

Surgical Anatomy of the Midcheek: Facial Layers, Spaces, and the Midcheek Segments

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KEYWORDS

- Midcheek • Lid-cheek junction • Malar mound
- Nasojugal groove • Malar fat pad • Midcheek furrow
- Orbicularis retaining ligament

*He that loves a rosy cheek,
Or a coral lip admires,
Or from star-like eyes doth seek
Fuel to maintain his fires:
As old Time makes these decay,
So his flames must waste away.*

Thomas Carew 1595–1640

The poet elegantly expressed the importance of the midcheek in attractiveness. The youthful midcheek is inherently attractive as it conveys an overall look of freshness to the face, whereas the changes that occur in the midcheek over time epitomize the “tired look” of the aging face, which loses its appeal.

In addition to its role in aesthetics, the anterior face functions as the primary structure for both non-verbal and verbal communication. The central location of the midcheek connects the eyes and the lips, the two most important structures for communication and expression. Because faces have a limited range of movement, expression relies on minute differences in position and relative proportion of facial features. In fact, aged faces often falsely express a negative emotion (anger, fatigue, disappointment) in repose because the changed proportions now resemble those temporarily assumed in normal expression. To mask these changes, some people refresh their look by assuming a static smile, as this effectively provides a temporary midcheek lift.

For these reasons, correction of the midcheek is of central importance in facial rejuvenation surgery. Despite this importance, attempts to correct the midcheek are relatively recent in the evolution of facial rejuvenation and remain a major challenge. Progress in understanding the midcheek has been hampered by the absence of consistent terminology and a lack of understanding of how aging changes the anatomical components. The detailed description of the midcheek that follows may be unfamiliar to many surgeons because this is an original description to account for the aging changes and provides the basis for a more logical correction of the midcheek.

DEFINITIONS

The term “midface” refers to the central third of the face, as distinct from the upper and lower thirds of the face. The midface is arbitrarily defined by an upper horizontal line located above the zygomatic arch and extending from just below the superior helix insertion to the lateral canthus, and a lower line that extends from the inferior border of the tragal cartilage to just below the oral commissure (**Fig. 1**).

The midcheek is the part of the midface on the anterior aspect of the face, between the lower eyelid above and the nasolabial groove and lip below. The midcheek has a triangular shape, narrowing

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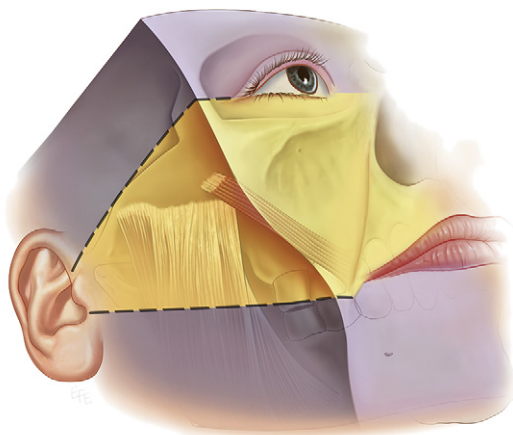


Fig. 1. The face has an anterior and a lateral aspect. The midface (yellow) is the horizontally orientated middle third of the face, which is bounded by an upper horizontal line (*upper dotted line*) that extends from the superior helix insertion along the top of the zygomatic arch to the lateral canthus. The lower boundary (*lower dotted line*) is a line that extends from the inferior border of the tragal cartilage to the oral commissure. The midcheek is the specific part of the midface on the anterior aspect of the face (ie, medial to a vertical line from the lateral orbital rim to the oral commissure).

below because of the angulation of the nasolabial fold. Medially, the midcheek blends imperceptibly with the side of the nose. The outer border of the midcheek is continuous with the lateral cheek around the prominence over the zygoma and below.¹

The youthful midcheek typically appears as a uniform rounded fullness (**Fig. 2**). However, structurally, the midcheek is not the single entity that its youthful appearance suggests. It becomes increasingly obvious with aging that the midcheek is formed by the convergence of three unique components. For purposes of description, we have named these the lid-cheek segment, the malar segment, and the nasolabial segment (**Fig. 3**). When the segments appear with aging, they are separated by the three cutaneous grooves on the midcheek: the palpebromalar groove superolaterally, the nasojugal groove medially, and the midcheek furrow or groove inferolaterally (see **Fig. 3**). The three grooves can be likened to the three interconnected limbs of the italic letter Y (for the right side of the face).² The midcheek furrow correlates with the obliquely oriented stem of the Y, running roughly parallel to the nasolabial fold, and is the continuation of the nasojugal groove. The palpebromalar groove correlates with the left side arm of the Y attached to the stem near the upper part of the midcheek (see **Fig. 3**).

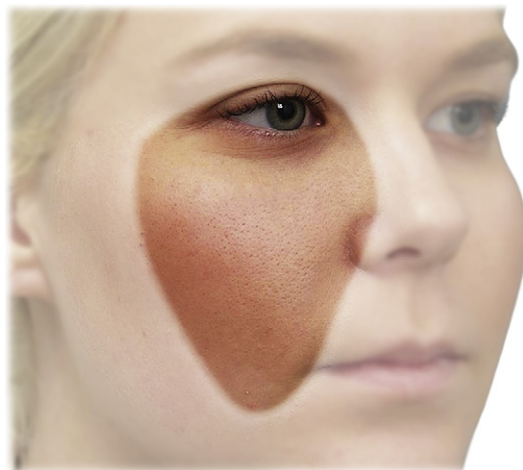


Fig. 2. In youth, the midcheek has a uniform rounded fullness. The youthful lid-cheek junction is a three-dimensional surface contour with concave shape. The skin of the youthful lid-cheek segment is indistinguishable from the skin of the youthful upper cheek.

The youthful lid-cheek segment has a high convex contour that extends up to the lower lid at the infratarsal crease and overlies the lower lid septum orbitale, the orbital rim, and part of the upper cheek.³ The malar segment is defined by its

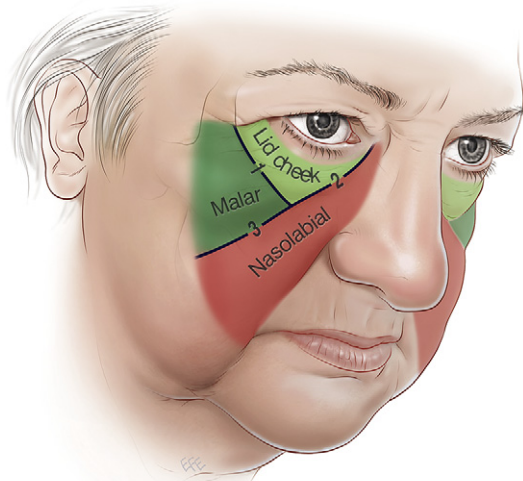


Fig. 3. The triangular midcheek is that part of the anterior face between the lower eyelid above and the nasolabial fold below. It is formed from the convergence of three components: The lid-cheek segment (*light green*), the malar segment (*dark green*), and the nasolabial segment (*red*). Separating the segments are (1) the palpebromalar groove superolaterally, (2) the nasojugal groove medially, and (3) the midcheek furrow inferiorly.

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