

# Surgical Manipulation of the Periorbital Musculature

Phillip R. Langsdon, MD<sup>a,b,\*</sup>, Parker A. Velargo, MD<sup>a</sup>,  
David W. Rodwell III, MD<sup>a</sup>

## KEYWORDS

• Blepharoplasty • Brow • Periorbital • Surgical technique • Transblepharoplasty • Plastic surgery

## KEY POINTS

- Brow position has a great impact on facial aesthetics and emotional portrayal.
- The corrugator supercilii, depressor supercilii, procerus, and orbicularis oculi muscles all contribute to brow depression as the aging process progresses.
- The gender of the patient, position of the hairline, presence of forehead tissue redundancy, and patient preference determine the approach to the brow and periorbital musculature.
- Many patients present with the false notion that eyelid surgery elevates the brow. It is important to demonstrate and discuss the influence of brow position on the outcome of upper blepharoplasty surgery.
- A transblepharoplasty brow lift in combination with brow depressor myotomy and extensive subgaleal forehead undermining can provide mild to moderate brow elevation in carefully selected patients.

## INTRODUCTION

The position of the brow has an impact on the apparent state of facial aging, general facial aesthetics, and the status of human emotion. Achieving a youthful result with brow-lifting procedures, while maintaining a natural appearance and facial dynamics, may be challenging no matter which surgical approach is selected. When tissue redundancy or a heavy brow is not present, stand-alone weakening of the brow depressor muscles may yield a satisfactory elevation. In this scenario, a transblepharoplasty approach to the periorbital musculature can provide excellent exposure and produce natural-looking results.<sup>1,2</sup>

## ANATOMY OF THE UPPER FACE

The upper third of the face is defined by the boundaries of the forehead—from the hairline to

the glabella. A forehead with a gentle convexity on profile is most aesthetically ideal. The ideal nasofrontal angle is from 115° to 135°.<sup>3,4</sup>

### Brow

In both men and women, the medial brow head lies along a tangent with the medial canthus and nasal ala, whereas the lateral brow head lies along an oblique line drawn from the nasal ala through the lateral canthus (**Fig. 1**). In women, the ideal shape displays the highest point of the brow arch above lateral limbus or lateral canthus, with the brow lying just above the supraorbital rim. In men, the ideal brow has little to no arching and sits at the supraorbital rim.<sup>3,4</sup>

### Orbit

The orbit is located in the lower third of the upper face and the upper third of the midface. The width

Disclosures: No commercial or financial disclosures or conflicts of interest for any of the authors.

<sup>a</sup> Division of Facial Plastic and Reconstructive Surgery, Department of Otolaryngology–Head and Neck Surgery, University of Tennessee Health Science Center, 910 Madison Avenue, Suite 429, Memphis, TN 38163, USA; <sup>b</sup> The Langsdon Clinic, 7499 Poplar Pike, Germantown, TN 38138, USA

\* Corresponding author.

E-mail address: langsdon@bellsouth.net

Clin Plastic Surg 40 (2013) 125–131

<http://dx.doi.org/10.1016/j.cps.2012.06.003>

0094-1298/13/\$ – see front matter © 2013 Elsevier Inc. All rights reserved.