



Vertebral column and pelvic girdle anatomy

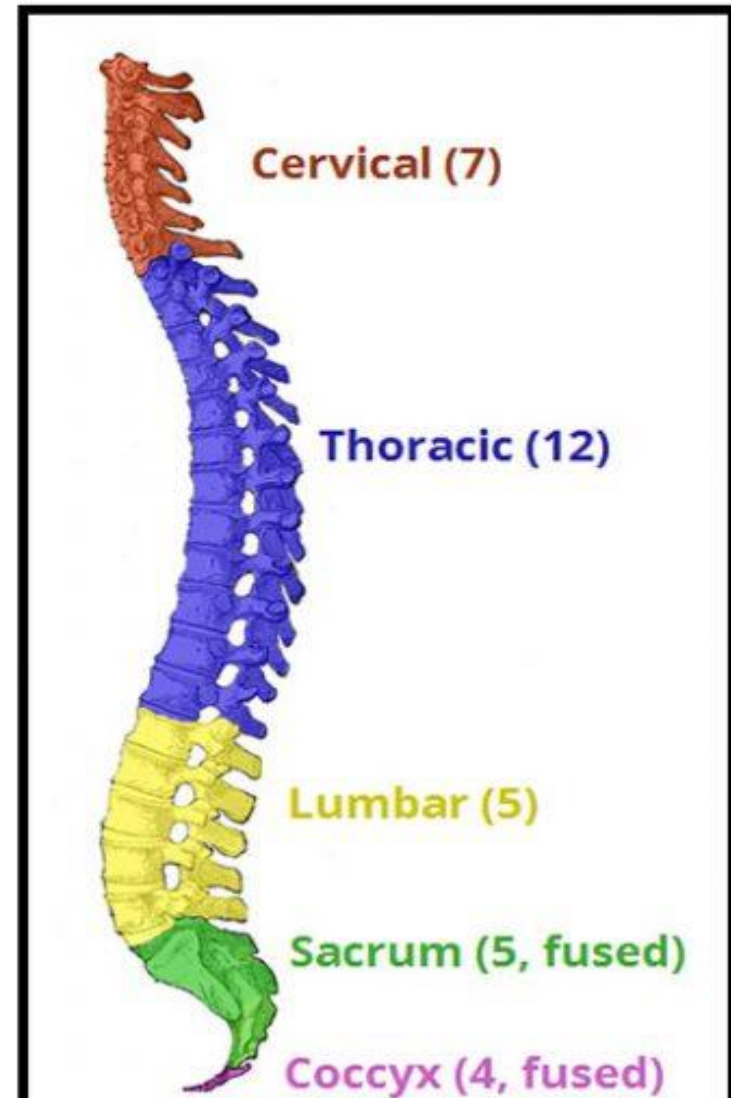
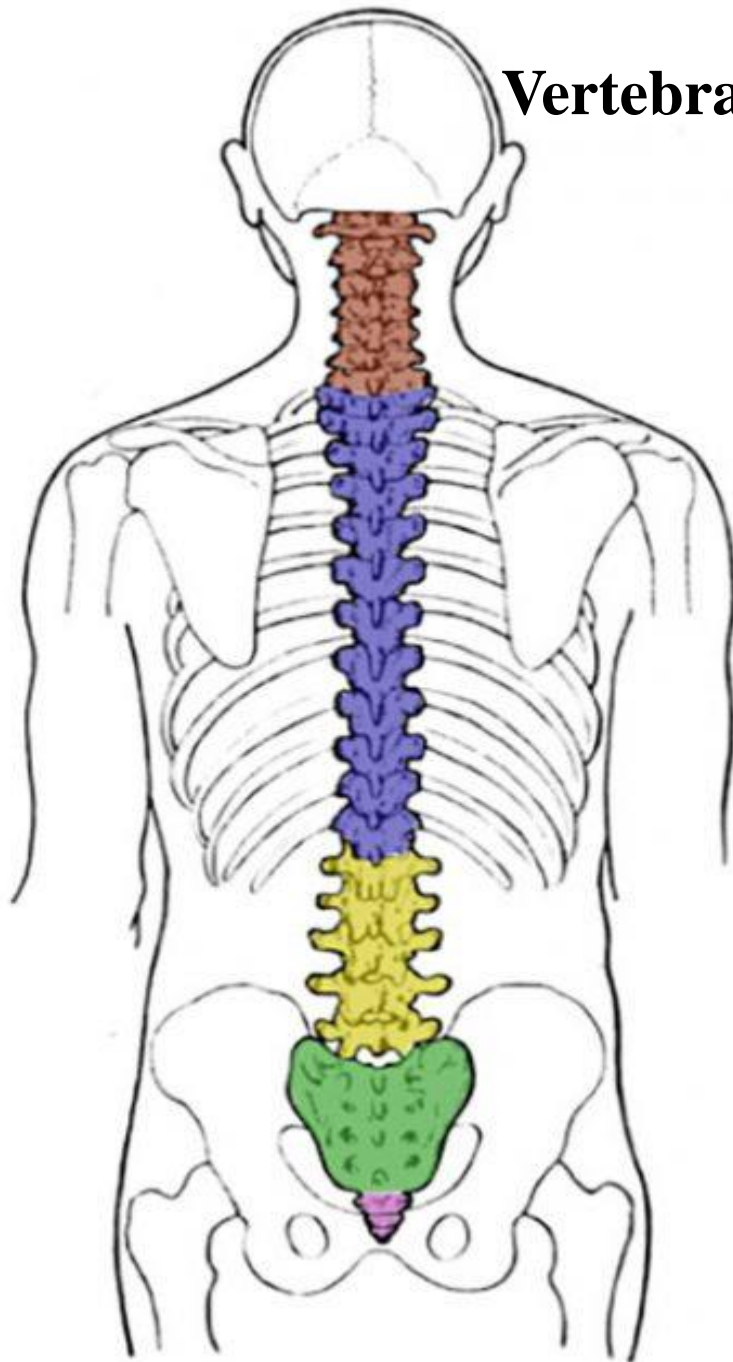
By: Mahdi Al-Anawy

M.S.C

The Vertebral Column

- A series of approximately 33 bones called vertebrae, which are separated by intervertebral discs.
- The column can be divided into five different regions, with each region characterized by a different vertebral structure.

Vertebral Column region



Functions

The vertebral column has four main functions:

Protection – encloses and protects the spinal cord within the spinal canal.

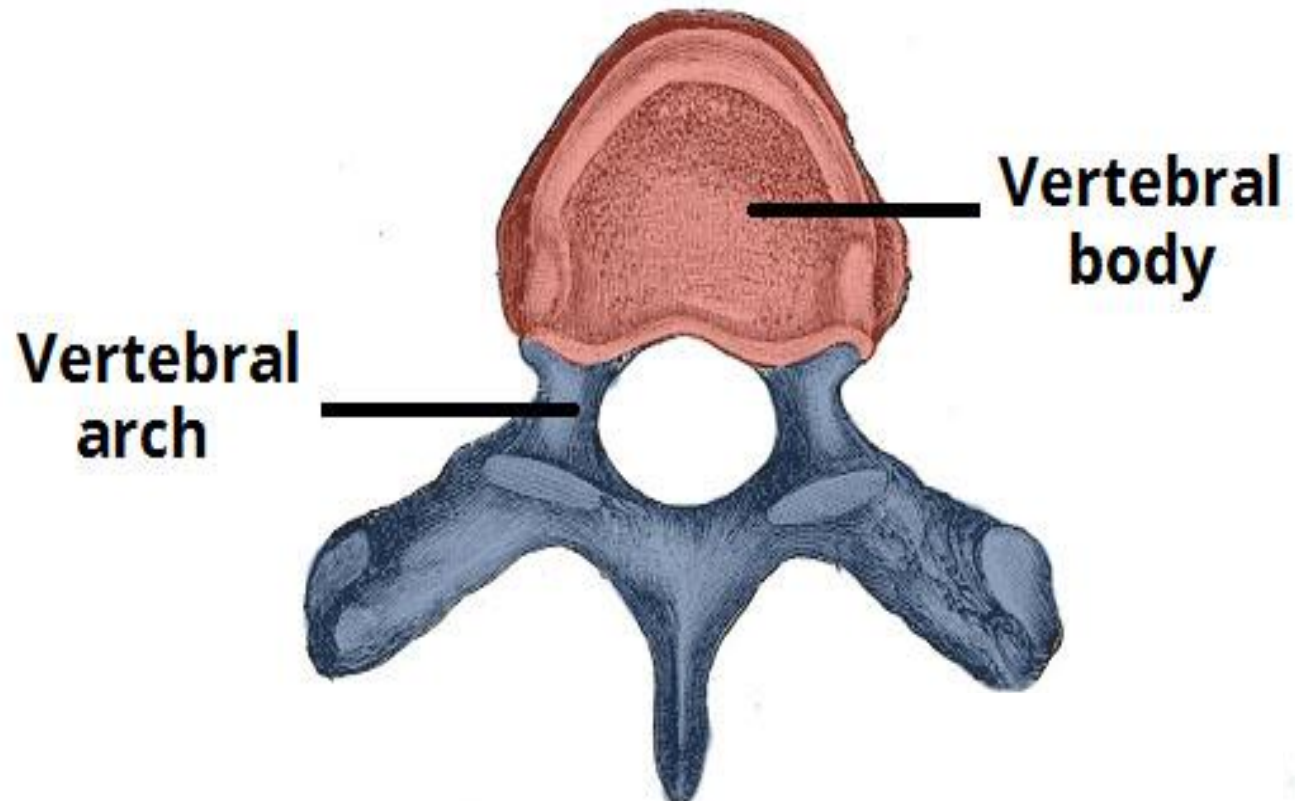
Support – carries the weight of the body above the pelvis.

Axis – forms the central axis of the body.

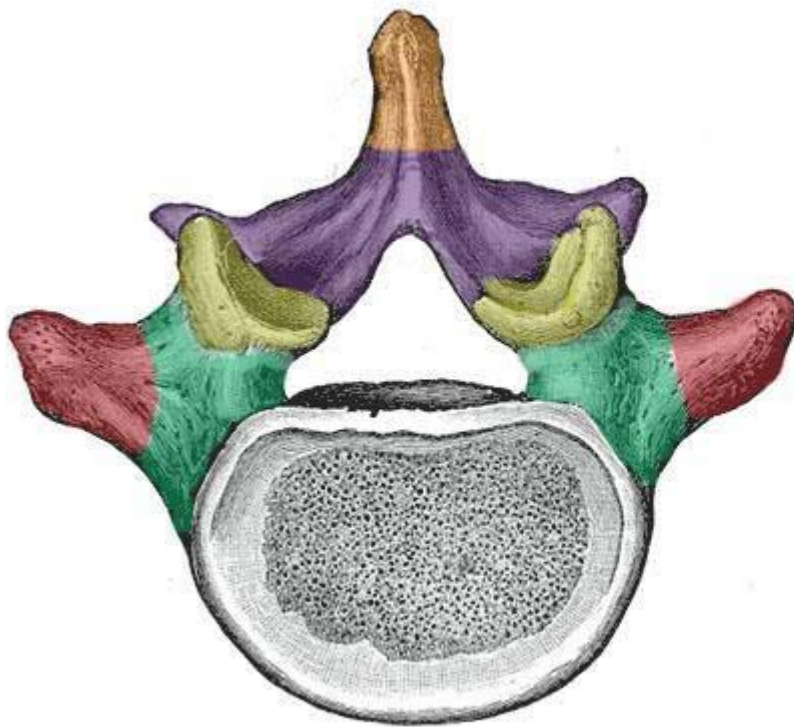
Movement – has roles in both posture and movement.






Structure of a Vertebrae

- **Vertebral Body**
- **Vertebral Arch**



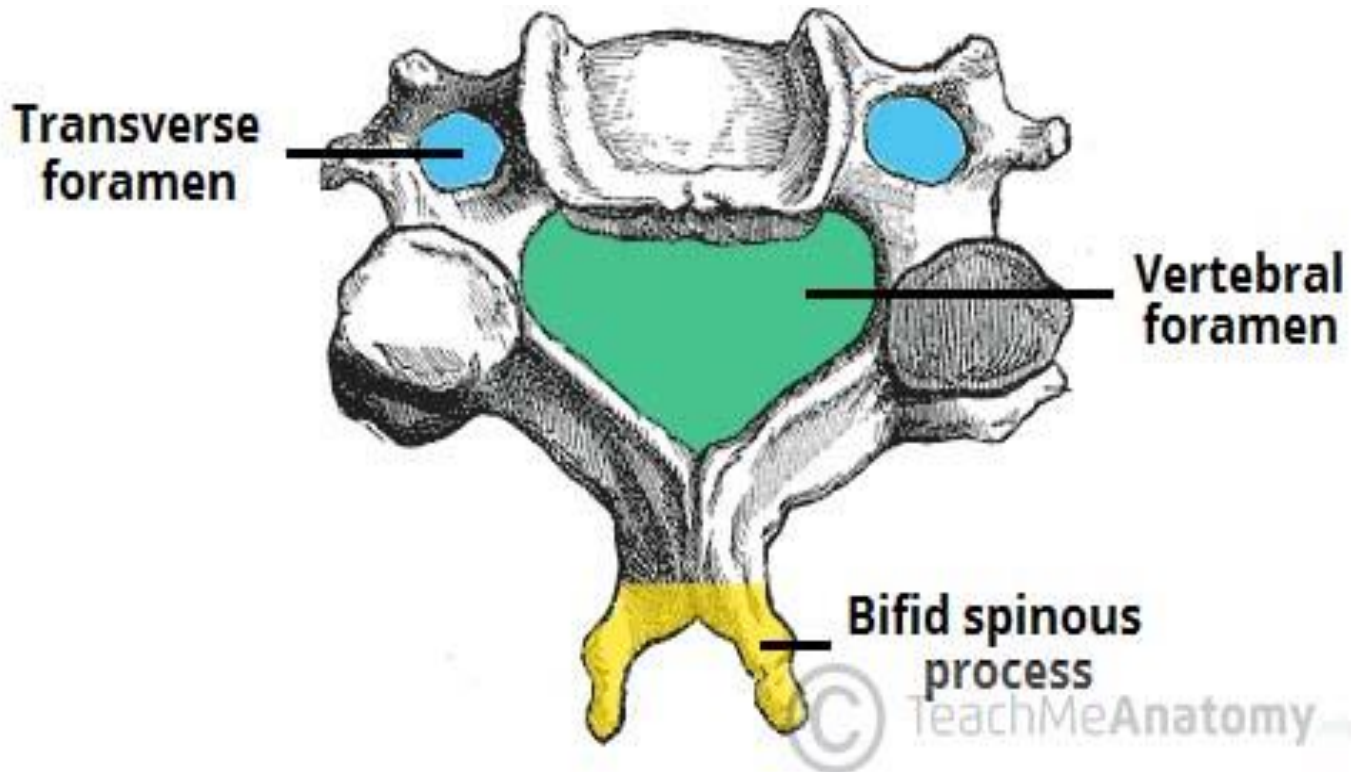
Vertebral Arch



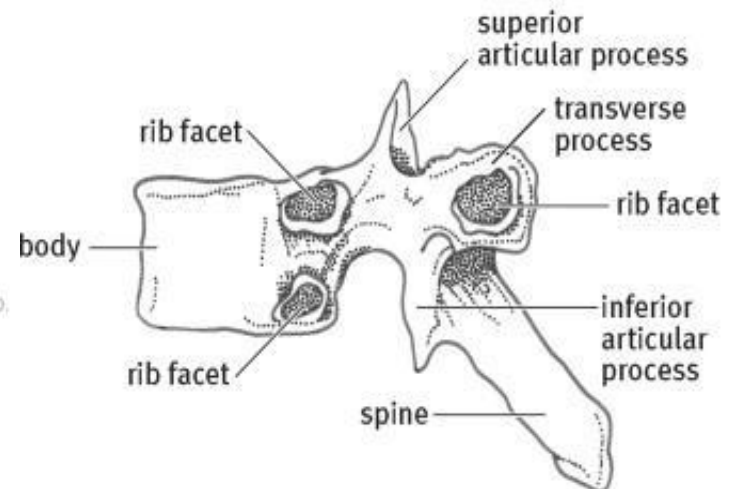
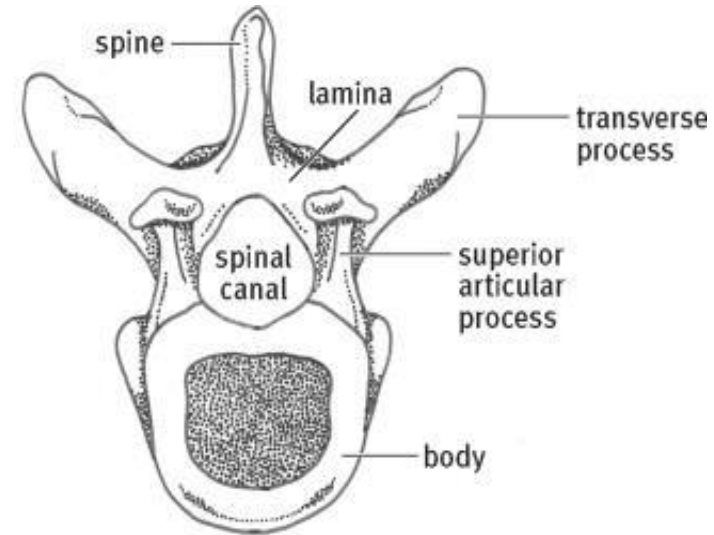
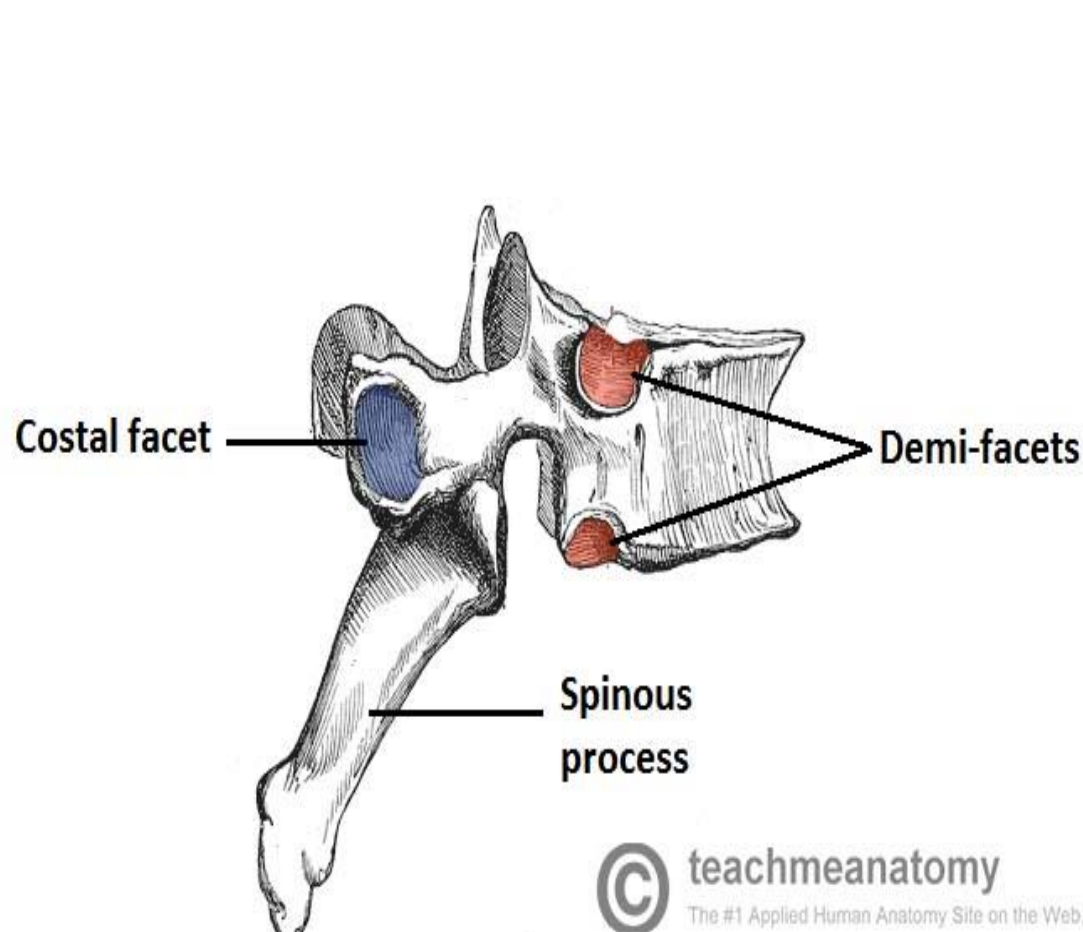
-  Spinous process
-  Lamina
-  Superior articular processes
-  Pedicles
-  Transverse processes

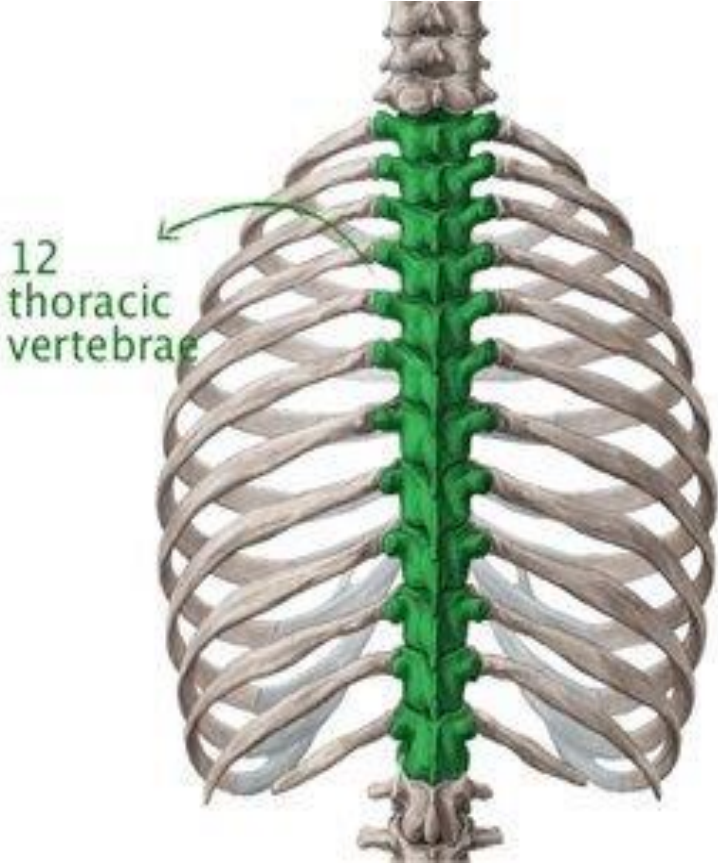
Classifications of Vertebrae

Cervical Vertebrae

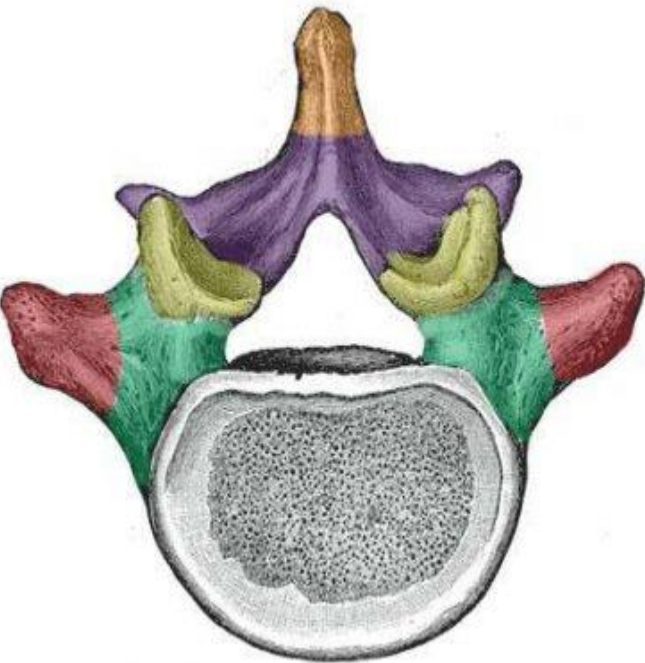







Thoracic Vertebrae

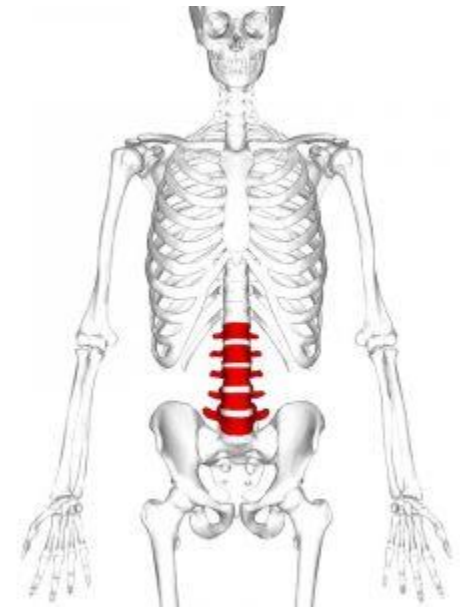


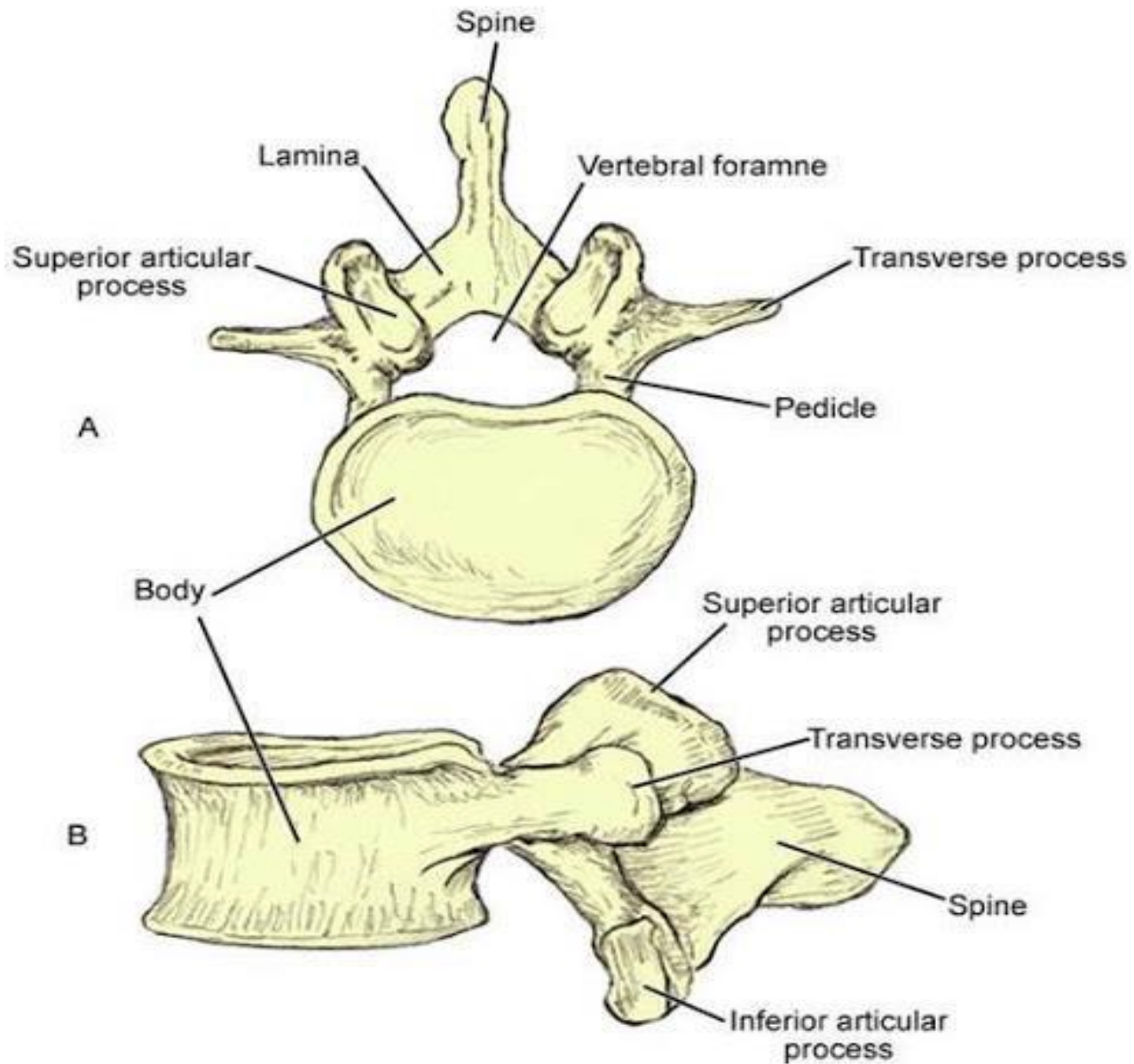


Lumbar Vertebrae



-  Spinous process
-  Lamina
-  Superior articular processes
-  Pedicles
-  Transverse processes

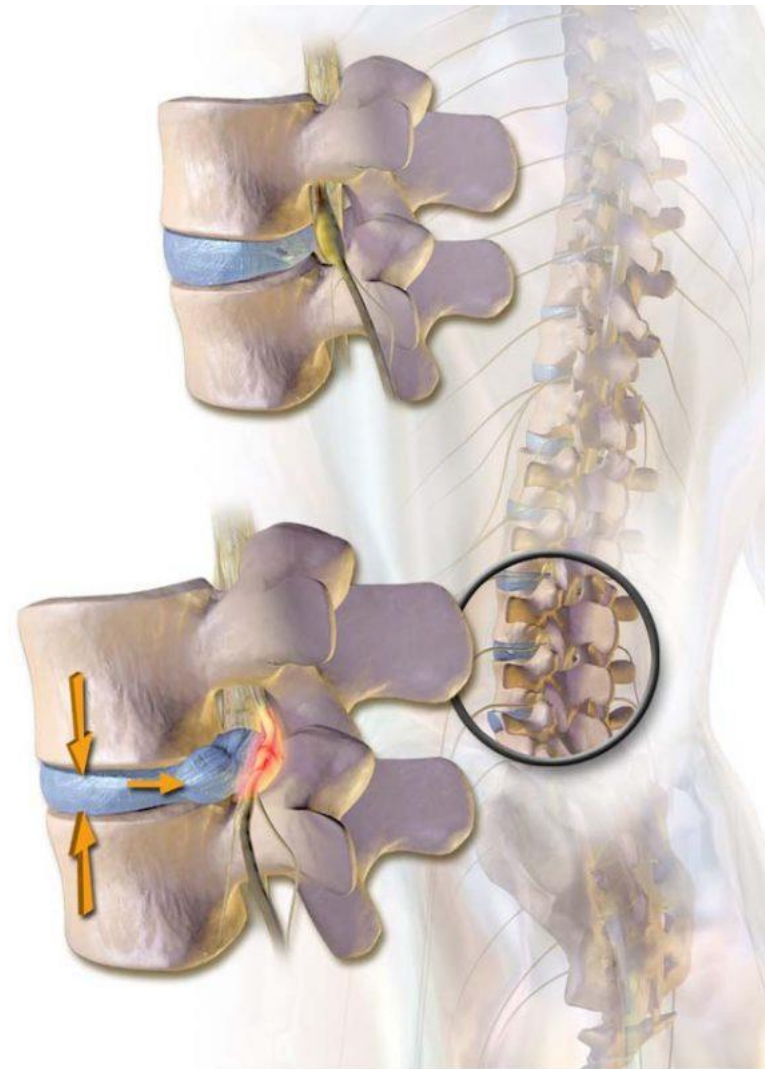




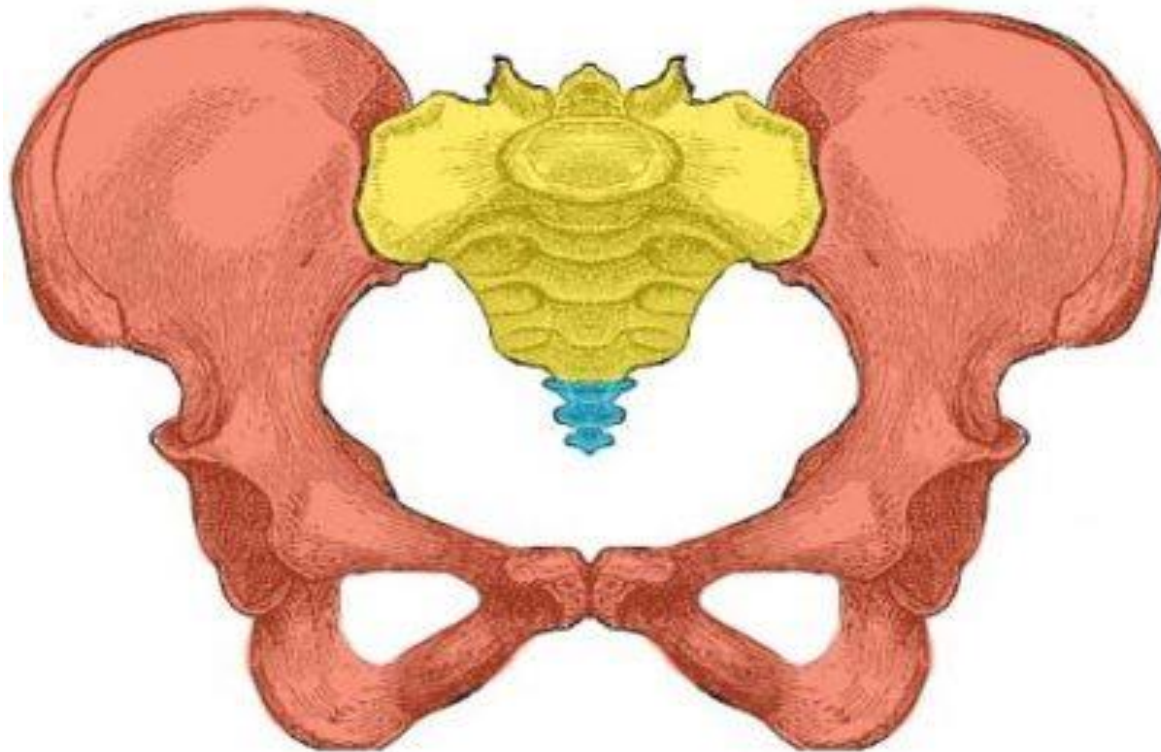


Intervertebral Disc Herniation

The intervertebral disc is a **fibrocartilaginous** cylinder that lies between the vertebrae, joining them together.



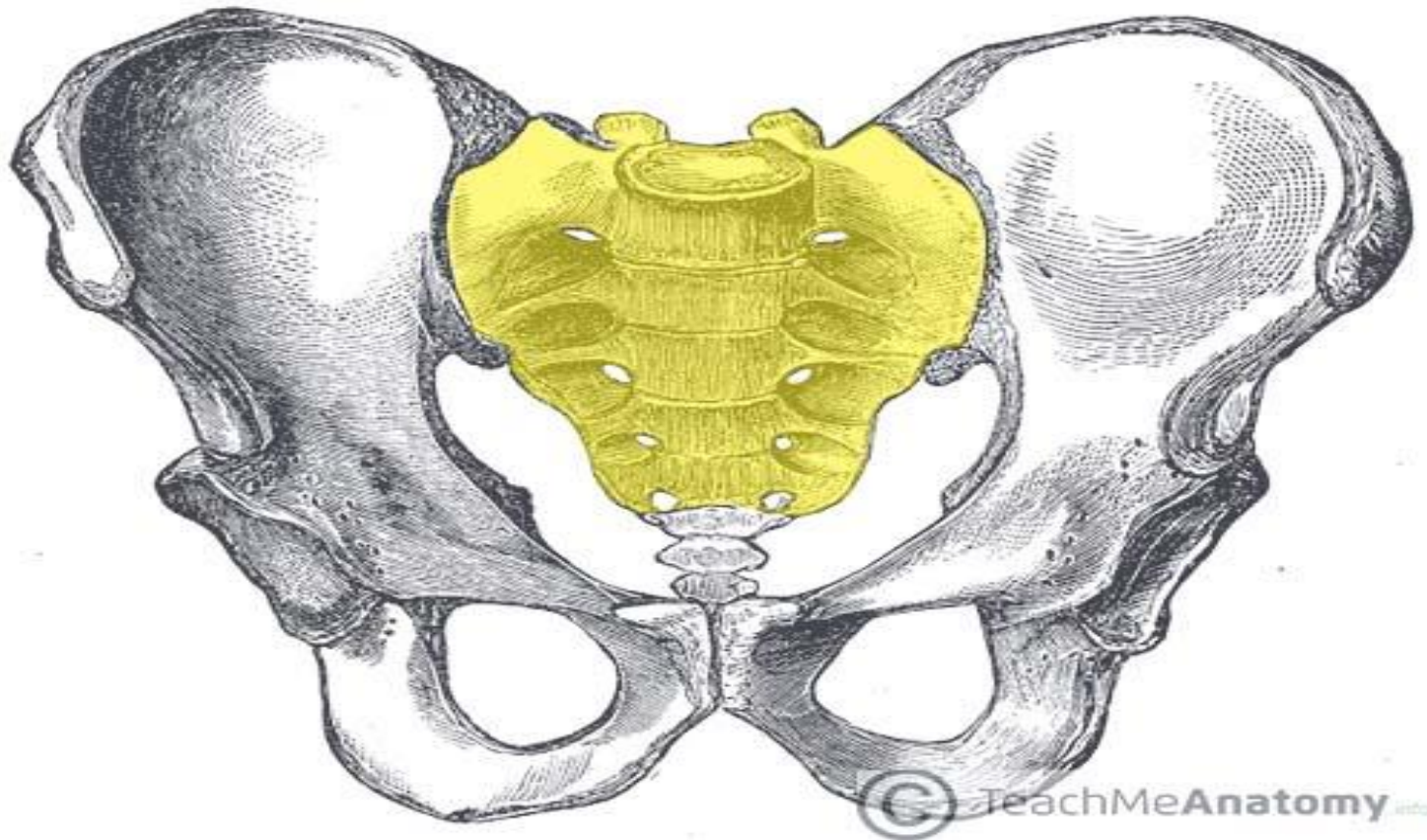
Sacrum and Coccyx



-  Hip bones
-  Sacrum
-  Coccyx

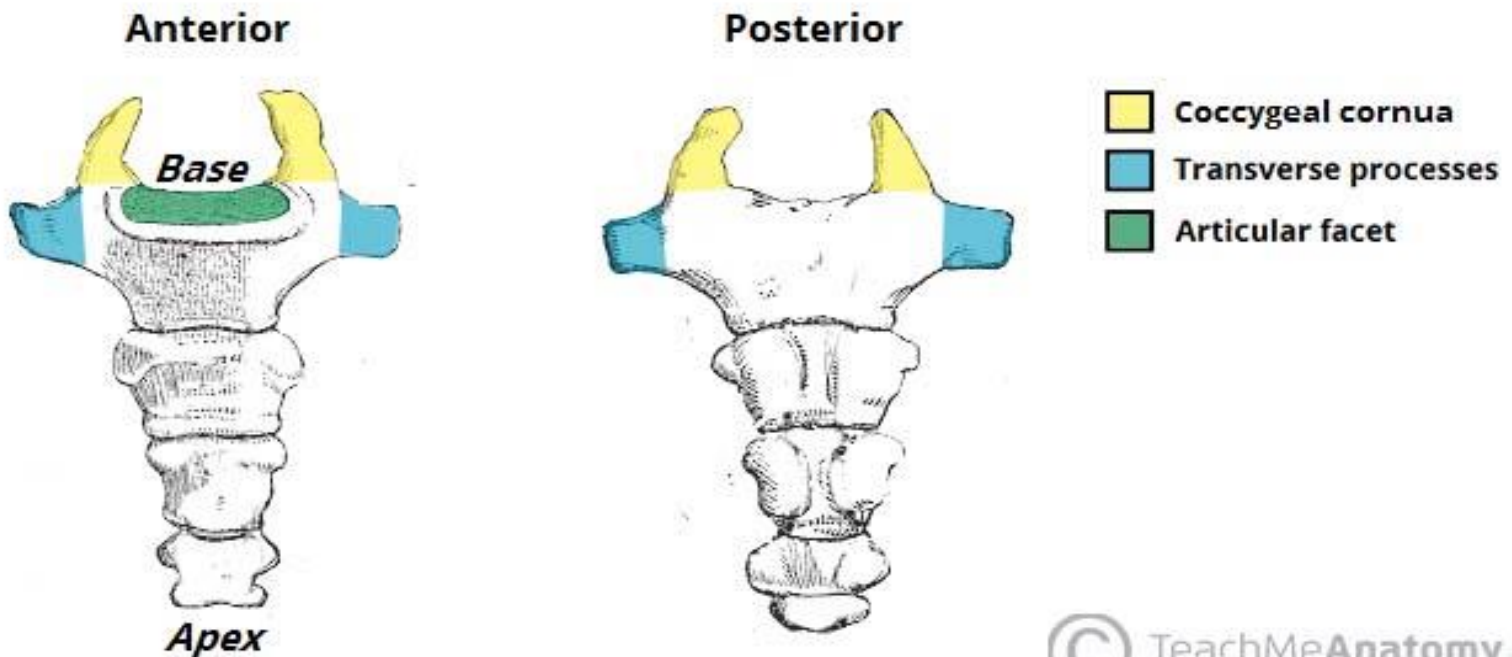
Sacrum

Is a collection of five fused vertebrae.



Coccyx

is a small bone which articulates with the apex of the sacrum. It is comprised of four vertebrae

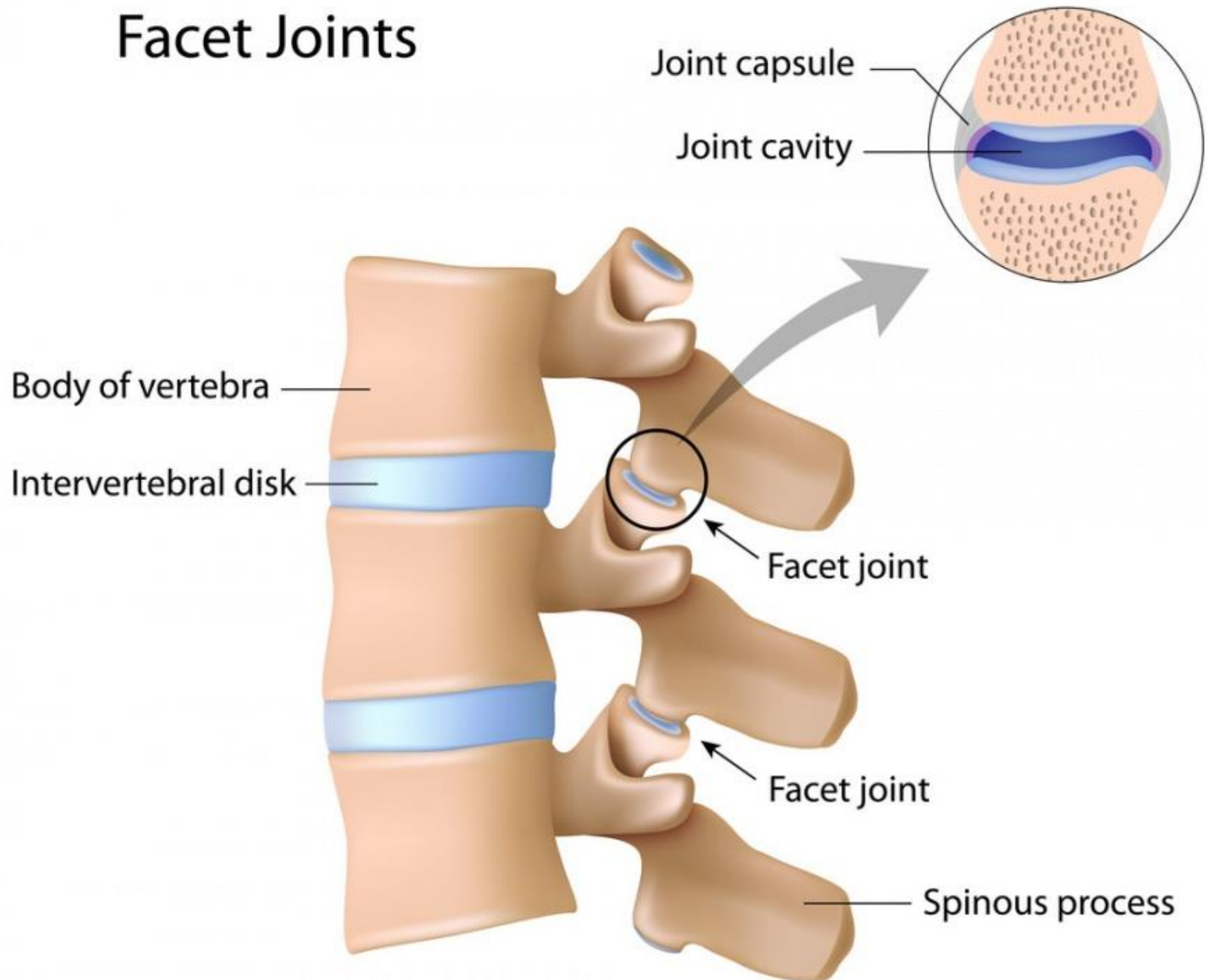


Joints

The mobile vertebrae articulate with each other via joints between their bodies and articular facets:

- Left and right superior articular facets articulate with the vertebra above (facet joints).
- Left and right inferior articular facets articulate with the vertebra below (facet joints).
- Vertebral bodies indirectly articulate with each other via the intervertebral discs (cartilaginous joints).

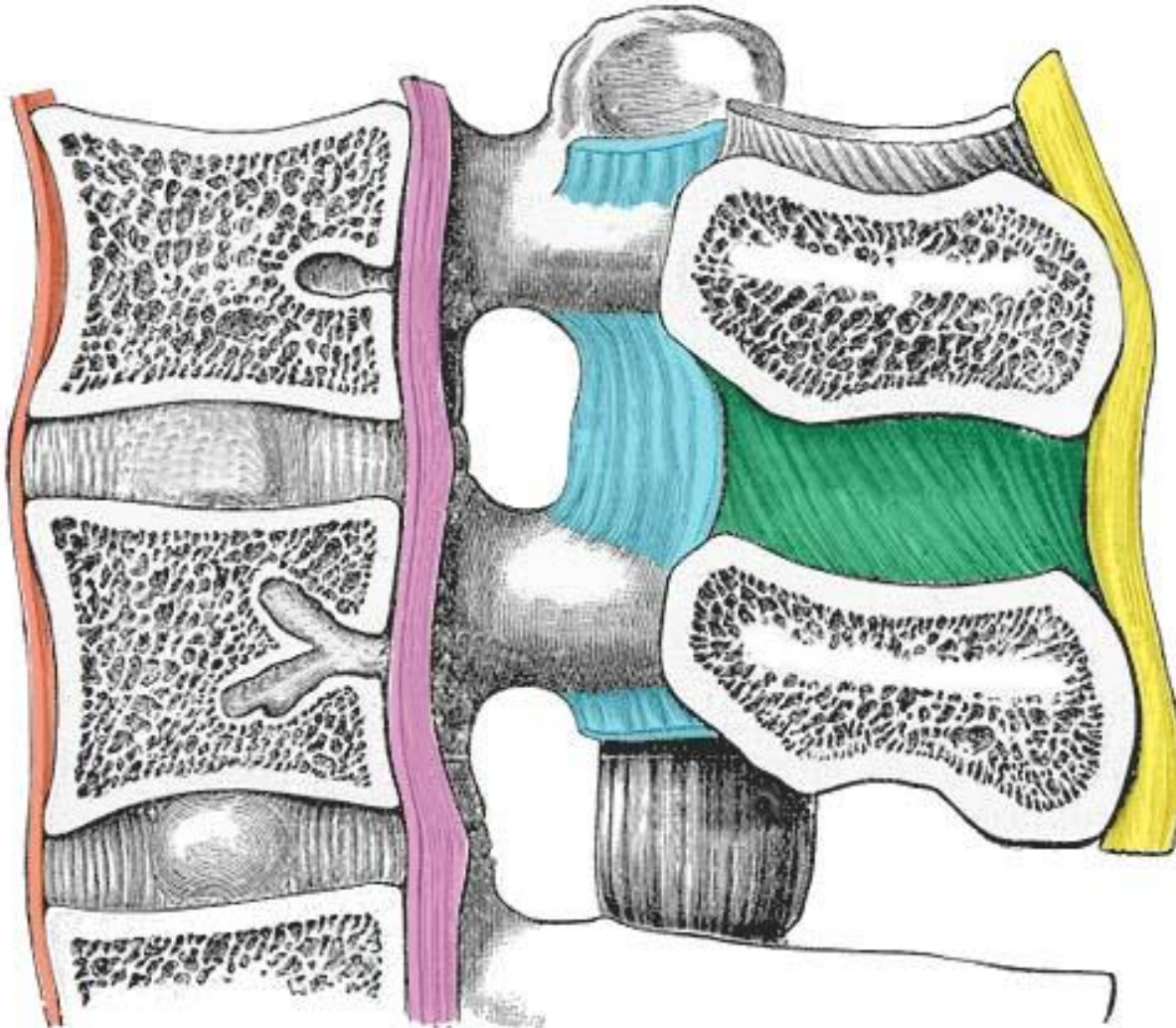
Facet Joints



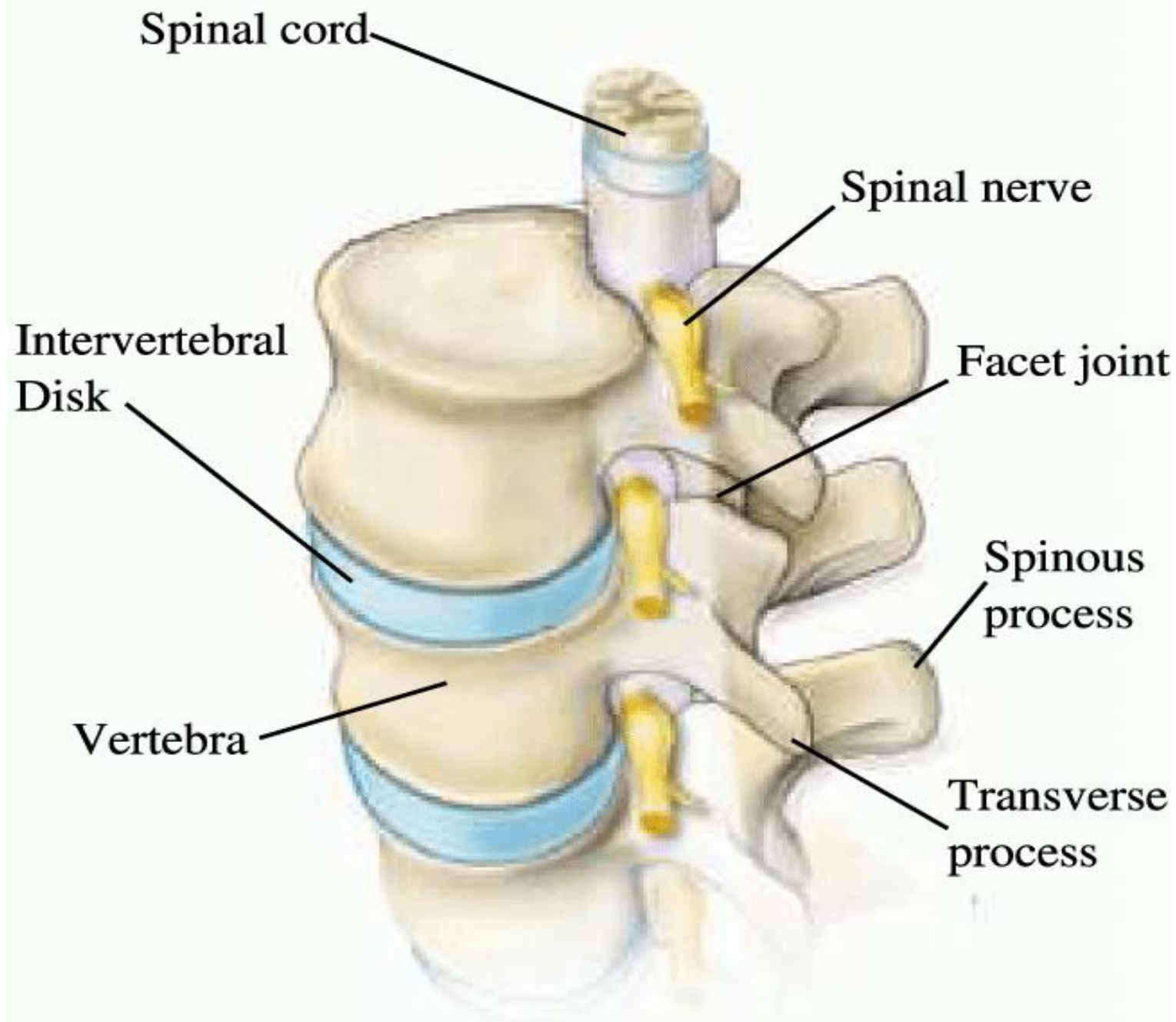
Ligaments

- Two ligaments strengthen the vertebral body joints: the **anterior and posterior longitudinal ligaments**
- **Ligamentum flavum** – extends between lamina of adjacent vertebrae.
- **Interspinous and supraspinous** – join the spinous processes of adjacent vertebrae.

Ligaments



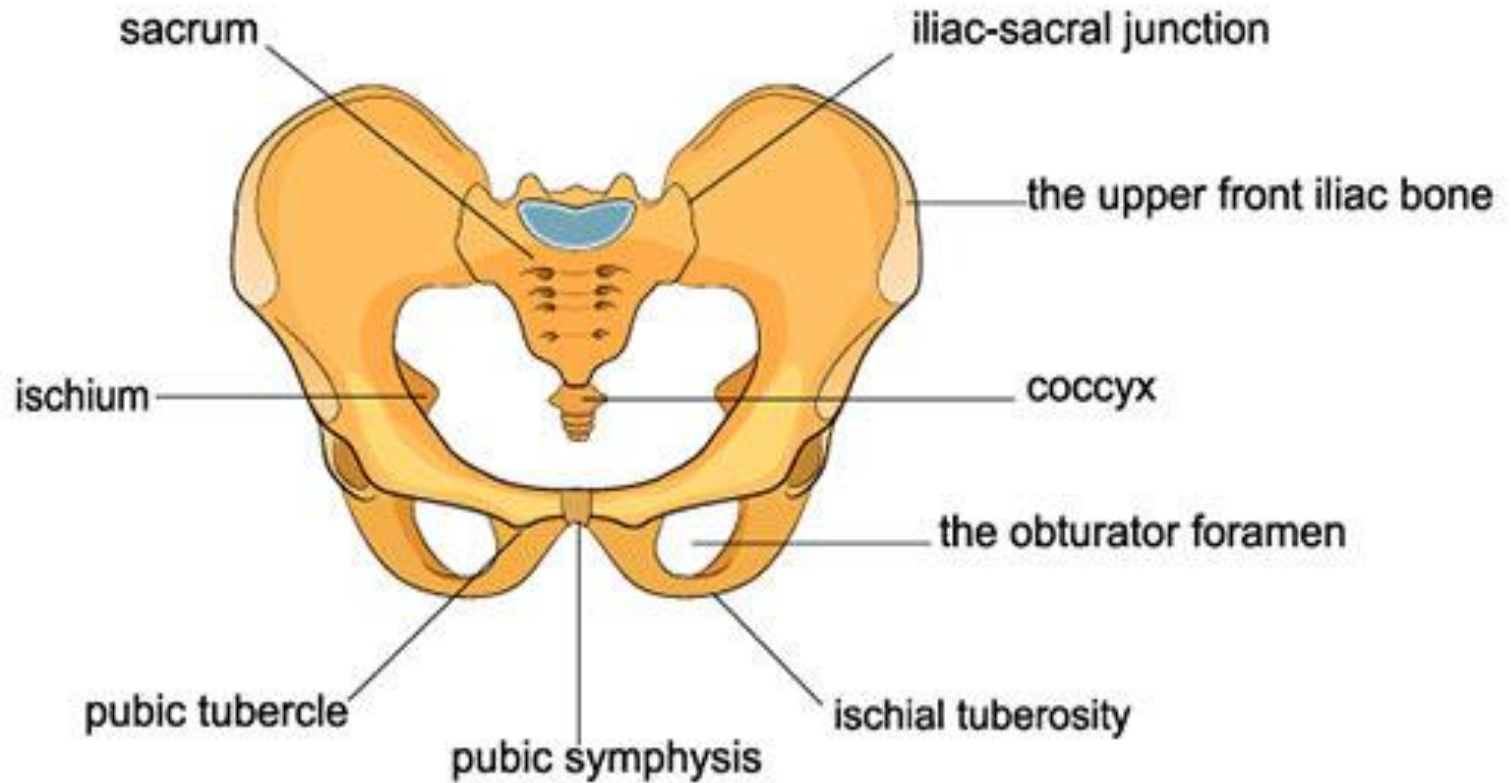
-  Anterior longit. ligament
-  Posterior longit. ligament
-  Ligamentum flavum
-  Interspinous ligament
-  Supraspinous ligament



Pelvic girdle

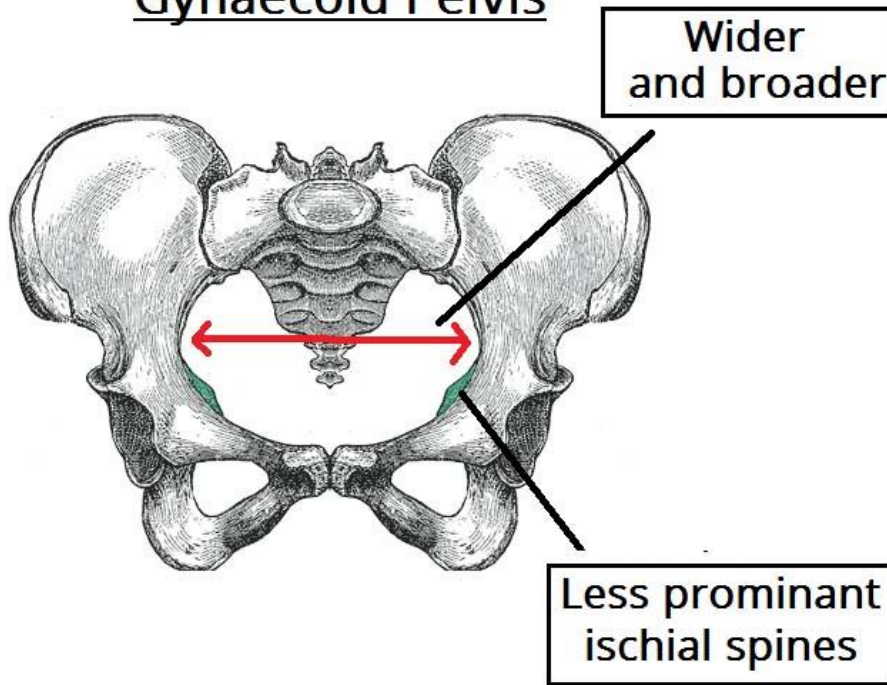
- Is a ring-like bony structure, located in the lower part of the trunk. It connects the axial skeleton to the lower limbs.

ANATOMY OF THE PELVIS



Gynaecoid pelvis and android pelvis

Gynaecoid Pelvis



Android Pelvis

