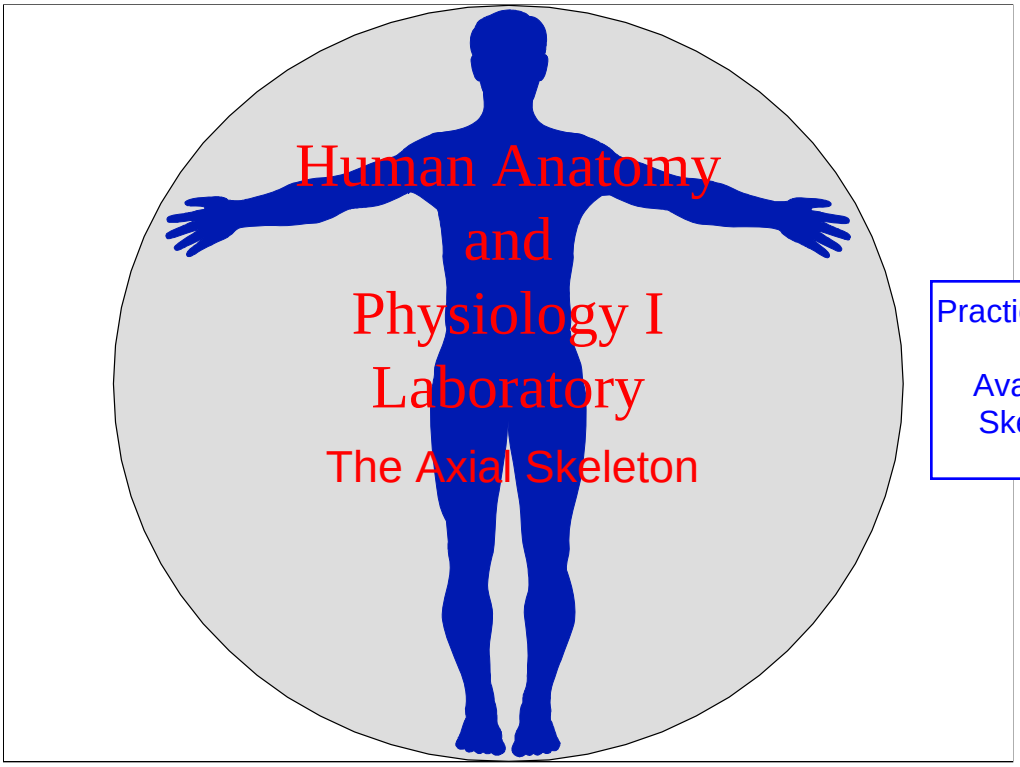
mp3

There is no Mpeg 4 file for the bones.



Practice Anatomy Lab (PAL) Available for The Skeletal System

This lab involves study of the laboratory exercise "*The Axial Skeleton*", completing the Review Sheet for the exercise, and taking the relevant quiz.

There are no mp3 or mpeg4 files for the bones.

You will note that there are more bones and contours in the lab manual than are identified in this PDF. The PDF focuses on only the most important.

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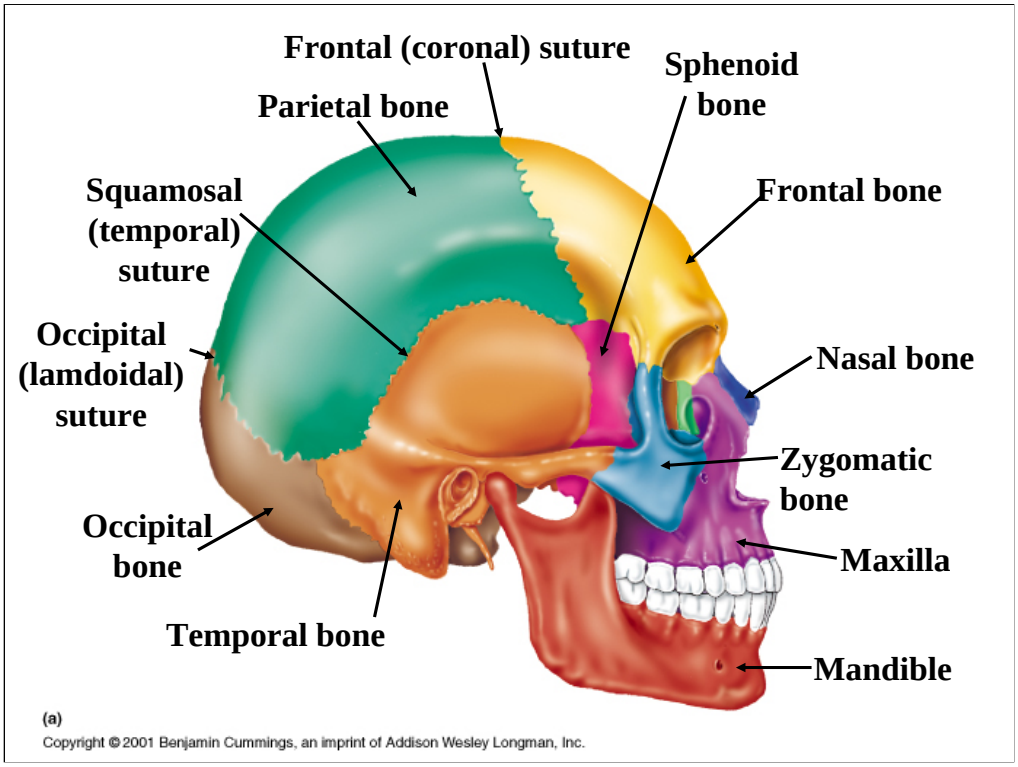

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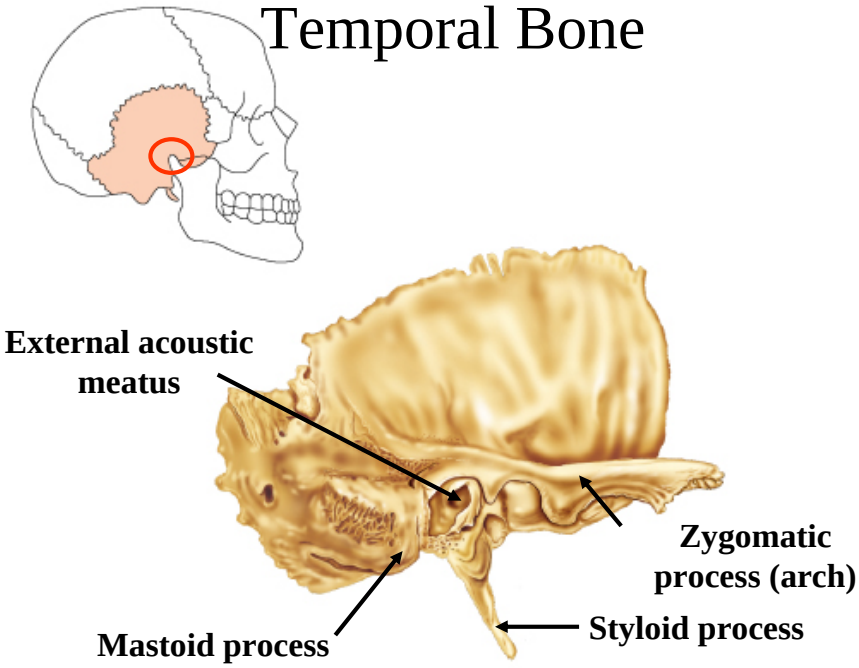
Temporal Bone



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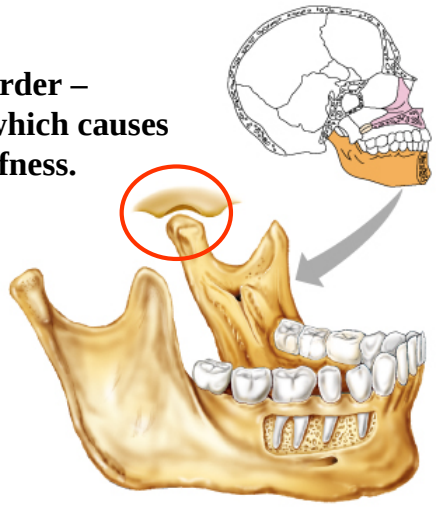
Tempero-mandibular Joint

TMJ disorder – inflammation which causes pain, stiffness.



(a) Mandible

TMJ disorder usually occurs in young people and disappears as the bones mature. In older adults it results mostly from teeth grinding and clenching and can be corrected with behavior adaptation or oral appliances.

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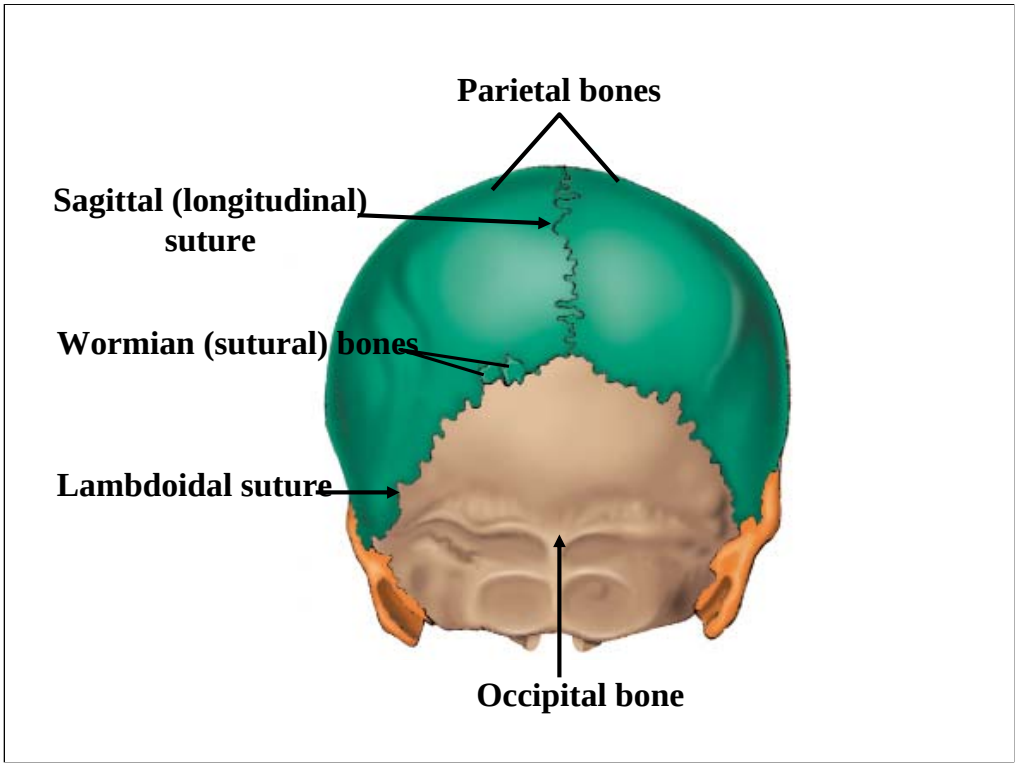

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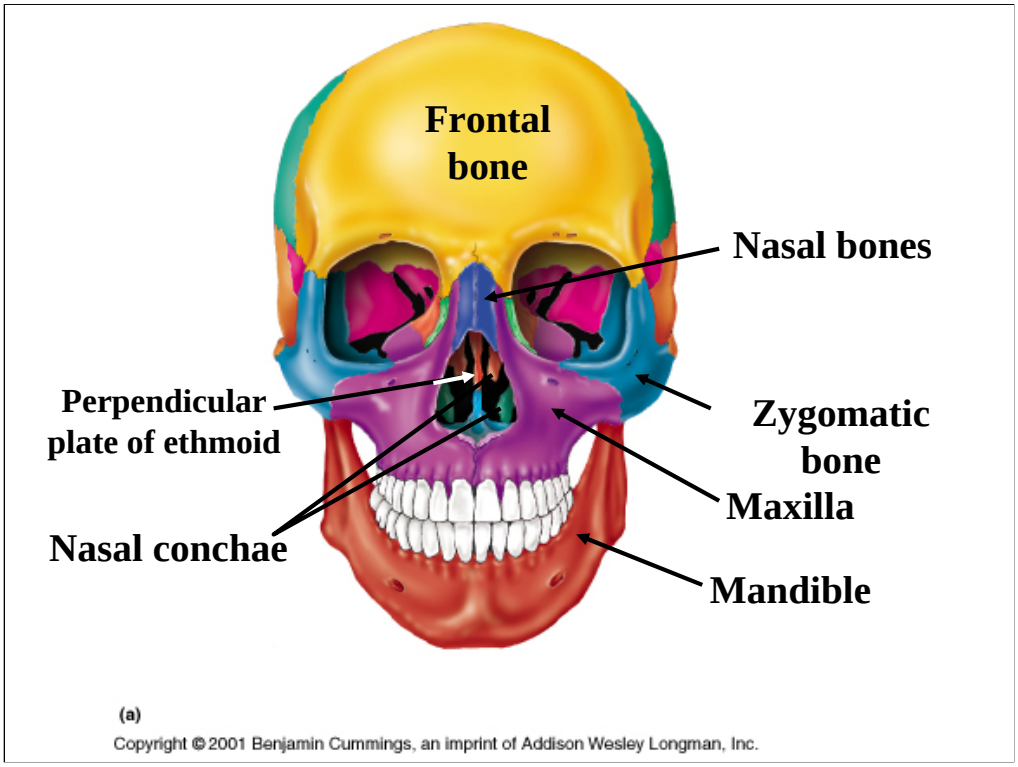

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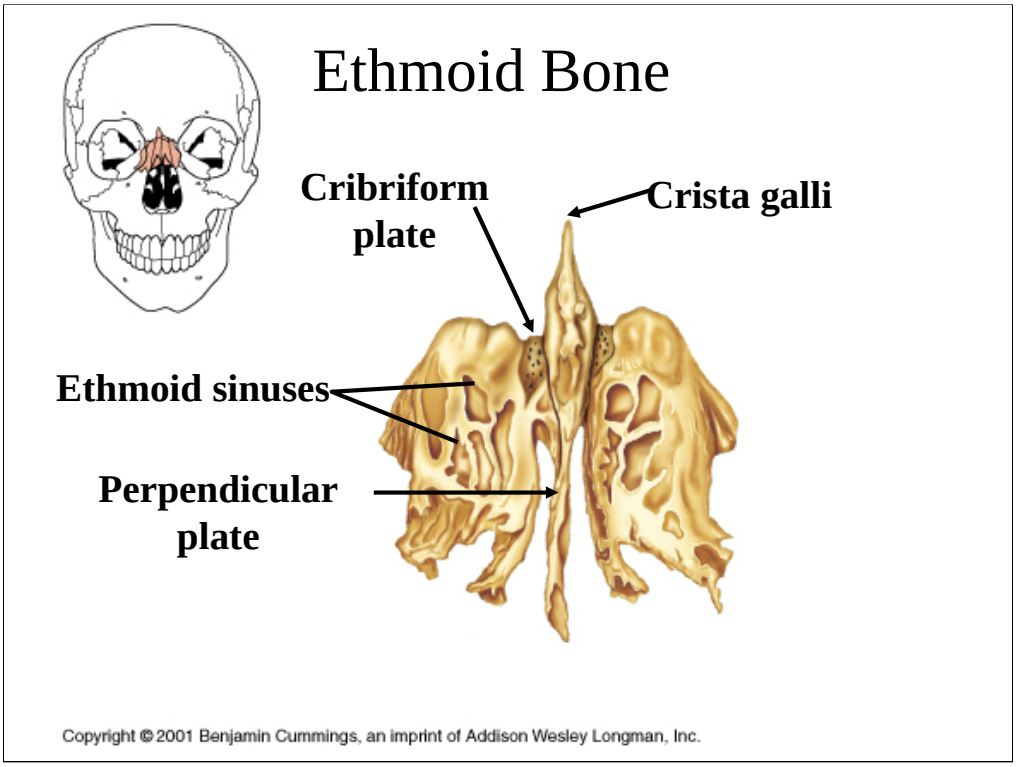

The cribriform plate allows the nerves for smell to pass from the olfactory receptors in the nasal mucosa to the olfactory bulb of the brain which lies directly above.

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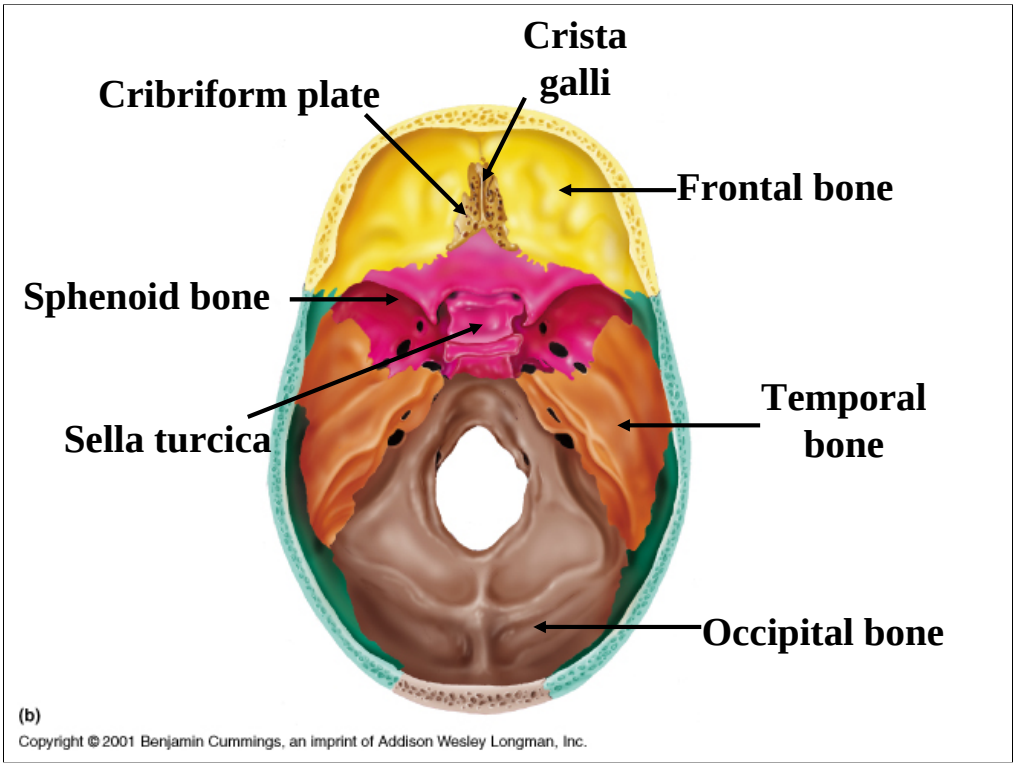

Note the upper part of the ethmoid bone in the floor of the cranial cavity. The sella turcica houses the pituitary gland.

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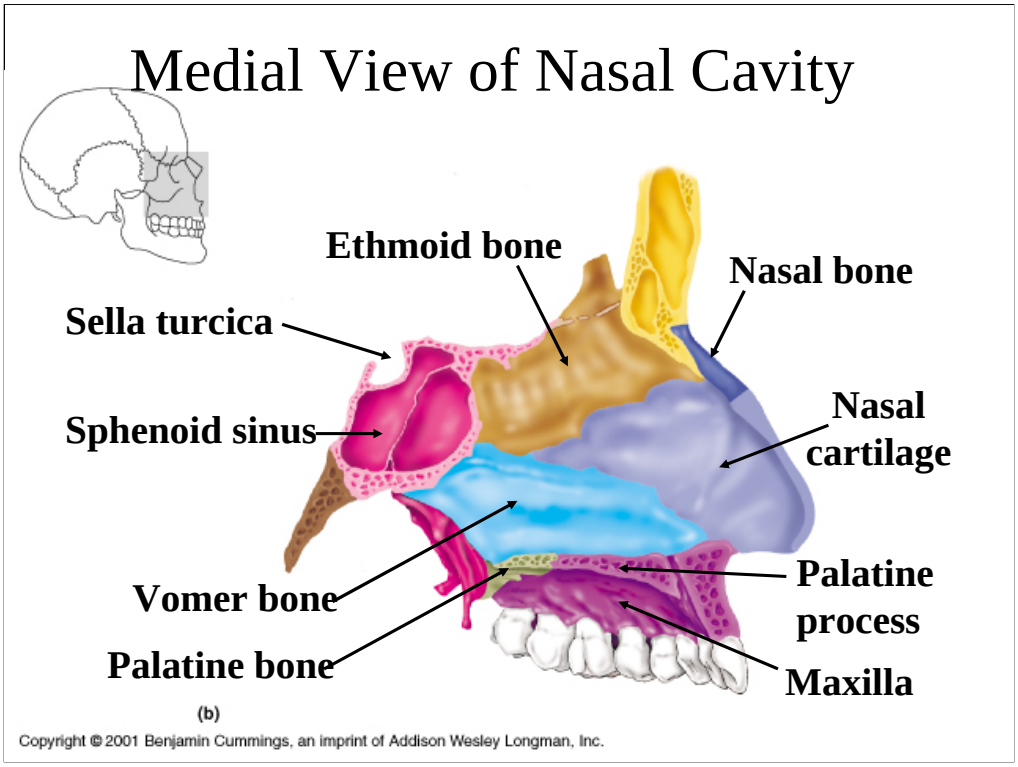

The **ethmoid bone** forms the top portion of the **nasal septum**, with the **vomer** forming the lower portion. Most of the septum is hyaline cartilage. The floor of the nasal cavity is composed of the **palatine process** of the maxilla and the **palatine bone**. The **soft palate** is a fleshy portion extending behind the palatine bone.

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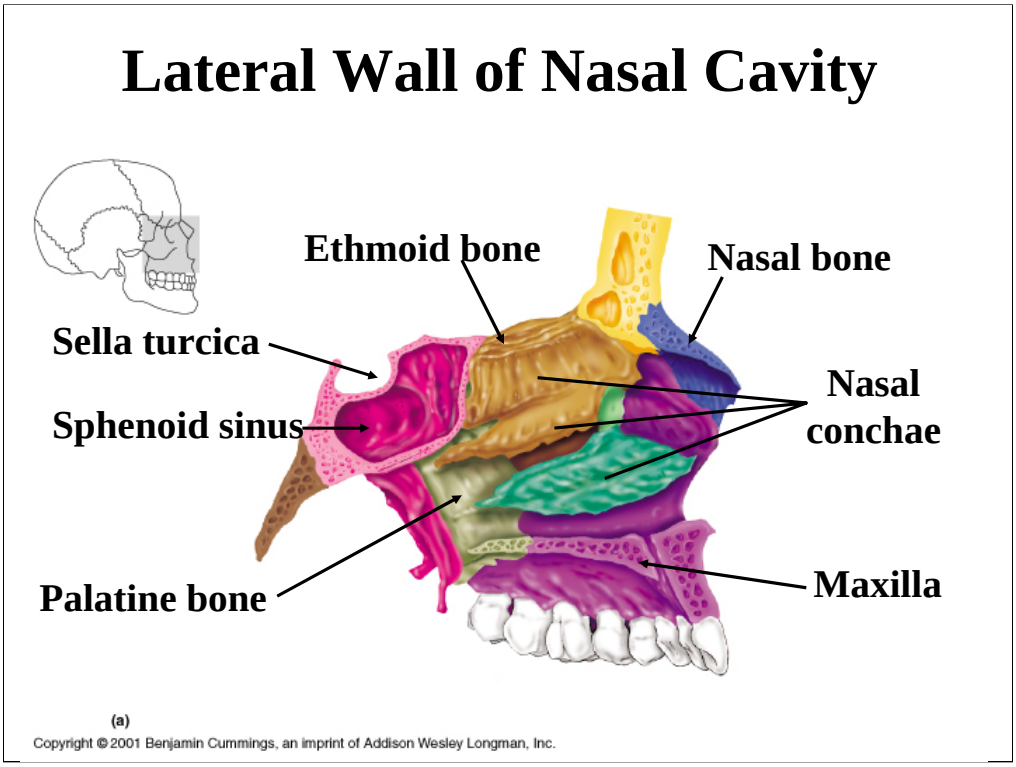

The **nasal conchae** (*konk-ee*) increase the surface area for the air to pass across the mucosa and be warmed and moistened. They also produce turbulence which causes fine particles to settle out of the air and adhere to the mucus lining the nasal cavity, so that it can be removed.

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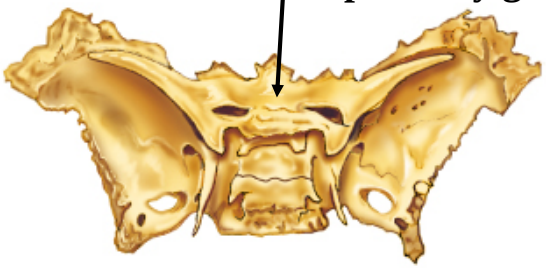
Sphenoid Bone

Sella turcica – contains the pituitary gland



(a) Superior view

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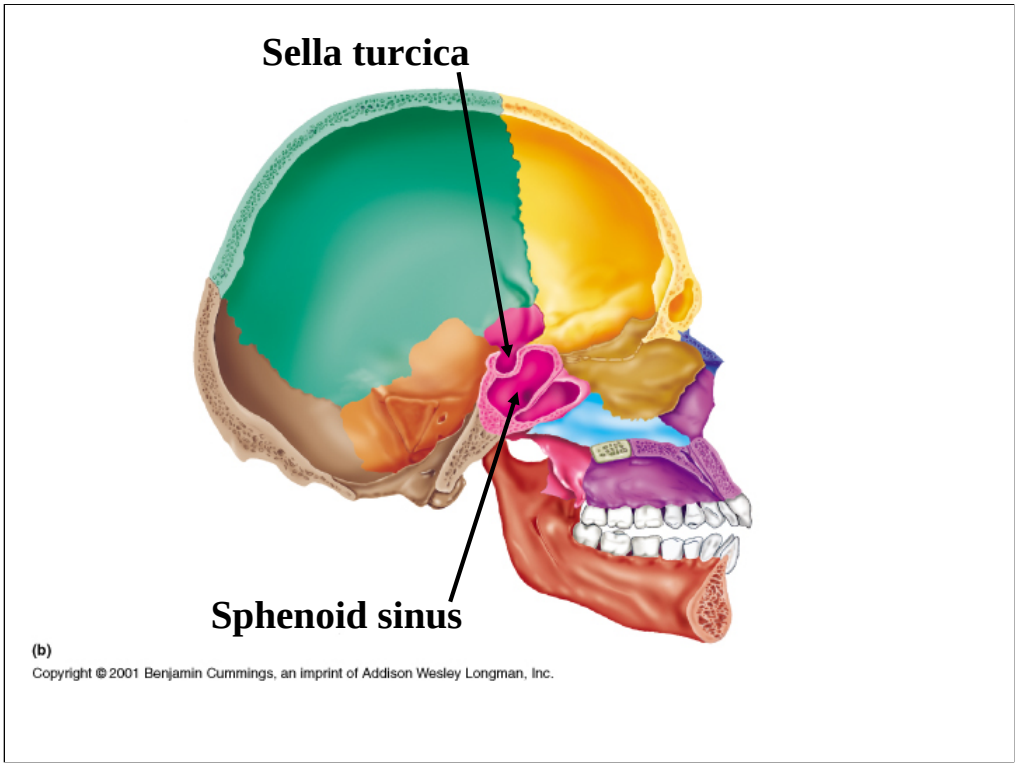

(b)

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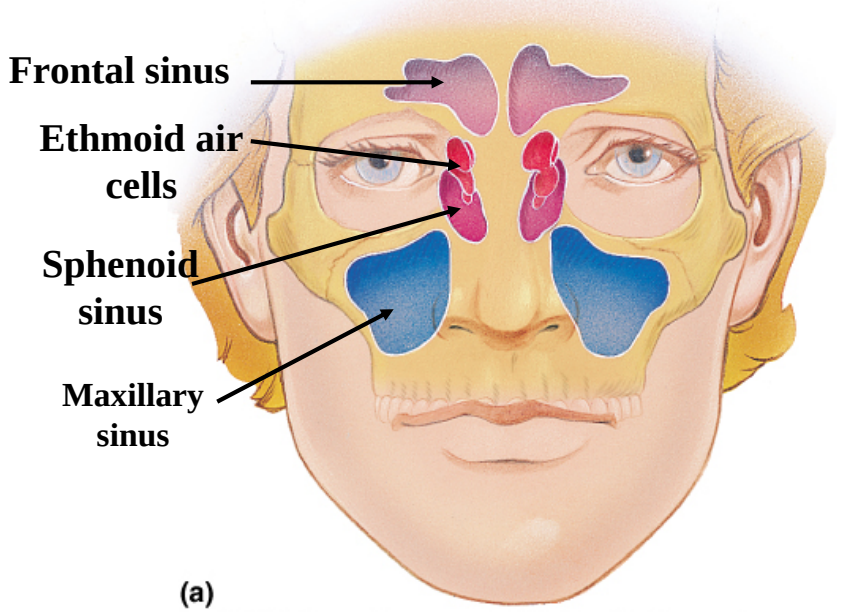
Paranasal Sinuses



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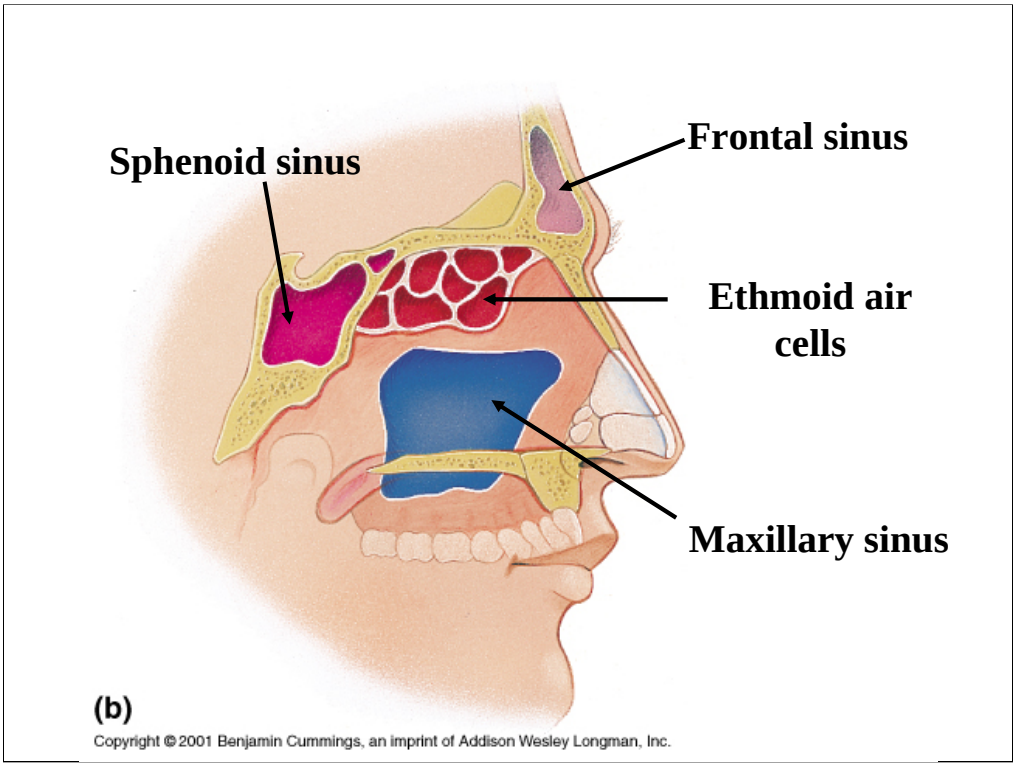

Sinuses must drain from one to another and into the nasal cavity to maintain open passages for equilibration of pressure. When the mucosa swells and pressure is unable to equilibrate sinus pain ensues.

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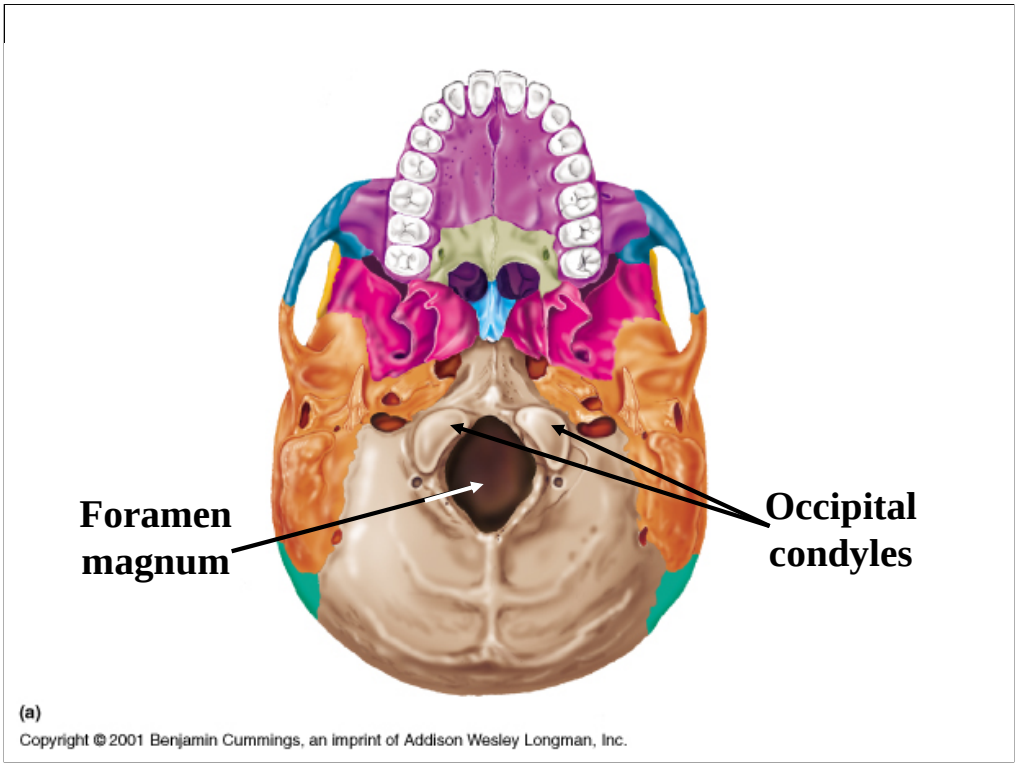

(a)

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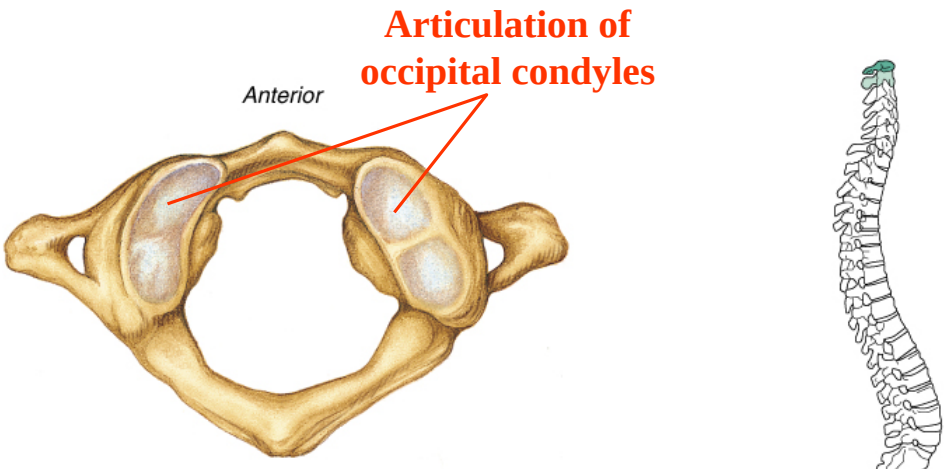
The Atlas (C1)



(a) Superior view of atlas (C_1)

The occipital condyles sit atop the articular surfaces of the atlas producing a condylar joint which allows flexion and extension of the head.

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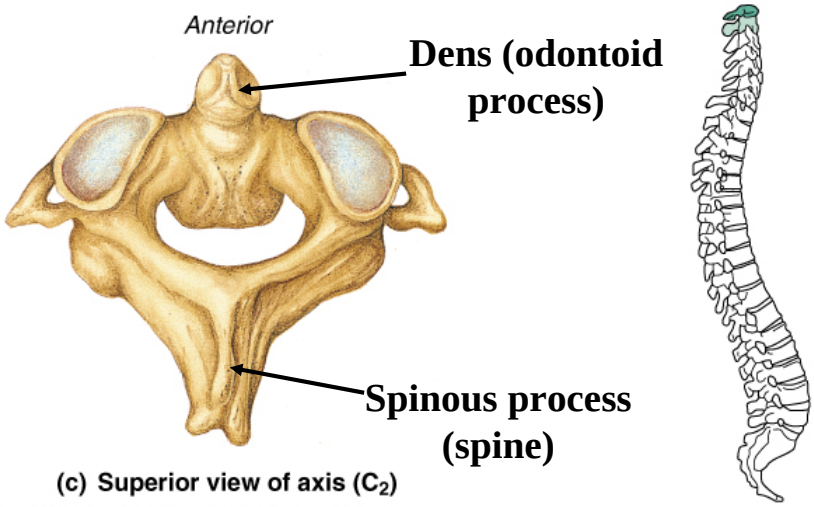
The Axis (C2)



(c) Superior view of axis (C_2)

The atlas and head rotates around the odontoid process of the axis.

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Cervical vertebrae = C1-C7

Thoracic = T1-T12

Lumbar =

L1-L5.

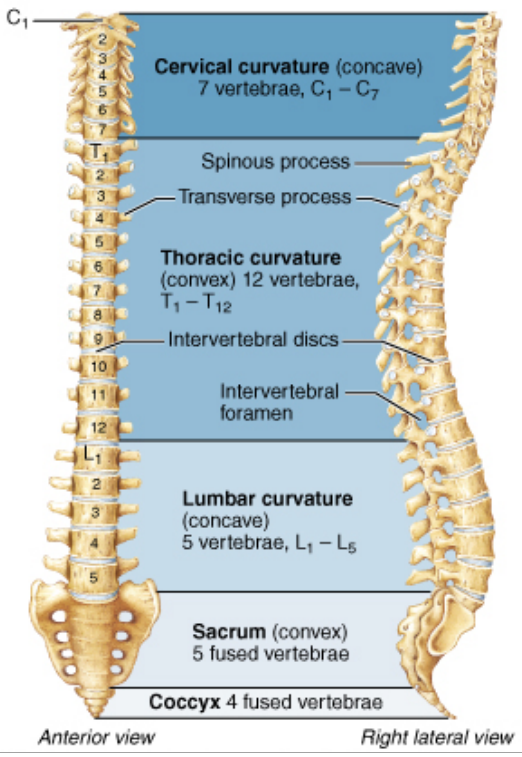
Sacrum = 5 fused

Coccyx = 3 to 5 fused

Exaggerated thoracic curvature = kyphosis

Exaggerated lumbar curvature = lordosis

Exaggerated lateral curvature = scoliosis



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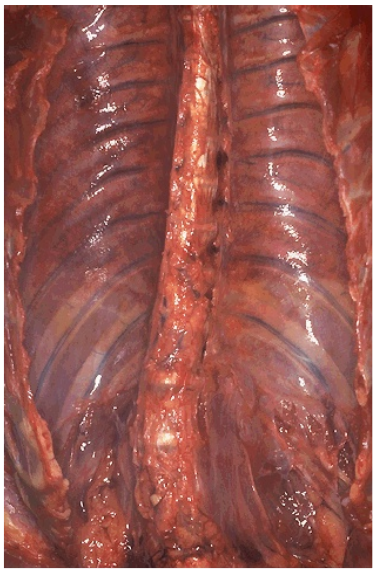

Severe scoliosis of the vertebral column.

All of the disorders of the vertebral column including **kyphosis**, **lordosis**, and **scoliosis** put abnormal stress on the vertebrae, limbs, and muscles, and can result in severe pain and reduced mobility.

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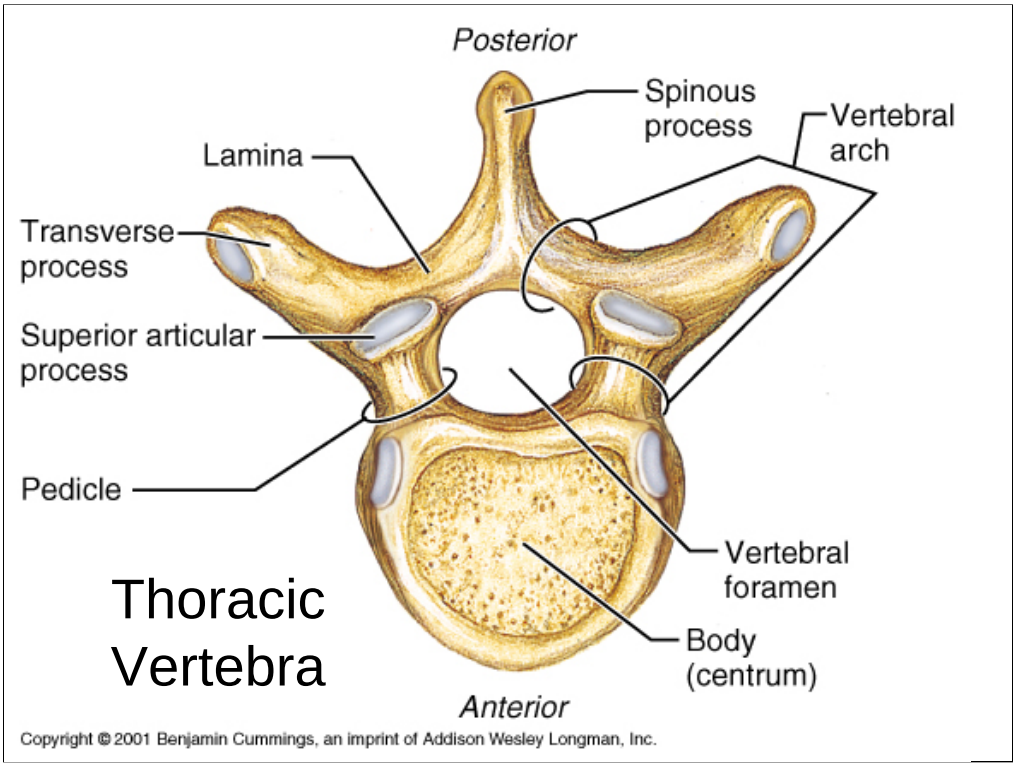

The **lamina** is sometimes removed in a process called a **laminectomy** to reduce pressure on nerve roots caused by a herniated disk.

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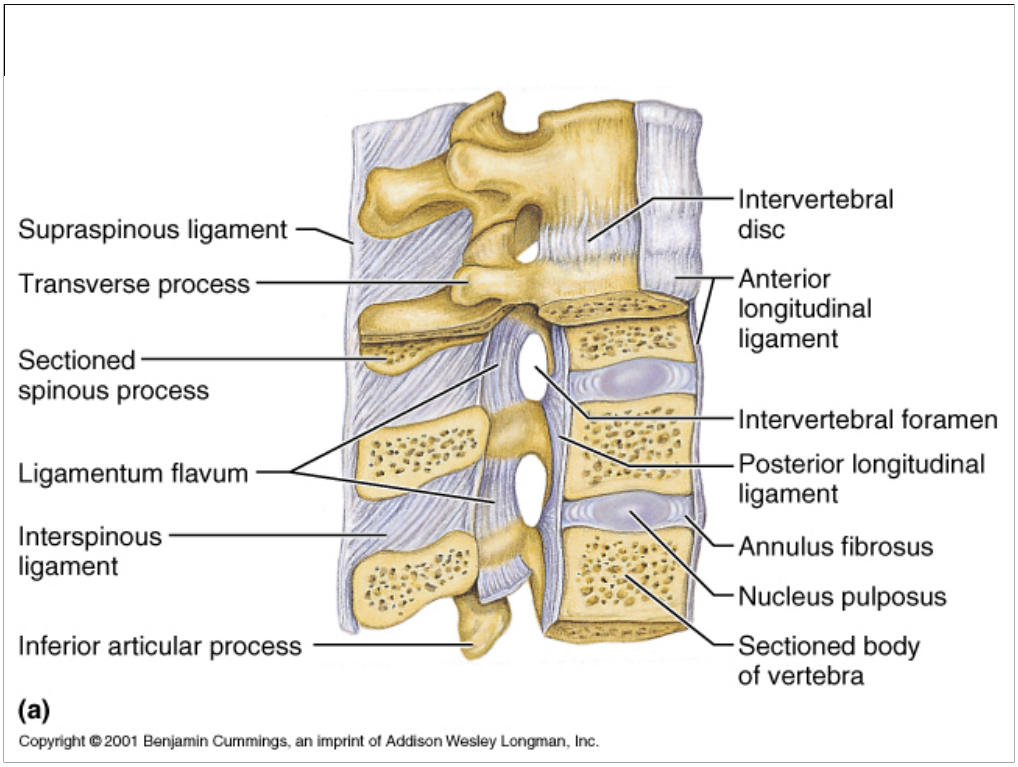

The **ligamentum flavum** is one of the few elastic ligaments in the body. Most ligaments are inelastic. Each intervertebral disk consists on an inner soft **nucleus pulposus** which absorbs shock, and an outer fibrous ring, the **annulus fibrosus**.

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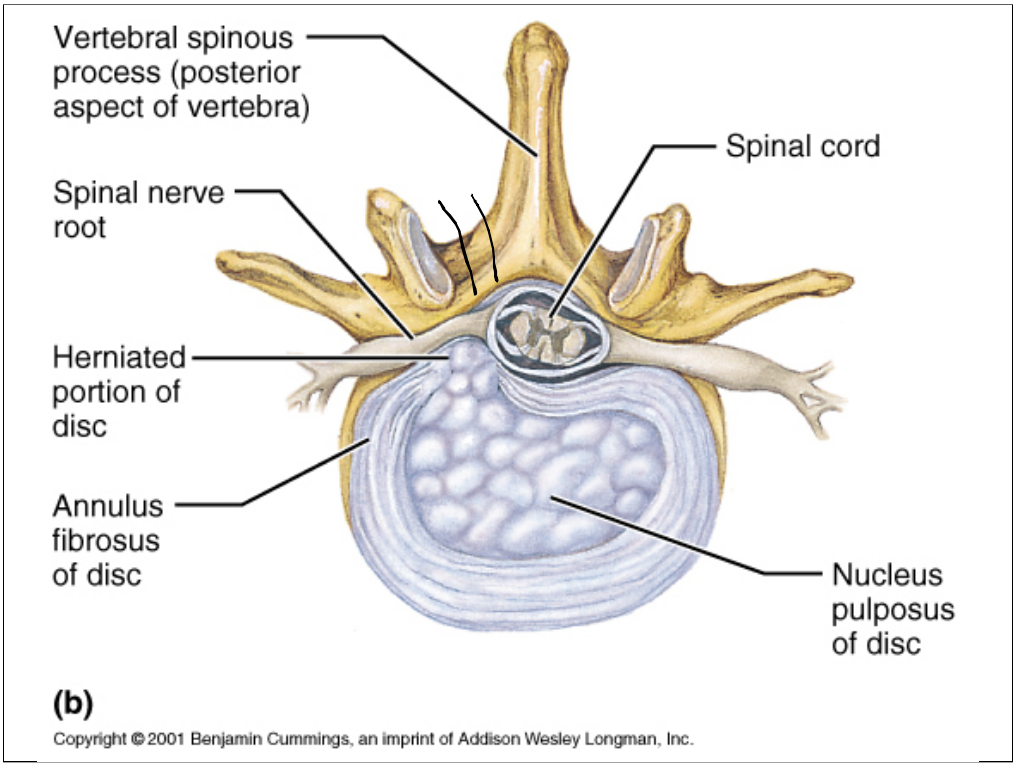

When a disc ruptures or **herniates**, the nucleus pulposus is squeezed through the annulus fibrosus to put pressure on the nearby nerve roots. Removal of a portion of the lamina (laminectomy) is sometimes done to relieve pressure on the spinal nerves .

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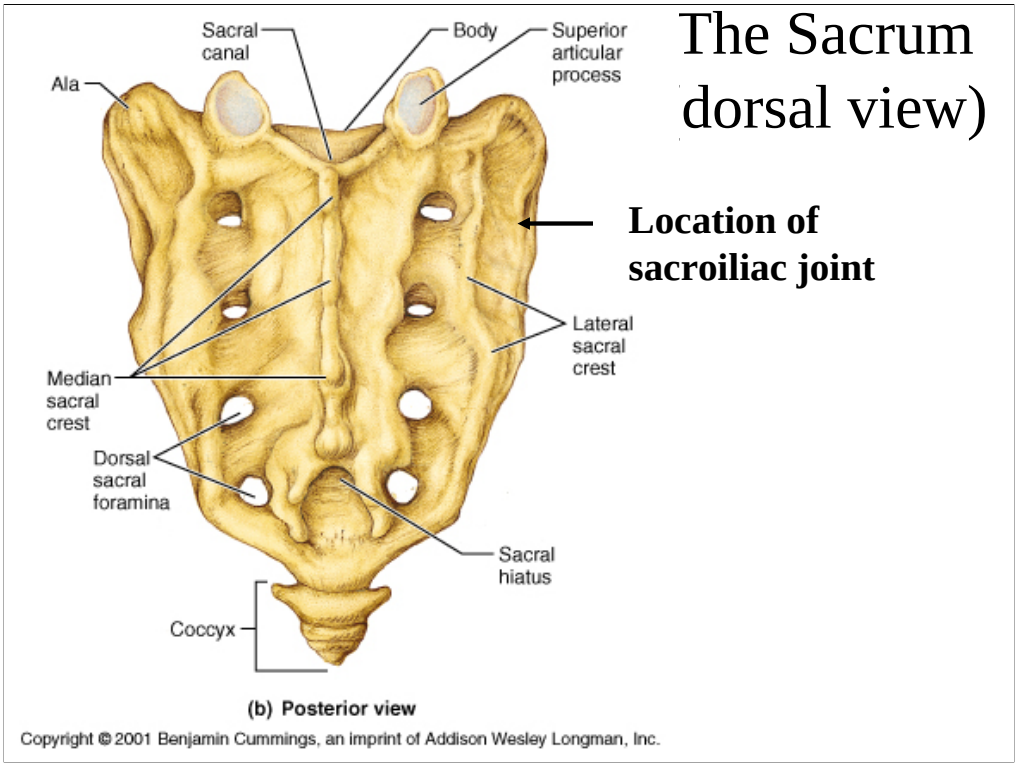
The Sacrum dorsal view)



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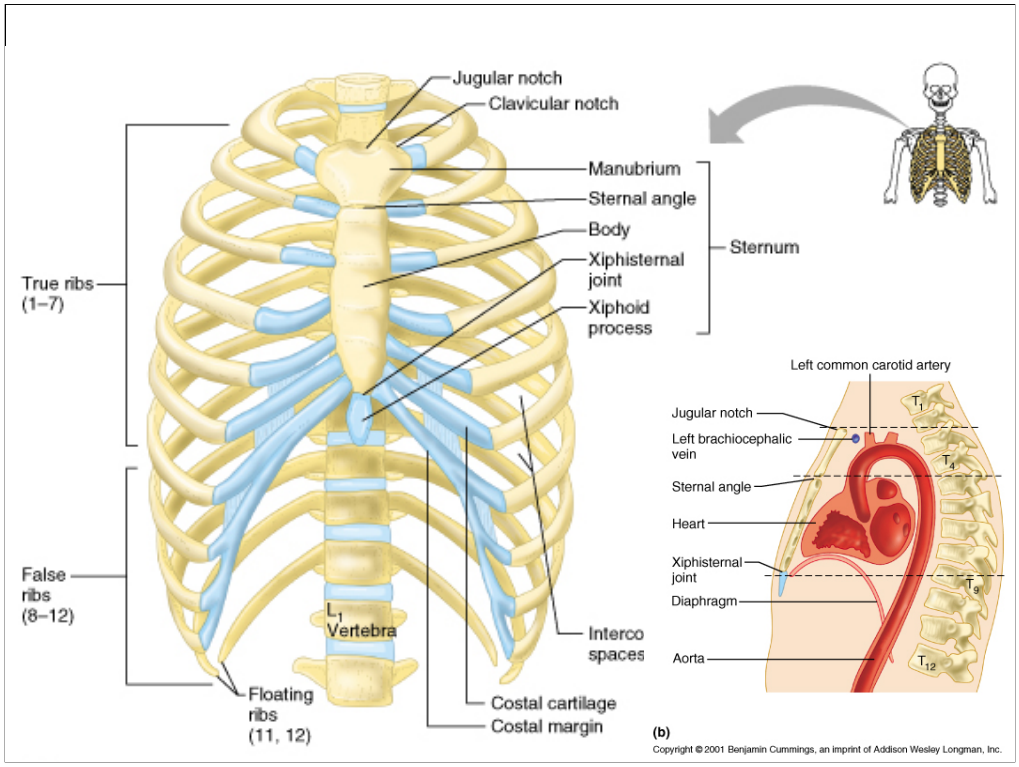

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Lab Protocol

1. After studying the lab exercise and this PDF, complete the Review Sheet which accompanies the lab exercise.
2. Use ADAM to study the bones and contours as per directions in the lab manual.
3. Take the quiz on the skeleton.

ADAM Interactive Anatomy - Find the following:
1. Dissectible Anatomy, Male, Anterior, Window centered on head, Layer Indicator 48. Adjust the layer indicator to 49 for internal nose.
2. Dissectible Anatomy, Male, Lateral View, Window centered on head, Layer Indicator 187
3. Dissectible Anatomy, Male, Posterior View, Window centered on head, Layer Indicator 186
4. Dissectible Anatomy, Male, Lateral View, Window centered on head, Layer Indicator 209
5. Atlas Anatomy, System, Skeletal, Skull (Lat) 1
6. Atlas Anatomy, System, Skeletal, Skull (Inf)