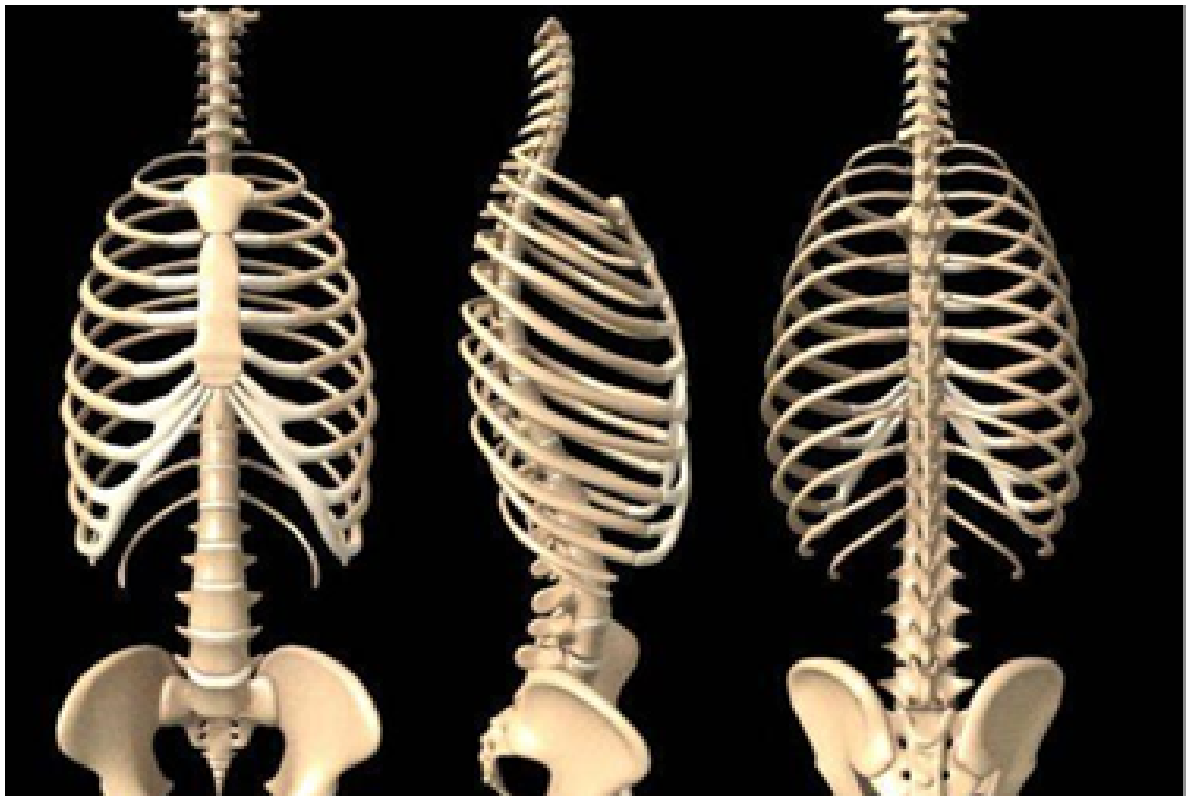
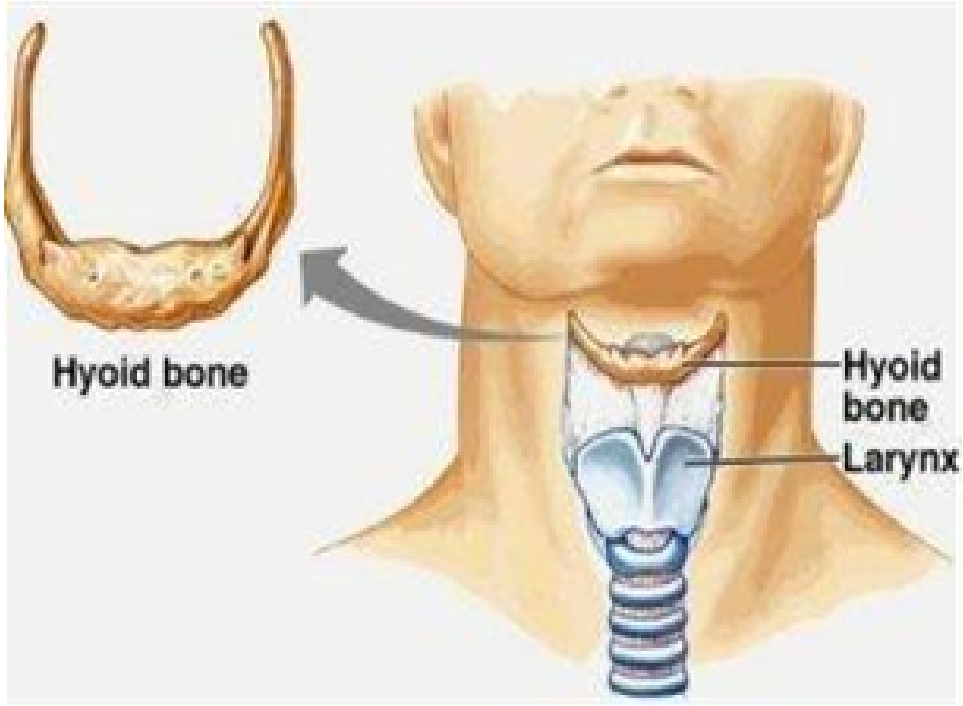
Hyoid, Verterbral Column and the Ribcage



Hyoid



Hyoid

- U-Shaped
- Superior to larynx in the neck
- Only bone in the body that does not articulate with another bone
- It is NOT your Adam's apple

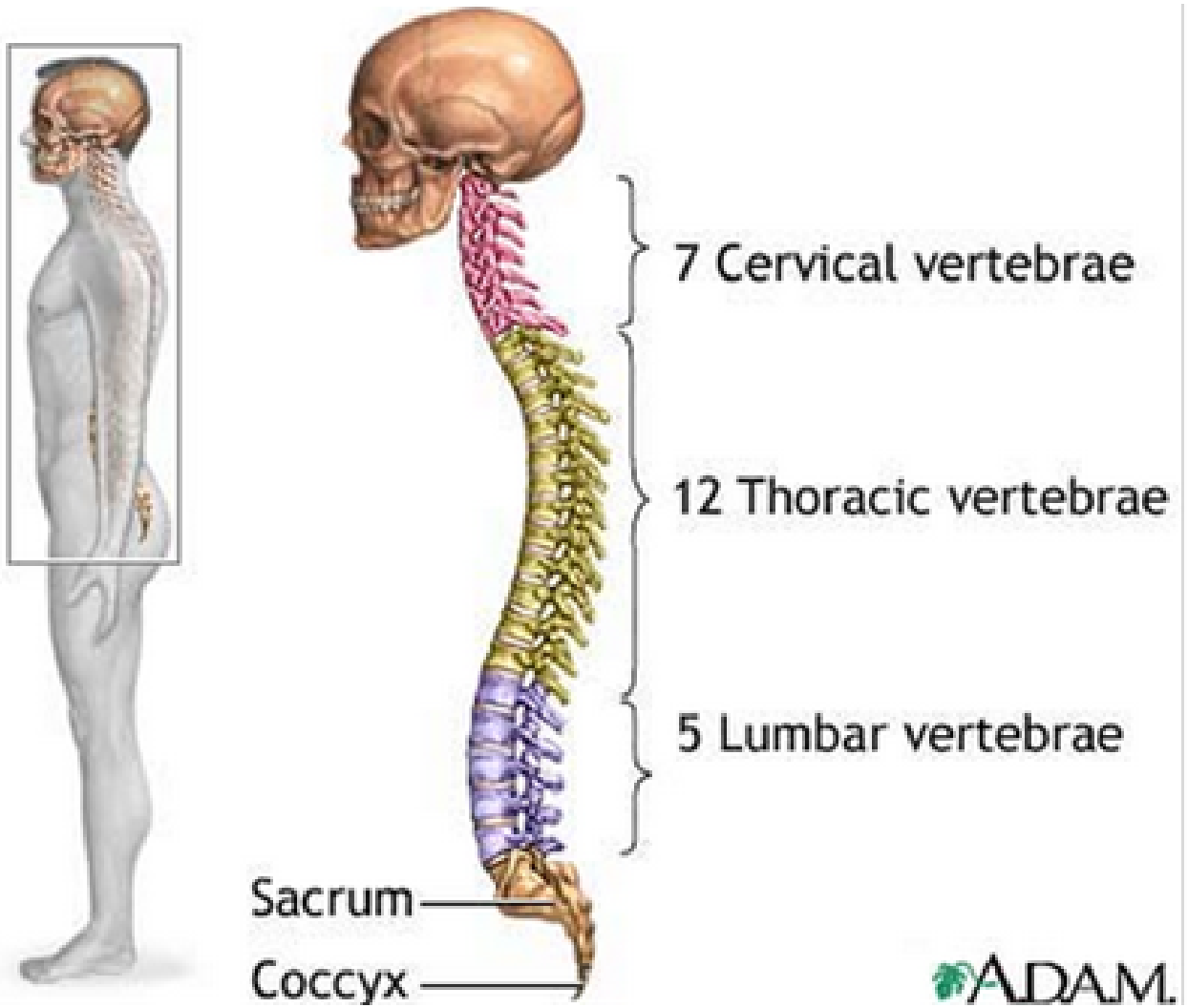
Hyoid

- Suspended from styloid process of the temporal bones by muscles and ligaments

- Anchors the tongue and serves as a place of attchment of muscles associated with swallowing

- The male larynx is lower than women's larynx giving women the opportunity to make a larger range of sounds than men

The Vertebral Column (Spine)



Vertebral Column (Spine)

- Extends from the skull to the pelvis
- Consists of a series of separate bones (Vertebrae)
- Vertebrae are separeted by pads of fibrocartilage called intervertebral disks

Vertebral Column (Spine) cont.

- Located in the middorsal region and forms the vertical axis

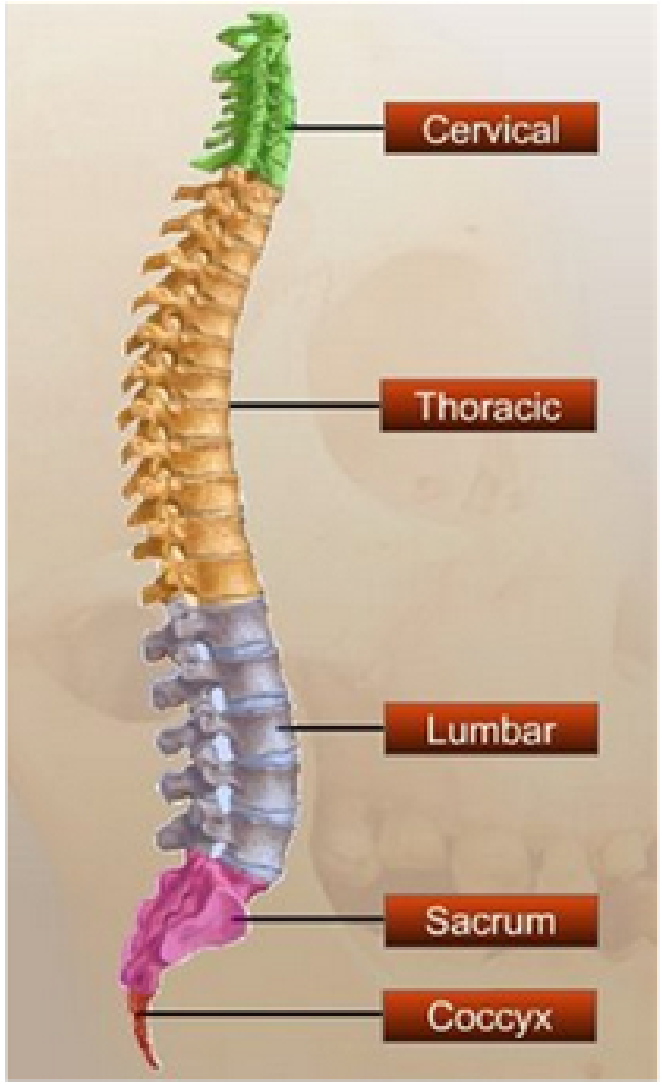
- Protects spinal cord

- Supports skull, ribcage and pelvic girdle

Vertebral Column (Spine) cont.

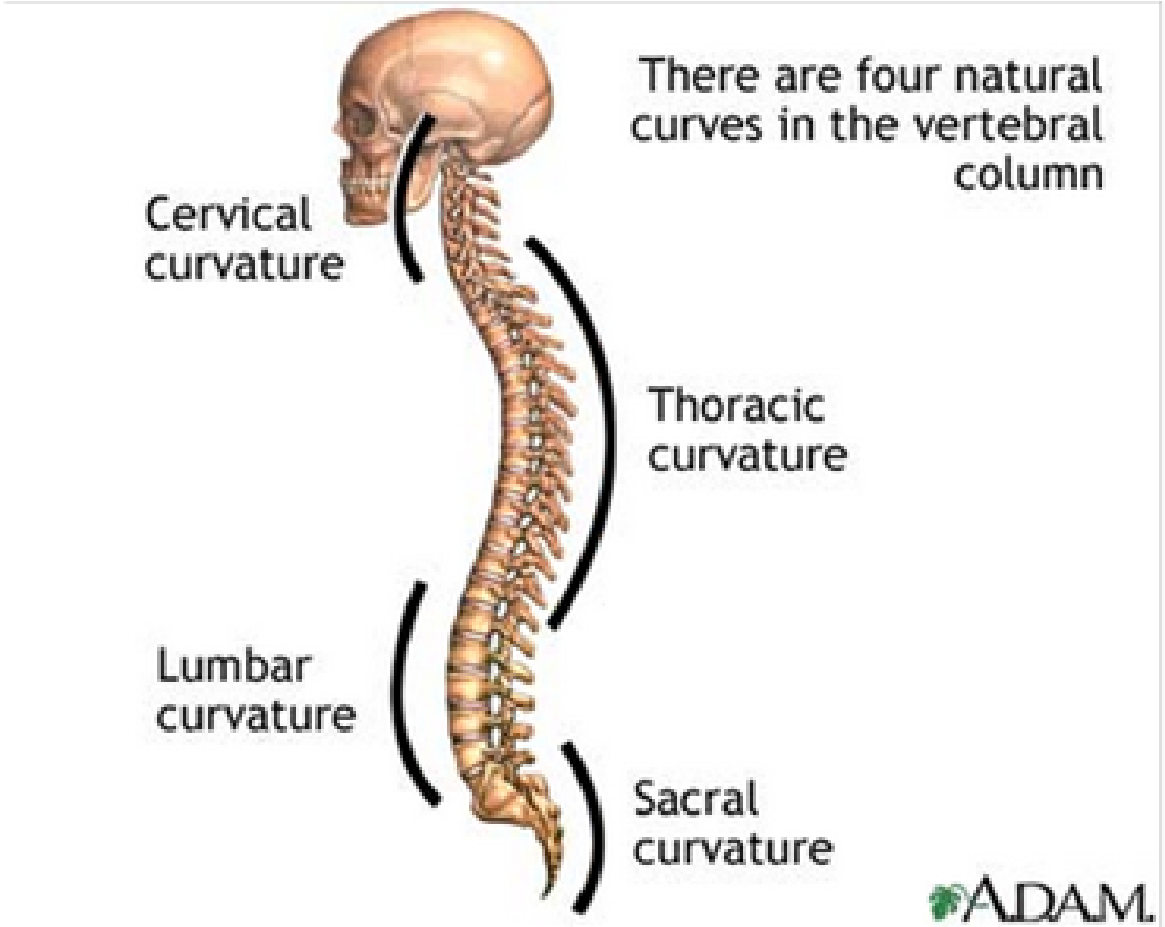
Vertebrae are named according to their location:

- Cervical (Neck)
- Thoracic (Chest)
- Lumbar (Lower Back)
- Sacral
- Coccyx



Vertebral Column (Spine) cont.

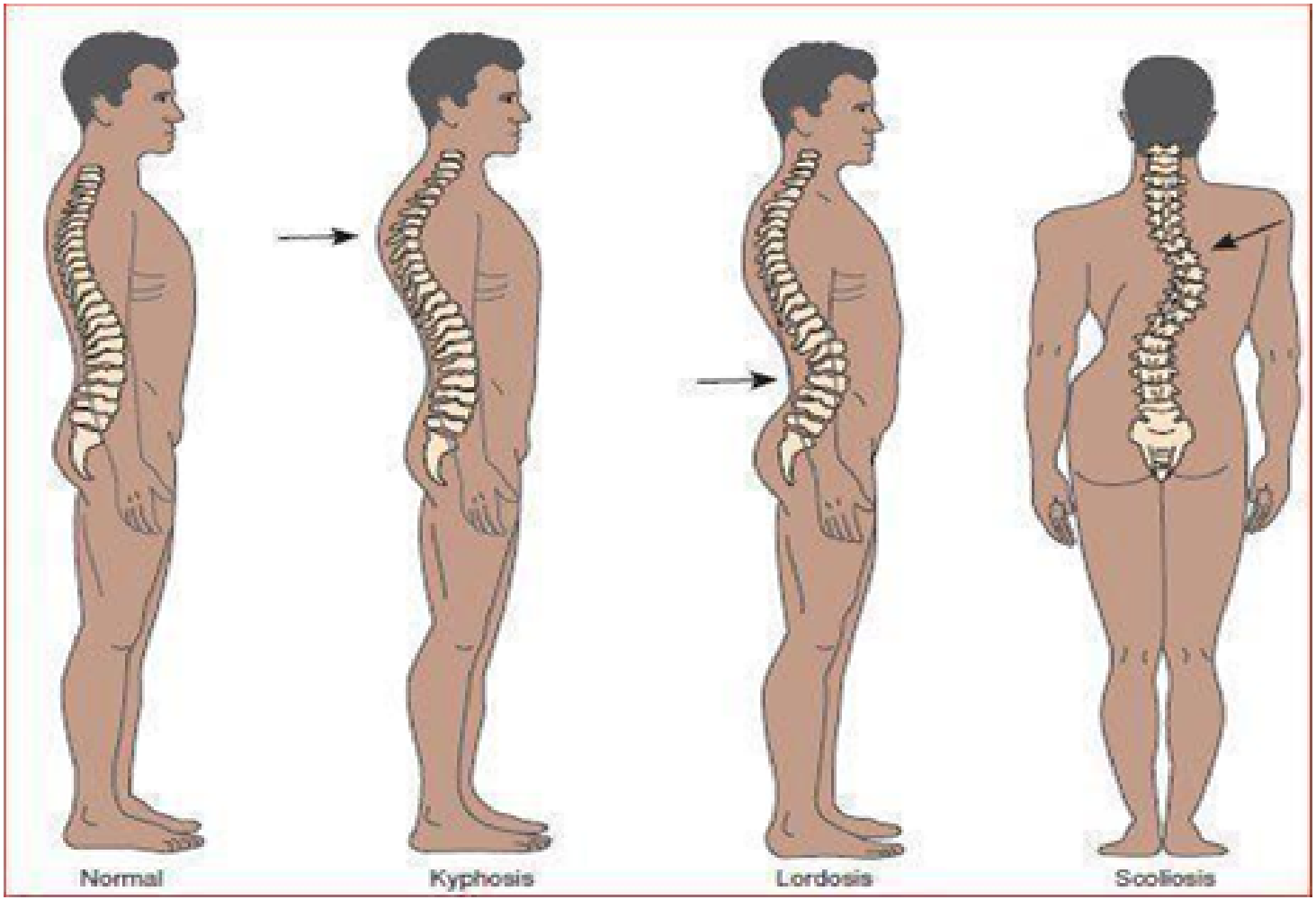
- Normal spines have 4 normal curvatures



Abnormalities

- Lordosis - Abnormally exaggerated lumbar curvature
- Kyphosis - Increased roundness of the thoracic curvature (hunchback)

Scoliosis - Abnormal side to side curvature



Intervertebral Disks (Discs)

- Fibrocartilaginous disks are located between the vertebrae to act as a cushion

- Disks are filled with gelatinous material whcih prevents the vertebrae from grinding against one another and absorbs shock

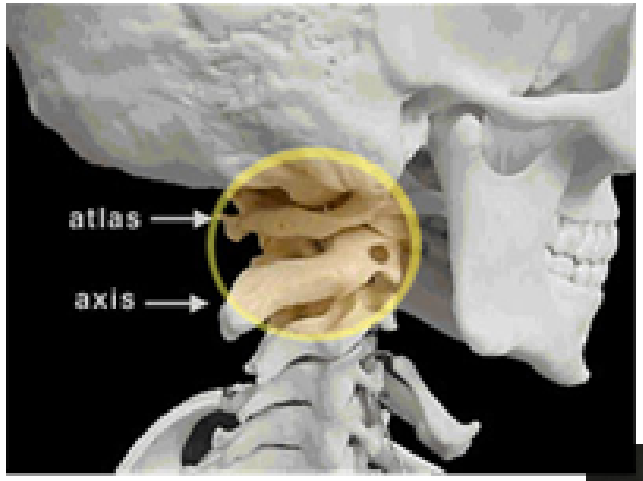
- Allow motion between

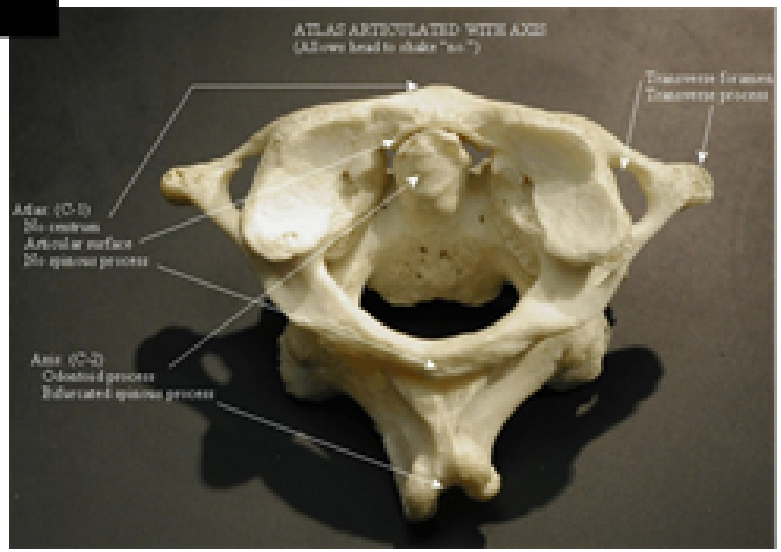
Intervertebral Disks

- A 'herniated disk' is when a disk becomes weakened with age or slips and ruptures

Cervical Vertebrae

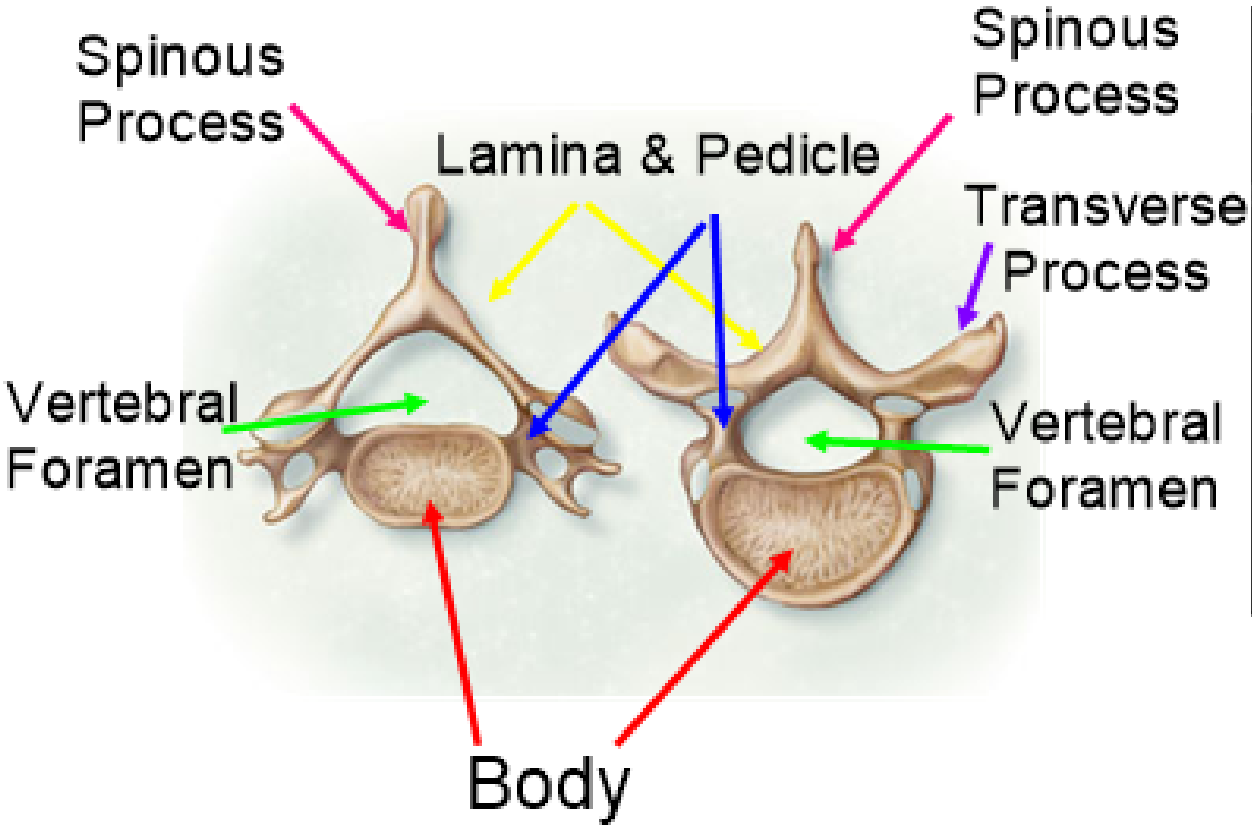
- Atlas and Axis - The first two cervical vertebrae, not typical vertebrae; atlas supports and balances the head; axis pivots in order to allow side to side movement of the head (allows head to shake 'no')





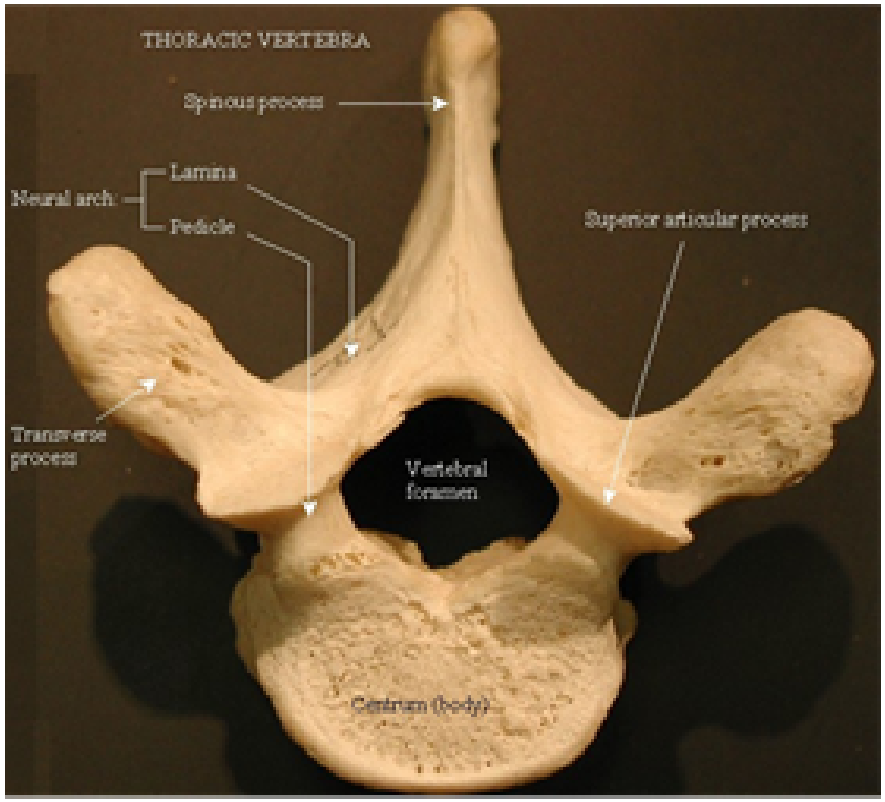
Cervical Vertebrae

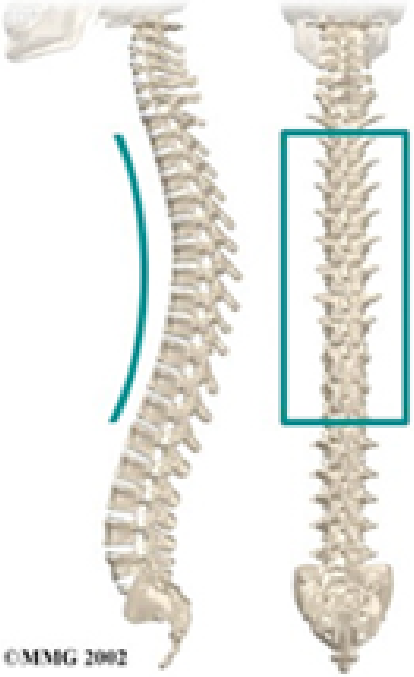
- There are 7 cervical vertebrae (including atlas and axis)
- Body, Vertebral foramen, Pedicles and Lamina form a 'roof', Spinous Process is like a flagpole, transverse processes are like gutters

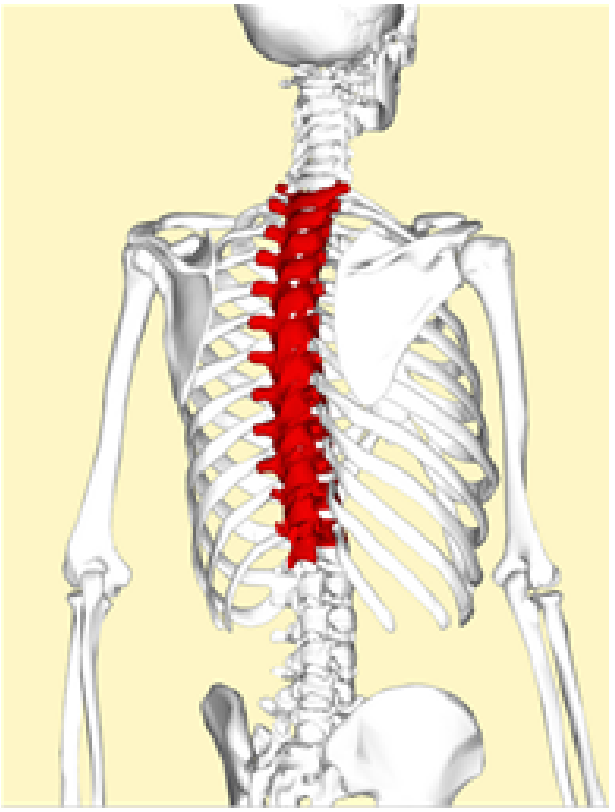


Thoracic Vertebrae

- There are 12 thoracic vertebrae - connect ribs to dorsal portion of body
- Body, Vertebral foramen, Pedicles and Lamina form a 'roof', Spinous Process is like a flagpole, transverse processes are like gutters

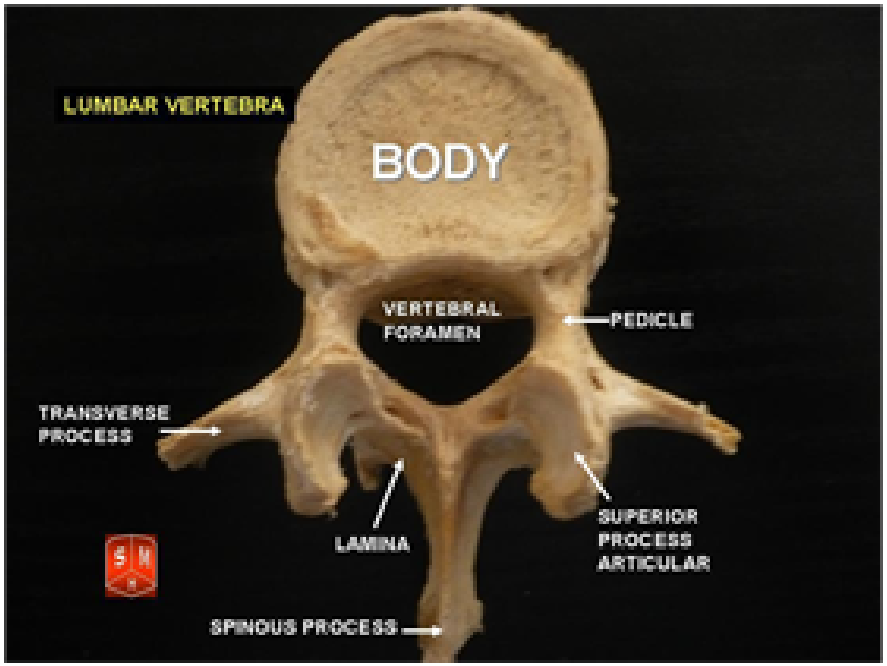




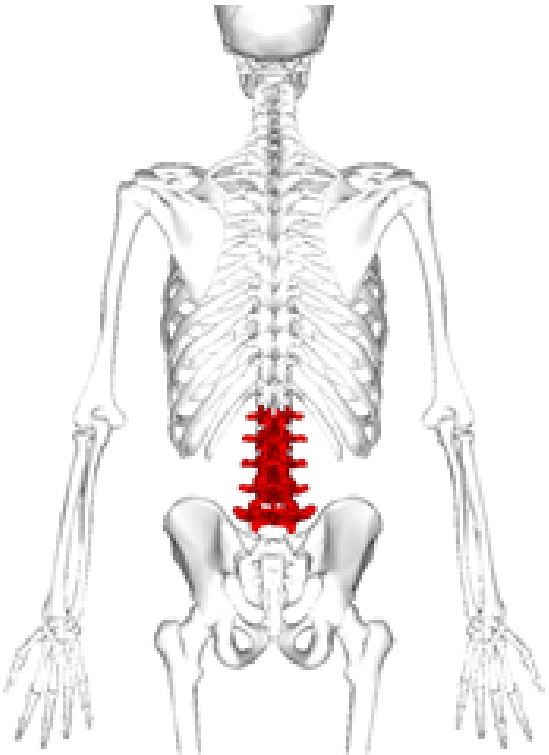


Lumbar Vertebrae

- There are 5 lumbar vertebrae - the largest of vertebrae to bear higher amounts of weight
- Body, Vertebral foramen, Pedicles and Lamina form a 'roof', Spinous Process is like a flagpole, transverse processes are like gutters



Lumbaring Moose ;-)

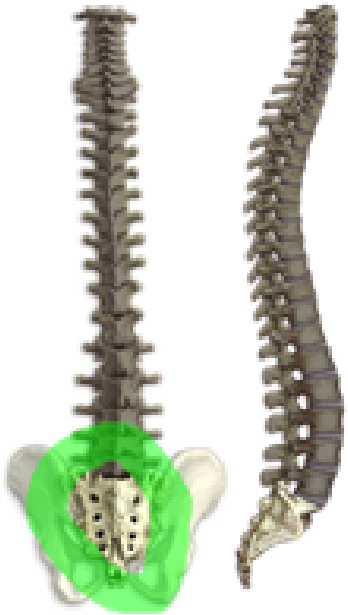


Sacrum

- Sacrum - 5 bones fused together, connects with the pelvic girdle and forms the posterior wall of the pelvic cavity

Ventral Side

Dorsal Side



Coccyx

- 'tailbone', fusion of 3 to 5 vertebrae, bottommost part of the vertebral column

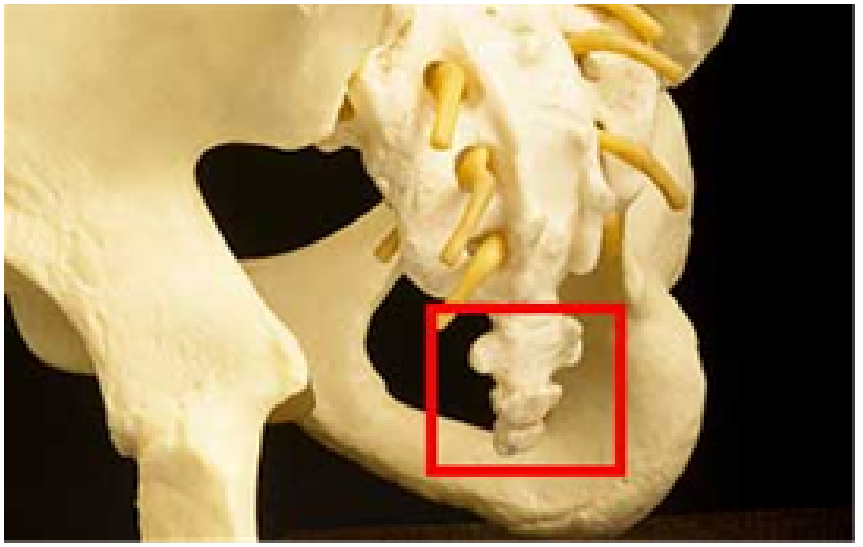
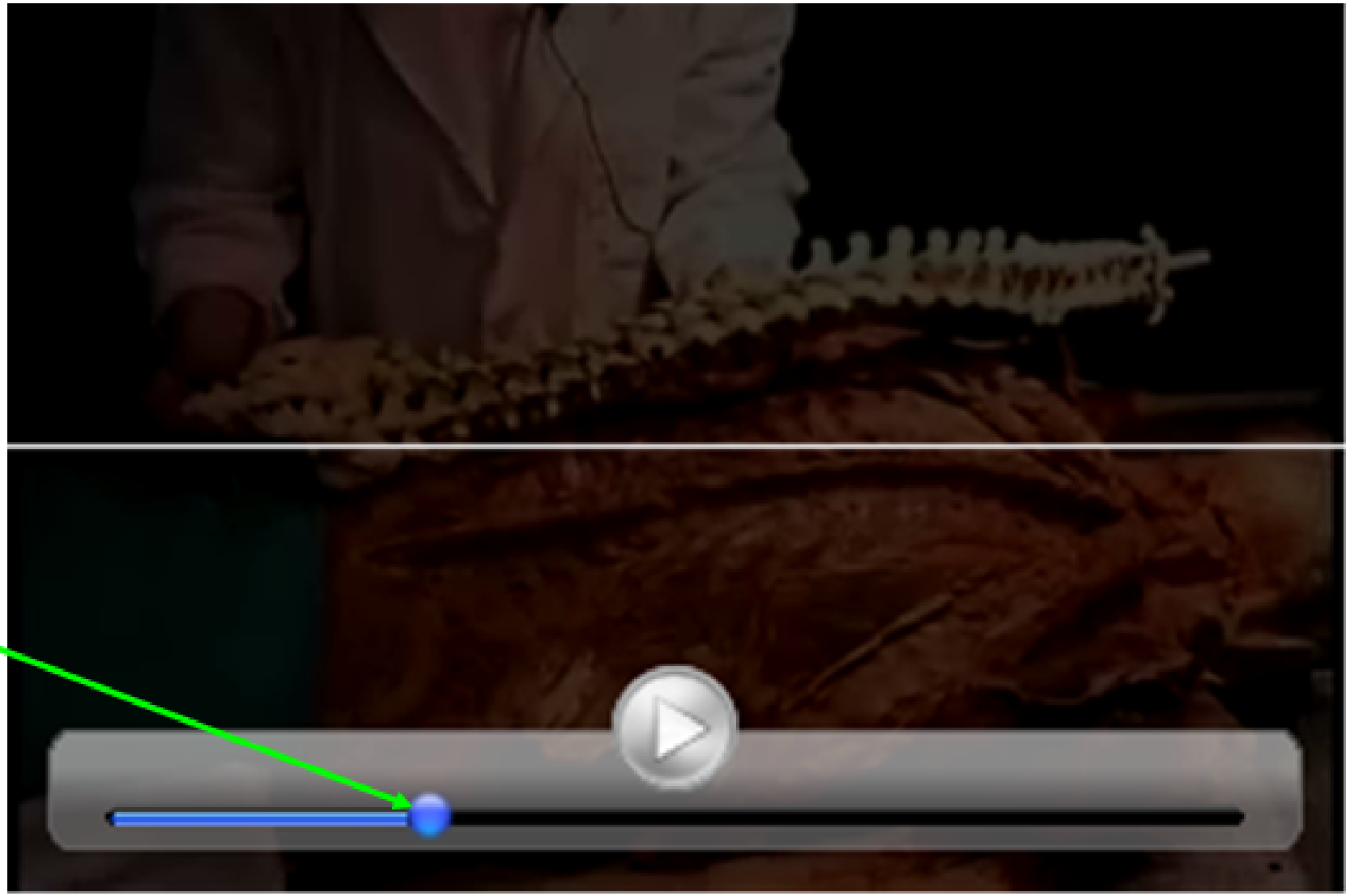
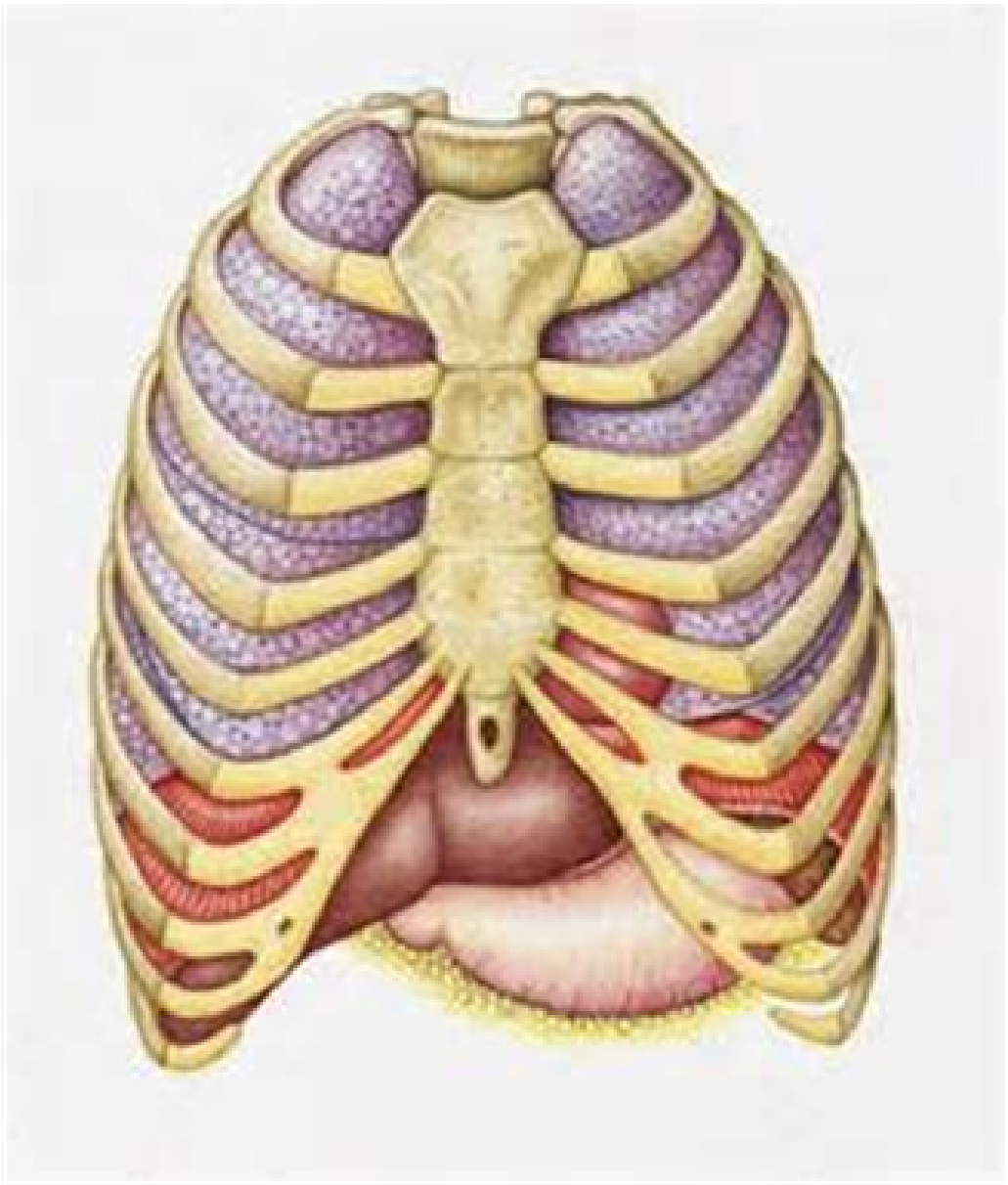


Fig. 1 ·

Cadaver Dissection; Vertebral Column



Rib Cage



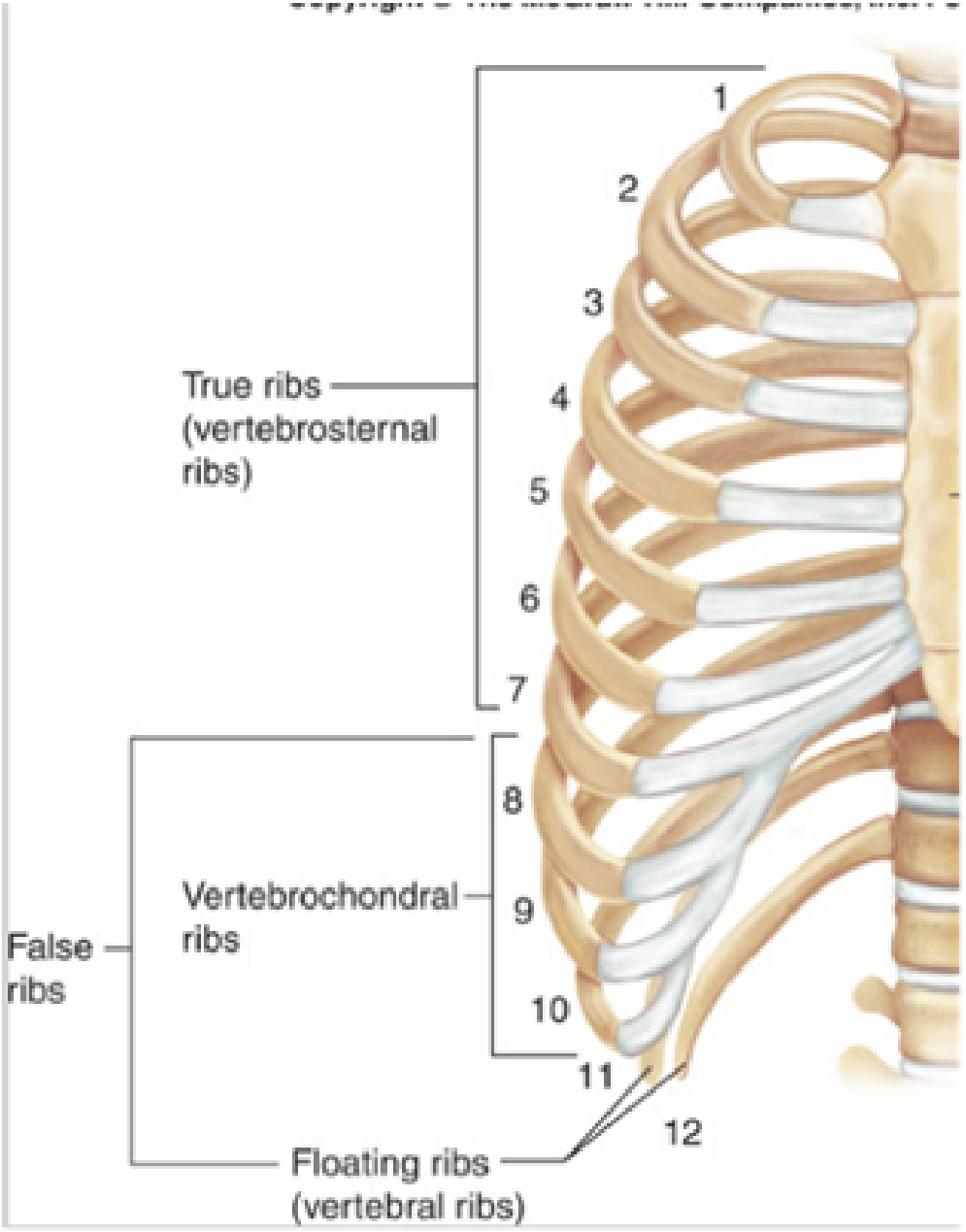
Rib Cage

- Also called 'thoracic cage'
- composed of the thoracic vertebrae, ribs, associated cartilage and sternum
- Protective yet flexible (inhale / exhale)
- Provides support for pectoral girdle

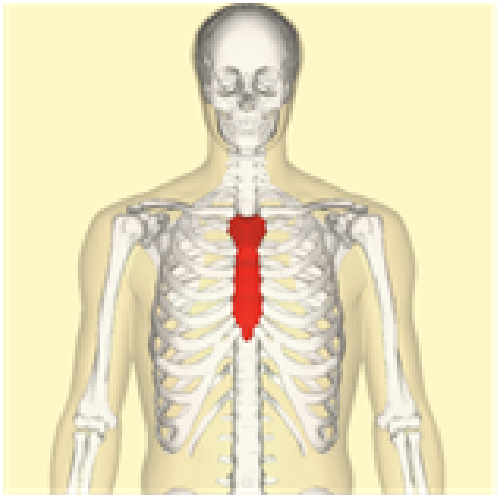
Rib Cage cont.

- 12 pairs of ribs connected directly to the thoracic vertebrae
- The upper 7 pairs of ribs connect directly to the sternum by costal cartilege (true ribs)
- The next 5 pairs of ribs attach indirectly to the sternum or don't attach at all (false ribs)
  - Ribs 8, 9, 10 attach to ribs above it (vertebrochondral ribs)
- Ribs 11 and 12 have no attachment to the sternum (Floating Ribs)

Rib Cage


1
2
3
4
5
6
7
8
9
10
11
12
True ribs
(vertebrosternal
ribs)
False
ribs
Vertebrochondral
ribs
Floating ribs
(vertebral ribs)

Sternum



Sternum

- also called 'breastbone'
- flat bone the shape of a blade
- composed of 3 fused bones

Sternum

- Manubrium - superior portion of the sternum
- Body - middle portion of the sternum
- Xiphoid Process - inferior and smallest portion of the bone (cartilege as a child / ossified as an adult)