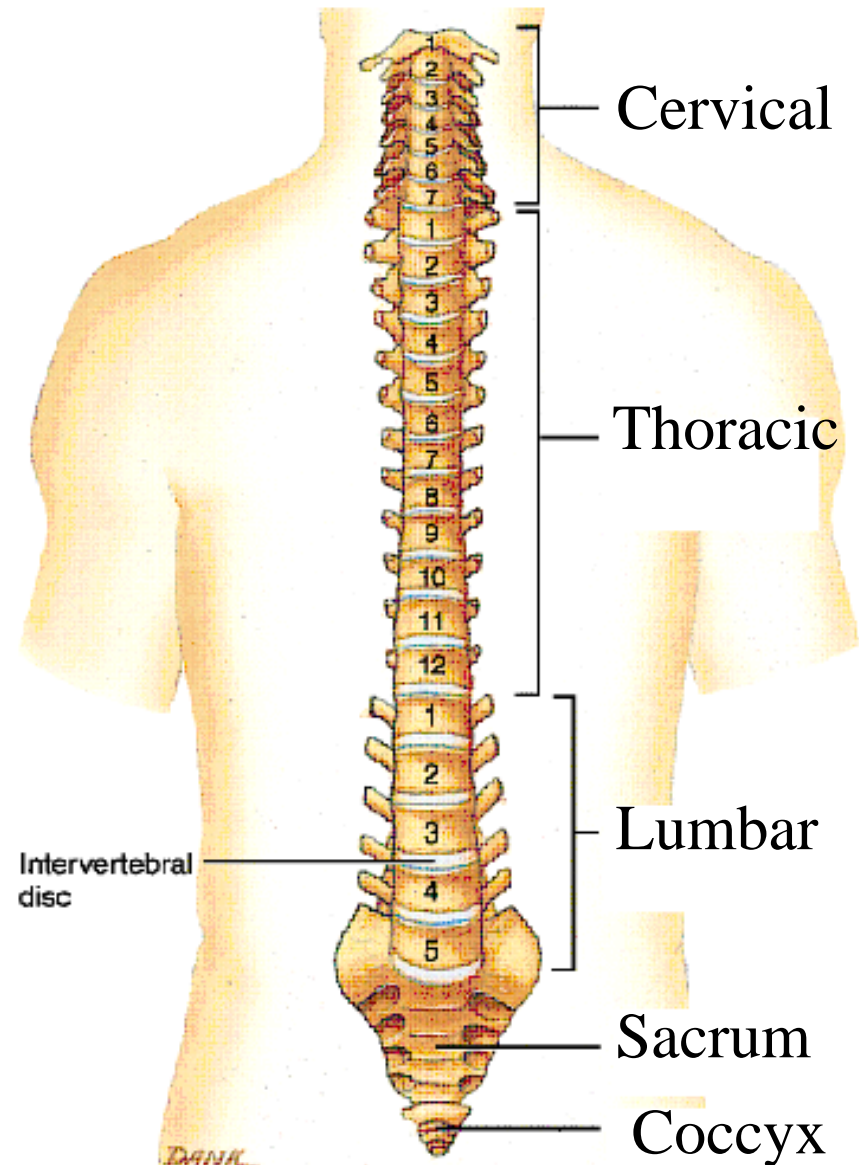


Vertebral Column

- Backbone consists of 26 vertebrae.
- Five vertebral regions
 - Cervical vertebrae (7) in the neck.
 - Thoracic vertebrae (12) in the thorax.
 - Lumbar vertebrae (5) in the lower back.
 - Sacrum (5, fused).
 - Coccyx (4, fused).

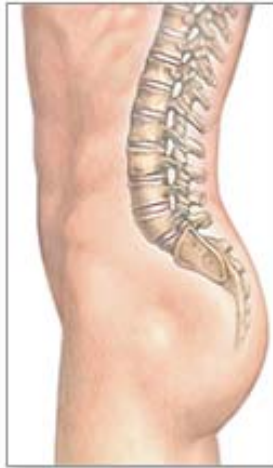




Kyphosis



Columna vertebral normal



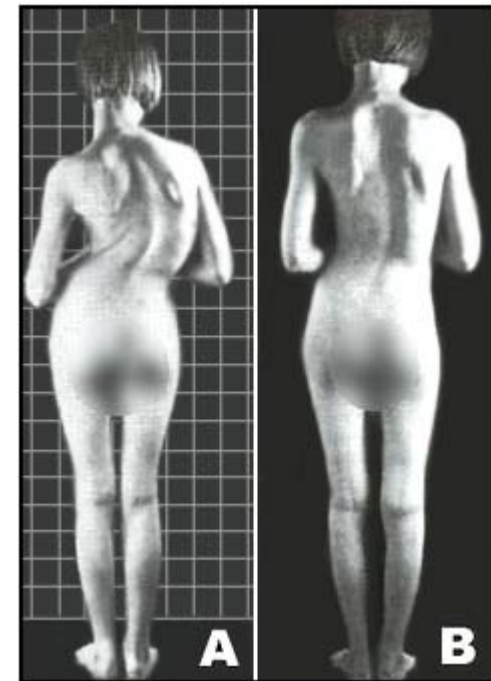
Lordosis de la columna vertebral



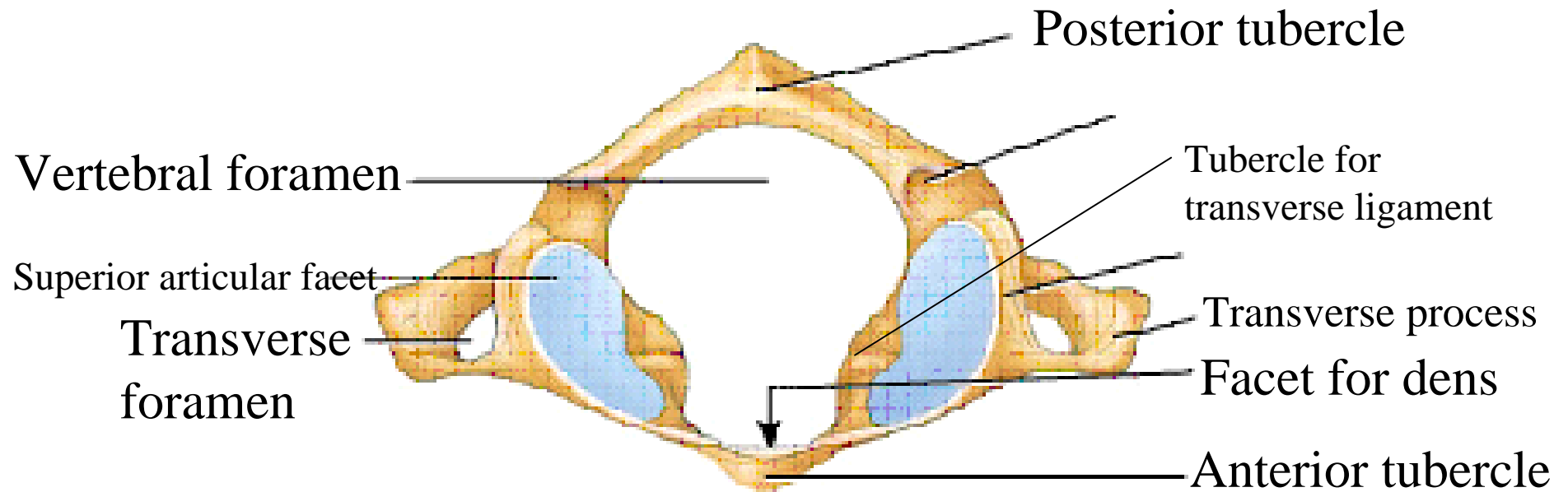
Lordosis



Scoliosis

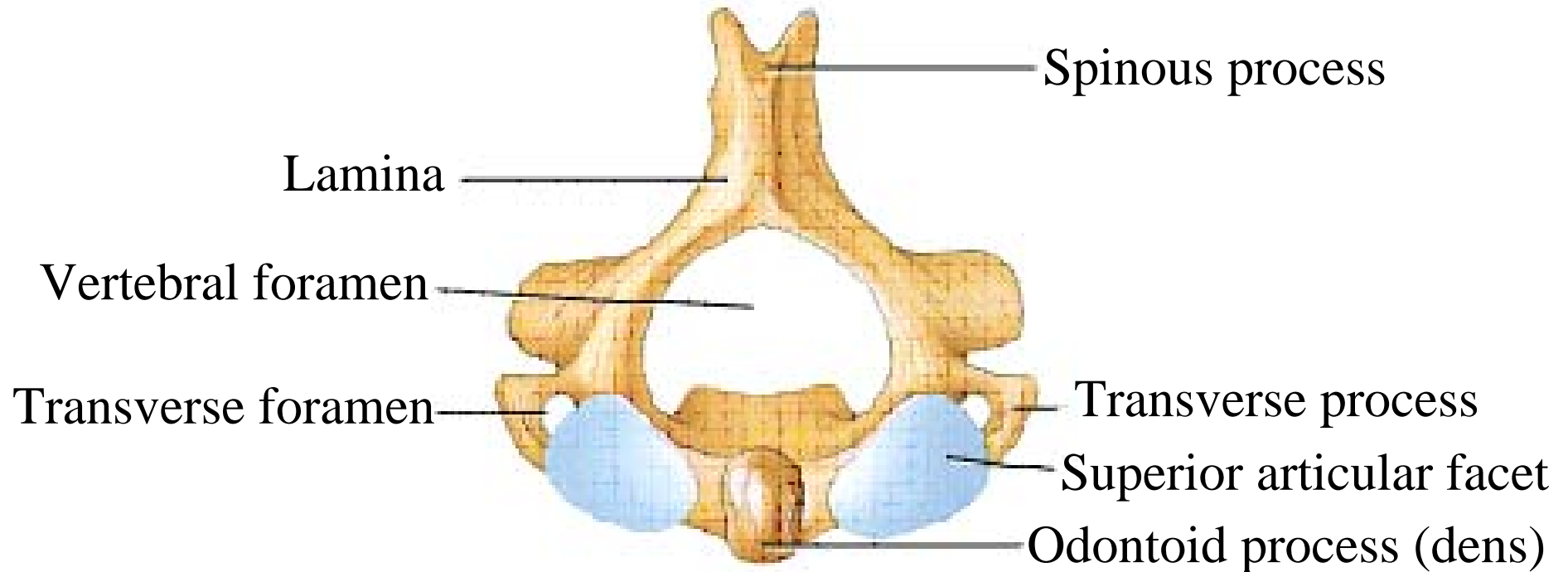


Atlas (C1)



- Atlas- ring of bone, superior facets for occipital condyles.
 - Nodding movement signifies “yes”.

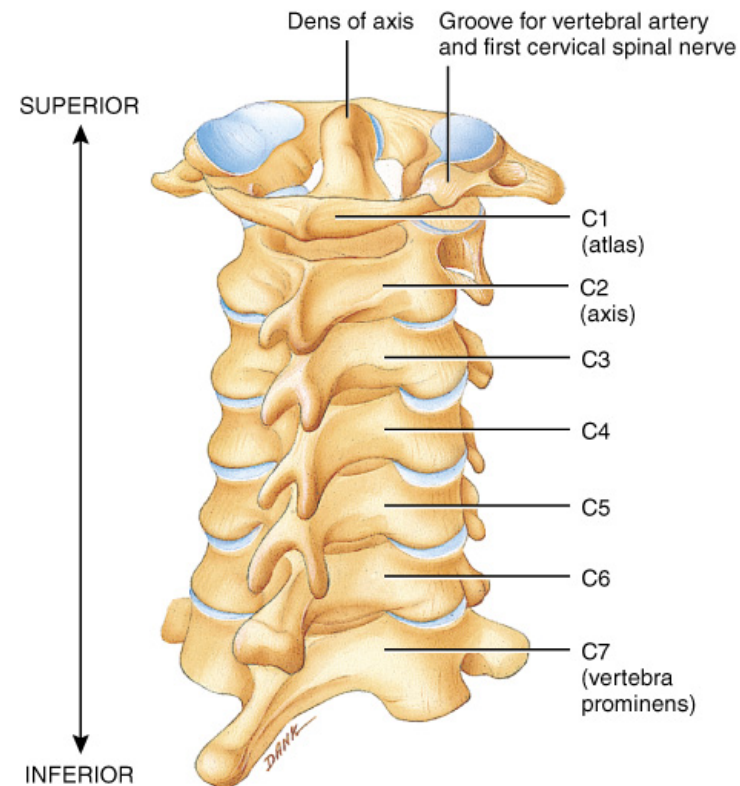
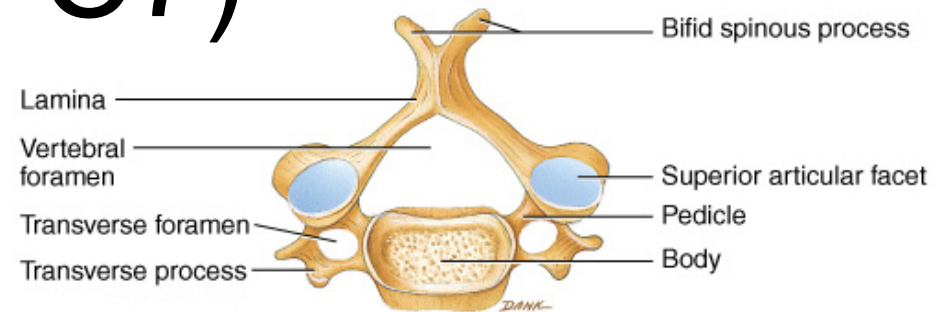
Axis (C2)



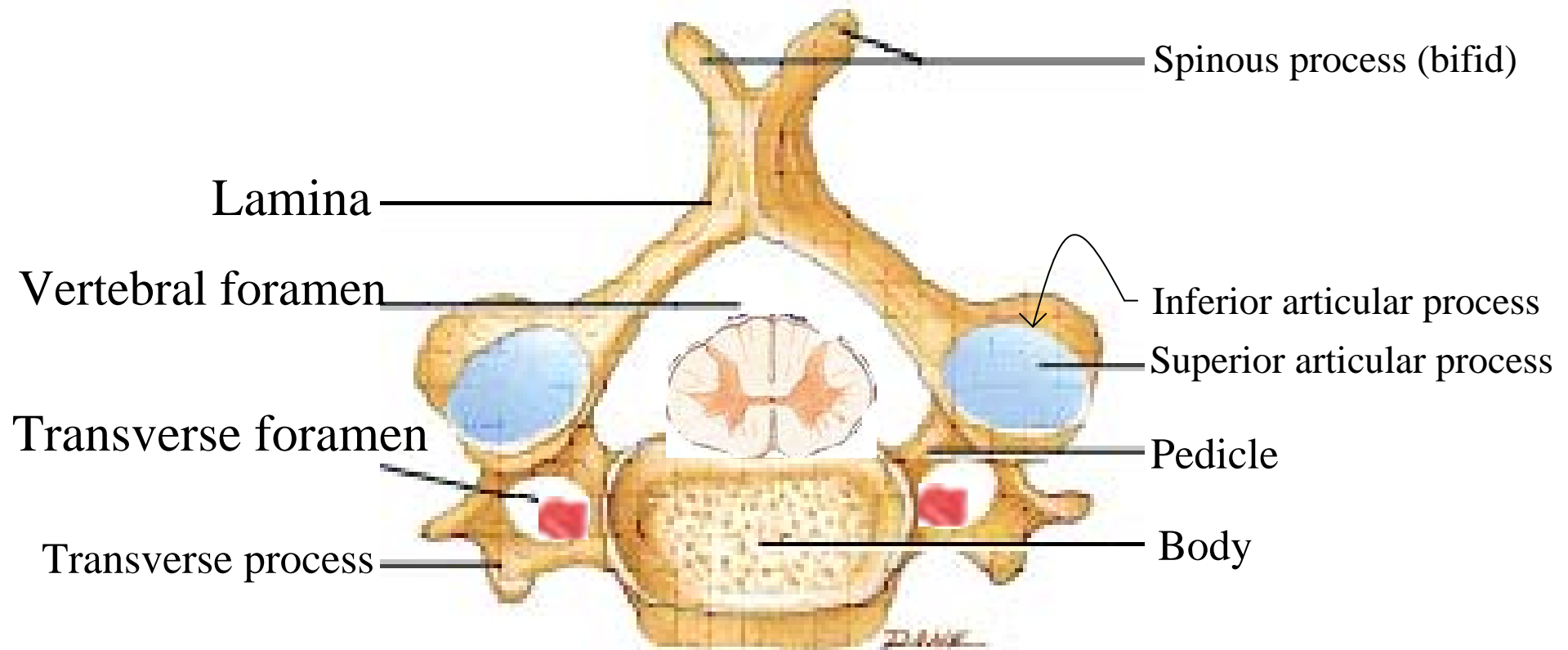
- Axis- dens or odontoid process is body of atlas.
 - Pivotal movement signifies “no”.

Typical Cervical Vertebra (C3-C7)

- Smaller bodies
- Larger spinal canal
- Transverse processes
 - Shorter
 - Transverse foramen for vertebral artery
- Spinous processes of C2 to C6 often bifid
- 1st and 2nd cervical vertebrae are unique
 - Atlas & axis

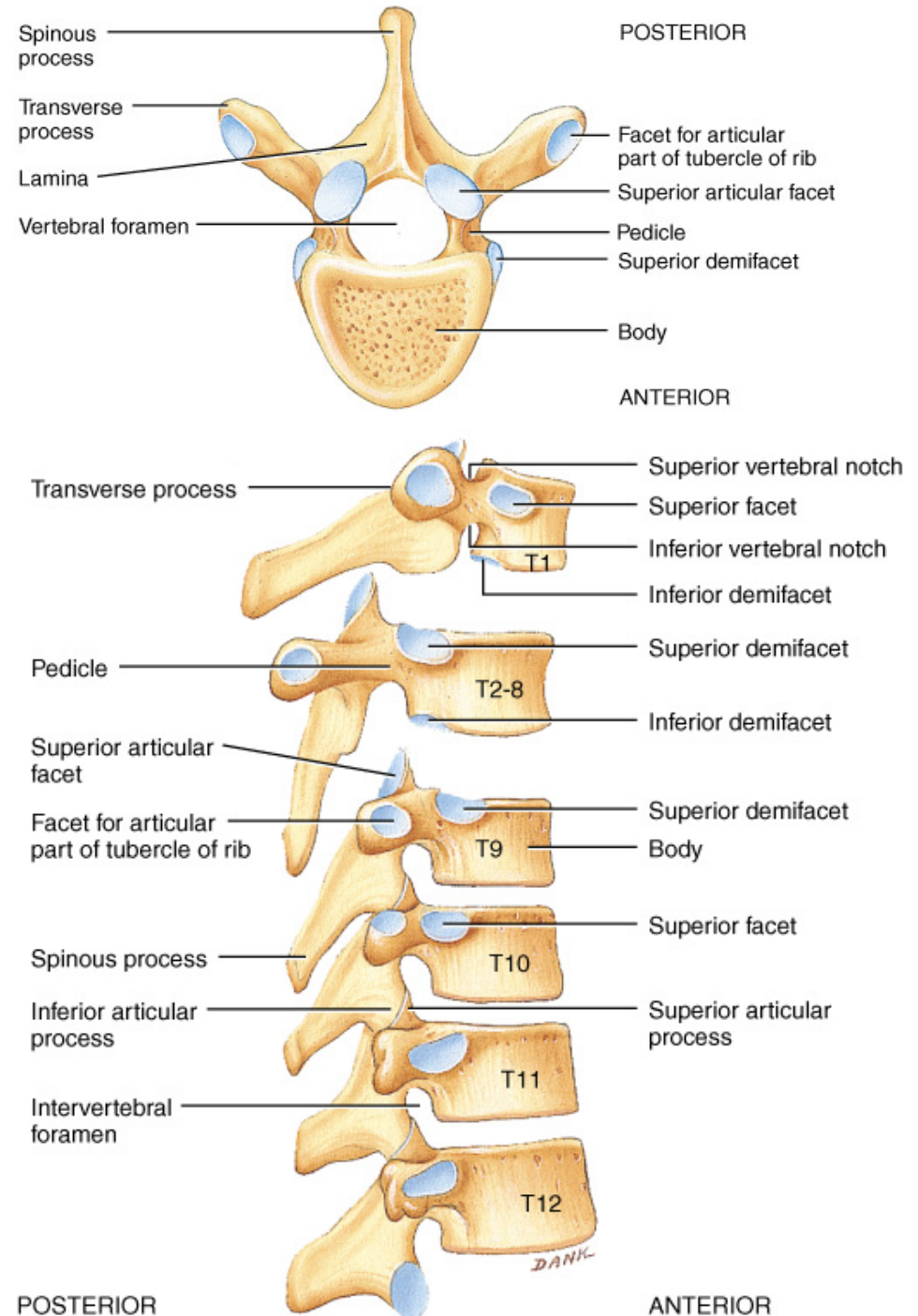


Typical Cervical Vertebra

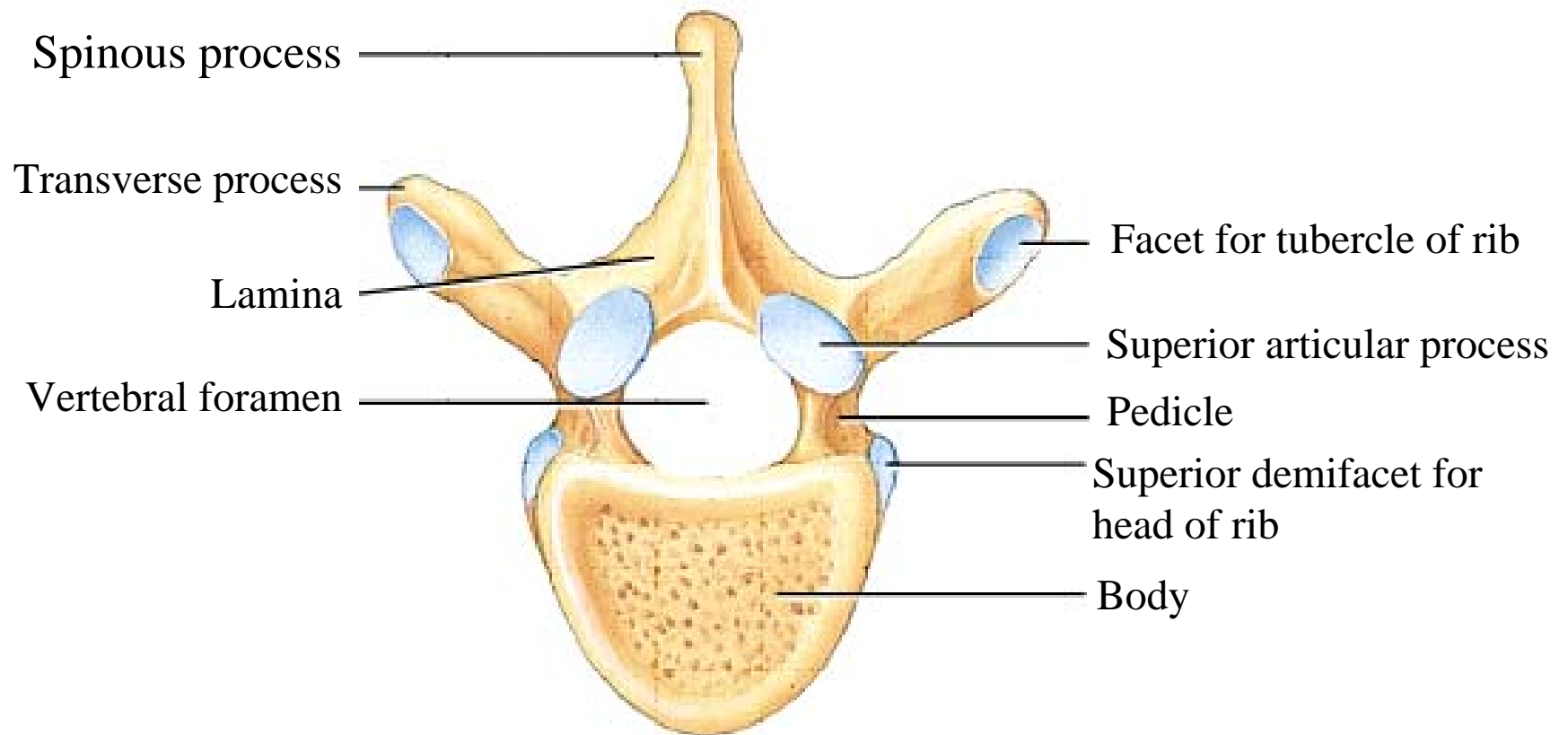


Thoracic Vertebrae (T1-T12)

- Larger and stronger bodies
- Longer transverse & spinous processes
- Demifacets on body for head of rib
- Facets on transverse processes (T1-T10) for tubercle of rib

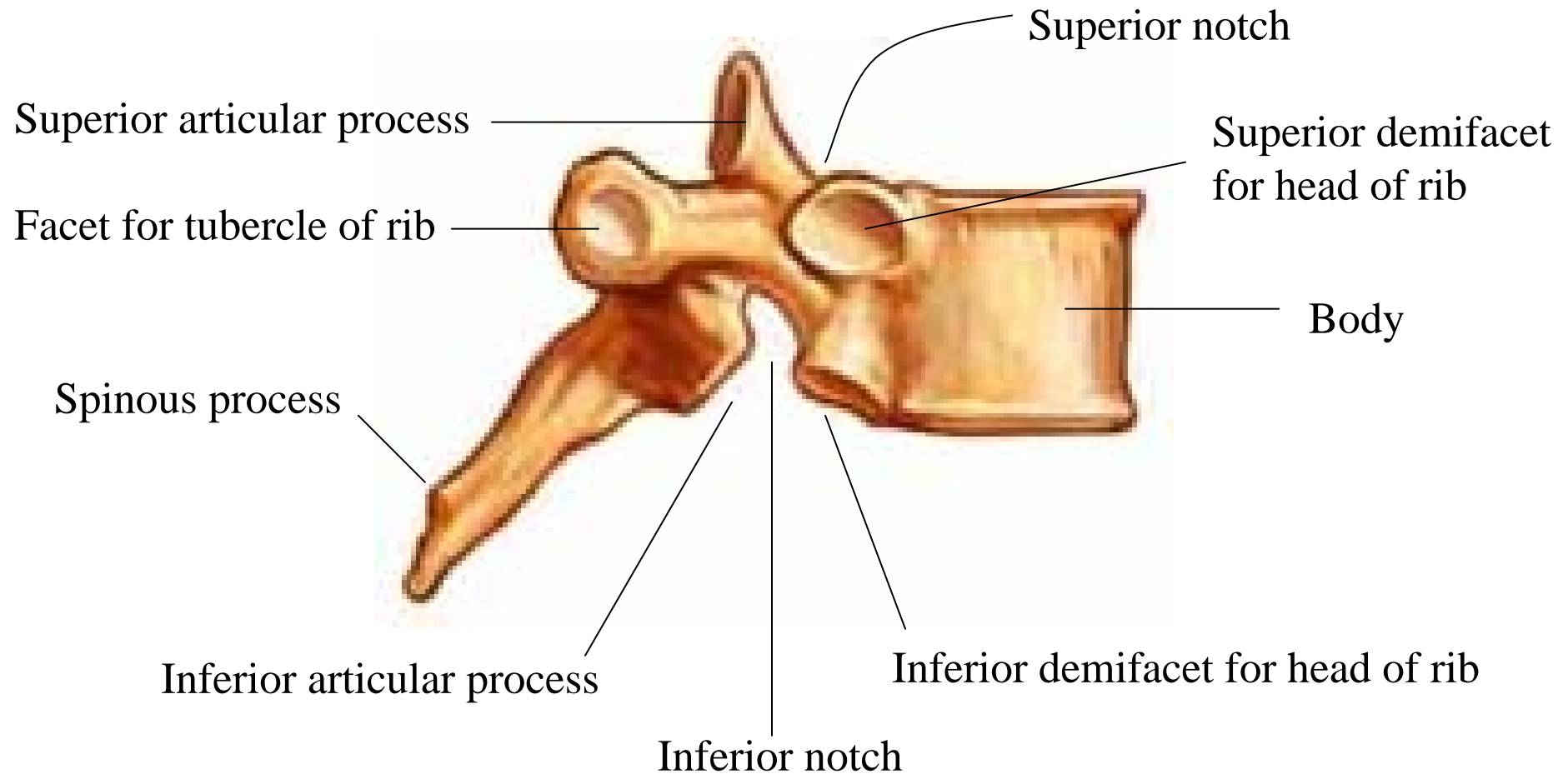


Thoracic Vertebra- superior view



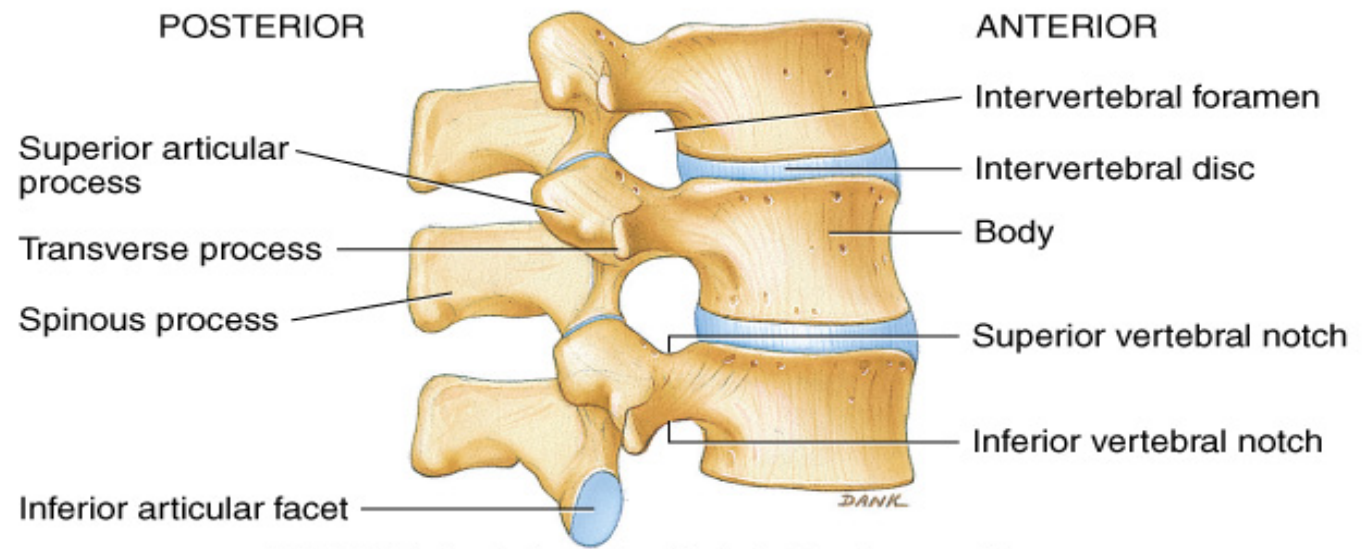
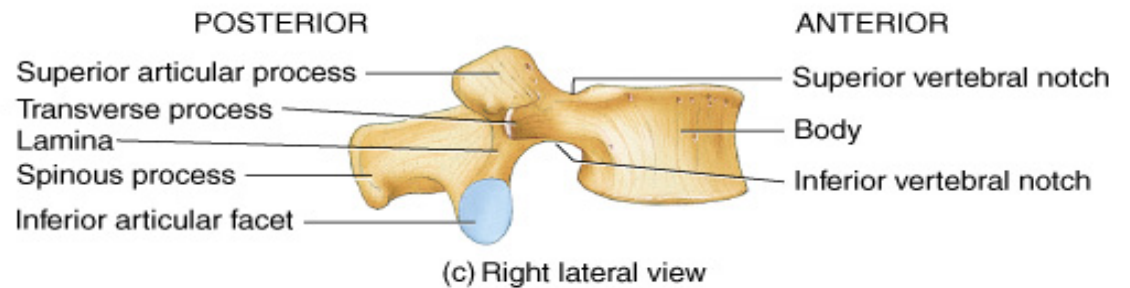
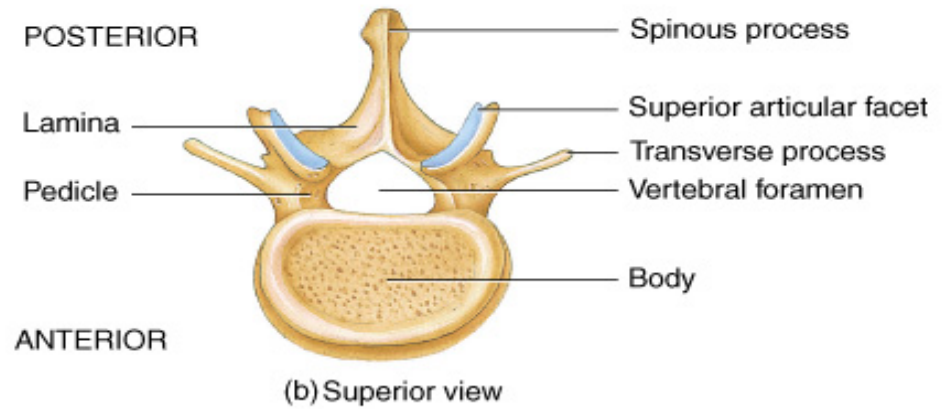
(b) Superior view

Thoracic Vertebra- lateral view

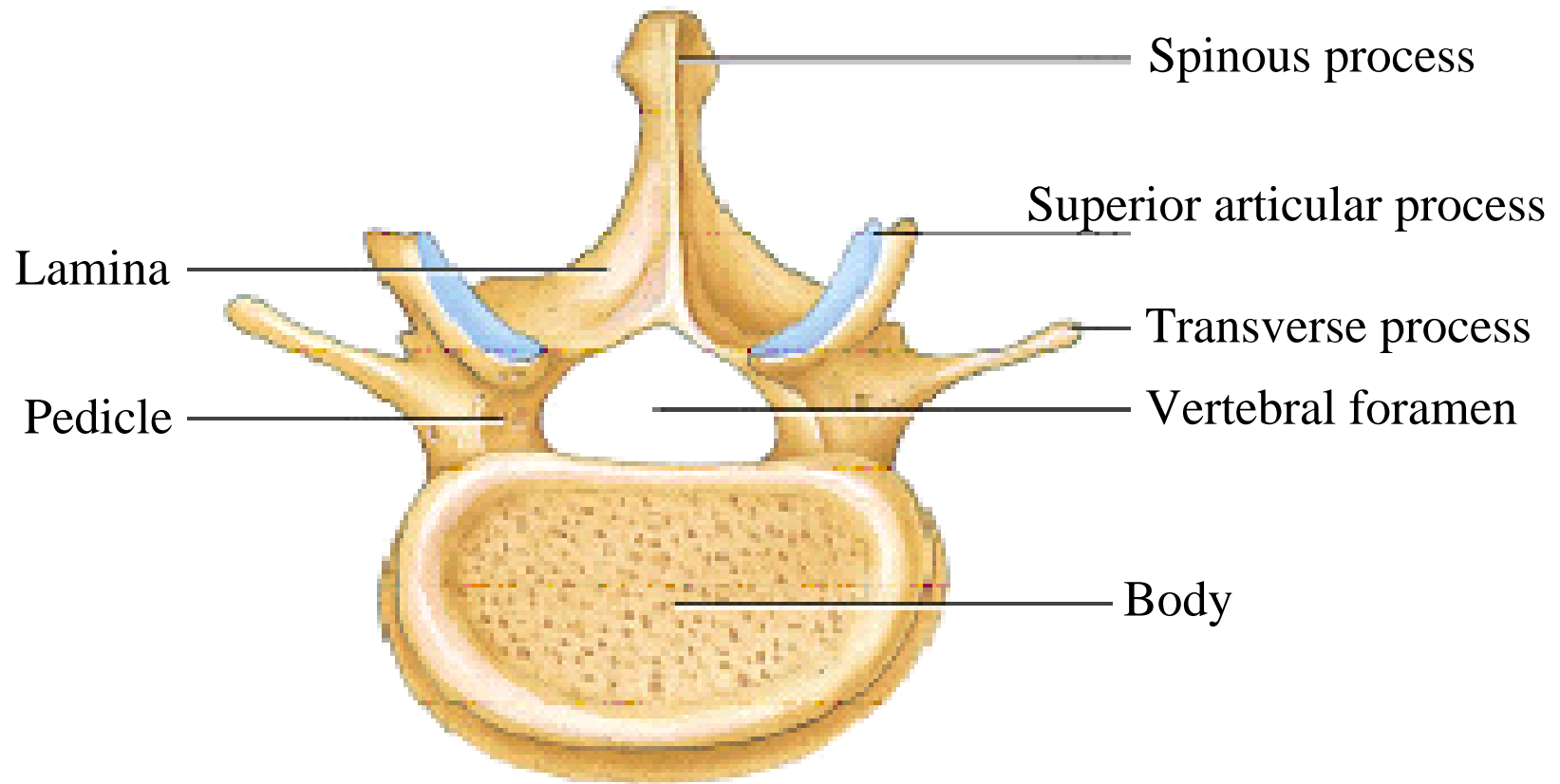


Lumbar Vertebrae

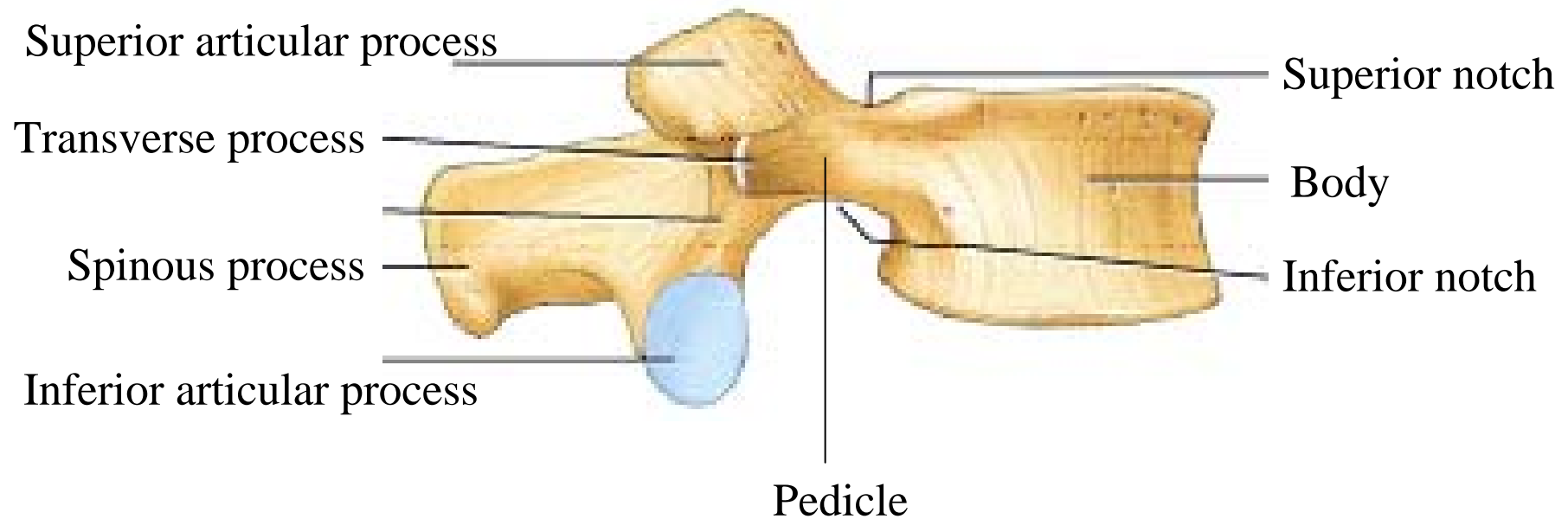
- Strongest & largest
- Short thick spinous & transverse processes



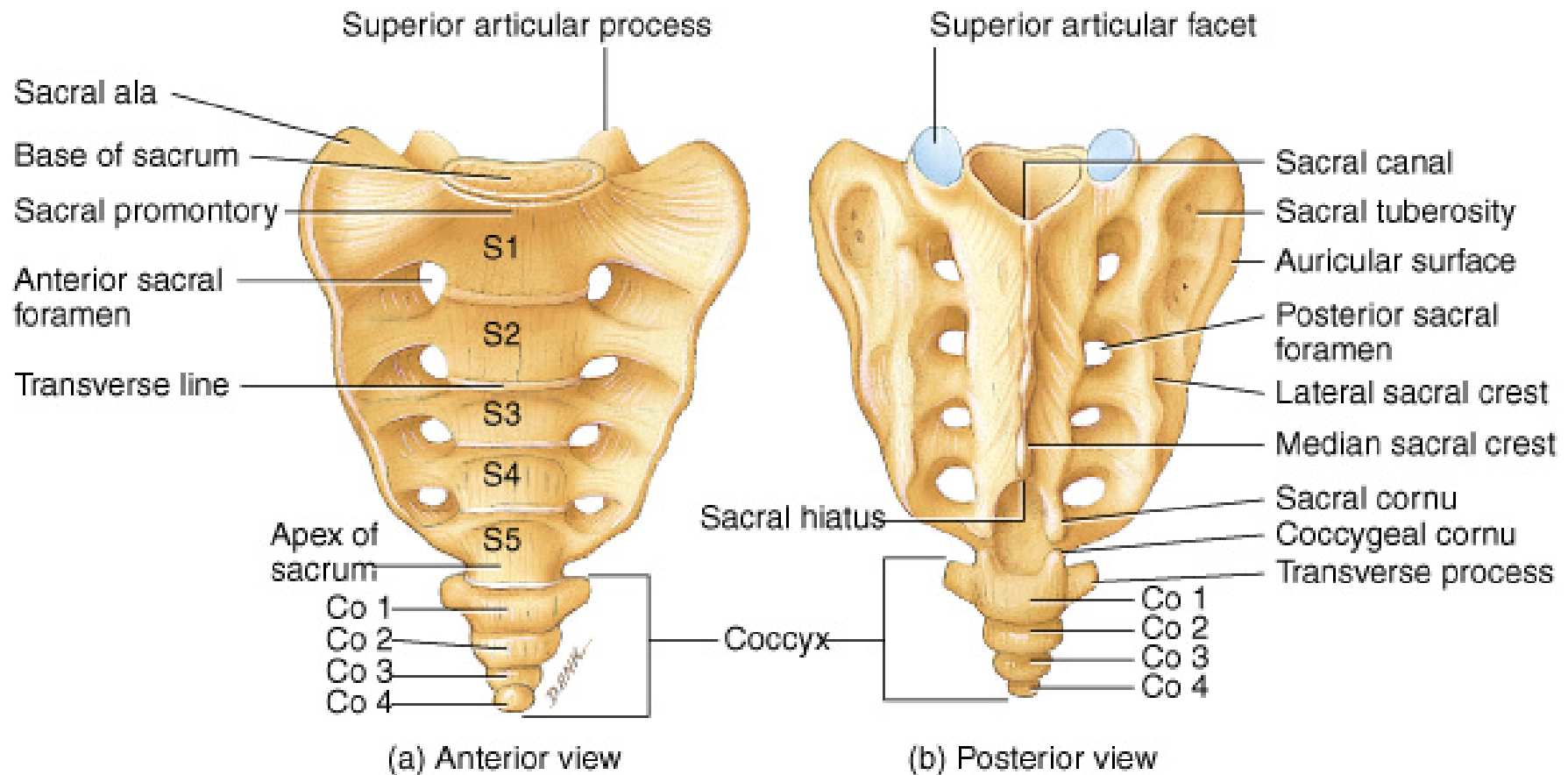
Typical Lumbar Vertebra- superior view



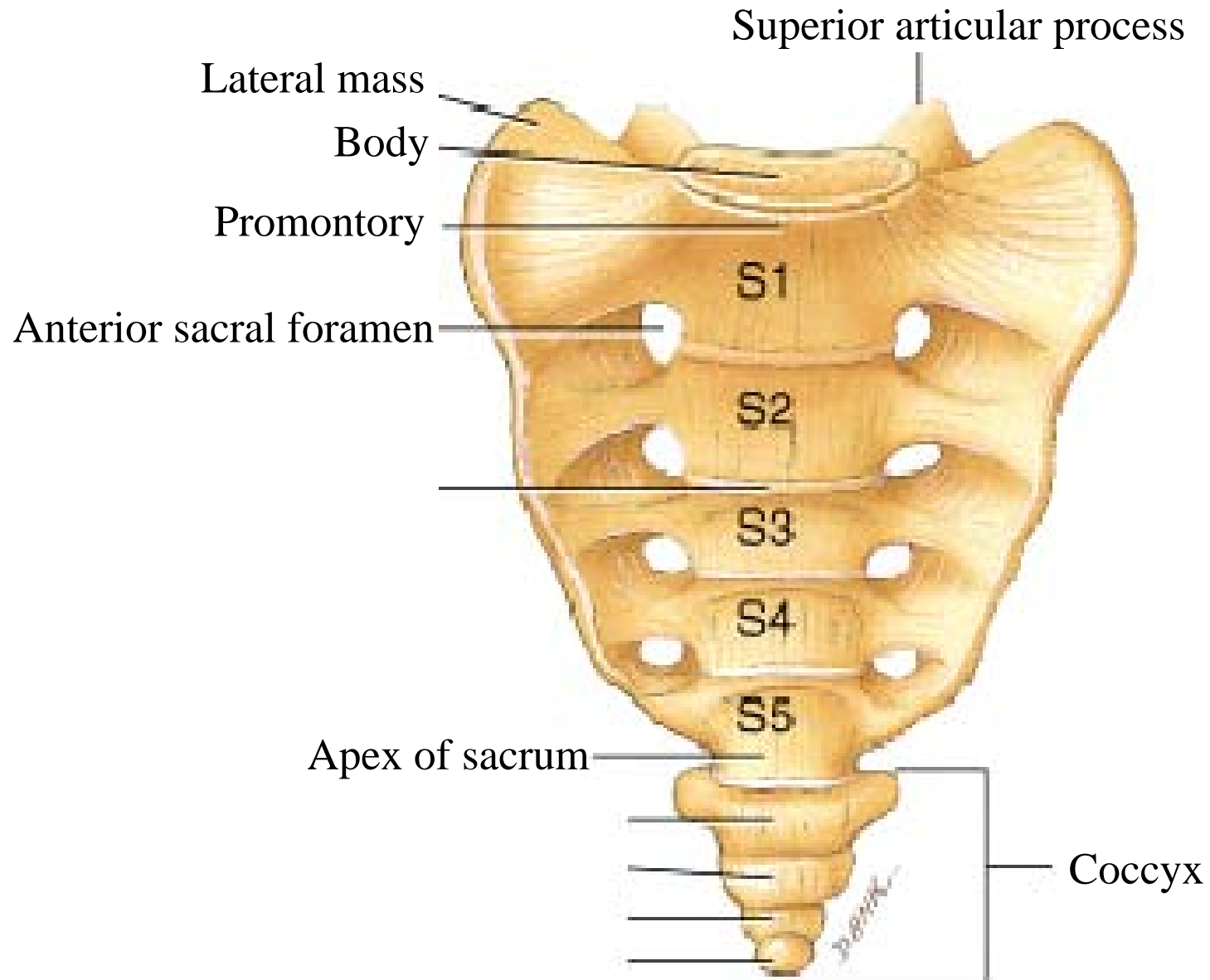
Typical Lumbar Vertebra- lateral view



Sacrum

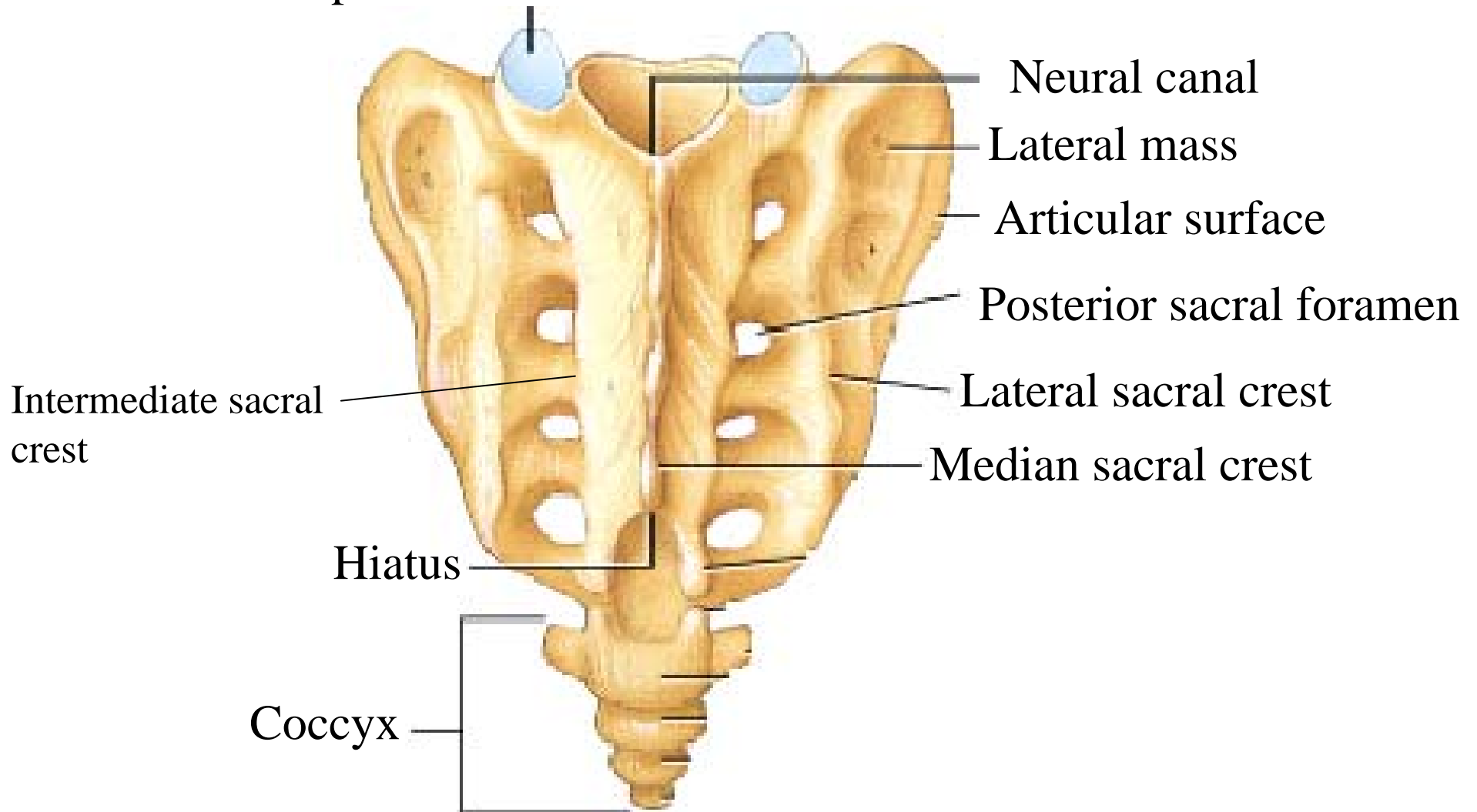


Sacrum- ventral view



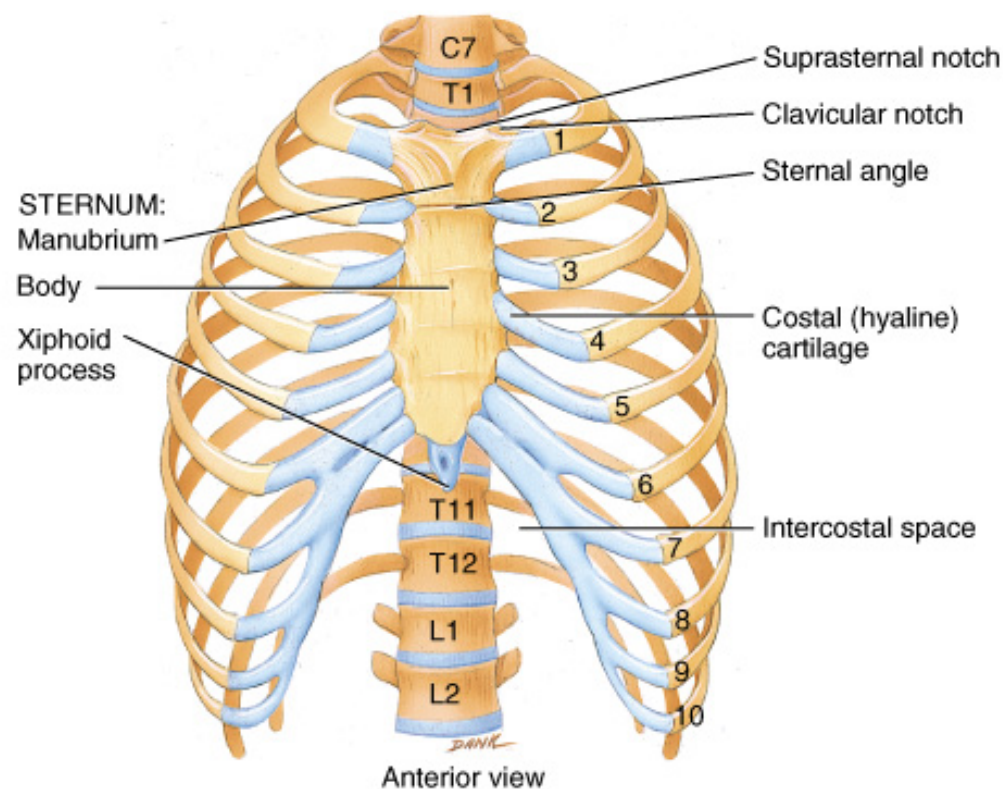
Sacrum- dorsal view

Superior articular facet

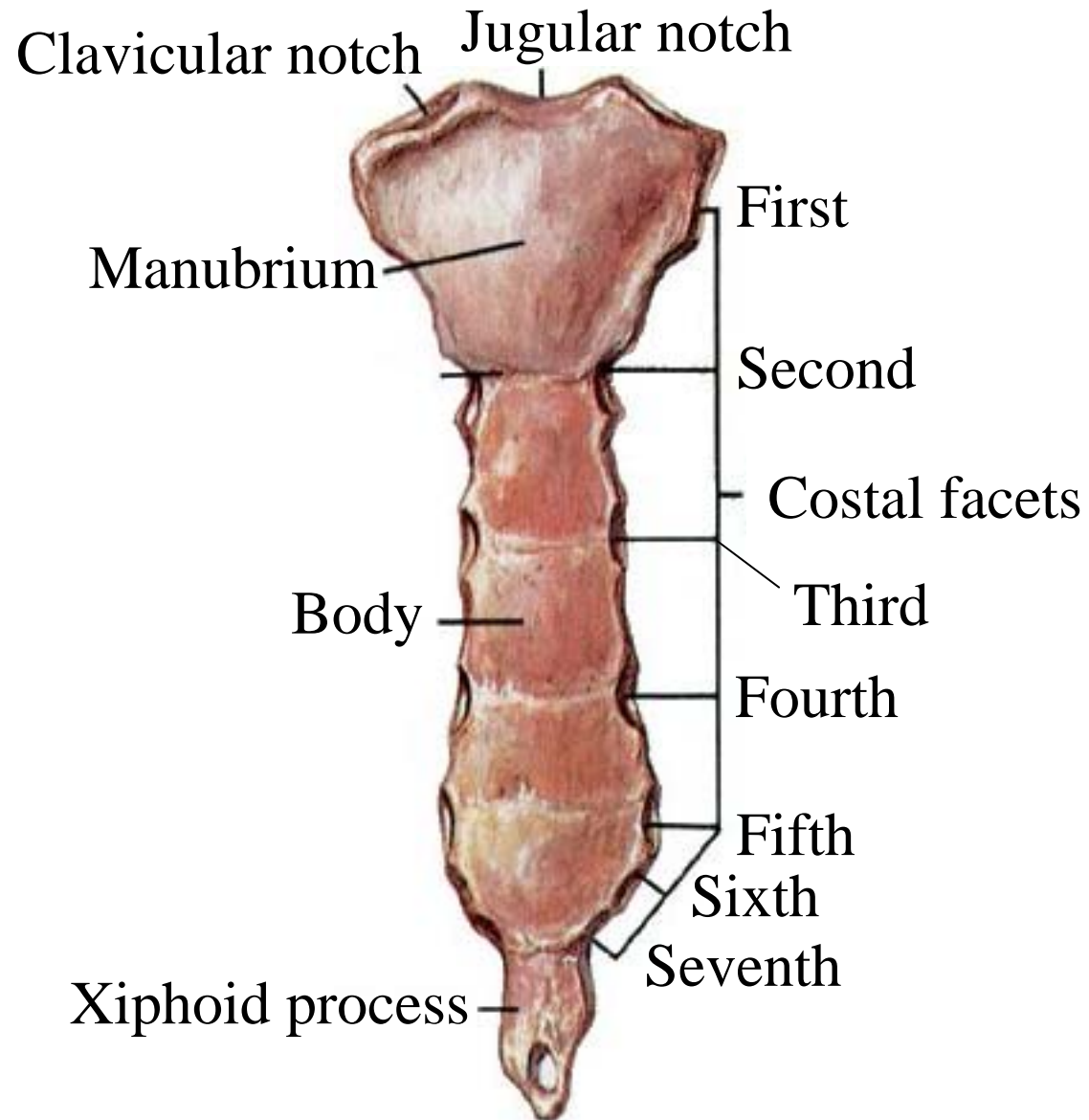


Thorax

- Thorax contains 25 bones
- Bony cage flattened from front to back
- Sternum (breastbone)
- Ribs
 - 1-7 are true ribs (vertebrosternal)
 - 8-12 are false ribs (vertebrochondral)
 - 11-12 are floating
- Costal cartilage

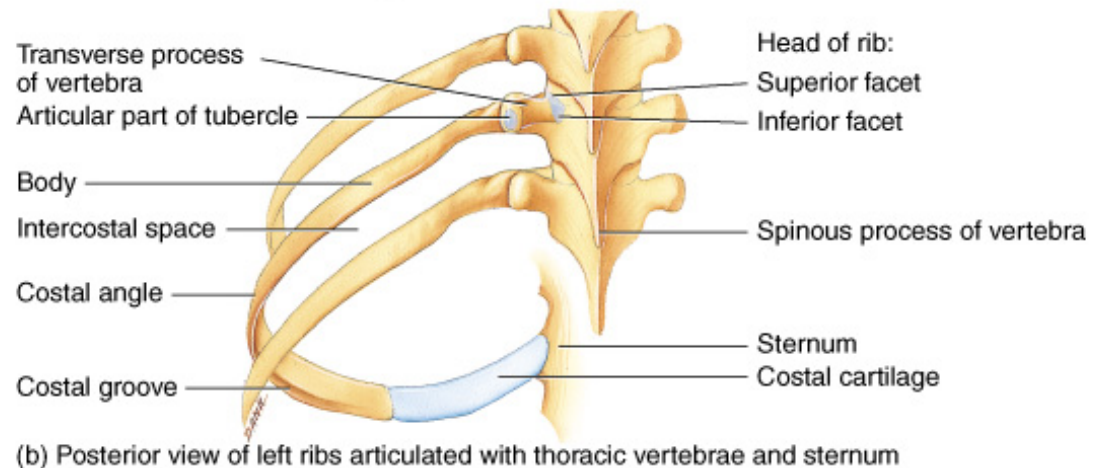
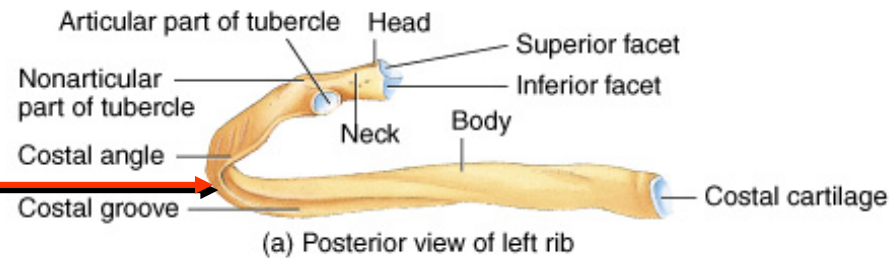


Sternum



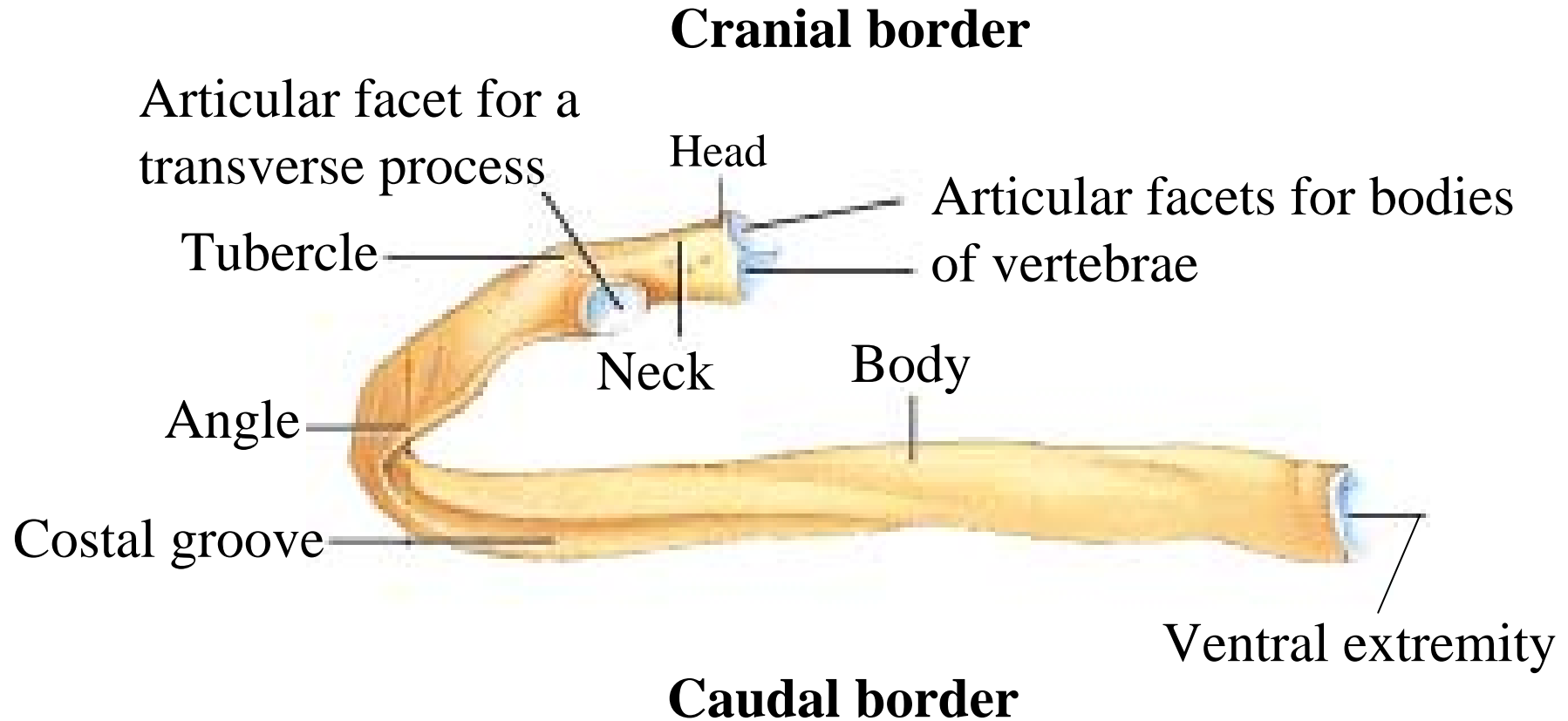
Ribs

Fracture at site of greatest curvature.

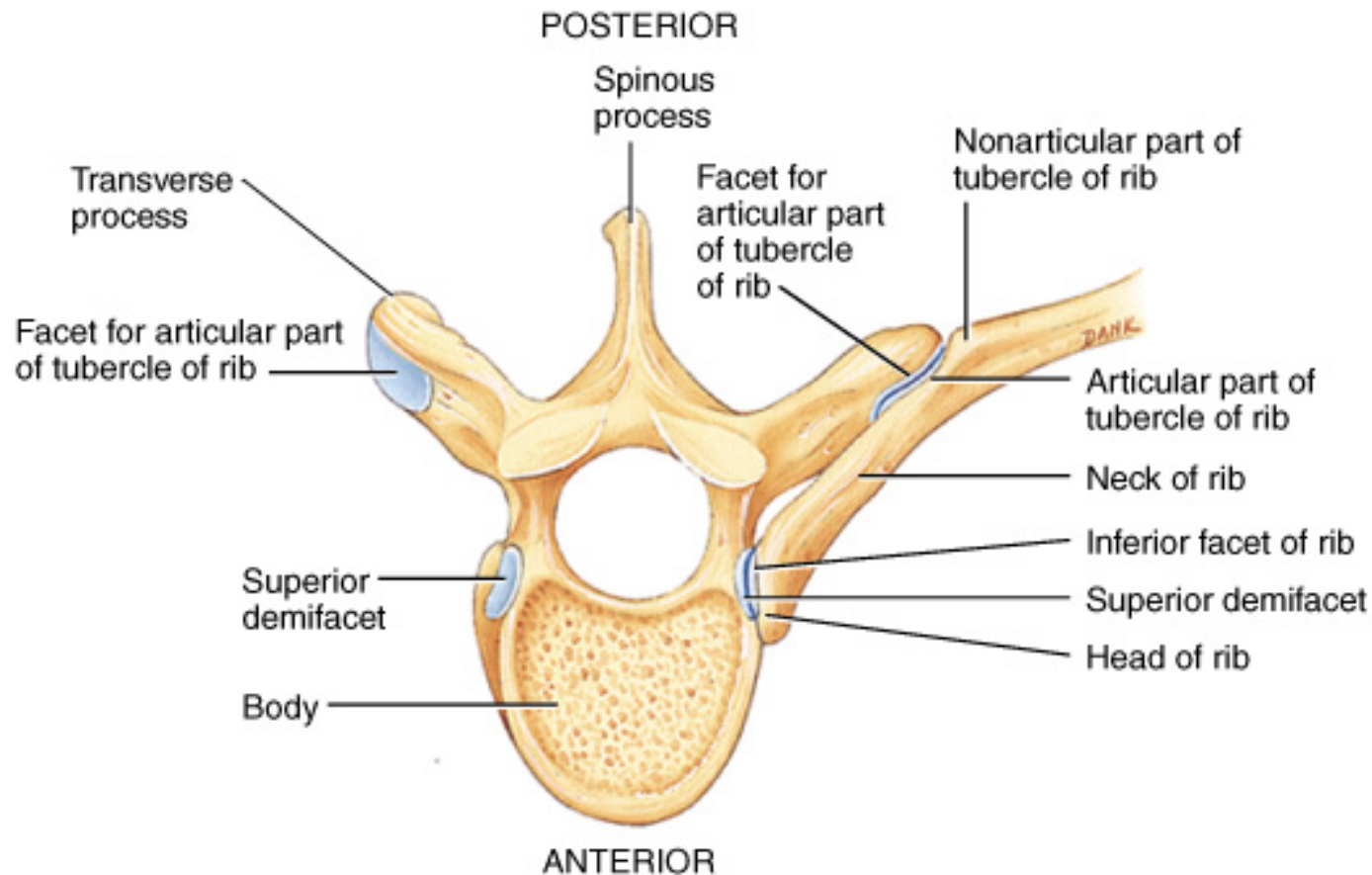


- Increase in length from ribs 1-7, thereafter decreasing
- Head and tubercle articulate with facets
- Body with costal groove containing nerve & blood vessels
- Intercostal spaces contain intercostal muscles

Rib

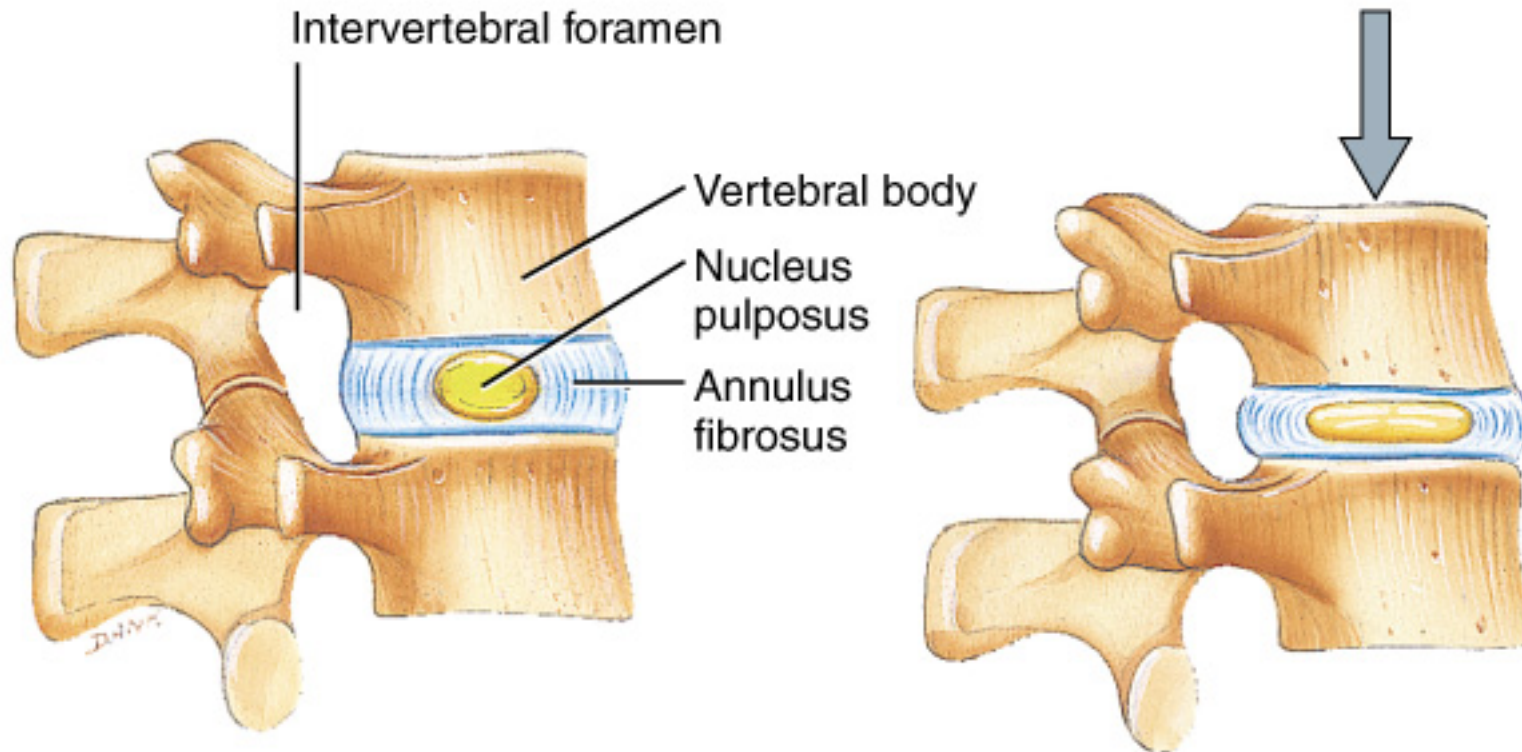


Rib Articulation



- Tubercle articulates with transverse process
- Head articulates with vertebral bodies

Intervertebral Discs



Normal intervertebral disc

Compressed intervertebral disc
in a weight-bearing situation

- Positioned between adjacent vertebrae
- Absorb vertical shock
- Permit movements of the vertebral column
- Fibrocartilagenous ring with a pulpy center

Herniated (Slipped) Disc

- Protrusion of the nucleus pulposus
- Most commonly in lumbar region
- Pressure on spinal nerves causes pain
- Surgical removal of disc after laminectomy

