Wrinkles should merely indicate where smiles have been. This now common saying is especially apt in regard to the nasolabial folds (NLFs)—the two skin creases that run from each side of the nose to the corners of the mouth.

Deepening of these creases is one of the key signs of ageing in the face. As such, softening these lines results in a rejuvenated appearance and a fresher, more youthful look.

Many techniques are available for reducing the prominence of the NLF and as is the case with many areas of aesthetic medicine, this multitude of therapeutic options suggests that we are yet to develop the perfect treatment for these laughter lines, or smile lines. It is true that current treatments each have their own limitations, but with care and practice, it is possible to address deep NLFs and lessen their impact in terms of an aged appearance.

The 3Lift is a new approach demonstrating significant promise for NLF treatment. This technique uses Teosyal’s latest range of hyaluronic acid (HA) dermal fillers—resilient hyaluronic acid (RHA)—for rejuvenation and contouring.

The structured approach of the 3Lift focuses on softening the appearance of the NLFs and the treatment protocol is individualised to each patient using Teosyal’s RHA3 with lidocaine and, in some cases, RHA4 with lidocaine or PureSense Ultra Deep with lidocaine.

Anatomy of the NLF
A thorough understanding of facial anatomy underpins effective treatment. Treating the NLF is no different.

The NLF courses diagonally in the mid-face from the nasal ala toward the corner of the lip. The crease is accentuated by smiling because the muscles of facial expression that draw the upper lip in a supero-lateral direction—primarily the zygomaticus major, the zygomaticus minor, and the levator labii superioris—have dermal insertions on the upper lip. Smiling draws the upper lip under the malar fat pad as the pad bulges forward. The lateral nasal artery is in close proximity to the NLF, 2–3 mm superior to the alar groove and it is the main vascular supply for the nasal tip and ala.

Ageing and the NLF
At birth and in early childhood the NLF is absent while the face is at rest. With ageing, the fold becomes visible even when the face is in repose. This change is due to multiple age-related factors including facial volume loss, ptosis of the malar fat pad, atrophy of dermal collagen, and increased skin laxity. The presence of the NLF is also dependent on some baseline tonic activity of the muscles of facial expression, as demonstrated by the disappearance of the fold in patients with paresis of the facial nerve.

Rejuvenation techniques using hyaluronic acid (HA) dermal fillers in the mid-face and NLFs address some of these underlying causes.

Volume restoration
An approach which I’ve designed
to reduce prominent NLFs uses volume restoration, either in the NLF alone, or in conjunction with mid-face volume replacement. This approach uses Teosyal’s latest range of HA dermal fillers—RHA—to address the dermal atrophy, associated with ageing, that contributes to the development of the NLF. Restoration of contour and volume in the mid-face creates an upward lift, thereby softening the prominence of the NLF.

RHA dermal filler has been the prototypical filler since 2014, with clinicians able to choose the viscosity and degree of cross-linking of the product. In general, and depending on the choice of product, this filler is injected just medial to the NLF but in the mid- to deep-dermal layer. RHA incorporates an anesthetic agent for patient comfort.

RHA dermal fillers integrate very well into the ground substance of the dermis and into tissue in general. This is due to the unique molecular structure of RHA dermal fillers, which results from the use of Teosyal’s patented technology during the manufacturing process. The process preserves HA long chains, allowing the formation of a mobile 3D network and giving the HA its viscoelastic capacities. Thanks to these properties, the HA is capable of maintaining tissue architecture, volume and hydration.

In practice, the unique molecular structure of RHA fillers affords superior resilience in withstanding the constant, repetitive stretching and contractions of facial musculature during facial expressions. The longevity of effects for RHA fillers is typically six to 12 months, or even longer in some cases.

Patient selection
When using RHA fillers, consider the quality of the patient’s skin, the depth of the fold, the patient’s goals regarding degree and longevity of correction and the patient’s risk tolerance. Facial assessment involves objective grading of volume loss in the mid-face and NLF; in addition to their structure, symmetry and proportion. Taking pictures prior to formulating a treatment plan is an effective tool for educating a patient on their facial features and appearance. It also helps you in explaining the rationale for the treatment plan to the patient.

Patients with mild and moderate NLFs are suitable candidates for the R3Lift. Patients presenting with severe NLF, especially with excess skin laxity and hanging skin folds require surgical intervention. The goal of this treatment is to achieve a reduction of NLFs without full effacement.

Practical guide
• For mild midface volume loss, mild NLF, use RHA3 in NLF.
• For mild midface volume loss, moderate NLF, use RHA4 in midface and RHA3 in NLF.
• For moderate midface volume loss, moderate NLF, use Ultra Deep and RHA4 in midface, and RHA3 in NLF.

RHA4 is injected in superficial fat compartments, Ultra Deep injected in deep fat compartments.

Injection protocol: Where to inject
The R3Lift has been designed with the use of blunt-tipped micro-cannulas.

The NLFs prominence and any concurrent mid-face volume losses will determine the correct injection sites for dermal fillers. When evaluating potential areas to inject, it is important to remember that contour and volume restoration in one area may lead to improvement in the adjacent area.

For instance, treatment in the maxillary and zygomatic (cheek) areas may improve the appearance of the NLF. This is especially true in patients who have mild to moderate volume loss in the mid-face with minimal or no translocation of mid-face fat pads.

Sequence of injection
Injections in the deep fat compartments create an effective upward lift in the mid-face. Lateral lift is achieved through the linear threads in the mid-face. More often than not, this sequence of injections alone improves the appearance of the NLF.

Choice of RHA Filler
• For deep fat compartments, use the bolus technique with RHA4 or PureSense Ultra.
• For superficial fat compartments, use retrograde linear threading with RHA4.
• For nasolabial folds, use retrograde linear threading with RHA3. Instead of PureSense Ultra Deep, clinicians may use PureSense Ultimate.

Volume of product
The volume of product injected in each area will vary from patient to patient

<table>
<thead>
<tr>
<th>Injection site</th>
<th>HA filler</th>
<th>Volume (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra Deep</td>
<td>RHA4</td>
<td>0.1-0.15 ml</td>
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<tr>
<td>Deep</td>
<td>RHA3</td>
<td>0.05-0.1 ml</td>
</tr>
<tr>
<td>Mid to deep</td>
<td>RHA2</td>
<td>0.05-0.1 ml</td>
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References