

FINESSE AND APPLICATIONS FOR NON-SURGICAL RHINOPLASTY

Onir Spiegel discusses the most common indications for non-surgical rhinoplasty and the treatment benefits over surgery

ABSTRACT

We suggest the following seven guidelines as a systematic approach to non-surgical Rhinoplasty. Of course, just as treating the nose provides the opportunity to make meaningful changes to a highly visible facial feature, so

too are injections in this area fraught with the possibility for serious complications. It is necessary to have advanced injectable knowledge prior to undertaking NSR to achieve precise results. Our system details the following seven categories: 1) Dorsal hump or dorsal bump, 2) Bulbus tip,

3) Depressed, beak-like, nasal tip/down turned nasal tip, 4) Twisted Nose, 5) Enhanced nasal dorsal definition to mask a wide, flat nose, 6) The overly resected, overly ski-sloped, or saddle nose dorsal ridge, 7) Flattened or retracted columella.

RHINOPLASTY IS AMONG THE MOST common facial plastic surgery procedures but requires a recovery period during which the patient will likely have bruising, swelling, and nasal congestion, in addition to needing to wear a surgical cast and tape on the nose for a week or more. In experienced hands, the cost can be high, and while 2-D and 3-D modelling techniques are available to demonstrate the potential outcome, there is no great way to know how the face would look before moving forward.

Facial fillers have seen great popularity over the past several years. From the initial indications to blunt the nasolabial folds and improve superficial rhytids, the utility of these minimally invasive injectable fillers has expanded to lip shape and volume enhancement, facial balancing by augmentation of the chin and jaw, and rejuvenation of the ageing face with application to the cheeks, tear troughs, and temples. Though highly technique dependent and not for the novice, tear trough injections have greatly reduced the number of transconjunctival ('scarless') lower lid blepharoplasties being performed as blunting between the lid and the cheek is a more natural correction in many cases than removing lower lid periorbital fat.

More recently, the use of injectable fillers has expanded further to the nose. Non-surgical rhinoplasty (NSR) has become celebrated among people of all ages as a quick

way to obtain a meaningful change in nasal appearance without surgery. As an office procedure that takes only minutes, it is desirable for individuals seeking a solution that requires little downtime away from work and family obligations to those who want to 'test the water' and see what they could look like with less time and financial investment. Interestingly, it is also desirable for those who have had a rhinoplasty but desire some further modification or improvement without undergoing a full revision surgery. For all these reasons and more, NSR is unquestionably among the hottest procedures in facial aesthetics. At The Spiegel Center in Newton, Massachusetts, NSR is among the highest requested procedures for filler aesthetics and a frequent reason for referral from other injectors and area plastic surgeons.

Rhinoplasty is widely considered to be the most difficult plastic surgery procedure to perform well and the hardest to master. The nose is a complex three-dimensional structure in the centre of the most visible part of the face, so there is a small margin of error. Furthermore, there are many anatomical features on the nose that create important shapes and shadows critical for an attractive appearance. Facial plastic surgeons spend years learning to evaluate a nose to determine the proper intervention.

With over 200 cases performed in the last 3 years, we have developed a systemised approach to non-surgical rhinoplasty based on seven frequent anatomic diagnoses. By using this guideline, the injector will be >



ONIR SPIEGEL, DDS, PHD,
Director of Aesthetics Services
at The Spiegel Center, Advanced
Facial Aesthetics, Newton, MA,
US

email: onir@drspiegel.com

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▷ better able to deliver consistently beautiful and safe results. Of course, just as treating the nose provides the opportunity to make meaningful changes to a highly visible facial feature, so too are injections in this area fraught with the possibility of serious complications. It is necessary to have advanced injectable knowledge prior to undertaking NSR to achieve precise results. One must be well-trained and experienced in the use of facial fillers and have extensive knowledge of nasal anatomy, including nasal vasculature. That said, here are the seven most common nose deformities that can be corrected predictably with non-surgical rhinoplasty, including fillers and energy devices.

Dorsal hump or nose bump

The dorsal hump is likely the most common reason for patients to seek a non-surgical rhinoplasty, or surgical rhinoplasty for that matter. The appearance of a dorsal hump can be caused by the overgrowth of the nasal bones and cartilages, a result of trauma, or appear due to an excessively deep radix—the concavity at the top of the nose beneath the forehead and between the eyes, right below the corrugators and procerus muscles.

For small bumpy noses, I may only use tiny drops of filler that can be delivered through a small needle, typically a 30-gauge needle, for direct droplet injection. This gentle and precise placement of filler can fill in the area of depression, creating improved symmetry of the nose from the forehead extending to the ridge of the nose. The injections should be placed deep into the skin beneath the ‘SMAS’ layer of the nose just above the nasal

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bone or cartilage.

For larger imperfections and more significant bumpy noses, I often choose to deliver filler with a cannula, which can further decrease the potential for bruising, the most common, but still rare potential undesired sequela of NSR. To penetrate with a 30-gauge cannula, I numb the area with 0.1cc of Lidocaine with 1:100,000 epinephrine at the injection site. After a 1-2-minute wait, I make an entry point for the cannula with a 22-gauge needle. The cannula is inserted through, and the filler is applied in a retrograde (injection while pulling back) motion. I prefer to use a surface vibration device adjacent to the cannula tip to help with sensitivity. The vibration device can be further used to meticulously spread the filler to smooth and refine filler deposition. Importantly, one should pay attention to avoid any displacement of the filler in a lateral direction to the sides of the nose. This can create an abnormally widened or ‘T-shaped’ appearance to the nasal dorsum. In the event of such an occurrence, apply immediate pressure to the side of the lateral nostril to quickly push the filler back to its intended place on the nasal dorsal ridge (*Figure 1*).

Bulbous tip

Often, if the nose looks like an inverted ice cream cone with an excessively bulbous tip, the problem can be a lack of balance due to a narrow bridge of the nose near the root. This area may also look narrow due to a hollowed extension of the tear trough from beneath the lower eyelid. In this situation, we need to pay particular attention to the precise area leading to the narrow



appearance and treat it carefully and accurately. Again, gentle and precise placement of filler with a 30-gauge needle will provide excellent results. The injector must be well-versed in the anatomy of the area to avoid arterial occlusion, as this is known to be the 'danger zone' in NSR correction. Only tiny aliquots of filler should be placed, again utilising a round vibration device to help spread the filler smoothly in the area.

Depressed, beak-like, nasal tip/down-turned nasal tip

Some people are born with a downward projection of the tip of the nose that can become more pronounced when smiling. The nose seems to point down like a parrot beak, hence the descriptive term 'beak-like' for the tip. Here our goal is to create a new tip-defining point so that the overall appearance looks balanced rather than downward facing. To achieve this, I add small drops of hyaluronic acid filler through the smallest needle (30 or 32-gauge) to the tip of the nose extending upward to the bridge of the nose in a graduated fashion to create a new tip-defining (most projected) point. The filler must give the nose an attractive shape in an upward and outward direction.

Commonly you will need to continue these small hyaluronic acid filler injections for an additional definition to the dorsal ridge of the nose as well as inject filler to the chin for better facial balance. Lifting and reprojecting the nasal tip can create a facial imbalance which is improved with the deposition of filler into the chin. For the chin, we have several options regarding the type of filler used. In most cases, when a small amount is required to obtain symmetrical balance with the nose, I will use the remainder of the hyaluronic filler used for the NSR. However, if more filler is required to obtain this correction, I prefer a calcium-based filler such as Radiesse®.

Twisted nose

Vertical asymmetry or a C-shaped curve to the nose is another common problem for which people seek non-surgical correction. The key to adjustment of a twisted nose is to recognise that it represents, typically, a central area of volume deficiency on one side with higher and lower areas of volume loss on the contralateral side. Unless the twist is very severe, this can be readily corrected with a non-surgical rhinoplasty/liquid rhinoplasty. By filling in the concave areas, the contour is smoothed, and you gain a straighter nose projection. This is also a great treatment following a prior rhinoplasty if something didn't heal just right. This is a perfect example of a situation where two minutes in the office can replace two hours of surgery. But keep in mind that this is one area where adding filler will make the nose appear wider and may be better treated with a surgical rhinoplasty. Here again, remember to layer small aliquots of hyaluronic acid filler through the smallest needles, often a 30-gauge needle, just to the areas of the nose that are concave and hollow to get more symmetry. I find it important to counsel patients that we are seeking



Figure 1 (A) Before dorsal hump or dorsal bump corrected with NSR (B) after, in a female patient.



Figure 2 Enhanced nasal dorsal definition used to mask a wide, flattened nose dorsum. (A) Before (B) after.

improvement and rarely expect perfection (even if we sometimes achieve it). As before, I employ a vibration device during injection to help with sensitivity and meticulously spread the filler to smooth any filler protrusions.

Enhanced nasal dorsal definition to mask a wide, flat nose

Many persons of African or Asian descent have softer and/or wider nasal cartilages and thick skin. This creates the appearance of a wide, flat nose with large nostrils. Enhancing the nasal dorsal ridge with enhanced projection and outward protrusion will add definition to a nose with widened nostrils. Increasing the projection of the dorsum extending from the radix area to the tip of the nose will balance wide nostrils. In this case, we inject hyaluronic filler extending from the tip of the nose to the root of the nose to increase ridge definition and thus mask a widened nose. The key here will be to prevent lateral spread of the filler as a high and central dorsal ridge is important to balance the width and lack of support. In addition, we have found that energy devices such as Morpheus8 (Inmode, Irvine, CA USA) radiofrequency may contribute to further shrinkage of the nasal skin and, thus, further improve tip definition (Figure 2).

The overly resected, overly ski-sloped, or saddle nose dorsal ridge

Saddle nose deformity can be a birth defect, a result of overzealous prior rhinoplasty where too much bone and/or cartilage was removed during surgery, or occur following nasal trauma, or drug use with loss of the ▷

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Figure 3 (A) Before and (B) after correction of an overly resected, ski-sloped nose dorsal ridge from a prior surgical rhinoplasty.

▷ nasal dorsum or an overly scooped nasal dorsum, particularly on profile view. This creates an unattractive nose slope which can cause breathing problems and interfere with the proper use of eyeglasses. In severe or long-standing cases, only surgery is indicated as the skin can be contracted (particularly if the cause was nasal inflammation from an autoimmune disorder or drug use) and is unlikely to expand well with a soft filler. However, in more mild cases, the dorsum can be recreated similarly to that performed with an ethnic rhinoplasty but being very specific to identify the start and end of the depressed area so that only the hollow areas are augmented (*Figure 3*). Augmentation above or below the true depressed region can exacerbate the problem. Again, the use of the vibration device is adequate to help with injection sensitivity as well as aid in ensuring that the filler stays in the precise area of injection and does not flow to the sides of the nose ridge.

Flattened or retracted columella

Appropriate columellar show on a profile view is 3-5mm for most women. The proper projection of the columella can be beautiful and very feminine, while a flattened or retracted columella can seem more masculine. The columella is the small strip of skin and tissue between your nostrils when you look at the base of the nose. It looks like a small column, hence the name columella, and it is very important for the proper balance and beauty of the nose. If this area is flat, too high, or seems retracted within the nose, adding filler to that area extending the columella downward can be attractive and, in some cases, improve symmetry when there is some degree of caudal septal deviation. Care must be taken not to overfill the central part of the columella laterally, as the medial crura cartilages within the columella should have a gentle curve to be wider at the nasal footplates, and an overly wide columella will look unnatural. The use of the vibration device, in this case, helps but may not be adequate to help with injection sensitivity as this is a particularly tender region for injection.

Non-surgical rhinoplasty (NSR) can smooth and straighten noses to complement facial balance and

harmony. However, non-surgical rhinoplasty cannot make a nose smaller or thinner; although, with filler camouflage, the nose may appear smaller as the light reflection of a narrower dorsal ridge, even with a wide nose, will make the nose appear smaller. Additionally, a straight nose will reflect light in a way that makes it look smaller than a crooked nose. Of course, liquid rhinoplasty is not likely to help with breathing problems, nasal congestion, snoring, or other sleep disturbances. These can only be addressed with a surgical rhinoplasty procedure.

Conclusions

Non-surgical rhinoplasty is a very powerful procedure that can result in high patient satisfaction. As always, potentially serious complications can occur, and these must be discussed in advance, including bruising, vascular occlusion, blindness, tissue necrosis, nasal deformity, and others. I recommend using a three-way mirror during patient evaluation and specifically under-promising the results you are likely to produce for your patient. Once you have mastered these techniques, you should find them to be extremely rewarding. In my experience, patient satisfaction with NSR is higher than with any other non-surgical aesthetic procedure. We are currently gathering data and plan to publish patient satisfaction data on NSR compared to surgical rhinoplasty as well as patient retention and patient conversion from NSR to surgical rhinoplasty rates. Non-surgical rhinoplasty is a non-invasive and reversible approach to nasal shaping which can substantially improve facial appearance. It has been a great addition to my practice and among my most favourite procedures.

► **Declaration of interest** None

► **Figures 1-3** © Dr Onir Spiegel

Key points

- 1 We suggest an approach for correction of nose deformities with non-surgical rhinoplasty
- 1 Listing seven categories that enable correction of nose deformities with filler injections
- 1 Findings based on 200 non-surgical rhinoplasties performed at our centre



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