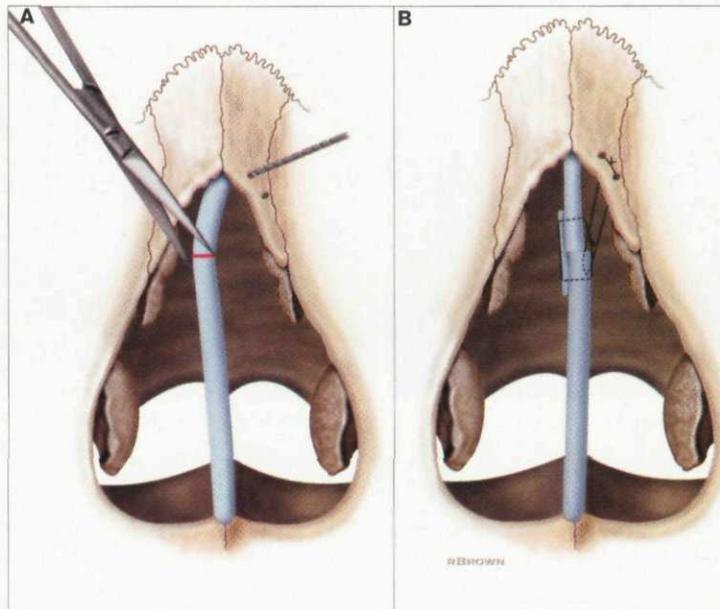


# A suture suspension technique for improved repair of a crooked nose deformity

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*Figure 1. A: After the deflected dorsal segment of the septum is separated vertically from the remainder of the septum, a 3.0-mm Skeeter drill is used to create two small holes in the nasal bone on the side opposite the direction of the deflection. B: The ends of the separated septum are sutured into position with a horizontal mattress suture that is passed through the holes in the nasal bones. A unilateral spreader graft is then placed to provide additional support.*

Repair of a crooked nose deformity can be a formidable task. The correct cause must be established in order to achieve a successful correction. Too often, a well-intentioned surgeon will perform an osteotomy of the ascending process of the maxilla in an attempt to shift the nasal pyramid into a central position. However, this procedure is doomed to fail in cases where the deformity is caused by a septal misdirection rather than a bony deviation.

Caudal or inferior septal deflections are routinely ap-

proached and successfully treated through a closed endonasal approach without disrupting the dorsal nasal septum. However, if a crooked nose is influenced by a proximally deflected dorsal septum, it is necessary to treat this portion of the septum directly in order to achieve a correction.

The senior author (S.H.D.) has developed a suture-suspension technique to correct a proximally deviated dorsal septum. An external rhinoplasty approach is used to facilitate adequate exposure. Wide undermining of the

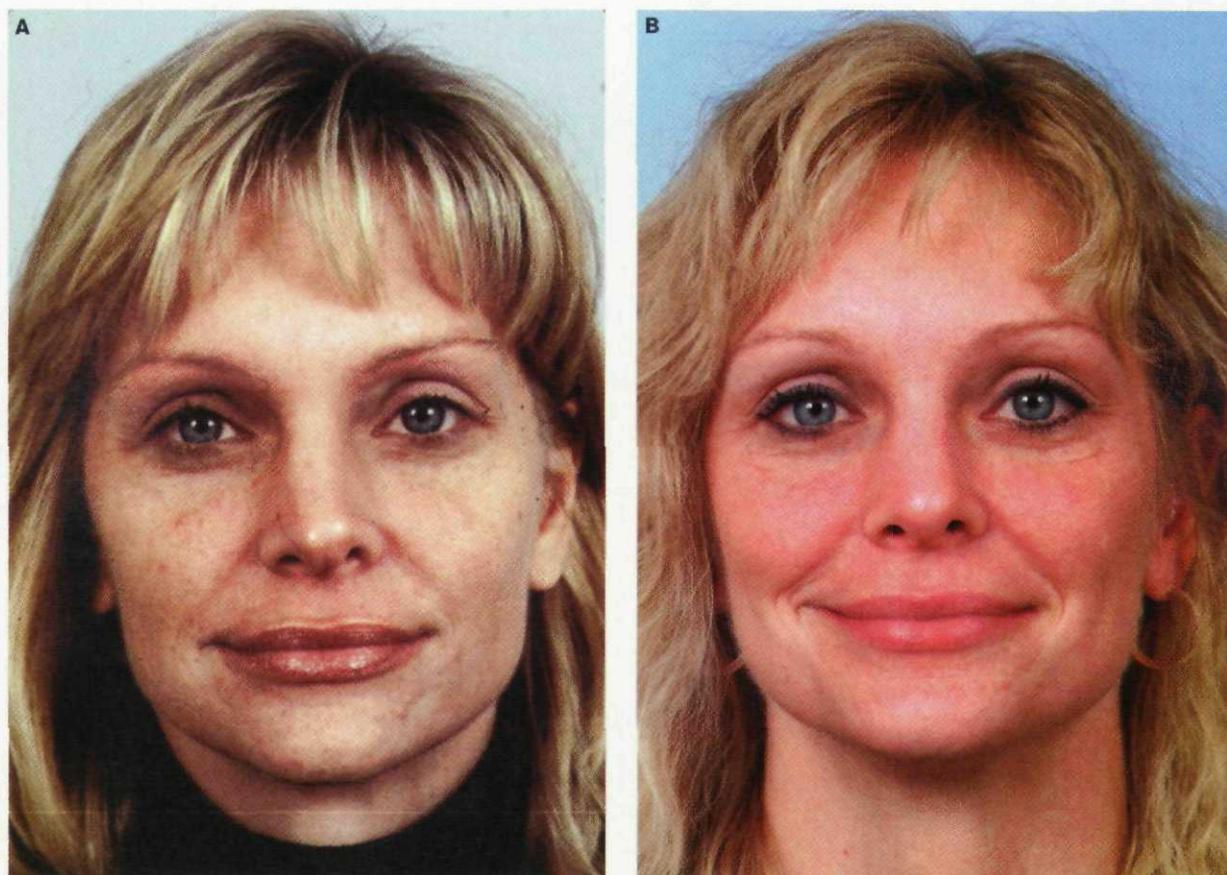


Figure 2. Representative pre- (A) and postoperative (B) photographs document the long-term improvement in nasal alignment.

skin soft-tissue envelope and septal mucoperichondrium is performed in order to achieve complete exposure of both the nasal bones and the deflected septum. The deflected dorsal segment of the septum is then divided from the upper lateral cartilages in a submucoperichondrial plane. The free but distorted dorsal septum is vertically transected through the deviated segment with a Converse scissors (figure 1, A).

Next, a 3.0-mm Skeeter drill (Xomed Medtronic; Jacksonville, Fla.) is used to drill two small holes into the nasal bone on the side opposite the direction of the septal deflection (figure 1, A). The distal segment of the divided septum is then brought into a midline position with a horizontal mattress suture (4-0 polydioxanone [PDS]) that extends from its dorsal border to the holes drilled through the nasal bones (figure 1, B). Finally, a unilateral spreader graft that spans the transection is placed along the cut dorsal septum on the side opposite the suture. The graft provides support to the dorsal septum.

Thus far, the senior author has performed this technique on 12 patients. On 24-month follow-up, straight nasal alignment with improvement in nasal airflow has been maintained in each (figure 2). In 8 of the 12 patients, this

technique has been used in conjunction with osteotomy, and there have been no complications or failures.

Other authors have previously described placement of unilateral and bilateral spreader grafts as a means of correcting the crooked nose deformity. We present an alternate technique that provides an additional mechanism for straightening the septum.

A crooked nose deformity is a common entity that can be caused by various anatomic factors. The suture-suspension technique described here corrects high proximally oriented deviations of the dorsal septum and provides enough stability to resist septal cartilage memory.

#### Suggested reading

- Rohrich RJ, Gunter JP, Deuber MA, Adams WP. The deviated nose: Optimizing results using a simplified classification and algorithmic approach. *Plast Reconstr Surg* 2002;110:1509-23; discussion 1524-5.
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- Toriumi DM, Ries WR. Innovative surgical management of the crooked nose. *Facial Plast Surg Clin North Am* 1993;1:63-78.

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