

Title: The Art and Science of Nasal Tip Plasty: Anatomical Foundation and Surgical Techniques

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Background

Achieving an ideal nasal tip that maintains long-lasting projection while remaining soft and movable is a central challenge in aesthetic rhinoplasty. Because structural projection and tissue mobility often present contradictory demands, surgical success requires balancing robust architectural support with refined aesthetic judgment.

Objectives

This presentation examines the critical relationship between the structural anatomy of the nasal tip and the aesthetic goals of rhinoplasty, providing a comprehensive review of surgical techniques utilized to optimize tip projection and position.

Anatomical Foundation and Aesthetic Goals

The structural integrity of the nasal tip relies on key anatomical components, primarily the lower lateral cartilage, scroll ligament, caudal septum, and the thickness of the tip's subcutaneous skin. Understanding historical biomechanical models, such as the tripod concept and cantilever theory, is essential for predicting structural outcomes. Aesthetically, successful tip plasty is guided by established metrics. Ideal projection often aligns with the Goode ratio (approximately 0.63), while optimal tip rotation targets a nasolabial angle of 95° to 110° for females and 90° to 100° for males.

Surgical Techniques

A highly tailored approach is necessary to manipulate tip dynamics effectively. The presentation details various operative strategies to increase tip projection and manage rotation, including:

- Cartilage augmentation at the dome using onlay and shield grafts.
- Straightening of curved medial crura and the conversion of lateral crura into middle crura via lateral crural steal.
- Direct anterior suspension utilizing rein-shaped or L-shaped strut grafts, as well as septal extension grafts (extended spreader, batten, and direct extension types).
- Derotation maneuvers, elongation techniques for short or contracted noses, and the release of the scroll ligament.

Conclusion

The true art of nasal tip plasty lies in achieving harmonious dorsal-to-tip proportions. By mastering the underlying anatomical science and employing precise graft and suture

techniques, surgeons can construct a stable, long-lasting tip foundation that beautifully complements the patient's facial profile.