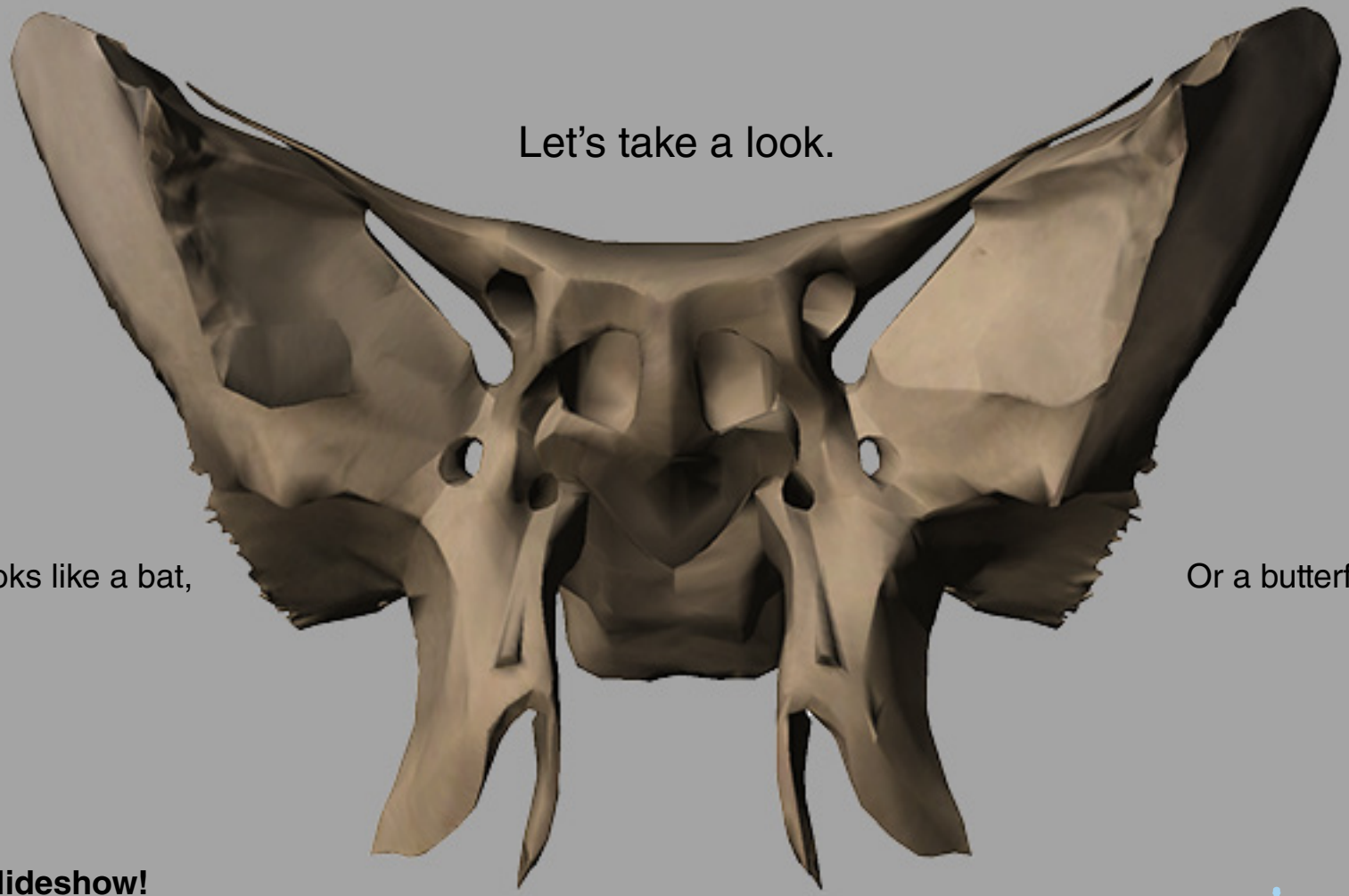
The sphenoid.

Isn’t it the most interesting-looking bone you’ve ever seen?

The sphenoid is actually **in your skull** and has many functions.



Let’s take a look.

It kind of looks like a bat, doesn’t it?

Or a butterfly.

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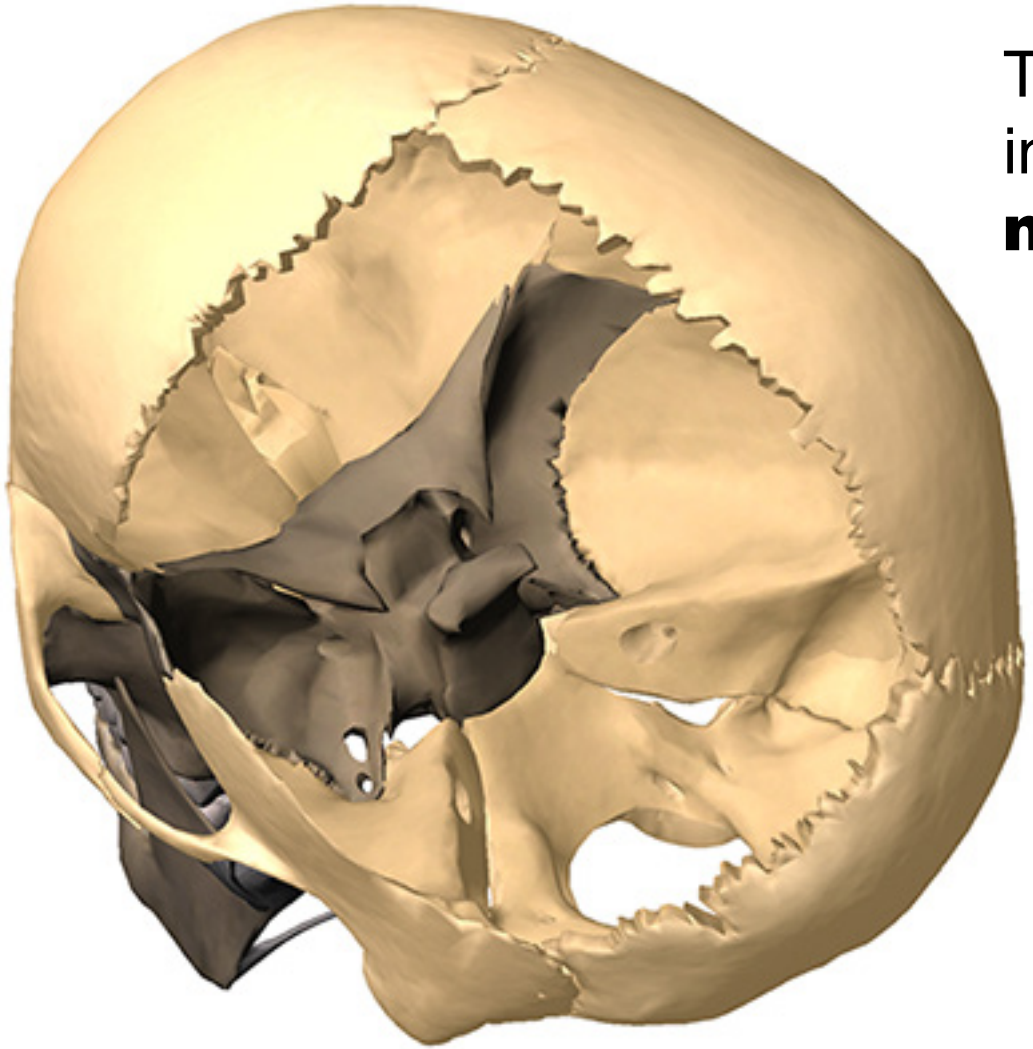
The sphenoid **articulates** with **12** bones, both in the neurocranium and **facial skeleton**.



The sphenoid is not just present in human skeletons, but also in **mammalian ones**.

Factoid: A human has 1 sphenoid bone, but a dog has 8 bones that make up its sphenoid.

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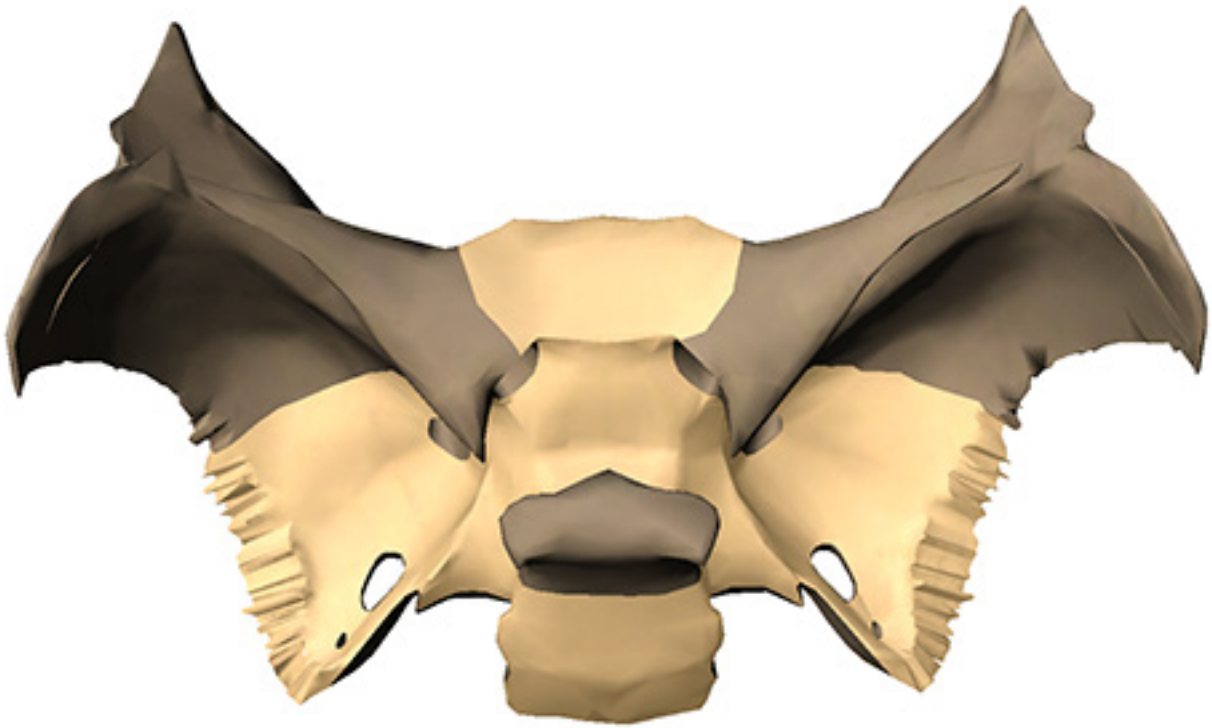
The **sphenoid** is one of the **8** bones of the **neurocranium** (the bones that protect the brain).

It is the **keystone*** bone at the base of the skull.

*In architecture, a keystone is the piece at the apex of an arch, locking all the other pieces together and bearing the weight of it all.

The **body** of the sphenoid is the central part of the bone.

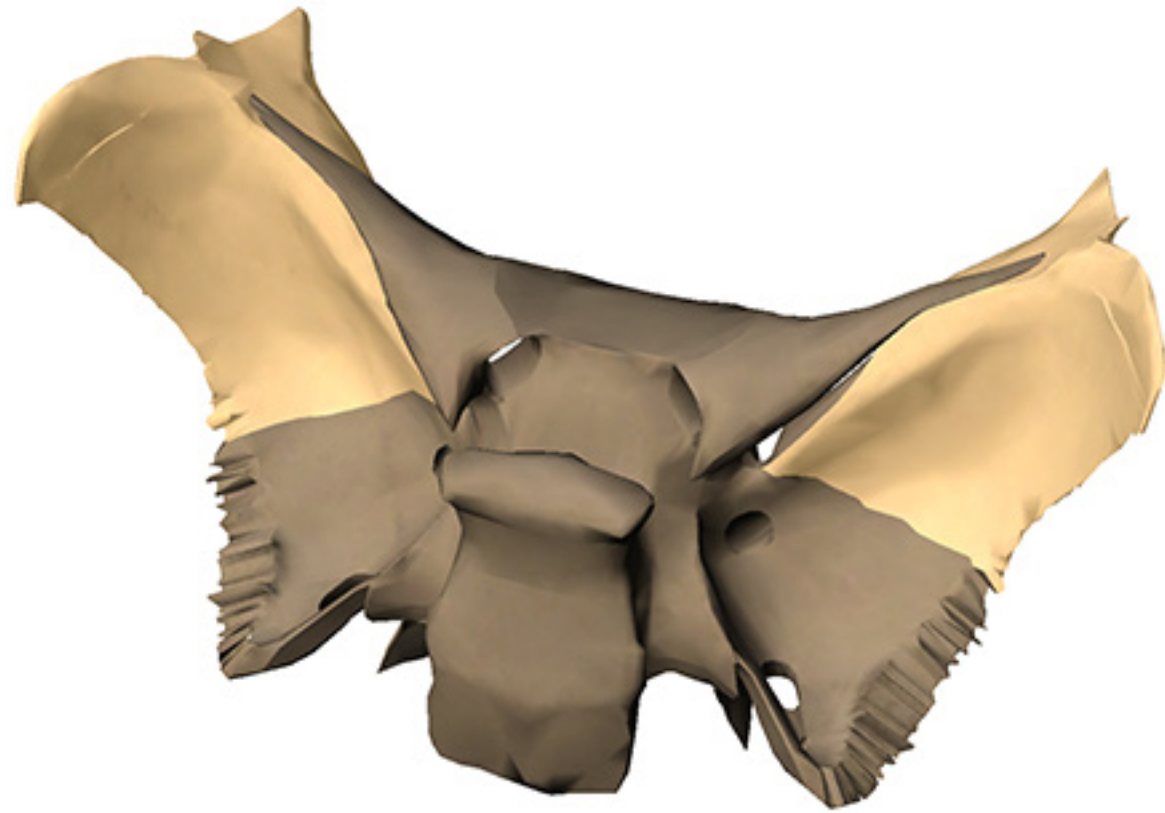
It is a hollowed-out, cubical portion of the bone that forms the **sphenoidal sinuses**.



The body is home to a deep depression known as the **Sella turcica**, which houses the **pituitary gland**.

Factoid: sella turcica is Latin for "Turkish saddle" because of its resemblance to the saddles used by Turks, which had supports in the front and back.

The **greater wings** of the sphenoid articulate with several bones, including the frontal, temporal, parietal, and zygomatic.



They also serve as the attachment site for the **temporalis** muscles.

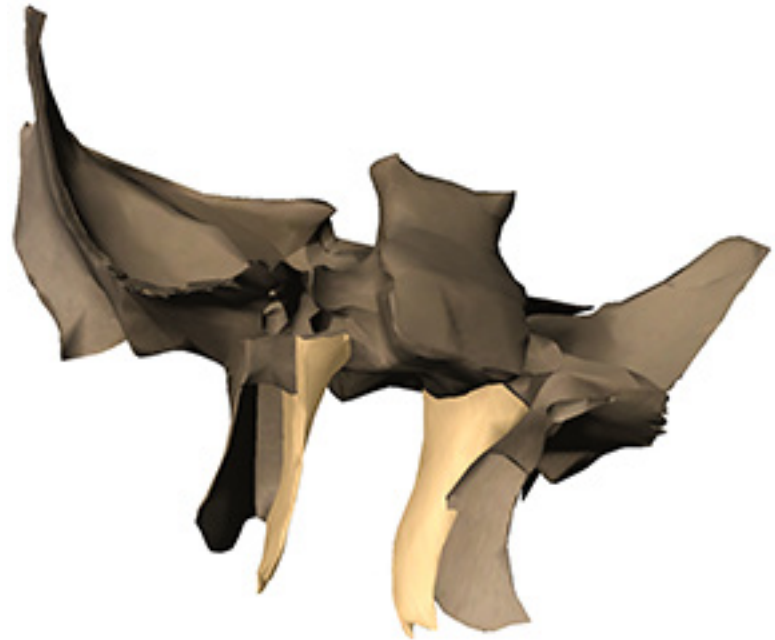
The **lesser wings** are thin, triangular plates located above the greater wings.

They, along with the body, form the **optic canal**.

The optic nerve (II) passes through the optic canal to the eyes.

The **lateral and medial pterygoid plates** project downward from the sphenoid body to give shape to the **nasal cavity**.

The lateral pterygoid processes give attachment to the pterygoid muscles.

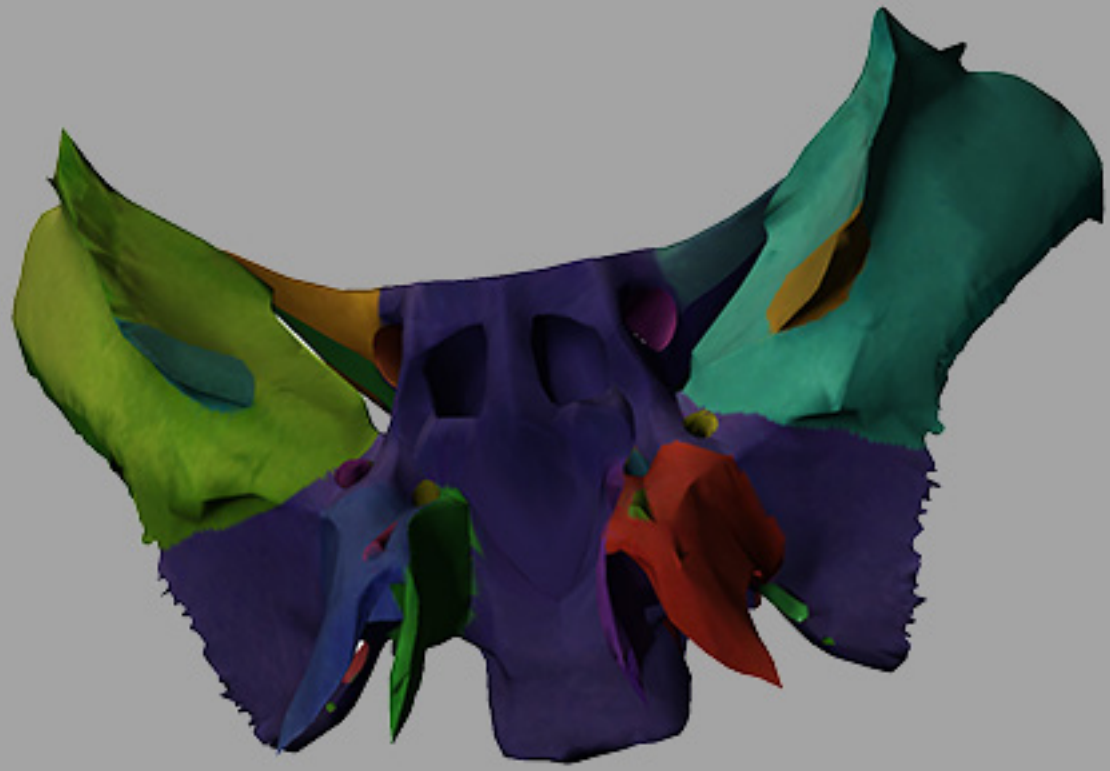


The sphenoidal processes of the palatine and ala of the vomer articulate with the medial plates.

Quick review.

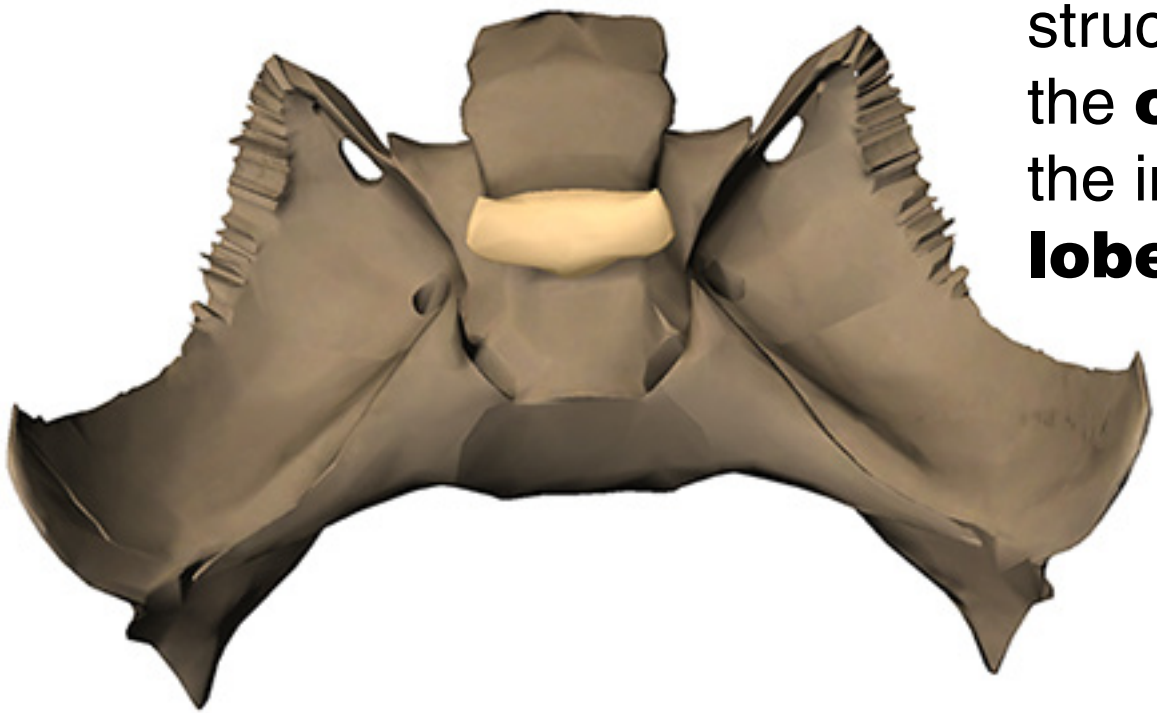
Every bone in the body has **landmarks**, or components, that serve various functions.

- A **process** is a protrusion that can be an attachment site for muscles or articulate with another bone.
- A **foramen** is a hole through which nerves or vasculature pass.
- A **sinus** is a cavity within a cranial bone and usually holds air cells.



All the colors designate regions and landmarks.

The **posterior clinoid process** is a small protrusion that completes the sella turcica.



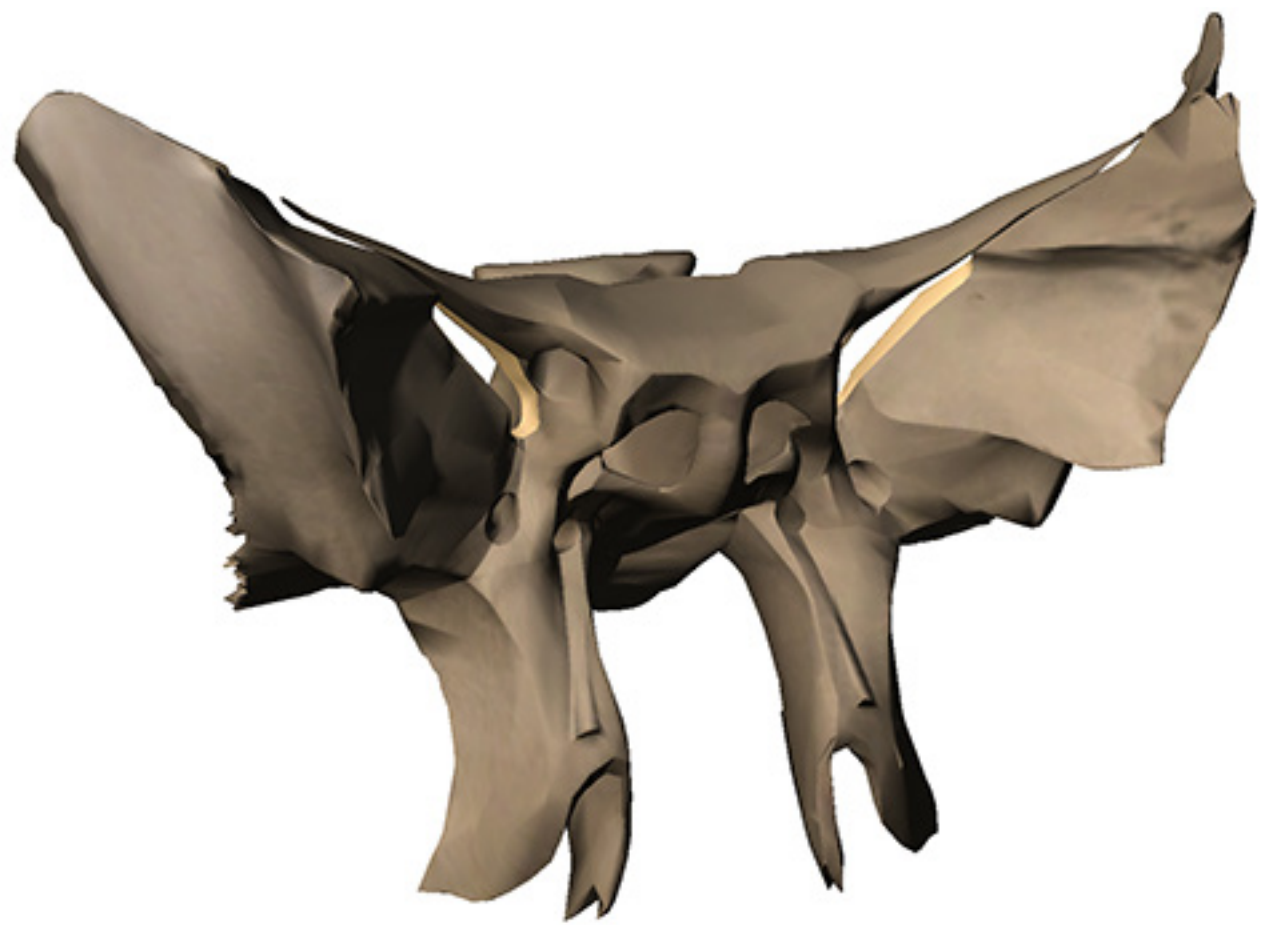
The process gives attachment to the **tentorium cerebelli**, a structure in the brain that separates the **cerebellum** (hindbrain) from the inferior portion of the **occipital lobe**.

Factoid: The word clinoid comes from the Greek word "kline," which means "bed."

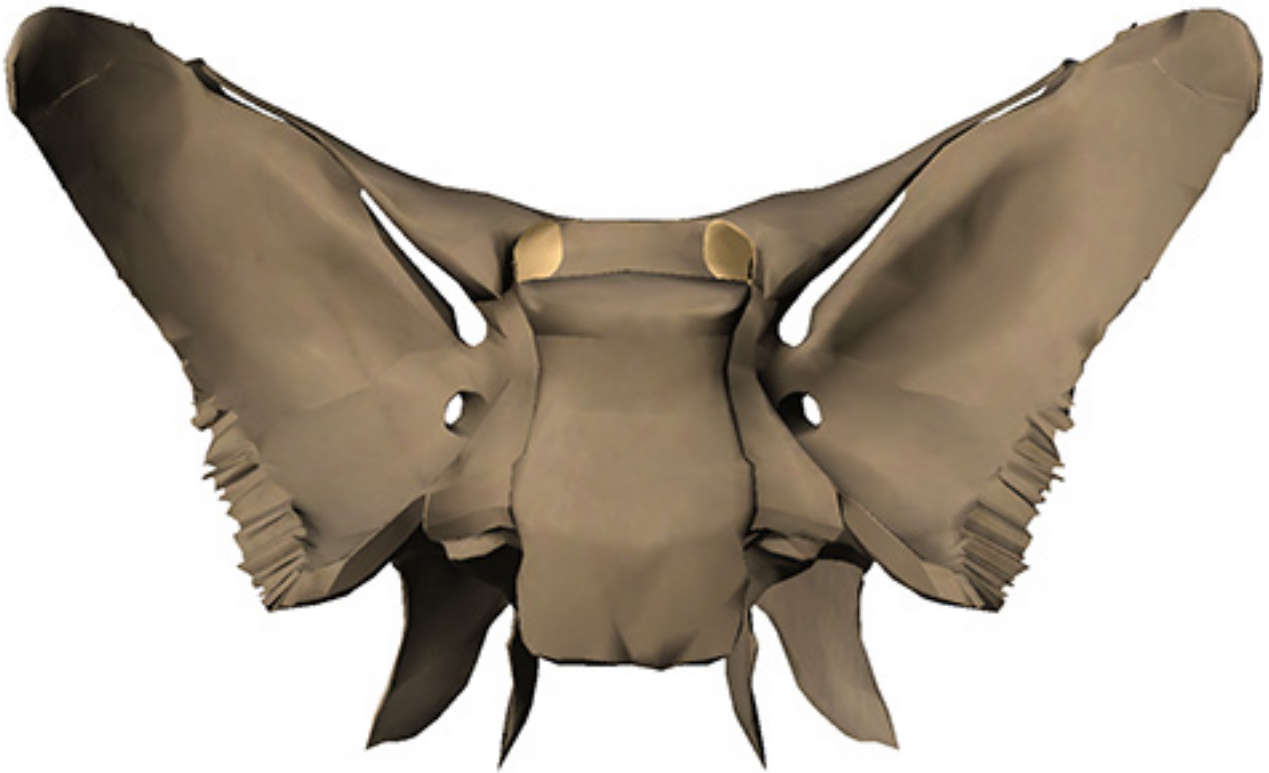
The **superior orbital fissures** are the largest **foramen** in the sphenoid.

A large number of important structures pass through them:

- Oculomotor nerve (III)
- Trochlear nerve (IV)
- Branches of ophthalmic nerve (V)



The **optic foramen** are the entrances to the **optic canal**.

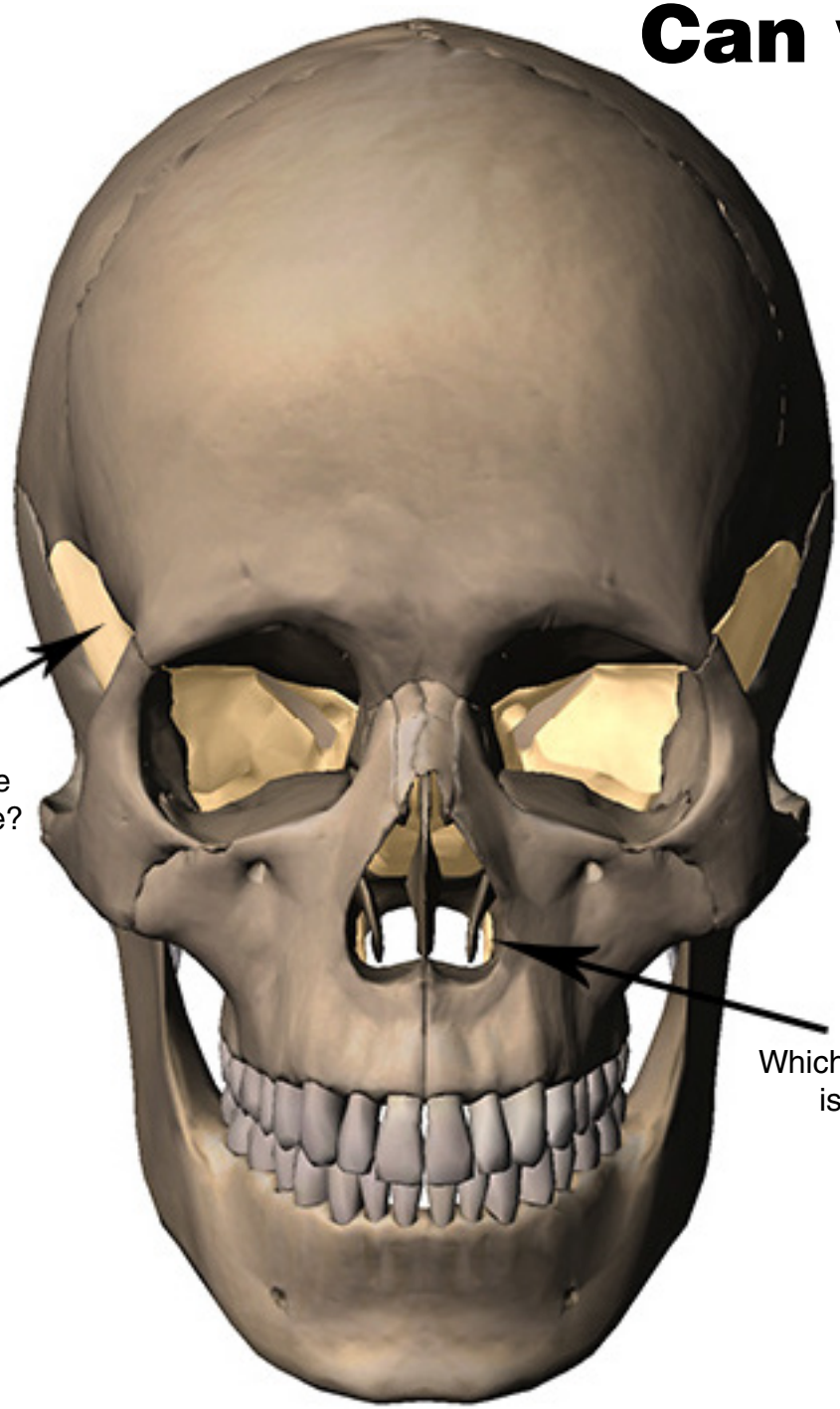


The **optic nerve (II)** passes from the eyes, through the foramen, and into the canal to reach the **brain**.

The **foramen rotundum** connect the pterygopalatine fossa and middle cranial fossa.

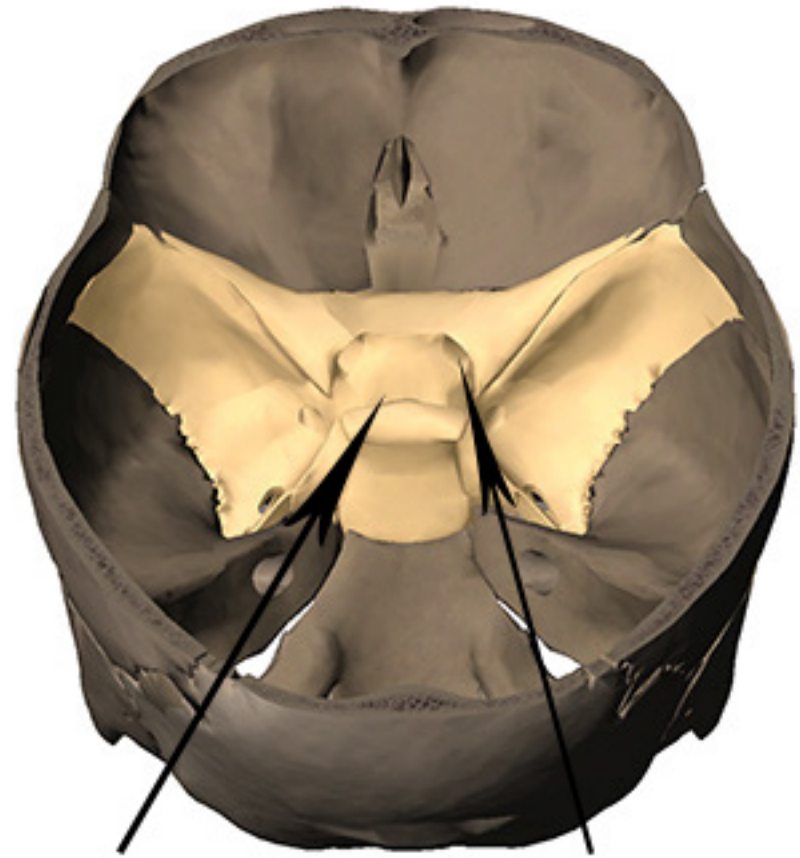
The **maxillary nerve (V)** passes through the foramen and branches into the **infraorbital nerve**.

Can you guess the answers?



What muscle attaches here?

Which structure is this?



The pituitary gland sits in which structure?

What is the name of this foramen?

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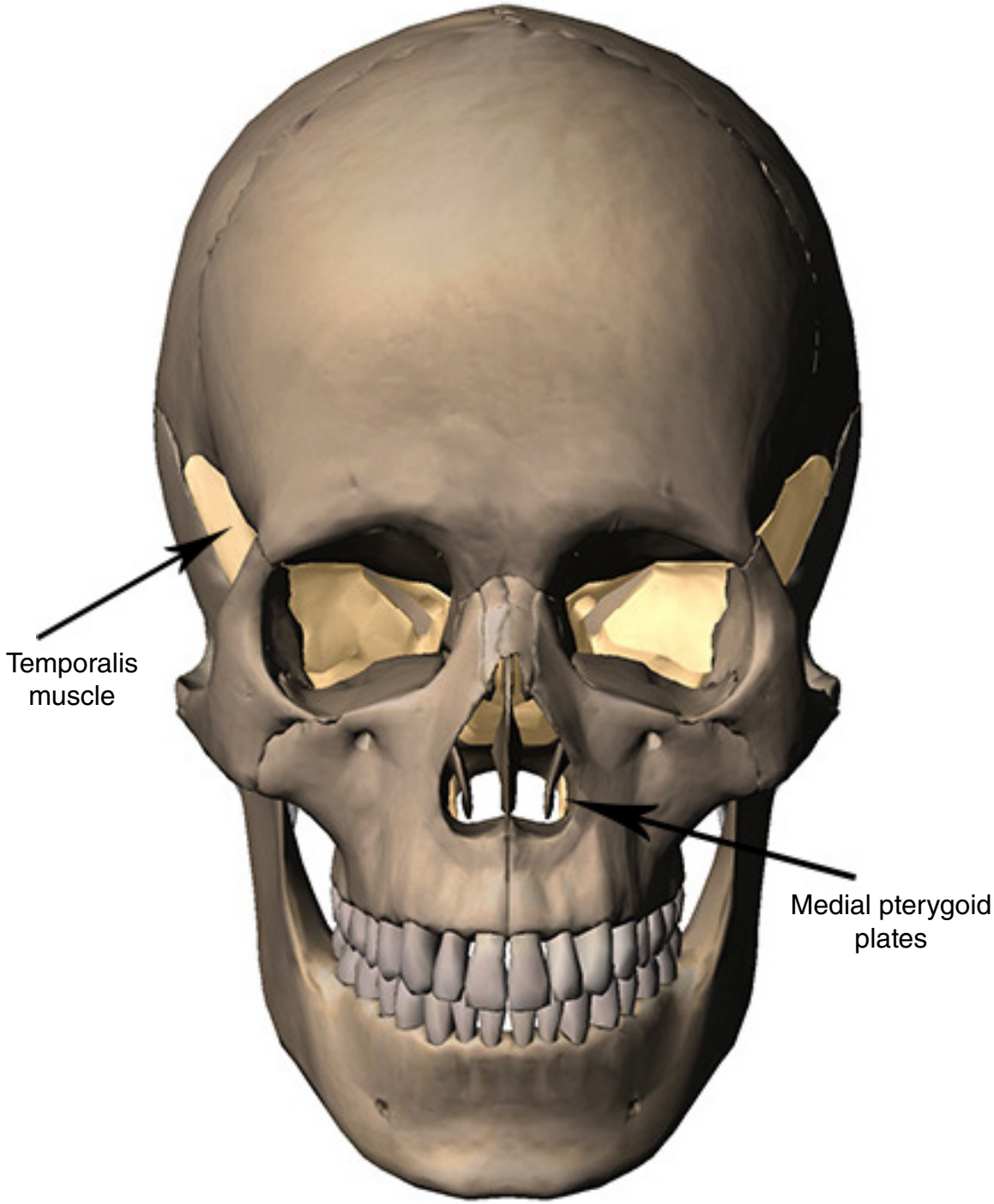
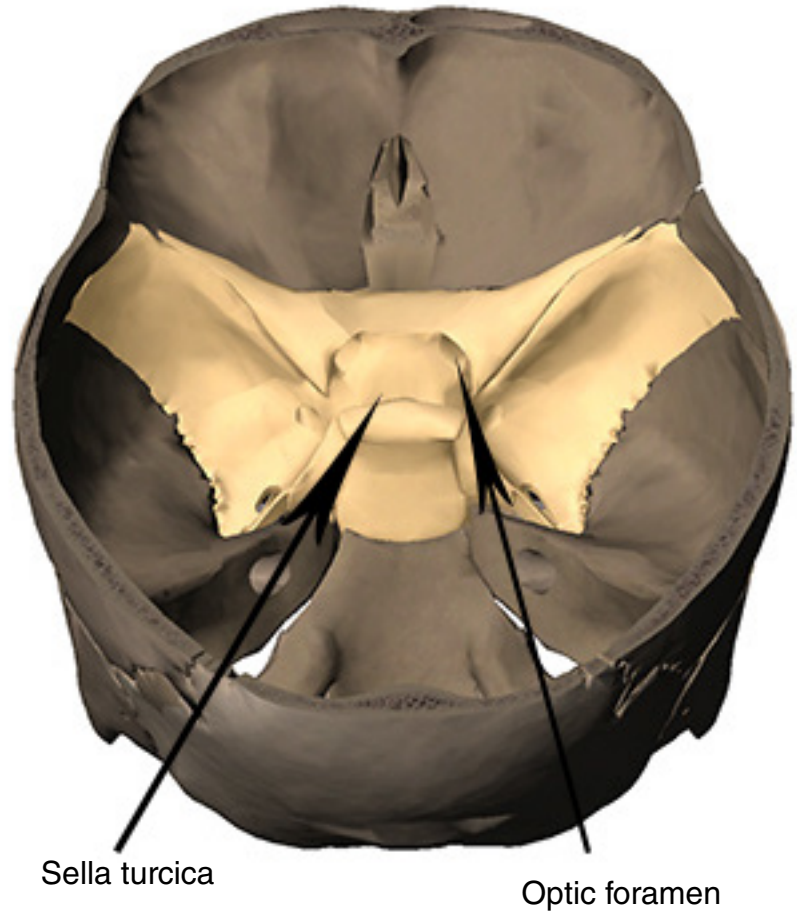
Answers.





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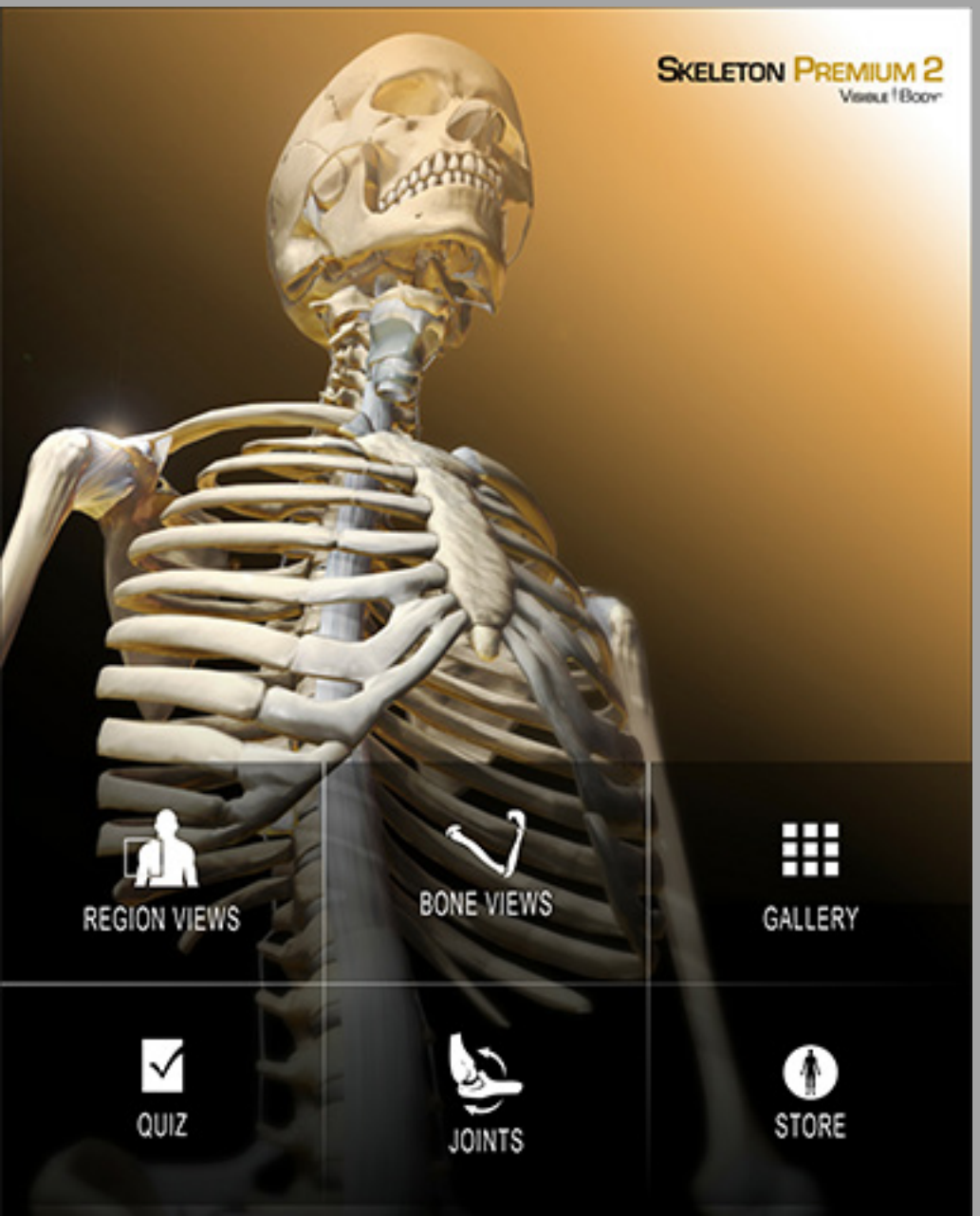
Skeleton Premium 2



All the images and most of the text in this eBook came from our new Skeleton Premium 2 app—an encyclopedic anatomical reference for skeletal anatomy.

Content in the app includes:

- 800+ bony landmarks detailed on 3D bone models. These are accompanied by pronunciations and descriptions in the supporting text
- 300+ preset views that can be rotated, zoomed, customized, and saved to a personal library
- 3D models of bone tissue, synovial joints, and animations and illustrations that review pathologies and regional anatomy
- A quiz bank with 500+ questions
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