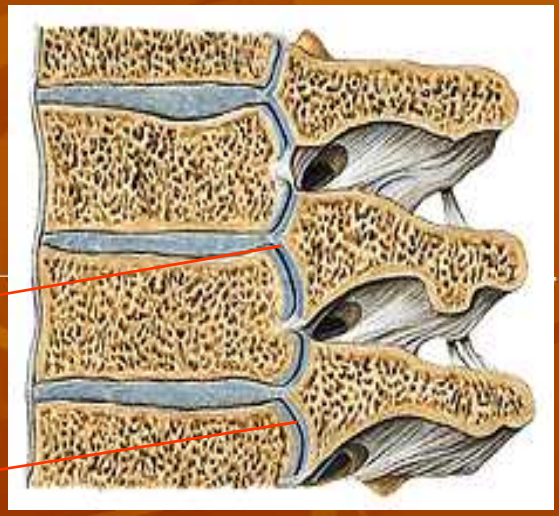


Lig. Capituli costae radiatum

Lig. Costotransversarium anterior

Lig. Capituli costae interarticulare

Rongga sendi art. costovertebralis



HUBUNGAN COSTA-STERNUM:

- Dari costae verae, hanya costa I berupa "synarthrosis" yaitu "synchondrosis"

- Yang lain secara "diarthrosis"
  → diperkuat lig. Sternocostalis radiata

- Art. Interchondralis: diarthrosis antara pinggir-pinggir iga VI, VII dan VIII (kadang IX & X)
  → diperkuat lig. interchondralis

OTOT-OTOT PERNAPASAN:

- Dibedakan 2 :
  1. Regular : diperlukan saat pernapasan biasa
  2. Auxilliar : bila diperlukan pernapasan seperti saat aktivitas fisik

- Makin berat aktivitas, makin banyak otot auxilliar yang berkontraksi

- Cara pernapasan ada 2:
  1. Respiratio costalis
  2. Respiratio diaphragmatis (abdominalis)

- Pada pernapasan biasa → campuran (pernapasan costo-abdominal)