

LMRT Review: Skull, Facial Bones & Paranasal Sinuses

Skull Overview

The skull is divided into two main parts:

- Cranial bones – protect the brain (8 bones)
- Facial bones – form the face (14 bones)

Cranial Bones Review

- Frontal bone
 - Forms the forehead
 - Contains the frontal sinuses
- Parietal bones (2)
 - Form the sides and roof of the skull
- Temporal bones (2)
 - Form the sides of the skull
 - Contain the middle and inner ear
- Occipital bone
 - Forms the back and base of the skull
 - Contains the foramen magnum
- Ethmoid bone
 - Located between the eyes
 - Contains the cribriform plate
 - Forms part of the nasal septum
- Sphenoid bone
 - Considered the keystone of the cranial floor

Facial Bones Review

- Maxilla (2)
 - Forms the upper jaw
 - Houses the maxillary sinuses
- Mandible
 - Forms the lower jaw
 - Only movable bone of the skull
 - Classified as an irregular bone
- Zygoma (2)
 - Forms the cheekbones
 - Part of the orbits
- Nasal bones (2)
 - Form the bridge of the nose
- Vomer
 - Forms part of the nasal septum
- Lacrimal bones
 - Small bones in the medial orbit
 - Contain the tear duct
- Palatine bones
 - Form part of the hard palate

Orbits (Eye Sockets)

- Made up of multiple bones
- Commonly tested facial bone in the orbit:
 - Zygoma

Paranasal Sinuses Review

What Are the Paranasal Sinuses?

- Air-filled cavities within certain skull bones
- There are 4 paired sinuses:
 - Frontal
 - Ethmoid
 - Maxillary
 - Sphenoid

Sinus Locations

- Frontal sinuses → Frontal bone
- Ethmoid sinuses → Between the eyes
- Maxillary sinuses → Largest sinuses, located in maxilla
- Sphenoid sinuses → Posterior to nasal cavity

Function of Sinuses

- Warm and humidify air
- Lighten the skull
- Enhance voice resonance

Sinus Radiography Basics

- Sinus images are taken upright
 - To visualize air-fluid levels
- Best projection for paranasal sinuses:
 - Waters view
- Best projection for maxillary sinuses:
 - Waters view
- Best projection for orbits:
 - Caldwell view

Quick Memory Tips

- Cranial bones = 8
- Facial bones = 14
- Forehead = Frontal
- Back of skull = Occipital
- Upper jaw = Maxilla
- Lower jaw = Mandible
- Cheekbone = Zygoma
- Nasal septum = Vomer + Ethmoid
- Largest sinus = Maxillary
- Sinuses upright = Air-fluid levels
- Waters view = Sinuses