

The Role of the Septal Extension Graft

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INTRODUCTION

Anatomic subtleties of the nasal tip have a dramatic impact on the overall appearance of the nose. Here, we provide a focused review of nasal tip analysis and surgical technique, with particular emphasis on the septal extension graft.

NASAL ANALYSIS

Preoperative nasofacial analysis is systematically performed from frontal, lateral, and basal views in the “10-7-5” fashion described by the senior author (R.J.R.).¹ Ideal nasal tip projection equals two-thirds the ideal nasal length, or 50%–60% of the total nasal projection should lie anterior to the upper lip. In women, the nasolabial angle is determined to be 95–100 degrees, whereas in men, 90–95 degrees is preferred.

OPERATIVE TECHNIQUE

Using a systematic approach is the most precise technique for tip shaping.² The septal extension graft is a versatile graft that effectively controls tip projection, shape, and rotation, whereas a columellar strut graft is only effective for unifying the nasal tip, maintaining its position while lacking control over nasal tip rotation.^{3–5}

The septal extension graft is keel shaped to mimic the middle crura. (See **Video 1 [online]**, which displays the shaping of the septal extension graft.) It is placed onto the anterior septal angle as a “fixed-floating” graft with extension beyond the anterior septal angle into the interdomal space, with the most caudal and inferior portion of the graft placed on the cephalic border of the medial crus at the columellar lobular angle.

A 4-step suture technique is performed. (See **Video 2 [online]**, which displays body fixation and superior stabilization suture.) (See **Video 3 [online]**, which displays inferior and body stabilization suture.)

1. Body fixation horizontal mattress suture
2. Superior stabilization suture

3. Inferior stabilization suture
4. Body stabilization horizontal mattress suture

Reshaping of the nasal tip proceeds using a bottom-up approach. (See **Video 4 [online]**, which displays medial crural footplate, low medial crural, and high medial crural approximation.) (See **Video 5 [online]**, which displays transdomal and interdomal suturing.)

1. Medial crural footplate approximation corrects footplate deformities and asymmetries.
2. “Low” medial crural approximation stabilizes the graft, corrects footplate asymmetries, controls columellar width, and strengthens the medial crura.
3. “High” medial crural approximation further stabilizes the medial crura to the graft and aids in establishing tip width and symmetry.
4. Transdomal suturing corrects asymmetries, lateral crural convexities/concavities, and narrows the tip.
5. Interdomal approximation further accentuates eversion, decreases the angle of divergence, narrows the tip-defining points, corrects vertical asymmetries, and camouflages the graft.

Dead space closure is important when using the septal extension graft and begins with placement of medial crura footplate horizontal mattress sutures and then proceeds inferior to superior and caudal to cephalic. (See **Video 6 [online]**, which displays dead space closure.)

CONCLUSION

The septal extension graft is reliable and predictable in controlling tip projection, shape, and rotation.

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REFERENCES

1. Villanueva NL, Afrooz PN, Carboy JA, et al. Nasal analysis: considerations for ethnic variation. *Plast Reconstr Surg*. 2019;143:1179e–1188e.

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2. Sieber DA, Rohrich RJ. Finesse in nasal tip refinement. *Plast Reconstr Surg*. 2017;140:277e–286e.
3. Byrd HS, Andochick S, Copit S, et al. Septal extension grafts: a method of controlling tip projection shape. *Plast Reconstr Surg*. 1997;100:999–1010.
4. Ha RY, Byrd HS. Septal extension grafts revisited: 6-year experience in controlling nasal tip projection and shape. *Plast Reconstr Surg*. 2003;112:1929–1935.
5. Akkus AM, Eryilmaz E, Guneren E. Comparison of the effects of columellar strut and septal extension grafts for tip support in rhinoplasty. *Aesthetic Plast Surg*. 2013;37:666–673.