

Resource for Unit 1 lesson 11 Anatomy Bones of the Face

The bones of the face

The facial skeleton is composed of a network of bones that collectively contribute to the unique contours and proportions of an individual's face. These bones serve as the foundation upon which the soft tissues and features of the face rest. It can be useful to discuss the concept of the bones serving as the foundation for all other structures of the face in terms of dealing with the aging face. Changes in bone structure will lead to changes in all layers of the face.

Maxilla and Mandible: The maxilla, forming the upper jaw, is a key determinant of midface aesthetics. Its height and projection influence the prominence of the cheeks and the appearance of the periorbital region.

The mandible, comprising the lower jaw, contributes to the lower face's contour, jawline definition, and chin projection. Its harmony with the maxilla establishes the overall facial balance.

Zygomatic Bones: The zygomatic bones, commonly known as the cheekbones, play a significant role in facial width and midface projection.

Their position impacts the perception of facial fullness and the transition from the midface to the lower face. Collaboratively, they influence facial harmony and symmetry.

Nasal Bones: The nasal bones form the bridge of the nose, affecting the overall profile and proportions of the face.

Alterations to the nasal bridge or tip during rhinoplasty can harmonize the nasal structure with other facial features, contributing to a balanced appearance.

Frontal Bone: The frontal bone, comprising the forehead, impacts the upper face's aesthetics and proportions.

Its contour influences the perception of brow height and can affect expressions of surprise, concern, or seriousness.

Cranial Sutures: The sutures between various cranial bones can influence the shape of the skull and, consequently, the appearance of the face.

In some cases, an understanding of cranial sutures is relevant for procedures like forehead contouring or brow bone augmentation.

Temporal Bones: The temporal bones contribute to the lateral aspects of the forehead and temples.

Their influence on facial width and the temporal region's fullness is relevant in procedures like temple filler placement.

Lacrimal and Ethmoid Bones:

The lacrimal and ethmoid bones, located around the eyes, affect the periorbital aesthetics.

Their proportions contribute to the appearance of the eye sockets and the surrounding area, which is important for a youthful look.

Sutures and Bone Shape:

The unique patterns of sutures between different bones contribute to an individual's facial shape.

Understanding how these sutures evolve with age and their influence on facial contours is crucial for tailored aesthetic interventions. We will discuss bone changes in aging later in this unit.

Male and Female skull bones

Size: Generally, male skulls tend to be larger and more robust than female skulls. This discrepancy in size is particularly evident in the brow ridges, jawbones, and muscle attachment points, which are typically more prominent in males due to their greater muscle mass and overall larger physique.

Shape: The overall shape of the skull can also vary between males and females. Male skulls often exhibit a more pronounced square or angular shape, particularly in the jaw area, while female skulls tend to be more rounded and delicate.

Brow Ridge: One of the most noticeable differences is the brow ridge, also known as the supraorbital ridge or brow bone. In males, this ridge is usually more prominent and protruding, creating a more defined and angular appearance compared to the smoother and less pronounced brow ridge in females.

Forehead: The forehead of male skulls may appear more sloped or receding compared to the smoother, more vertical forehead of female skulls.

Orbital Opening: The orbit, or eye socket, tends to be larger in males to accommodate the relatively larger eyeballs. This results in a more circular or rectangular-shaped orbit in males, whereas females typically have a more oval-shaped orbit.

Mandible: The mandible, or jawbone, is typically larger and more robust in males, with a square-shaped chin, whereas females often have a narrower, more pointed chin.

Occipital Bone: The occipital bone, located at the back of the skull, tends to have a more pronounced external occipital protuberance (bump) in males, which serves as an attachment point for neck muscles. In females, this protuberance is usually smaller and less prominent.

Mastoid Process: The mastoid process, located behind the ear, tends to be larger and more developed in males due to its role in anchoring neck muscles. In females, it is typically smaller and less pronounced.

These differences in skull morphology between males and females arise from various factors, including hormonal influences during growth and development, as well as the evolutionary pressures that have shaped human anatomy over time. It's important to note that while these differences are typical, there can be considerable variation within each sex, and individual skulls may not always conform strictly to these generalizations.