

Anatomy of facial bone

By
MUNEER JAWAD MS.C RT 2

Introduction

- The facial bones are a series of **14 irregular bones** that collectively are attached to the antero-inferior aspect of the skull.
- Within these bones, and some of the bones forming the cranial base, are a series of air-filled cavities known as the paranasal air sinuses
- The maxillae , zygomata and mandible contribute most to the shape of the face , and the orbits , nose and paranasal sinuses form bony cavities contained by the facial skeleton

Facial Bone

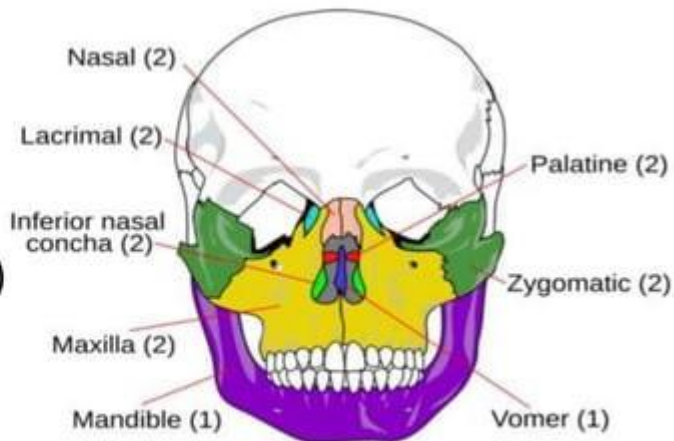
There are 14 bones that make up the facial bones.

6 bones are paired (R/L)

- Maxillae
- Zygomatic bones
- Lacrimal bones
- Nasal bones
- Inferior nasal conchae
- Palatine bones (not visualized)

2 single bones

- Mandible
- vomer



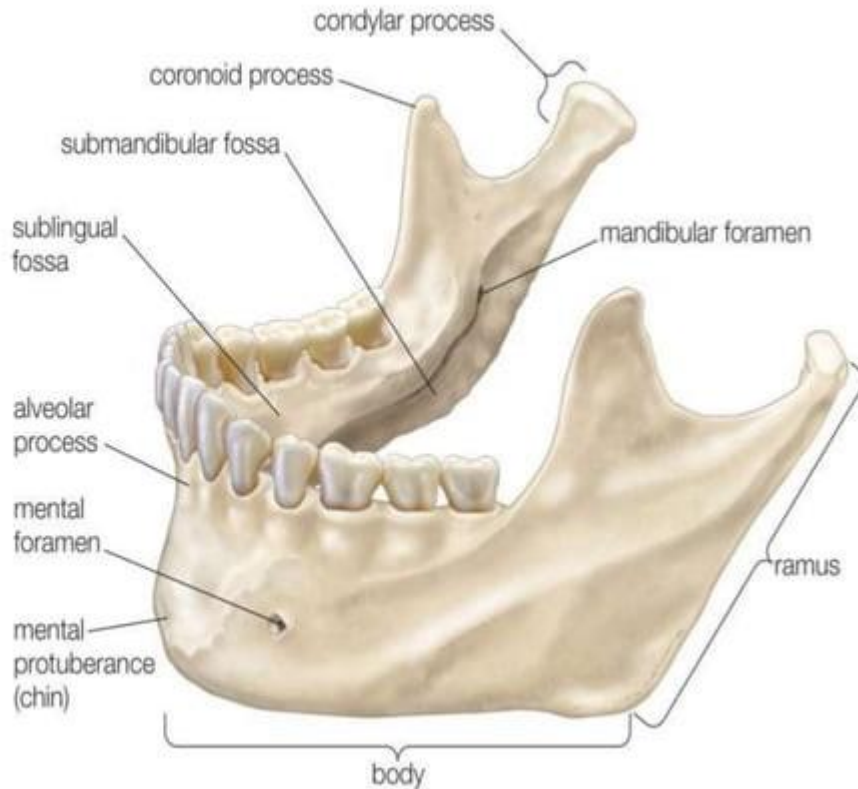
14 Facial Bones

Mandible(1)

- It is the largest and strongest bone of the face
- Only movable bone in the skull
- It consists of an horseshoe or curved horizontal shaped body and two rami that project upwards from the posterior part of the body
- Angle of mandible (gonion)
- Mental protuberance (chin)
- Symphysis menti



- ❖ *Alveolar process*
- ❖ *Mental foramina*
- ❖ *Coronoid process*
- ❖ *Condylar process*
- ❖ *Mandibular notch*



Maxillae (2) R/L

- Maxillae is the 2nd largest bone in the face
 - The 2 maxillae form the whole of the upper jaw (immovable bone)
 - Body contains large pyramidal cavity – maxillary sinus
 - Form three fourth of roof of the mouth
 - It form part of the floor and later wall of nose and the floor of the orbit
- ❖ **It has 4 surface and encloses a large cavity**
- Anterior or facial
 - Posterior or infratemporal
 - Superior or orbital
 - Medial or nasal



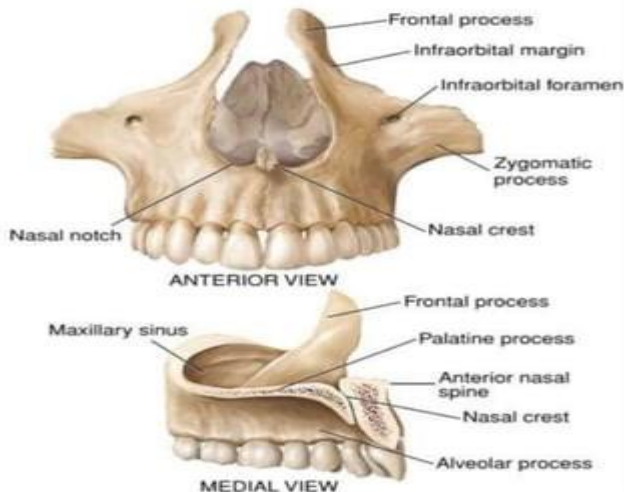
❖4 Processes of maxilla

- Zygomatic processes .
- Frontal processes .
- Alveolar processes .
- Palatine processes .

- Infraorbital foramen
- Anterior nasal spine
- Acanthion

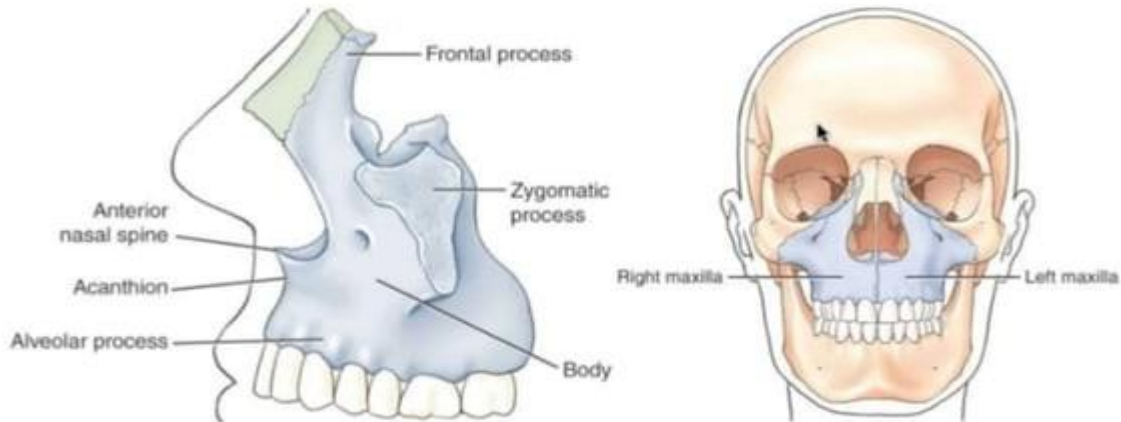
Bones articulation

- Each articulate with all other facial bones , except mandible
- also articulate with frontal and ethmoid cranial bones



Maxilla

(right and left maxillary bones)



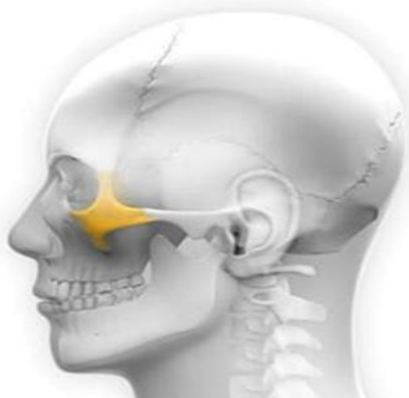
- Articulates with two cranial bones and seven facial bones

Zygomatic bones (2) R/L

- ❖ It forms prominence of cheeks
- ❖ The zygoma or malar bone complex forms central support of the cheek and is a strong buttress of the lateral surface of the middle face .
- ❖ Forms lower outer margin of orbits

❖ four process

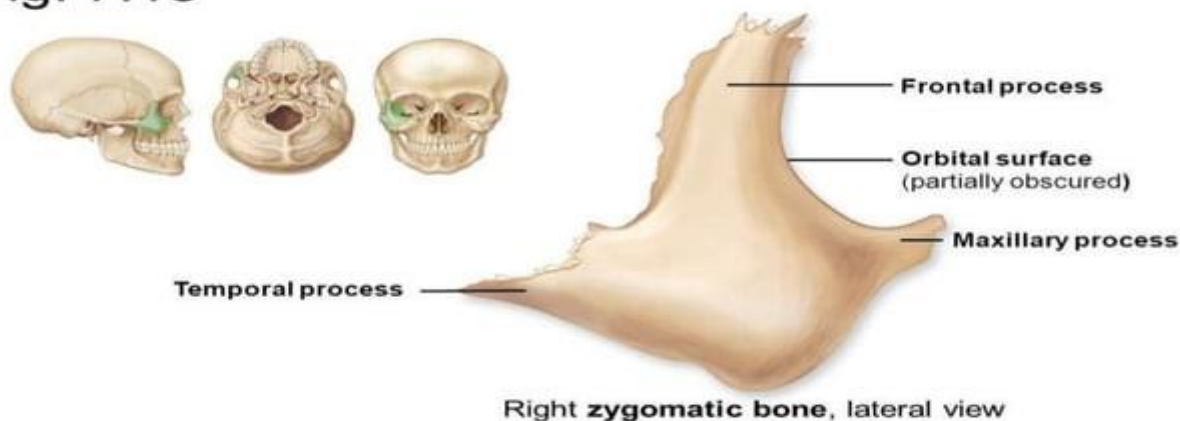
- Frontal process
- Temporal process
- Maxillary process
- Orbital process



- **Articulations**

- ☐ superior – frontal bone
- ☐ Lateral – zygomatic process of temporal bone
- ☐ Anterior – maxilla
- ☐ Posterior – sphenoid

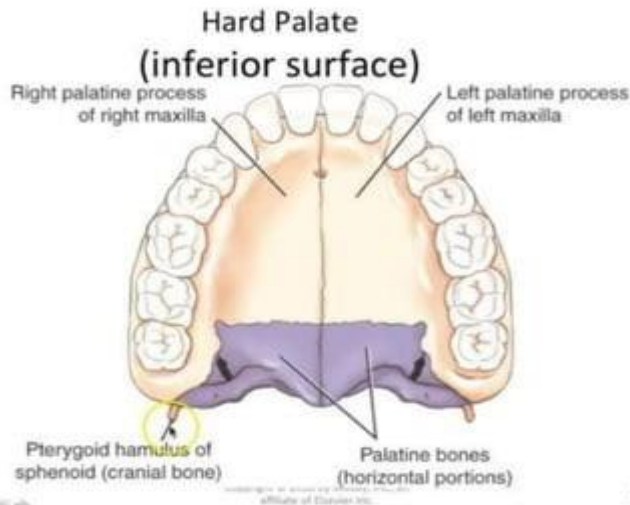
Fig. 7.18



- Two L – shaped bone composed of vertical and horizontal plates
- Horizontal plates articulate with maxillae to complete the posterior fourth of bony palate (roof of mouth)
- vertical portion extend upward between maxilla and the pterygoid process of the sphenoid in posterior nasal cavity
- Palatine bone contributes to the walls of three cavities:-
 - 1] The floor and lateral wall of the nasal cavity;
 - 2] The roof of the mouth,
 - 3] The floor of the orbit.

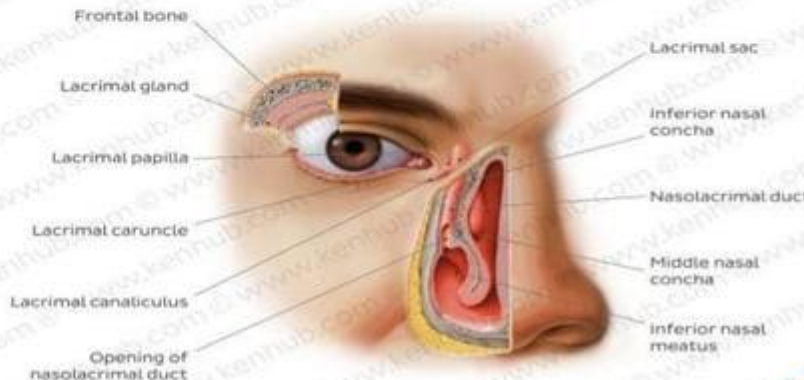


- The bone features three processes; pyramidal, orbital and sphenoidal.
- Its articulating with five bones; maxilla, sphenoid, ethmoid, inferior nasal concha, and vomer.



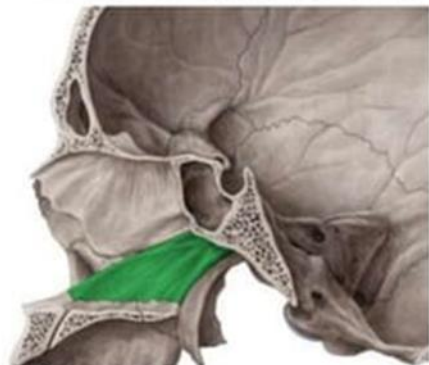
Lacrimal bone

- The 2 smallest bones in the skull
- It form part of the medial wall of the orbit.
- it articulates with :
 - ❖ Frontal bone
 - ❖ Maxillary bone
 - ❖ Ethmoid bone
 - ❖ Inferior nasal concha
- lacrimal foramen
- The lacrimal groove

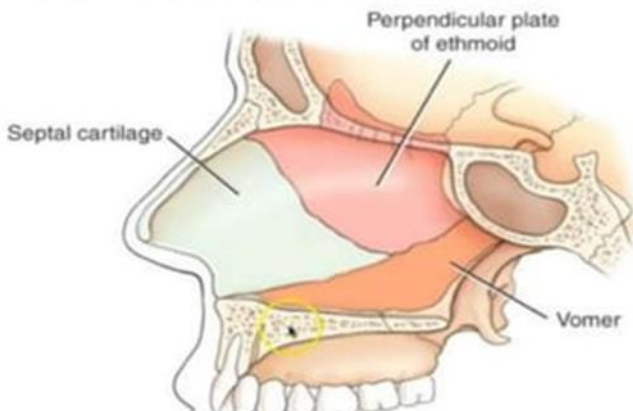


The vomer

- Thin plate of bone situated in MSP of floor of nasal cavity
- Forms inferior nasal septum
- Superior border articulates with body of sphenoid bone
- Superior part of anterior border articulates with perpendicular plate of ethmoid bone
- Posterior border is free



Bony Nasal Septum and Vomer

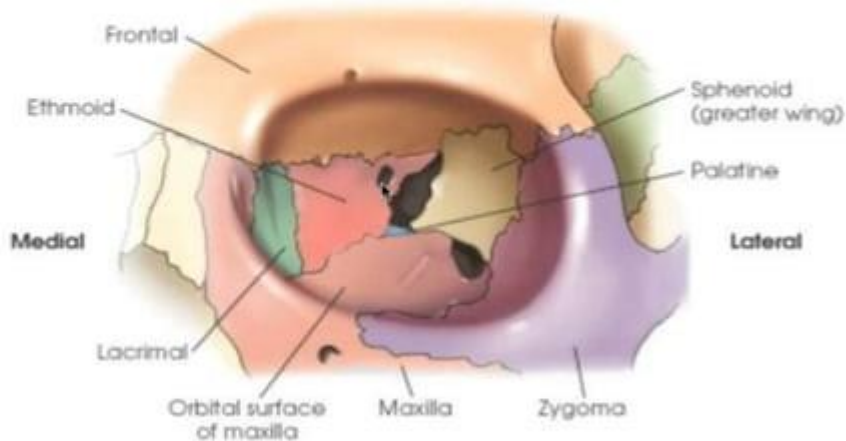


Orbits

➤ Each is composed of seven bone

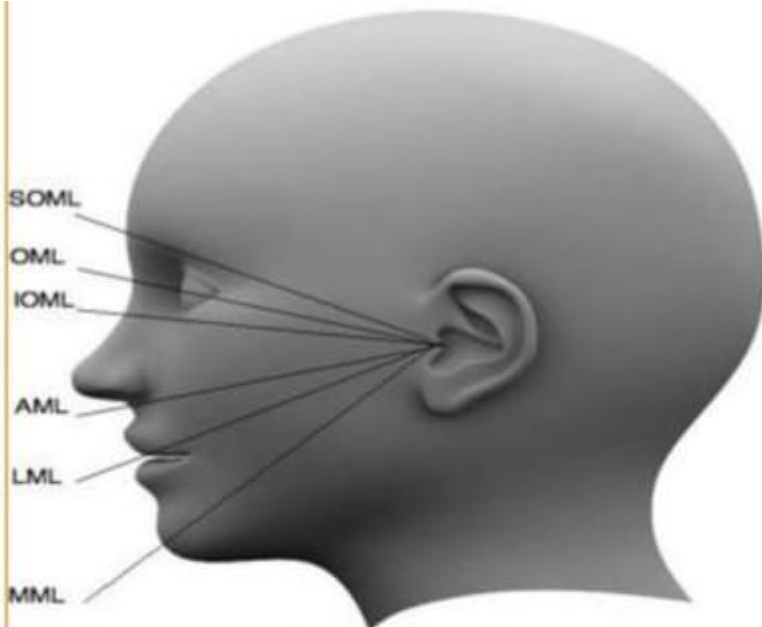
1. Frontal
2. Sphenoid
3. Ethmoid
4. Maxilla
5. Zygoma
6. Lacrimal
7. Palatine

Anatomy: Orbit



Anterior aspect of orbit

Lines



SOML - Supraorbitomeatal line

OML - Orbitomeatal line

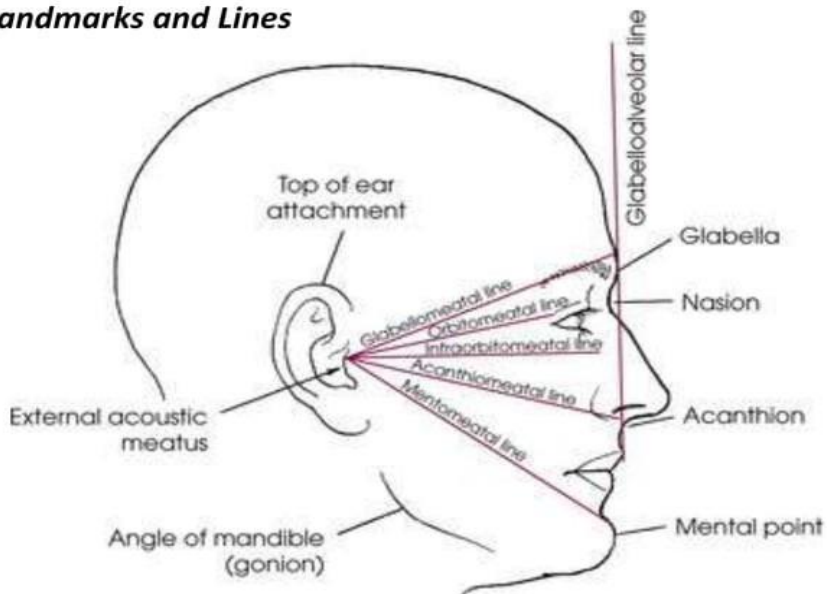
IOML - Infraorbitomeatal line

AML - Acanthiomeatal line = CM canthiomeatal line

LML - Lips-meatal line

MML - Mentomeatal line

Landmarks and Lines



Nasal bones

The nasal bones The paired nasal bones are attached to each other and to the nasal spine of the frontal bone They are grooved on their deep surface by one or more anterior ethmoidal nerves These vertically oriented grooves can be seen on a radiograph and should not be mistaken for fractures.

