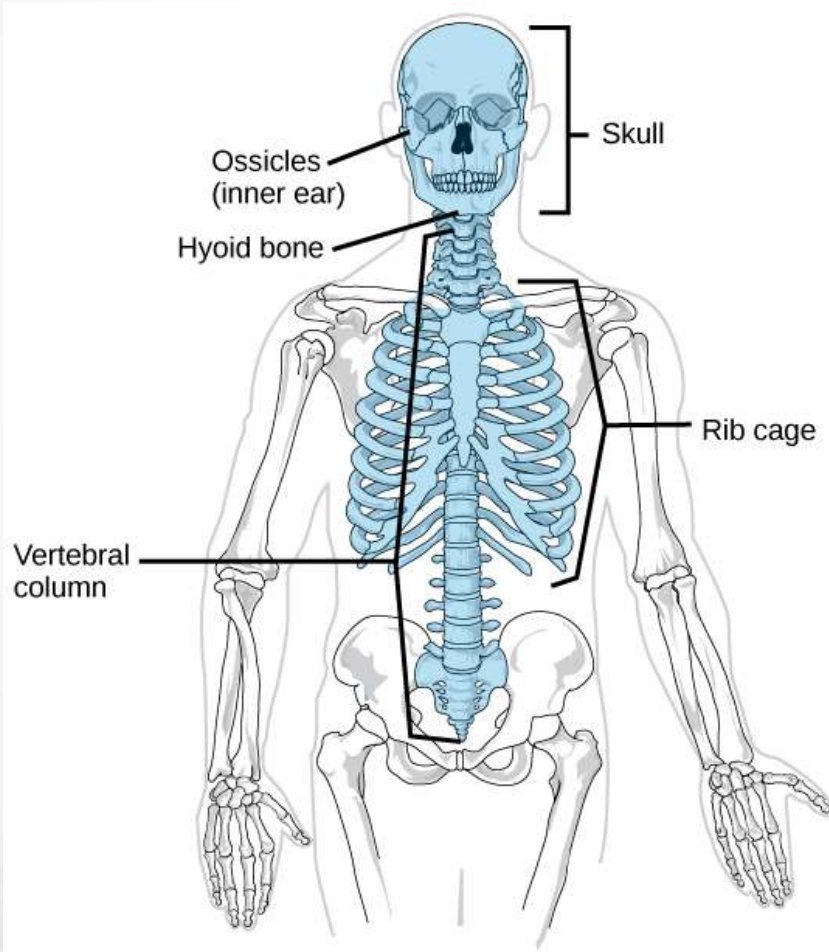


The Axial Skeleton



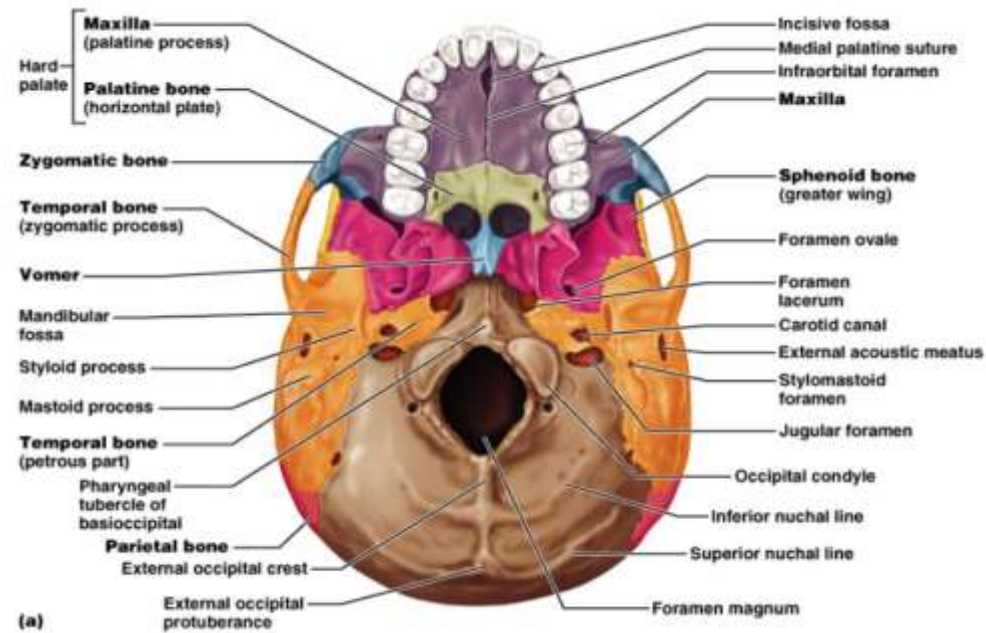
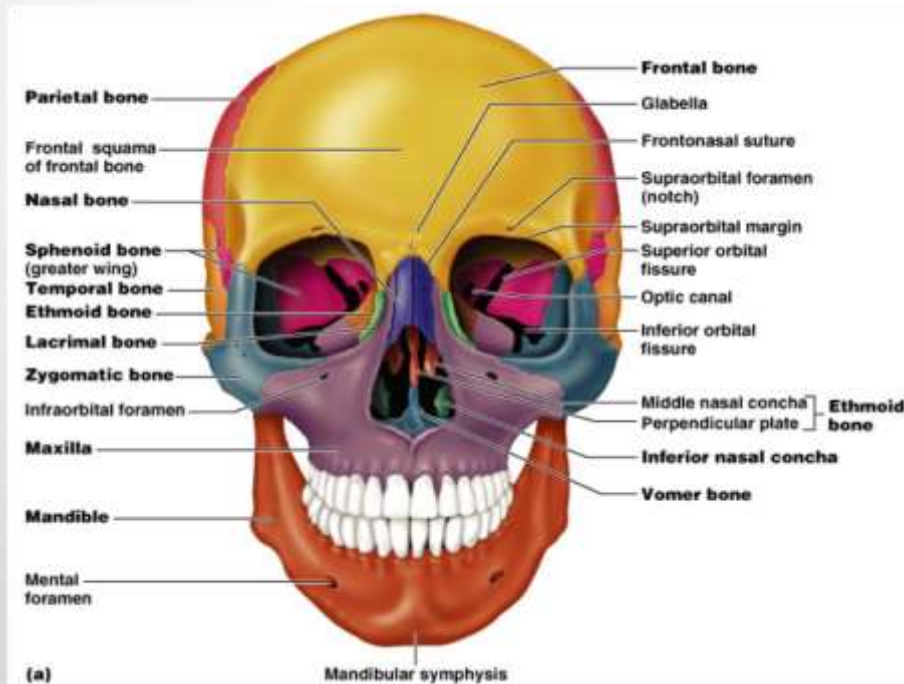
EQ: List the bones in order from most superior to most inferior along the axial skeleton.

The Axial Skeleton

- Forms the longitudinal part of the body
- Divided into three parts
 - Skull
 - Vertebral column
 - Bony thorax

The Skull

- Made up of both the cranium and the facial bones



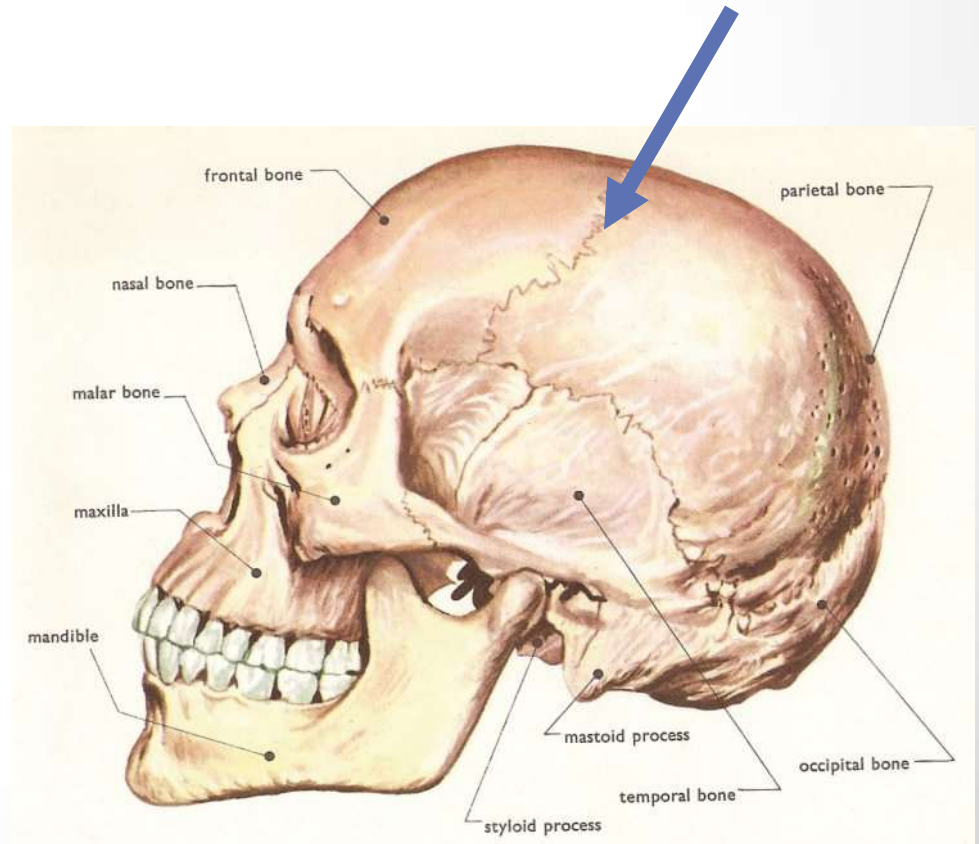
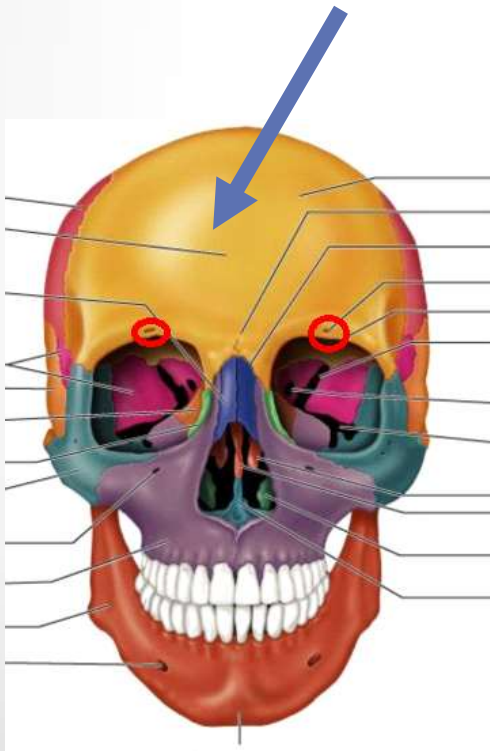
Cranium



8 Bones

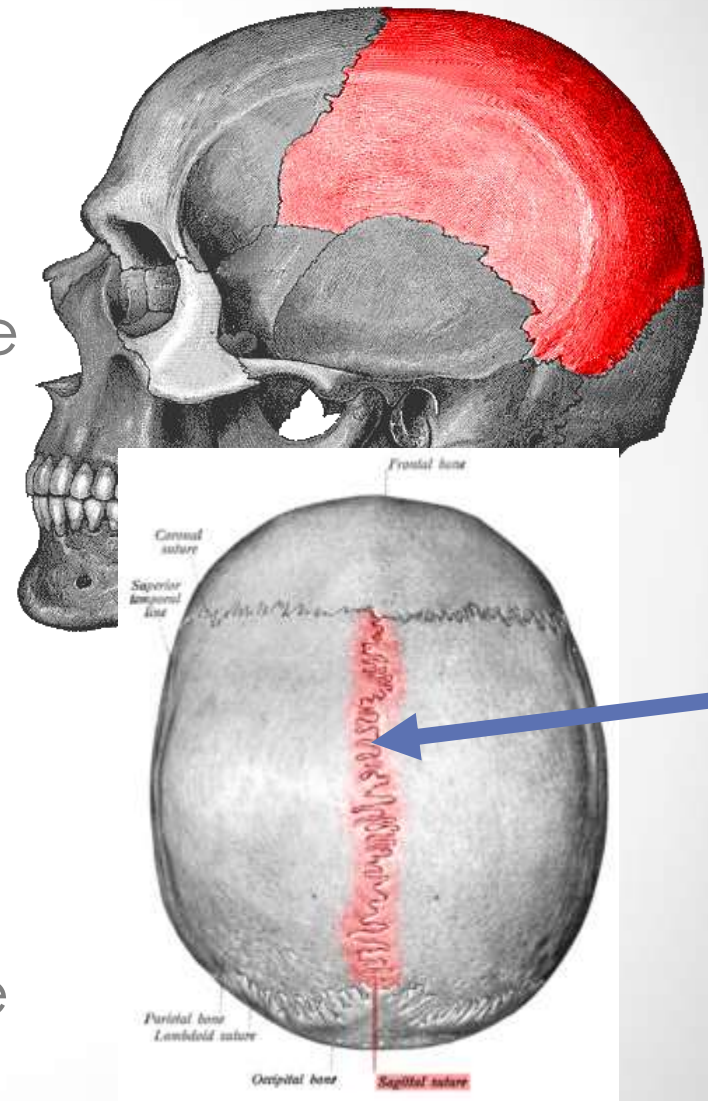
Frontal Bone

- Anterior portion above the eyes
- Separated from the parietal bone by the Coronal Suture



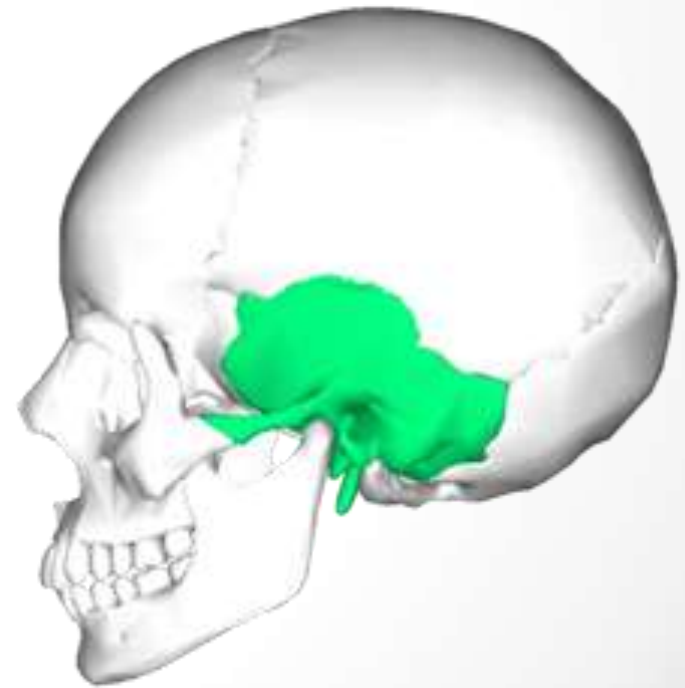
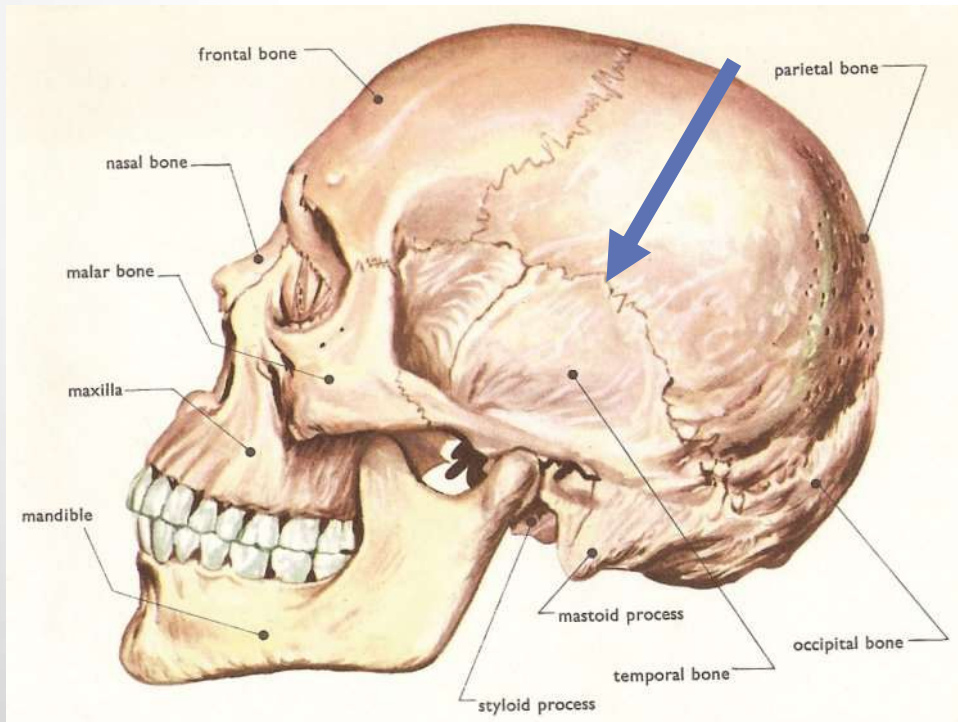
Parietal Bones

- One each side of the skull just behind the frontal bone
- Separated from the frontal bone with the Coronal Suture
- Separated from each other by the Sagittal Suture
- Separated from the Occipital bone with the Lambdoidal Suture
- Separated from the temporal bone with the Squamosal Suture



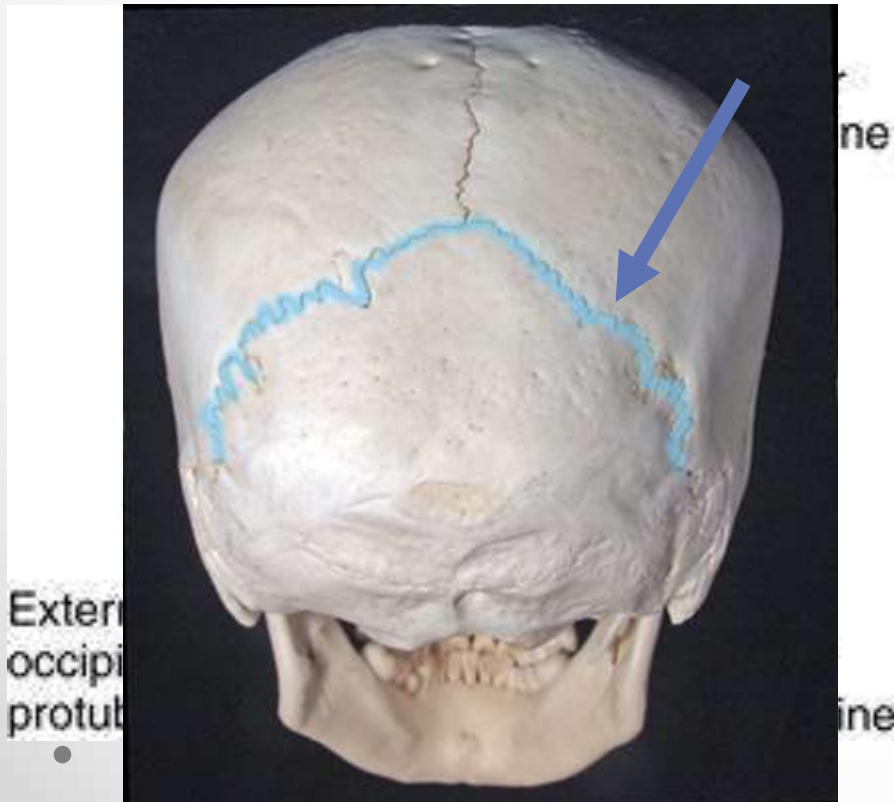
Temporal Bones

- Forms parts of the side of skull and base of cranium
- Separated from the parietal bones by the Squamosal Suture



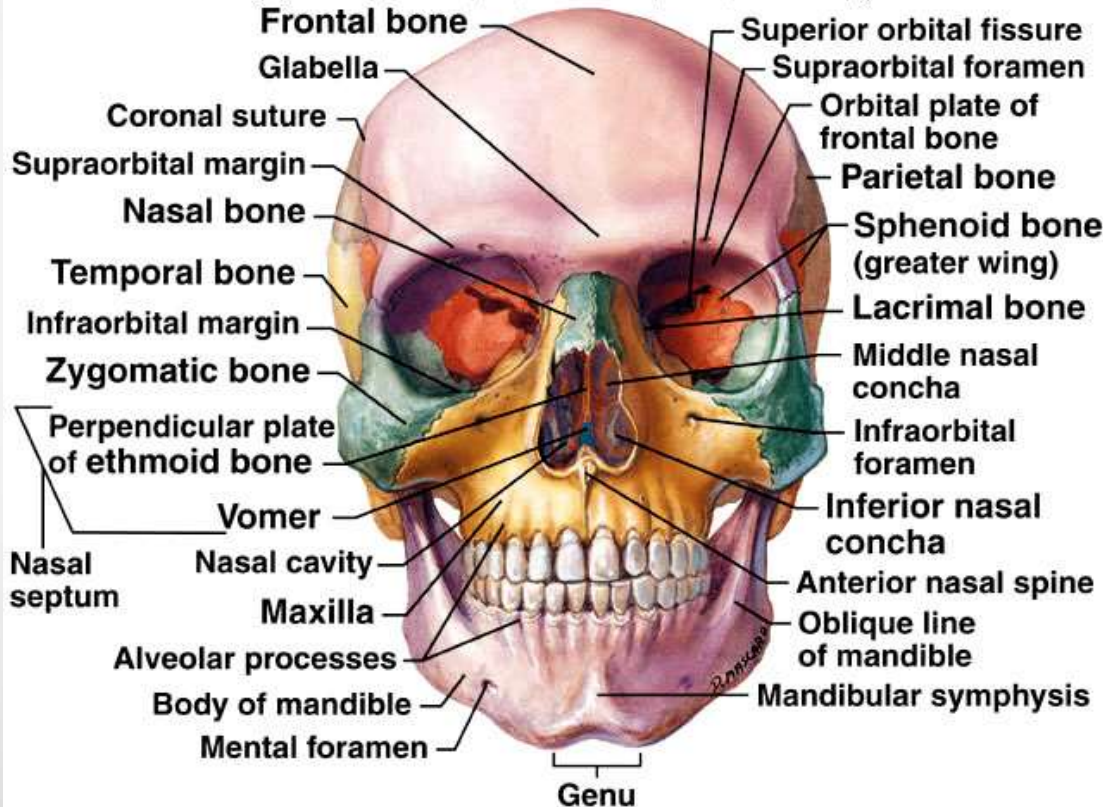
Occipital Bone

- Forms the back of the skull and base of the cranium
- Separated from the parietal bone by the Lambdoidal Suture



Facial Bones

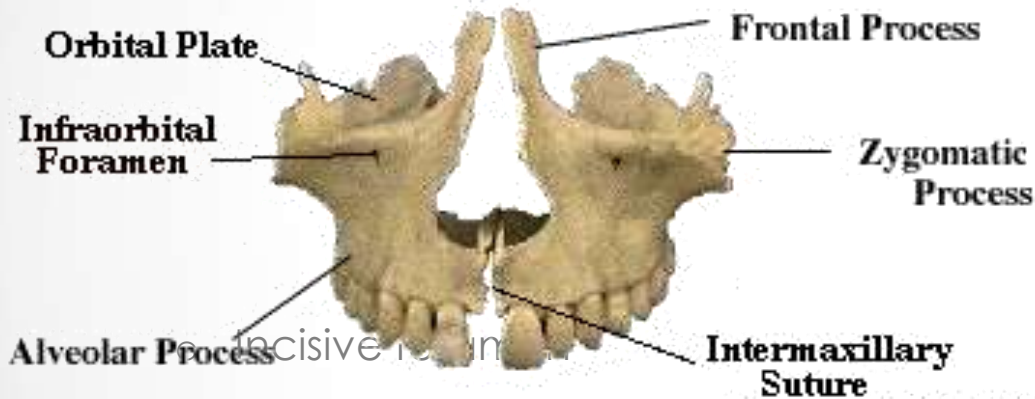
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14 Bones
**Only
learning 5
of the 14**

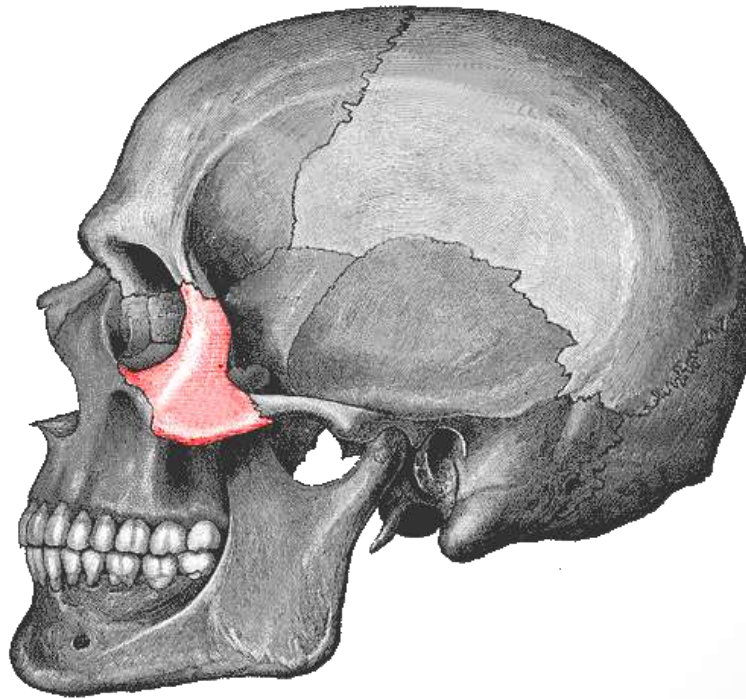
Maxillae

- Forms upper jaw



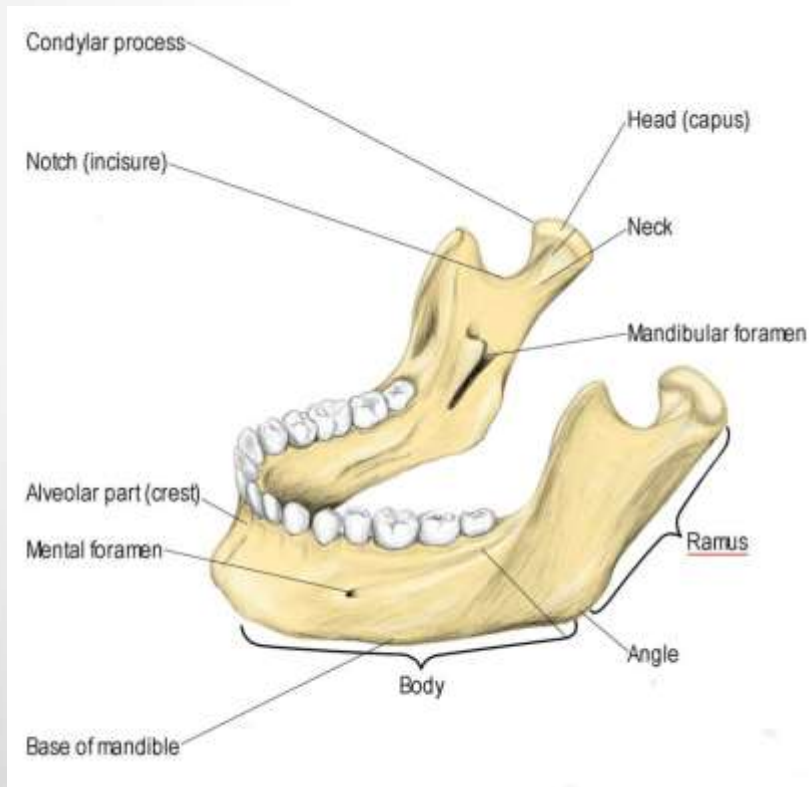
Zygomatic Bones

- More commonly known as Cheek bone



Mandible

- Lower jaw
- Only moveable bone of the skull



The Hyoid Bone

- The only bone that does not articulate with another bone
- Serves as a moveable base for the tongue

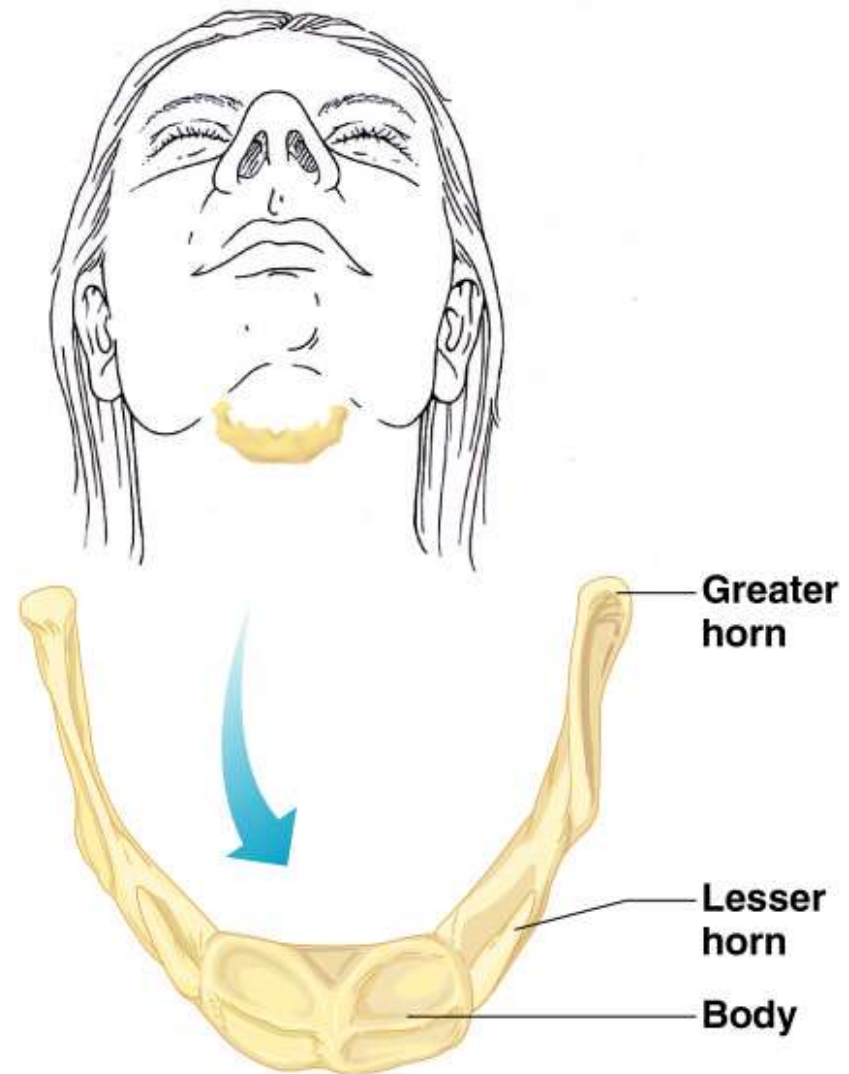


Figure 5.12

The Torso

The Vertebral Column

Our goal is to correctly name a vertebra of the spine and be able to label regions of the vertebral column



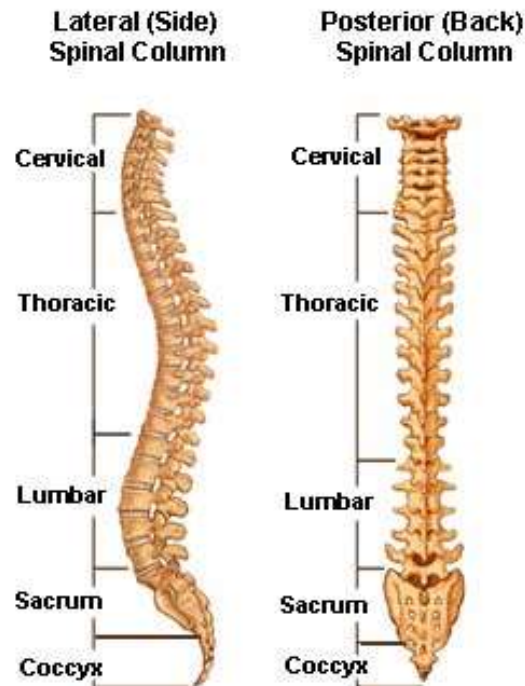
The Vertebral Column

- A series of bones running the length of the back and forming the central axis of the body is called the vertebral column or backbone.
- The individual bones of this column are called vertebra – plural is vertebrae.

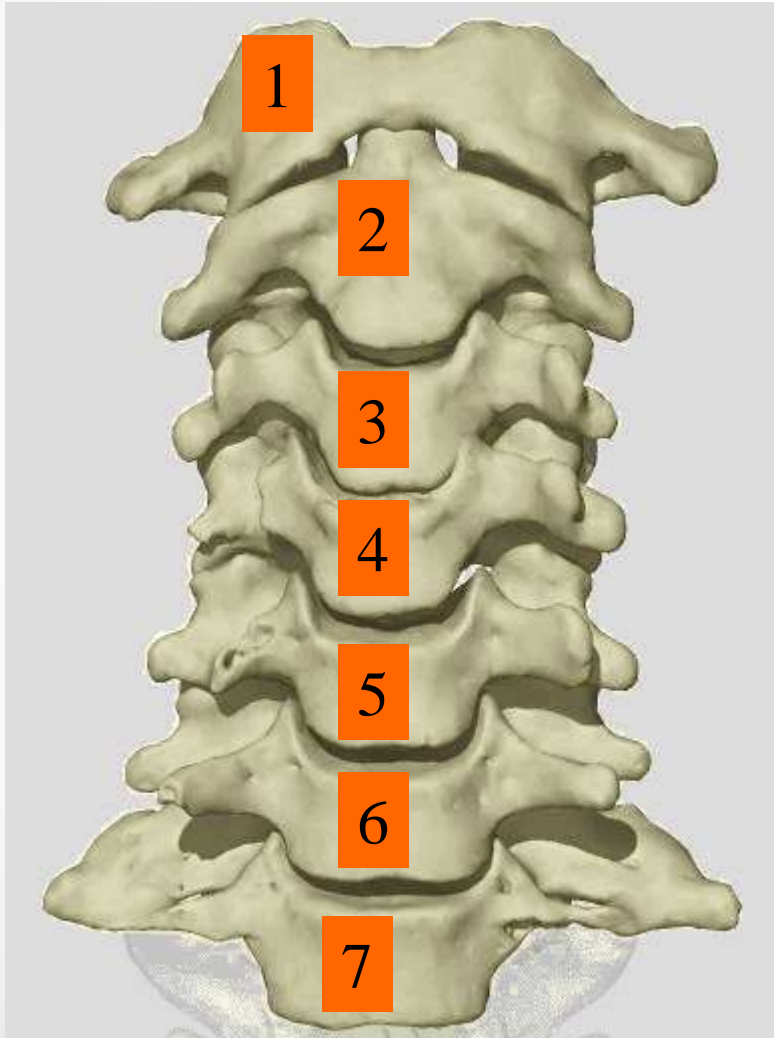
Development

- Humans are born with 33 vertebrae
 - Kids have more, as the sacral & coccygeal regions fuse to form the sacrum and coox.
 - As adults we have 26 bones in the column
 - We divide vertebrae into groups based on their location

We have 5 groups of vertebrae

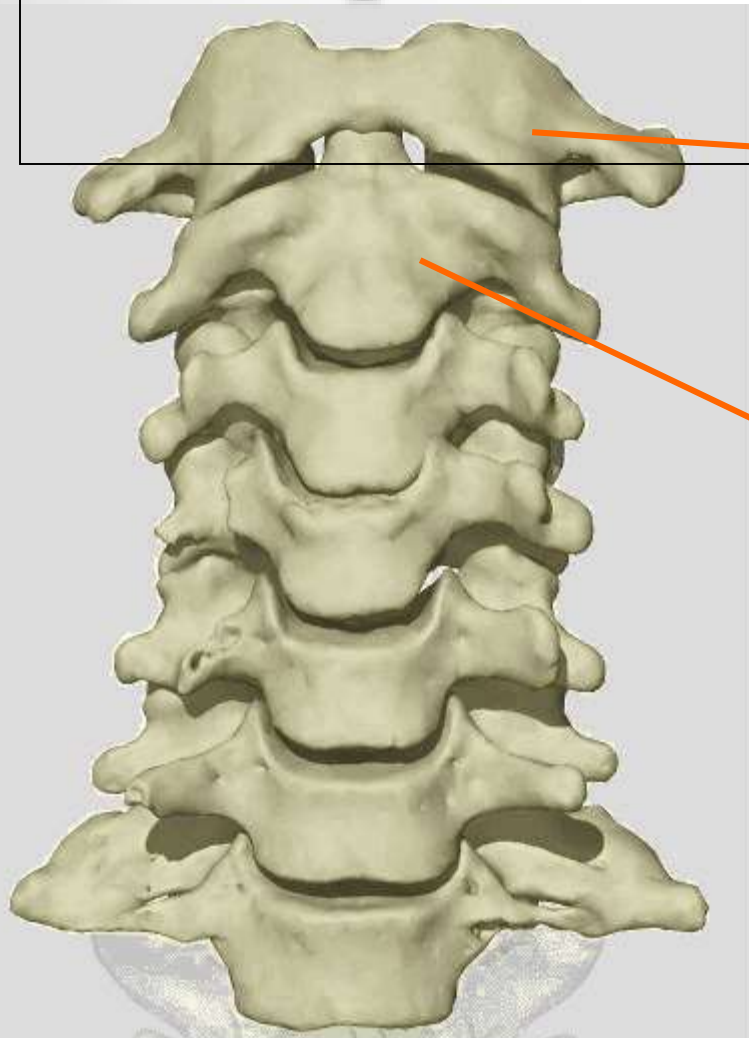


Group 1: The Cervical Vertebrae



There are 7
vertebrae
in the neck

Top 2 Most Important

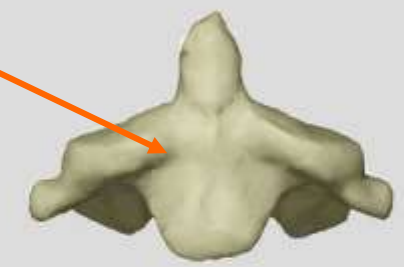


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The Atlas or C-1

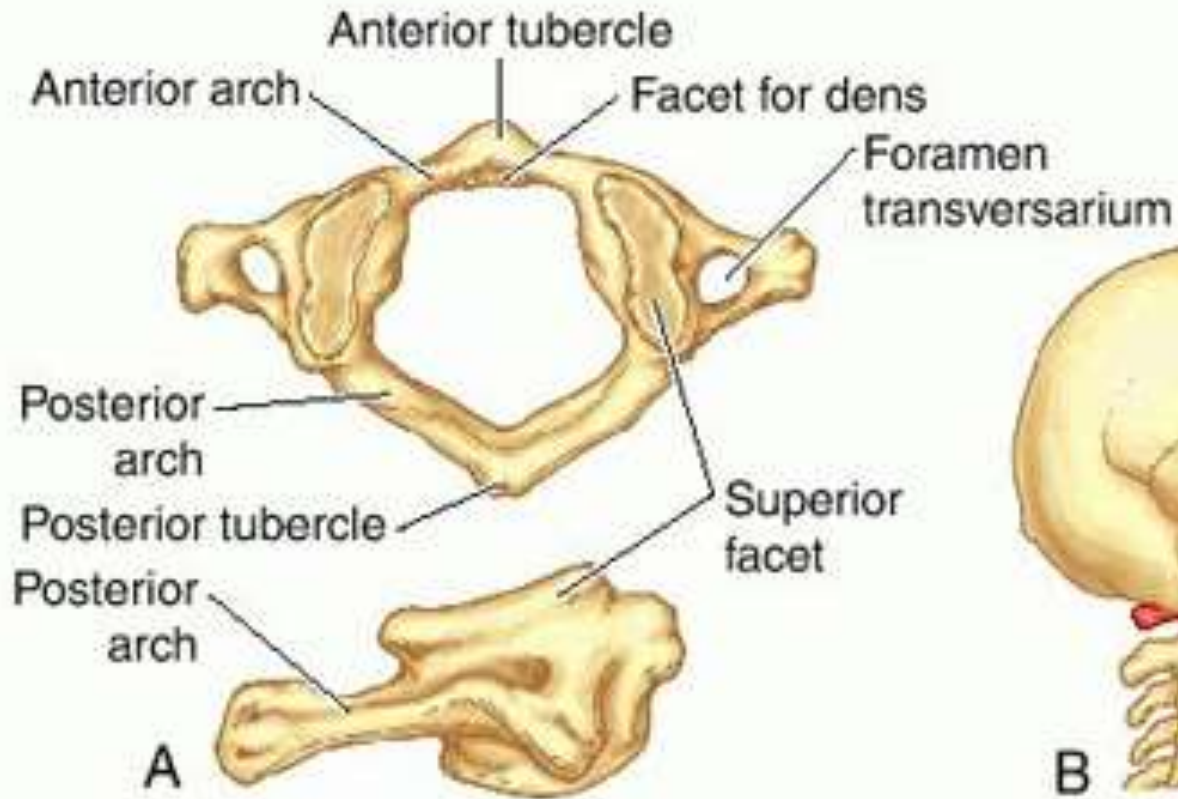
[c]1996 Dorling Kinder



The Axis or C2

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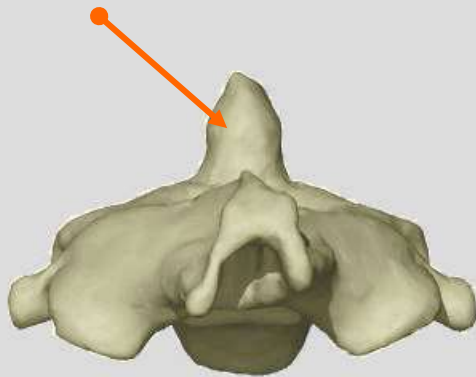
The Atlas



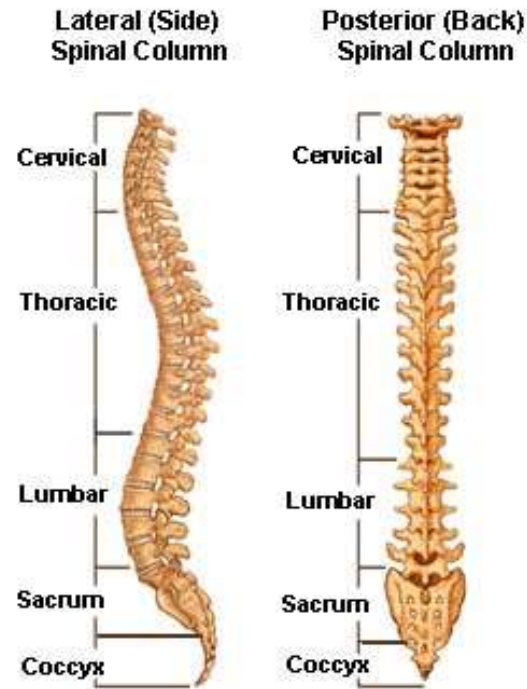
“yes” motion

The Axis

Odontoid Process



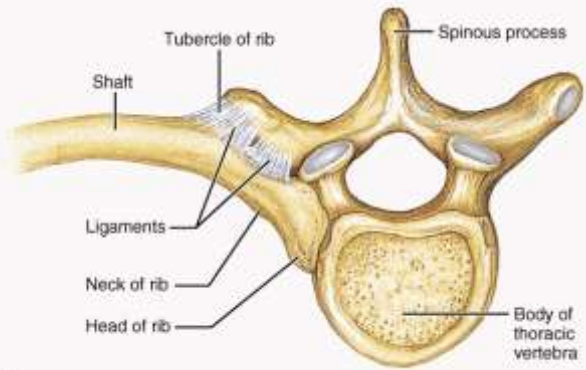
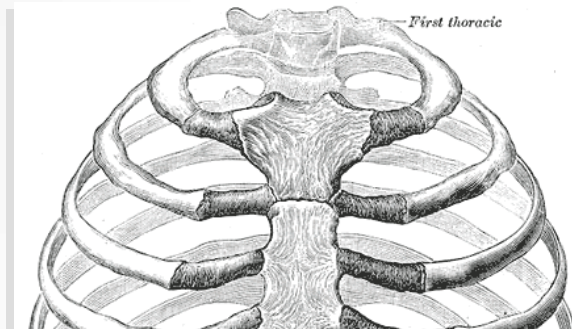
- ▶ The skull and atlas rotate with the axis.
- ▶ The atlas rotates around the odontoid process. or dens
- ▶ The axis is also called C2,
- ▶ Allows “no” motion



Group 2:

Inferior to the cervical vertebrae are the 12 Thoracic Vertebrae.

The Thoracic Vertebrae



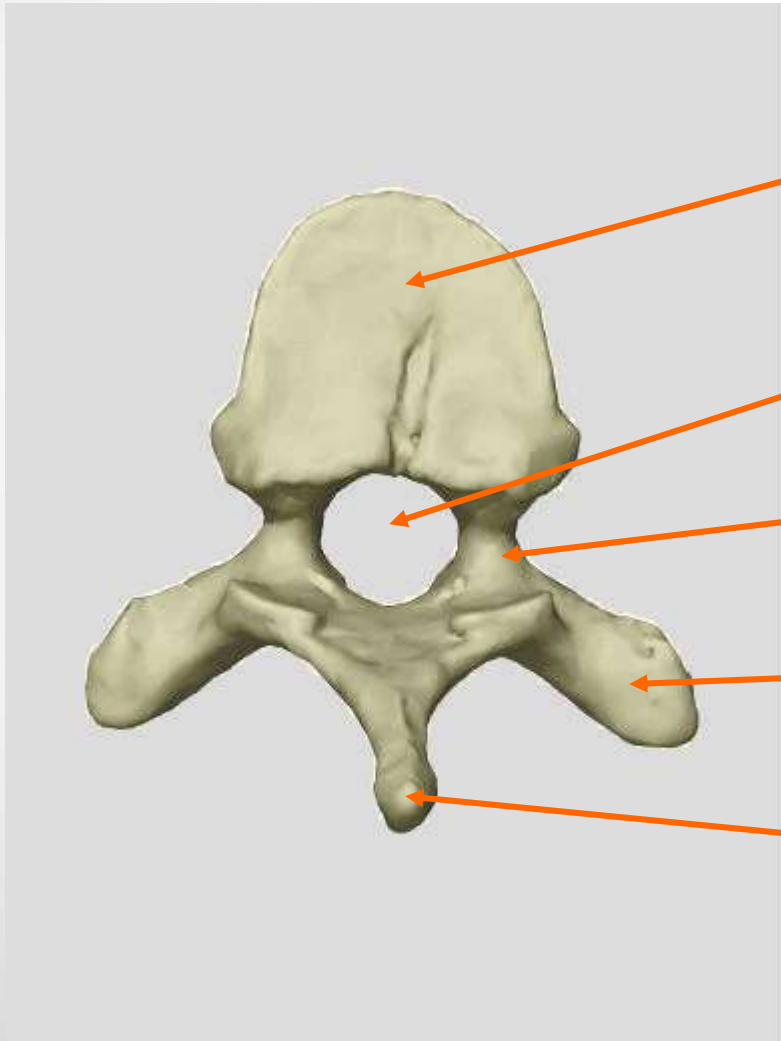
(b)

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- ▶ There are 12 thoracic vertebrae.
- ▶ They have facets to connect to the ribs. All ribs attach here

Individual Vertebrae--5 Parts



Centrum

Vertebral foramen

Neural Arch

Transverse Process

Spinous Process

The Ribs & Sternum



The chest or thorax contains the sternum, the costal cartilage, 12 pairs of ribs. Counting the thoracic vertebrae the whole unit is called the thoracic cage.

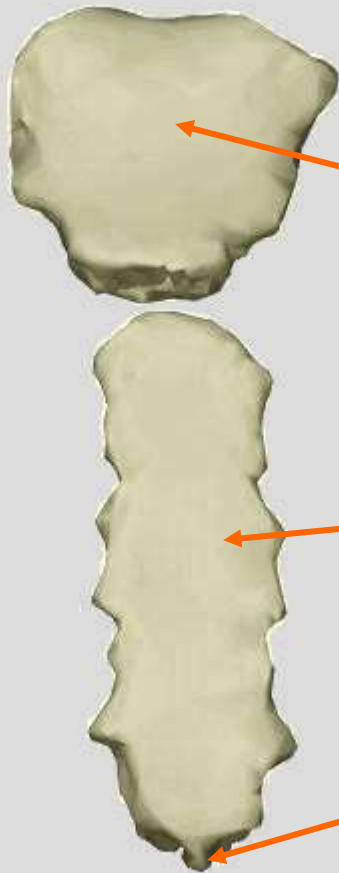
The Sternum

3 parts to the sternum

• Manubrium

• The Body

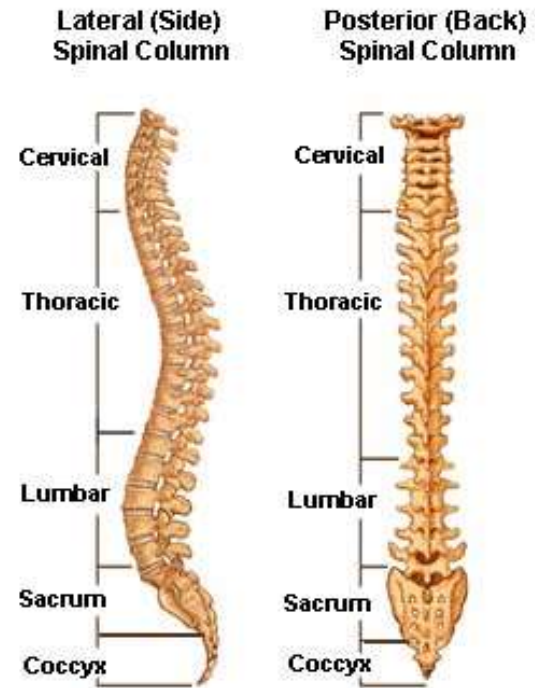
• The Xiphoid Process



The Ribs



- There are 12 pairs of ribs.
- The first 7 pairs connect to the sternum by their costal cartilage and are called true ribs.
- The rest are called false ribs because they attach through one piece of cartilage.
- Pairs 11 & 12 don't connect to the sternum & are called floating ribs.



Group 3:

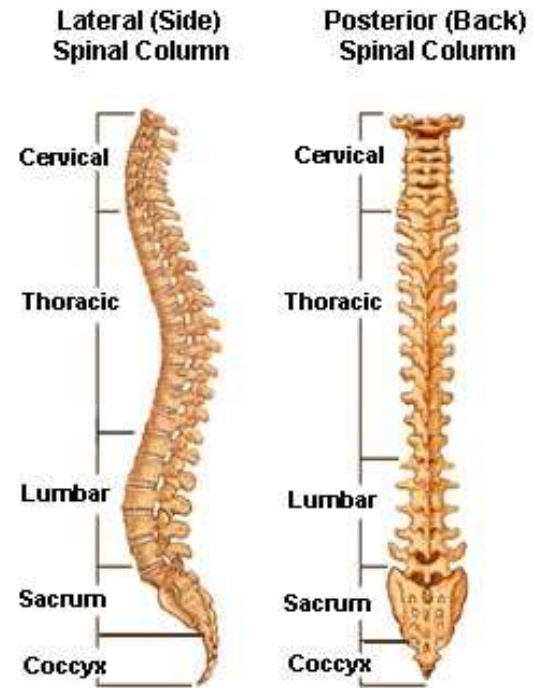
Next, the largest of the vertebrae, the Lumbar Vertebrae.

The Lumbar Vertebrae

- ▶ The 5 Lumbar Vertebrae support most of the weight of the body.



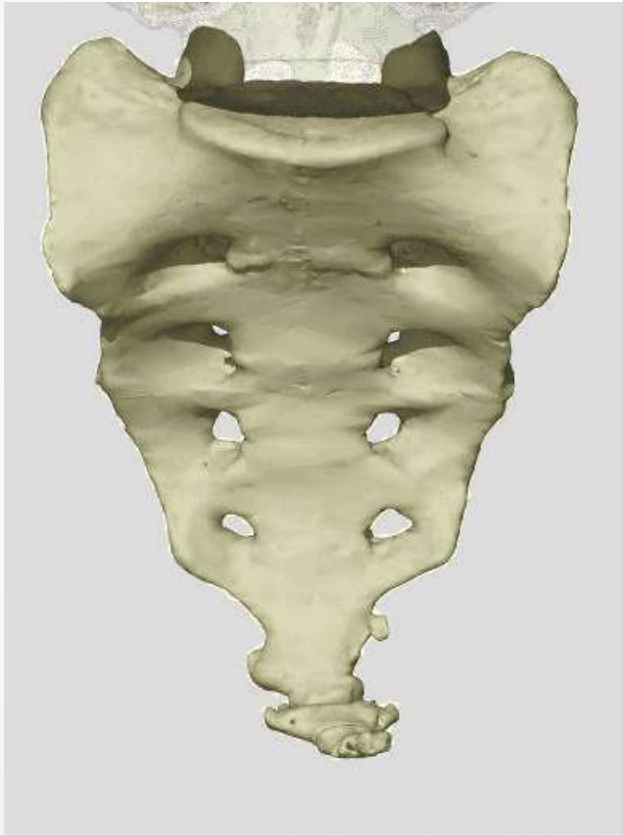
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Group 4:

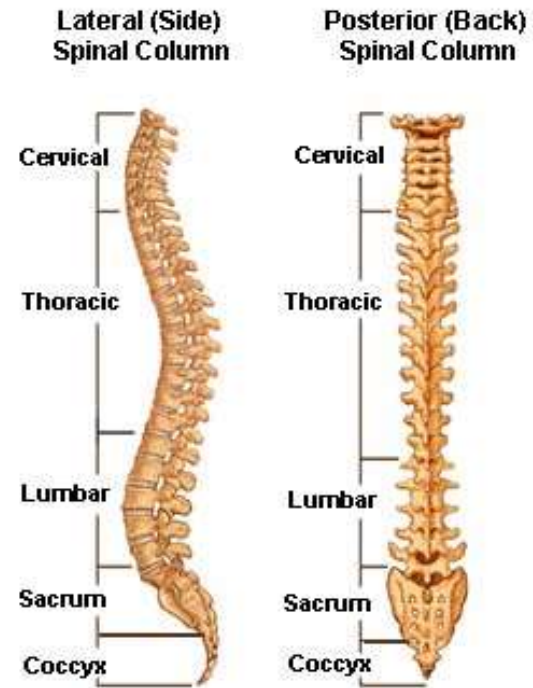
The 5 fused or connected vertebrae that make up the Sacrum

The Sacrum



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- ▶ In young children they are 5 separate bones.
- ▶ In adults they are fused into 1 single bone to attach the hips and legs.

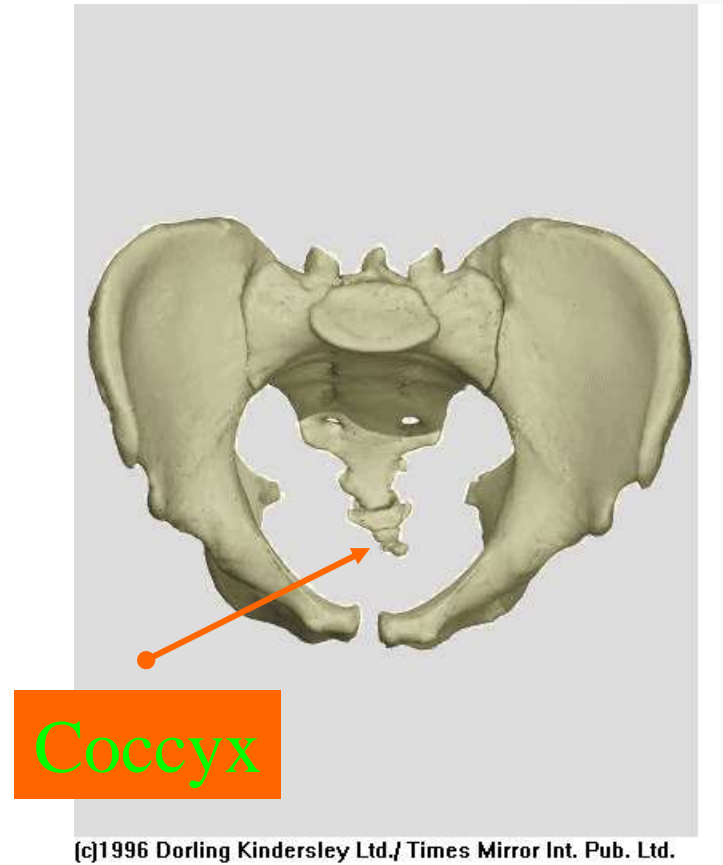


Group 5:

The final, most inferior group of vertebrae are called the coccyx

The Coccyx

- ▶ The coccyx usually consists of 4 fused bones.
- ▶ They are also called the tail bone.



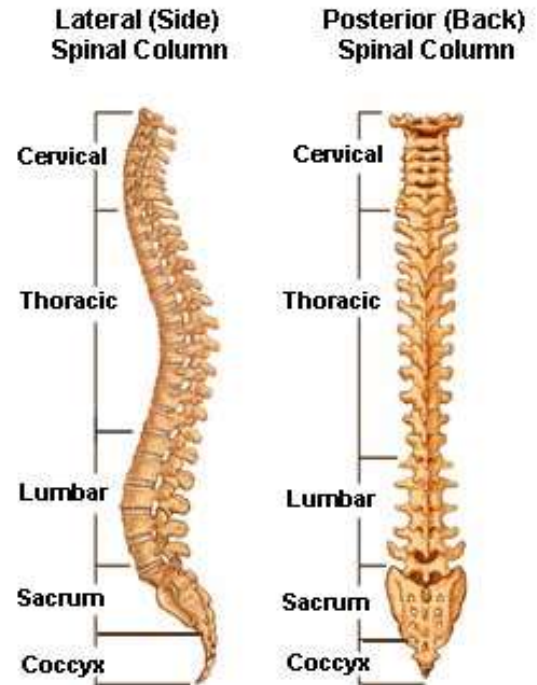
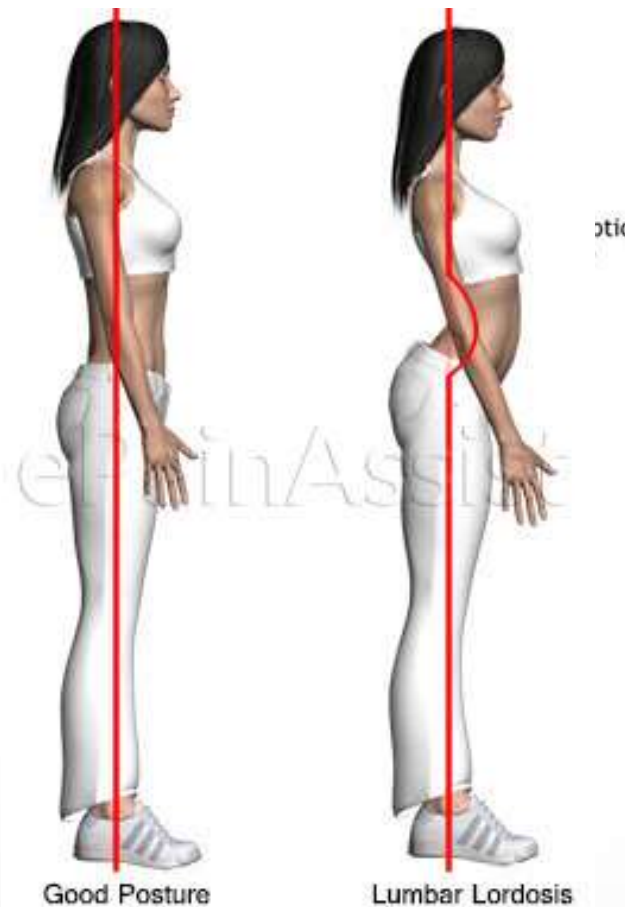
Curvature of the Spine

- You normally have 4 curves in your spine

- Kyphosis

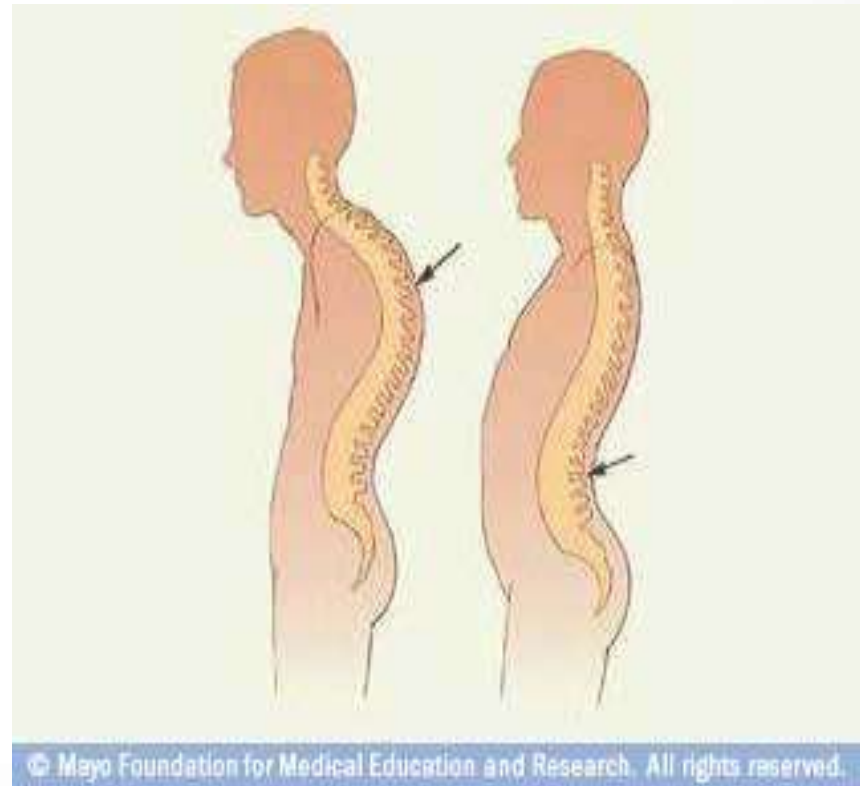
- Lordosis

- Scoliosis



Kyphosis

- With kyphosis, your spine may look normal or you may develop a hump.



Hyperlordosis

- A normal spine, when viewed from behind appears straight. However, a spine affected by lordosis shows evidence of a curvature of the back bones (vertebrae) in the lower back area, giving the child a "swayback" appearance.



Scoliosis

- Scoliosis is an abnormal curvature of the spine.

