BeautiPHIcation™: A Global Approach to Facial Beauty

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RENAISSANCE PHYSICIANS: PURVEYORS OF BEAUTY

The Renaissance Period (1350–1550) was the rebirth transition period between the Middle Ages and the modern world, and has been described as the most productive era in mankind’s history. As a cultural movement, it engulfed Europe in a revival of artistic learning based on classical sources and the development of linear perspective. Although the Renaissance saw resurgence in intellectual scientific activity, it is perhaps best known for the monumental achievements of such artistic geniuses as Leonardo Da Vinci and Michelangelo. Their influence affected and shaped the future by empowering their generation to embrace knowledge, and stood as a testament to the development of limitless skills in all the arts. These gifted Renaissance men were more than just intellectual icons: they inspired a medieval world to break free of dogmatic ideology and endeavor to develop its capabilities as fully as possible.

Da Vinci claimed, “I have offended God and mankind because my work didn’t reach the quality it should have.” It is time to rekindle his torch of commitment and excellence with a spark of passion and pride. We are the Renaissance artists of our time. Patients are our easels, their faces our canvas. We should strive to create beautiful works of art; to maximize each individual’s natural facial beauty.

The world today is immersed in an expectation economy: aesthetic consumers do not want to look just good, they expect to look fantastic; immediately, and with little downtime. Patients always budget to look great because looking great never goes out of style even in a disruptive economy. Today’s aesthetic patients realize that a youthful appearance is the best thing you can wear.

There exists a sea of sameness with a biblical flood of products, devices, and nonmedical centers, compelling aesthetic physicians to differentiate themselves through superior results. To chase lines is a guarantee of copying the competition in a race to the bottom; cosmetic specialists must separate their clinics from the monotherapist down the street by creating exceptional results through a comprehensive global approach.

The recent availability of safe volumizing fillers has provided cosmetic physicians with the tools necessary to contour facial features nonsurgically and cost-effectively. Like our Renaissance ancestors, it is incumbent on us to have a good understanding of the aesthetic goals necessary to achieve a beautiful and natural result. What should be the preferred facial volume and feature shape?
What is the ideal beautiful normal for each individual face, and is there a code to unlock the patient’s potential? Is it unreasonable to have lofty aesthetic goals, or should clinicians be less principled and more moderate? Thomas Paine (1737–1809), a British author who supported the American Revolution and became one of the Founding Fathers of the United States, wrote: “A thing moderately good is not as good as it ought to be. Moderation in temper is always a virtue; but moderation in principle is always a vice.”

This review focuses on outlining objective parameters necessary for creating a template to maximize each individual’s facial beauty. The techniques offered are the unique conceptions of the authors, experienced injectors who have applied their expertise in both aesthetic dermatology and cosmetic plastic surgery. It in no way represents the sole method to nonsurgically release the patient’s facial beauty potential. The intent is to encourage aesthetic injectors to always

![Fig. 1](image1.png)

Fig. 1. Using morphing software, German researchers created gradually changing images. Images 5 and 6 consistently scored highest on the 7-point attractiveness scale when exposed to different large-volume cohorts.

![Fig. 2](image2.png)

Fig. 2. The Magnificent Seven facial features that influence our perception of facial beauty.

| I.   | Facial shape (cheeks & chin) |
| II.  | Forehead height              |
| III. | Eyebrow shape               |
| IV.  | Eye size and inter-eye distance |
| V.   | Nose shape                   |
| VI.  | Lips (length and height)    |
| VII. | Skin clarity/texture/color  |
be result oriented, to develop methodical and comprehensive approaches to facial enhancement, and to push creativity beyond rejuvenation into the realm of beauty maximization. “The greater danger for most of us lies not in setting our aim too high and falling short; but in setting our aim too low, and achieving our mark” (Michelangelo Buonarroti).

FACIAL BEAUTY

St Thomas Aquinas, known as the angelic doctor, was one of the great philosophers of the Catholic Church in the thirteenth century. He proclaimed beauty to be “integras, proportio, et claritas”: harmony, proportion, and clarity. True facial beauty arouses the senses to an emotional level of pleasure and “evokes in the perceiver a high degree of attraction” (Stephen Marquardt).

It is essential that injection specialists have a deep understanding and a well-cultivated taste for beauty. Otherwise they would be satisfied with a low and common goal rather than the maximization of beauty potential in their patients. Although certain individuals may be endowed with an innate aesthetic sense, it can be learned, at least in part, by the ardent study of art and the constant observation of facial and body proportions and relationships.¹

Regardless of nationality, age, or ethnic background, for the most part people universally share a sense of what is attractive.² When British

![Fig. 3. (A, D) Before treatment. (B, E) After global volume restoration (HA) and neuromodulator (BTX-A). (C) Impact of cosmetics and hairstyle. (F) Hemi-face comparison, before and after treatment.](image-url)
researchers asked women from England, China, and India to rate pictures of various Greek men, their choices were identical. When asked to select attractive faces from a diverse collection, European White, Asian, and Latino people from a dozen countries also made the same choices.³ Studies have shown that even babies show a sense of what is attractive: infants 3 to 6 months old gaze longer at a nice-looking face than one that is not attractive.⁴

In a large research project on facial attractiveness at several German universities, digitally composed faces were created using a specialized software algorithm based on people’s perception of beauty.⁵ Using a 7-point Likert scale from 1 (very unattractive) to 7 (very attractive), results proved that most people, regardless of ethnicity, seem to have similar subjective ideas about what constitutes an attractive face (Fig. 1). Processing attractiveness can take milliseconds; the perceiver’s eyes rapidly scan the entire face while the brain analyzes contours, shapes, features, and skin quality. Contrary to patients’ requests for line filling, affecting facial beauty goes far beyond wrinkles and furrows.

However, finding objective answers to why people regard one face as being more beautiful than another is not as easy as it seems. When viewing a beautiful face, the eye focuses on areas that are highlighted with pleasing shapes.⁶ The angles that these features create are vital to the perception of beauty; highlights located too high or too low detract from attractiveness.⁷ Review of numerous articles on facial beauty.

Fig. 4. Artist’s rendition of an attractive face scaled to 5 eye widths across.

Fig. 5. The Divine Proportion in living things. (A) Nautilus shell. (B) Sunflower. (C) Tiger’s head. (D) Phalanges of the hand. (E) Human body. (F) Butterfly.
identifies 7 key facial features that seem to be subconsciously assessed when determining facial beauty (Fig. 2). Four features of these Magnificent Seven (facial shape, eyebrow shape, nose, and lips) are amenable to injection contouring with fillers (eg, hyaluronic acids [HAs]) and neuromodulators (eg, botulinum toxin A [BTX-A]). The remaining 3 features (forehead height, eye size and intereye distance, and skin tone and texture) are beyond the domain of injection therapy. Skin clarity, texture, and color can be markedly improved with topical agents, present-day energy device technology, and judicious use of makeup; forehead height accentuated or camouflaged by hair style; and intereye distance disguised by creative shadowing when applying eye makeup. All this emphasizes the importance of working closely with skilled aestheticians and experienced hairdressers when offering patients global facial beautification (Fig. 3).

**THE STORY OF PHI**

Many Renaissance scholars and artists studied ancient Greece and Rome, attempting to recapture the spirit of these cultures in their philosophies.
and their works of art and literature. The ancient Greeks maintained that all beauty is mathematics. Leonardo Da Vinci, in his scientific search for defining ideal beauty, stated that “no human inquiry can be called science unless it pursues its path through mathematical exposition and demonstration.”

The attractiveness of the female figure is often described in measured numbers (e.g., 36-24-36), so why not the face? The idea of a mathematical

Fig. 8. Marquardt’s female and male Golden Masks (www.beautyanalysis.com).
code, formula, relationship, or even a number that can describe facial beauty is not a modern concept. Medieval artists were impressed by the magical number 7. For them, the perfect face was neatly divisible into horizontal sevenths: the hair the top seventh, forehead two-sevenths, nose another two-sevenths, a seventh between nose and mouth, and the final seventh from mouth to chin. Novice artists are often taught that the simplest way to approximate the relative width of facial features is to divide the face into vertical fifths with each fifth being equal to 1 eye width (Fig. 4).

Only 1 mathematical relationship has been consistently and repeatedly reported to be present in beautiful things,\(^8\) both living (Fig. 5) and man made (Fig. 6): the Golden Ratio (also known as the Divine Proportion).

The Golden Ratio is a mathematical ratio of 1.618:1, and the number 1.618 is called Phi because it was regularly used by the Greek sculptor Phidias; Phi (upper case) is 1.6180339887..., whereas phi (lower case) is 0.6180339887..., the reciprocal of Phi and also Phi minus 1. This irrational number is the only one in mathematics that, when subtracted by units (1.0), yields its own reciprocal.

Used since the time of the Egyptians, the Golden Ratio was formulated as one of Euclid’s elements, one of the most beautiful and influential works of science in the history of humankind. This ratio was known to the Greeks as the Golden Section and to the Renaissance artists as the Divine Proportion. In geometry, it is a linear relation in which the smaller length is to the larger part as the larger part is to the complete line (Fig. 7).

Ricketts\(^9\) noted that the golden calipers applied to the hand of man reveals that each of the phalanges of each finger is golden to the next in all 5 fingers (see Fig. 5D).

Fig. 9. Golden mean caliper. When the gauge is adjusted, the middle arm always shows the Golden Section or phi ratio point between the 2 outer arms.

Fig. 10. Before and after BeautiPHIcation\(^\text{TM}\) showing midline symmetry of lips (twins) and mild asymmetry of the left and right sides of the face (siblings).
Stephen Marquardt, a California-based Oral and Maxillofacial surgeon has conducted extensive research on human facial attractiveness.\textsuperscript{10} His pioneering work on the mathematical construction of facial form led to his controversial\textsuperscript{11,12} Golden Mask, derived from the Golden Ratio (Fig. 8). Marquardt (personal communication, 2007) maintains that the evidence shows that our perception of physical beauty is hard wired into our being and based on how closely one’s features reflect phi

Fig. 11. Consistent clinical photography. (A, B) Front view and three-quarter view (tip of nose on cheek); (C, D) left profile showing focusing frame; (E, F) Towne view before and after BeautiPHIcation\textsuperscript{TM}.

Fig. 12. The Triangle of Youth. Youth is typified by a full and wide midface. Aging results in deflation of midface structures and support, tissue deterioration, and subsequent descent of the facial envelope, causing a reversal of the triangle and facial disproportion.
in their proportions. His modification of Hungerford’s classic quote that “beauty is in the phi [eye] of the beholder” is convincing.

Since 2003, the authors have collaborated on a global comprehensive approach to nonsurgical facial beautification by optimizing facial volume, creating harmony, symmetry, and balance through reflation and contouring. To maintain natural results and avoid overinflation, proportions were achieved initially by the use of a golden mean caliper; a tool based on an articulated pentagon for dynamically measuring the phi ratio (Fig. 9). The calipers were first used by Renaissance artists to determine the divine proportions for their compositions in stone and on canvas. Golden mean calipers initially help the aesthetic injector see Phi more as a relationship than as a number. Eventually, a geometric familiarity with the Golden Ratio develops, which leads to its intuitive expression in the injection technique.

In the absence of disease, the medial canthi remain a constant cutaneous landmark with age for each individual adult face. Measuring the intercanthal distance (x) to establish the unit length on which Phi (1.618x) and phi (0.618x) are created, aesthetic goals can now be defined to maximize each patient’s phi beauty potential.

### FACIAL SHAPE ASSESSMENT

The single feature that matters time and again in studies on facial beauty is symmetry.\(^\text{13}\) Many papers have discussed attractiveness in terms of 3 tenets: symmetry, balance, and harmony.\(^\text{14-17}\) Although often referred to as the first feature of beauty, symmetry is not absolute\(^\text{18}\): the left and right sides of the face should be considered more as siblings than as twins. However, the 2 sides of the lips should be regarded more as twins, with balanced upper and lower vermillion show (Fig. 10).

It is crucial for the aesthetic injector to be fastidious about the use of consistent clinical photography. It not only is invaluable in planning treatment but also remains a vital aspect of the patient’s record to document aesthetic accomplishments. Facial views should include frontal (anteroposterior [AP]), three-quarter (tip of nose in line with the outer cheek), lateral, and Towne view to highlight facial contours (Fig. 11). It is also beneficial for quadragenarian and older patients to provide earlier portrait photographs showing their youthful facial proportions and previously existing asymmetries.

Although dermatologic diagnoses can be made in seconds, when evaluating the aesthetic face, more time, care, and patience are warranted. Consensus guidelines point to an evolving paradigm in facial rejuvenation with a shift from the two-dimensional (2D) approach (focus on correcting dynamic facial lines) to the three-dimensional (3D) approach including loss of facial volume.\(^\text{19}\)

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Evidence of early soft tissue ptosis or atrophy slightly visible</td>
<td>Visible depression or descent</td>
<td>Severe depression or atrophy</td>
</tr>
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Table 1: Volume loss staging in the midface

![Fig. 13. The Four Ds of aging: deflation, deterioration, descent, and disproportion.](image-url)
In order to create great results, aesthetic physicians must have double vision: they must be able to see the third dimension in areas of volume loss as well as seeing the end result before they begin treatment. It is important to recognize that 1 size fits none and, even though each face is similar, every face is unique.

Youth and beauty are exemplified by a full and wide midface, referred to as the Triangle of Youth (Fig. 12). Authoritative work on facial shape by Dr Steven Liew, an Australian plastic surgeon based in Sydney, has revealed a global standard oval facial shape that is considered attractive to people of all racial backgrounds. Liew’s Universal Angle of Beauty, the angle of inclination of the vertical ramus of the mandible, is ideally measured at 9 to 12 degrees off vertical, and can be attained by either volumizing with fillers or thinning the masseter with precise botulinum toxin injections.20

Aging changes the 3D topography of the underlying facial structures, resulting in deflation and ptosis of the midface skin and soft tissues.

Fig. 14. A female model showing an ovoid, angular cheek mound with eccentric apex (star) as well as the ogee curve of the right cheek contour.

Fig. 15. Top models showing Phi facial width proportion (ie, medial canthus to medial canthus measures x; medial canthus to ipsilateral cheek apex measures 1.618x).
Fig. 16. The depleted region of the right cheek is outlined (black dashed line). Injections overlying the body of the maxilla (zone 1 above the body of maxilla line) are placed supraperiosteally and, if necessary, subcutaneously. Depth of volume injections for zones 2 and 3 are limited to the subcutaneous plane.

Fig. 17. Injections of the upper midface affecting lower zones (nasolabial fold and jowl). N/L = nasolabial.

Fig. 18. BeautiPHIcation™: The oval cheek mound lies within the triangular markings (see text) with the malar apex located as depicted (star).

Fig. 19. BeautiPHIcation™: Cheek apex (star) defined by the intersection of a line drawn from the nasal alar groove to the upper tragus and a line drawn vertically down from the midpoint of the lateral orbital rim.

Fig. 20. (A) Tear troughs before treatment. (B) Appropriate tear trough correction with HA of low viscosity. (C) Inappropriate tear trough/infraorbital hollow treatment resulting in lower eyelid ectropion and visibility of product (HA of high viscosity).
Conventional face and brow lifting without volume replacement is unable to restore facial fullness and fails to address the issue of deteriorating facial shape secondary to soft tissue atrophy and bone resorption.

**THE BEAUTI“PHI”ED CHEEK**

Reasonable goals in both midface rejuvenation as well as cheek enhancement should involve adequate volume restoration and contouring in the aesthetically appropriate locations. In 2004, Dr Wayne Carey, a Canadian aesthetic dermatologist, pioneered the use of HA fillers as 3 discrete pillars to restore cheek volume.

The female cheek mound is ovoid or egg shaped, not circular, and should not extend higher than the limbus of the lower eyelid (Fig. 14). The cheek axis is not vertical but angled from the lateral commissure to the base of the ear helix. Most importantly, each malar prominence has a defined apex, located high on the midface, below and lateral to the lateral canthus, and eccentrically located within the cheek oval.

Proportion and harmony are paramount in the midface, so great care should be taken to avoid excessive use of filler product in this region in the attempt to obliterate lines through reinflation. Wrinkle removal is not the endpoint but rather proper facial proportion. In general, ideal facial width for most ethnicities falls approximately Phi (1.618) times the intercanthal distance from the medial canthus to the ipsilateral cheek (Fig. 15).

**Technique**

The technique for midface contour volumization and cheek enhancement should involve a minimum of needle or microcannula punctures to achieve the desired result. A filler product with a high G’ (stiffness factor) or high cohesivity is chosen to maximize lifting capacity of the overlying tissue. Initial placement of the product is done vertically to create 2 to 3 pillars in the submuscular (supraperiosteal) plane. Small-gauge needles are preferred to create this tent-pole effect, with aliquots limited to no more than 0.5 mL of product per injection. Injections are performed antegrade, creating a visible lift during the procedure. The subcutaneous tent canopy requires layering of product via an angulated percutaneous microcannula (or fine needle) technique. Depending on the type of product selected for the lift effect, feathering of the cheek contour in a more superficial

![Fig. 21. BeautiPHIcation™ showing HA subgaleal injection to create gentle forehead convexity 12 degrees off vertical.](image-url)
subdermal plane may be indicated using a softer (lower G') product to avoid any step-off areas. Massage with cool ultrasound gel is always performed after treatment to mold and blend the product as discerned by tactile fingertip touch rather than relying on visual observation.

A 2-step marking approach is used to create the Fabergé egg appearance to the cheek along with its eccentric apex. This process can be likened to giving the face what it wants (volume), and then giving it what it needs (the proper apogee).

**Step 1: Giving the cheek what it wants (restoring the Ogee curve)**

The ogee curve is an architectural shape consisting of a concave arc flowing into a convex arc, creating an S-shaped curve. In aesthetic facial surgery, the term is used to describe many facial curves, including the malar or cheekbone prominence transitioning into the midcheek hollow (see Fig. 14). The aim of cheek enhancement is to restore (or in some cases create) a gentle ogee curve and subtly define the zenith of the malar prominence.

Using an eyebrow pencil, the depleted and concave (negative vector) areas of the anterior cheek, malar-zygomatic, and submalar regions are marked (Fig. 16). The inferior border of the body of the maxilla is outlined to demarcate supraperiosteal and subcutaneous placement of product. Injections overlying the body of the maxilla are layered supraperiosteally (submuscularly) as well as subcutaneously if necessary to correct any resistant contour irregularities. Injections overlying the parotid (preauricular) region, submalar region, and lower anterior cheek are performed in the subcutaneous plane. Any preexisting irregularities in the skin are addressed by direct intradermal injection of an appropriate lower G' product. Injections are performed from superior to inferior on the face, because higher placed product influences the lower zones by lifting the adjacent inferior tissue. This effect is shown by the softening of the nasolabial fold and jowl on the treated side once the cheek mound has been restored. Often, less product is required for direct correction of whatever deformity may remain along the upper nasolabial fold triangle and prejowl sulcus (Fig. 17).

**Step 2: Giving the cheek what it needs (the proper apogee)**

Once the markings from step 1 have been wiped away and the gel massage completed, the cheek is ready for the beautification markings to delineate the ovoid appearance and define the cheek apex (Fig. 18). A line is drawn from the lateral commissure to the lateral canthus of the ipsilateral eye. This line establishes the anterior extent of the malar prominence (Hinderer line). A second line is drawn from the lateral commissure to the inferior tragus of the ipsilateral ear, denoting the lateral and inferior boundary of the malar prominence (base of the triangle). The highpoint of the cheek is marked by a horizontal line at the level of the limbus of the lower eyelid. The cheek oval is drawn within these boundaries and tangential to the lines drawn. Feathering of the edges of the oval with subcutaneous filler product is done as necessary to create a smooth, egg-shaped mound. Lastly,

**Fig. 22.** The beauti”phi”ed brow. Begins vertically in line with the medial canthus (A); lies phi above the bony rim from the pupil; has a 10 to 20 degree climb from medial to lateral (B); is arched at a distance equal to the intercanthal distance (x), which is phi of the total eyebrow length (the point crossed by a line drawn from the alar base tangential to the lateral aspect of the pupil) (C); has a lateral tip higher than the medial tip; is Phi of the medial canthus in length (delineated by a line drawn from the lateral alar base through the lateral canthus (D); and has tissue fullness over the lateral supraorbital rim.
a line is drawn down from the lateral canthus to the base of the triangle, perpendicular to the latter (the height of the triangle). The cheek apex lies phi (about one-third of the way) from the lateral canthus along this line. This defined point is in an eccentric position within the cheek oval. This same apex injection point can be obtained by the intersection of a line drawn from the nasal alar groove (phi of the nasal length) to the upper tragus and a line drawn down vertically from the midpoint of the lateral orbital rim (Fig. 19). The final injection (0.25–0.5 mL of product placed on periosteum by vertical puncture) is performed at this precise point to give the cheek what it needs: a beauti“phi”ed apex. Molding and blending of this apogee is done with ultrasound gel to provide a smooth contour. Facial width can be confirmed with the Golden Ratio calipers and filler added at this

![Fig. 23. Patient with mobile glabellar skin. (A) Before glabellar BTX-A treatment, at rest. (B) Before treatment, upward gaze with activated frontalis showing splay of medial brow. (C) Status after BTX-A browlift and glabellar dynamic line treatment showing postcorrugator chemodenervation splay of medial eyebrows. (Patient also had transconjunctival blepharoplasty performed but no upper lid surgery.)](image)

![Fig. 24. (A) Patient with mobile glabellar skin before BTX-A treatment. (B) After BTX-A browlift and periorbital fractionated CO₂ resurfacing with absence of medial brow splay. Xs delineate injection points (see text).](image)
location to idealize the facial width proportion. Each side of the face is unique, so filling volumes and depot locations vary.

Completion of the anterior ogee cheek curve by placement of low G’ filler into prominent tear troughs and infraorbital and lateral orbital hollows should be reserved for experienced injectors, because these are the easiest areas to do poorly (Fig. 20).

**Modifications for the Male Cheek**

Compared with the female cheek, the male cheek has more anteromedial fullness, a broader-based malar prominence, and an apex that is more medial and subtly defined. The following modifications of the markings are noted:

The Hinderer line (anteromedial border of the cheek mound) is drawn from the lateral commissure toward the ipsilateral lateral iris, stopping at the infraorbital rim. Because of the lower jaw angle and stronger jaw, the line denoting the inferolateral border of the cheek (base of the triangle) is drawn from the lateral commissure to the base of the ipsilateral infratragal notch.

As for women, the highpoint of the cheek mound is marked by a horizontal line at the level of the limbus of the lower eyelid. The apex of the male cheek is modest and more medially located at one-third of the height of the triangle defined earlier, or one-third along a line from the lateral iris to the base of the triangle, intersecting the latter at a right angle. The ogee created should be flatter in its lower S curve (concave portion).

**THE BEAUTI“PHI”ED BROW**

The beautiful forehead has a gentle vertical convex ogee curve from trichion to supraorbital ridge, the height of which measures Phi of the intercanthal distance in the ideally proportioned face. A flattened or sloping brow greater than 15 degrees from vertical is often undesirable for the female forehead, and a pleasing convex appearance can be easily fashioned by the subgaleal placement of volumizing filler (Fig. 21). Excessive concavity of the temporal fossae is pathognomonic of advancing age, and can be restored to slight concavity or flat appearance, thus preventing the tail of the brow from disappearing around the corner.

The medial eyebrow begins vertically in line with the medial canthus and extends Phi of the intercanthal distance laterally (Fig. 22). An appealing female eyebrow has a 10 to 20 degree climb from medial to lateral and is arched at the phi point (approximately the junction of the medial two-thirds and outer one-third). The lateral tip should always be higher than the medial tip and there should be soft tissue fullness evident below the outer brow. Lateral brow location is typically 1 cm or phi above the bony rim from the pupil. Cutaneous phi landmarks of the aesthetic eyebrow are easily recognized in the clinical setting, as outlined in Fig. 22.

Loss of the corrugators’ medial pull after chemodenervation in a glabella with mobile skin can result in excessive splay of the medial brow toward the midpupillary line because of the unopposed oblique pull of the frontalis muscles (Fig. 23). Concomitant treatment of the upper frontalis with small-dose neuromodulator can prevent this disturbing splaying of the medial brow (Fig. 24).
THE BEAUTI“PHI”ED NOSE

Nasal enhancement (contouring) is one of today’s most sought-after cosmetic procedures, but it remains one of the most challenging and intriguing. Although the nose is the most central and prominent facial feature, it should not be dominating. It must have both a harmonious relationship and an intrinsic beauty. Nasal enhancement by injection is an art that requires the safe deposition of minute quantities of product to achieve remarkable instantaneous results. To paraphrase Winston Churchill, never in the field of nasal aesthetics was so much owed to so little.

Fig. 27. Nasal dorsal enhancement only with HA filler creating the optical illusion of a narrowing of facial width (bizygomatic, transcommissure, and interpupillary measurements are identical in the photographs). Dotted lines showing divergence and concavity of radix on AP view.
A little difference in anatomy can make a big difference in appearance, both before and after filler contouring.

There are countless textbooks on rhinoplastic technique by world-renowned experts. It would be impossible to duplicate these refined techniques with a needle and syringe; not every nose is amenable to the contouring effect of fillers within the confines of proper nasal proportion.

For aesthetic injectors to succeed at nasal enhancement, they must follow the following 4 tenets:

1. Think contour and shape of the face
2. Think skin texture and thickness
3. Think balance and proportion with other facial features
4. Always think in terms of improvement rather than perfection.

Furthermore, to achieve consistent and admirable results, the injector must respect the essential triad of anatomy, aesthetics (Phi), and sound injection principles.

Sheen and Sheen described the 5 aesthetic components to the nose, which are the radix, the dorsum, the tip, the columella-alar complex, and the nasal base (Fig. 25).

**The Radix**

In women, the radix or root of the nose defines a nasofrontal angle of approximately 115 to 125 degrees (Fig. 26). Its height from the medial...
canthus is phi of the intercanthal distance (in the order of 15–18 mm). Its location on profile is approximately at the level of the upper lid lash line in women, the superior acceptable aesthetic limit being the tarsal fold (creating a more masculine appearance).

The skin overlying this area is usually of average thickness and fairly mobile, and so the use of a product with higher G’ is desirable. The radix is divergent and concave on frontal view, so the injector must not overfill this region and should pinch the corrected radix to recreate this effect (Fig. 27).

**The Dorsum**

The skin of the dorsum is thinner and more mobile than other areas of the nose. The female dorsum should lie about 2 mm under a line drawn from the radix to the tip (see Fig. 26). From the front, which is the view that most patients see every day in the mirror, the dorsum should be straight and no wider than phi of the intercanthal distance (Fig. 28). Dorsal augmentation should be done in the supraperiosteal and supraperichondrial planes, and the product used should be of higher G’ value. Use of a softer product results in decreased longevity of the result and the lateral diffusion can create a width issue for Caucasian noses.

Another interesting application of nasal injections is in the region of the nasal valve, between the upper and lower lateral cartilages (Fig. 29). In both the natural and postoperated state, collapse in this region can lead to tight nasal airways with resultant snoring or obstruction. External nasal strips (eg, Breathe Right™), intranasal cones (eg, Sinus Cones™), and springlike splints (eg, Breathe With Eez™) have been designed to improve airflow at this bowed area. The instillation of intradermal HA product in this region can act as an internal splint, similar to the center span of a suspension bridge, preventing collapse with inspiration (Fig. 30). Careful intradermal placement is critical, because product placed subdermally burdens the valve region, adding to the obstruction.

**Nasal Tip**

The skin of the nasal tip is thicker and more adherent than the adjacent dorsal skin, and there

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**Fig. 29.** Nasal valve region of the nose, located between the upper and lower lateral cartilages.
is a variable amount of subcutaneous tissue. Tip height is measured at phi (0.618x) of the intercanthal distance. The beautiful nose should have 2 tip-defining points that are the most projecting aspect on profile and Phi (1.618 times the intercanthal distance) from the radix. Injections in this region should be subdermal with average G’ product and designed to create symmetry and establish a domal tip light reflection (Fig. 31).

The nasal tip is a common site of depressed scars caused by excision/curettage of lytic skin lesions; a smooth, aesthetic contour can be reestablished by the delicate layering of HA product followed by laser resurfacing (Fig. 32). Because it is a watershed area for nasal circulation (especially in the post-rhinoplasty patient), it is prudent for the injector to always avoid blanching of the nasal tip skin, to keep the patient 15 minutes after treatment.
for observation, and to always have hyaluronidase in the office for product erasure.

Canted nasal tips caused by anterior septal deviation can be provisionally corrected with submucosal injection of high G’ product along the concave side of the curved anterior septum (Fig. 33). Tip elevation can be achieved with the instillation of neuromodulator into both the depressor septae muscle as well as the dorsal component of the bilobed nasalis muscle. This latter treatment creates hyperkinesis in the untreated dilator nares portion of the nasalis muscle (Fig. 34) whose secondary function is to elevate the nasal tip.

Fig. 31. Correction of tip asymmetry with HA. Tip-defining points are Phi times the intercanthal distance from the radix (see text).

Fig. 32. (A) Three years after basal cell epithelioma treatment. (B) Three months after layered HA fill and secondary CO2 laser treatment.
Columella-Alar Complex

The skin of the nose is thinnest along the alar margins and columella, and shows skin-to-skin apposition. Retracted alae can be improved with the precise deposition of low G’ HA between the dermal sheaths just below the leading edge of the lower lateral cartilage, making sure to maintain a symmetric gull-in-flight arc (Fig. 35).

Typical nasolabial angle in the female patient is around 95 to 110 degrees (see Fig. 26) with a 2-mm to 3-mm columellar show, which, when absent, can be created by the judicious use of higher G’ product. Likewise, prominent medial crura causing a split columella can be softened in this fashion (see Fig. 35).

Nasal Base

Nasal base width should be approximately equal to the intercanthal distance (Fig. 36). In patients with mild to moderate excessive alar width, narrowing can be achieved by the deposition of high G’ product on the pyriform fossa via microcannula technique (personal communication, Maurizio de Maio, 2009).

BEAUTI“PHI”ED LIPS

The stigma of the overinflated, disproportioned lip has permeated the media worldwide. The art of beautifying lips revolves around subtle enhancement and not just pure augmentation; treatment...
Fig. 35. Correction of retracted alae (A) with HA injections, maintaining the gull wing appearance (B). Softening of dome knuckles and split columella (C) with HA (D).

Fig. 36. Phi proportions in the face (see text). Green, x; blue, 1.618x (Phix); black, 0.618x (phix); orange, 0.382x ($\phi^2x$). Lip width of Phi correlates with a vertical line (dotted white line) dropped from the medial iris.

Fig. 37. Phi proportions in the lip (see text). Philtral columns are located just medial to the peaks of Cupid’s bows.
goals should include proper proportioning of vertical height and intercommissure width (lip length), as well as recreation of a distinct upper lip white roll.

Ideal Phi proportion (see Fig. 36; Fig. 37) for lip length maintains red vermilion show to a vertical line drawn down from the medial iris, or medial pupil in patients with prominent masseters and increased lower facial width. Vertical mucosal show in white women is also in the Phi proportion of 1 for the upper lip and 1.618 for the lower lip (Asian and African American vertical lip dimensions may approach 1:1). The ratios of the distance from Cupid’s bow to Cupid’s bow compared with Cupid’s bow to the ipsilateral commissure is also 1/1.618. The distance between Cupid’s bows is phi (0.618x) of the distance from columellar base to mid-upper lip vermilion border. The upper lip philtral columns are just inside the Cupid’s bows (rather than aligned with them) in the youthful lip. Spreading and flattening of these columns with loss of upper lip pout is a common feature in the aging lip. Recreation of a lower philtral column just medial to the Cupid’s bow can restore a youthful look to an aging lip. Injections are performed slowly, taking care to deposit very little product superiorly and more inferiorly where the philtral columns meet the vermilion tubercle (Fig. 38).

The ideal feminine youthful lower lip should be fuller but the upper lip should project more on profile by 1 to 2 mm. When enhancing the lips with fillers, the combination use of minidose neuromodulator to moderate accordion contraction of the orbicularis oris can often increase the longevity of the volume achieved.

Fig. 38. Lip enhancement with HA (see text).

Fig. 39. Riedel plane: a line drawn tangentially through the anterior points of the lips (similar to Steiner line, which accounts for nasal projection).
Fig. 40. Jaw contouring and chin reflation showing the synergy of neuromodulator and HA filler.

Fig. 41. Jaw contouring and chin reflation 1 year after treatment (no further filler; BTX-A repeated at 4-month intervals).
Fig. 42. BeautiPHIcation™: combination therapy result at 1 year. HA filler (midface, superior and inferior orbital rims, pyriform fossae, prejowl sulci), panfacial neuromodulator (browlift, forehead, glabella, crow's feet, preseptal lower lids, mentalis, depressor angulae oris), microdermabrasion and ALA-aminolevulinic acid/IPL-intense pulsed light therapy, home skincare regimen. Result at 1 year (no further HA treatment; BTX-A repeated every 4 months).

Fig. 43. BeautiPHIcation™: single-session global approach with neuromodulator (glabella, crow's feet, preseptal lower lids, depressor anguli oris, mentalis) and panfacial volume restoration (HA to glabellar creases, tear troughs, nasojugal grooves, cheeks, lateral oral commissures, marionette zones, prejowl sulci, chin, mental crease, eyebrows, postjowl sulci). Treatment followed 2 weeks later by full-face Sciton resurfacing; results shown at 4 weeks after laser treatment.
Fig. 44. BeautiPHIcation™: neuromodulator to glabella, crow’s feet, preseptal lower lids, depressor anguli oris, depressor septae, nasalis, mentalis, neck (Nefertiti); HA fillers to glabellar creases, tear troughs, nasojugal grooves, cheeks, preauricular regions, eyebrows, lateral oral commissures, marionette zones, prejowl and postjowl sulcii, chin, mental crease, and nose contouring. Result at 8 weeks.

Fig. 45. BeautiPHIcation™: neuromodulator to glabella, crow’s feet, preseptal lower lids, depressor anguli oris, mentalis, neck (Nefertiti); HA fillers to glabellar creases, tear troughs, nasojugal grooves, cheeks, eyebrows, lateral oral commissures, marionette zones, prejowl and postjowl sulcii, chin, and mental crease. Results at 3 months.
THE BEAUTI“PHI”ED CHIN

Chin deformities are the most common bony abnormality in the face, but even experienced injectors often focus on the prejowl sulci and overlook the opportunity to simultaneously address mild forms of microgenia and volume loss in the entire perioral region. Chin deflation and contour changes may start early, appearing sometimes in the third decade.

Many methods of analysis have been described to both classify and treat mild microgenia. Just as with the other features discussed previously, the chin also follows the golden proportion in its facial relationships (see Fig. 36). As a general rule, anterior projection of the chin in women should be slightly behind or just at the Riedel plane, drawn tangentially through the anterior points of the upper and lower lips (Fig. 39).

Fig. 46. BeautiPHIcation™: 6-month result with HA filler for tear troughs, lateral brows, cheek and chin enhancement.
The chin plays a central role in facial beauty, harmony, and balance, especially through its relationship to the face in profile. The 3D aspect of projection, height, and width make the surgical planning of a genioplasty particularly difficult, whether by osteoplastic or alloplastic means. In many cases, inherent asymmetries in the region render these techniques incapable of properly addressing the underlying deformity. Surgical therapy often focuses purely on midchin projection and width with no attention paid to reflation and contouring of the lateral oral commissures, mental crease, marionette zones, and prejowl and postjowl sulcii. In perioral rejuvenation, it is not just the chin, and herein lies the distinct advantage of the physician injector skilled at percutaneous volume contouring as well as neuromodulator synergy to soften the associated apple core appearance, globally improving the entire perioral region (Fig. 40).

Historically the domain of the maxillofacial surgeon, chin augmentation is perfectly amenable to the physician injector using strategically placed depots of filler. Furthermore, depending on the product used and the depth of injection, it is our experience that, although not permanent, aesthetic results can last in excess of 12 months before further treatment is necessary (Fig. 41).
the younger patient, maintenance of a youthful chin often requires little product, but the lateral oral commissure may require more attention because of the loss of structural support. However, the associated presence of severely altered dentoalveolar relationships is always better served by orthognathic surgery than by chin augmentation.

LEARN TO THINK IN COMBINEESE (THE LANGUAGE OF COMBINATION THERAPY)

The doctrine of BeatuiPHIcation™, or any nonsurgical facial enhancement, is that it should be individualized, minimally invasive, result oriented, cost-effective, synergistic, and associated with minimal downtime, anxiety (for both the patient and physician), and pain. The art of bundling

![Image of facial comparison before and after treatment with HA and porcine collagen for lip phi proportion, with neuromodulator (BTX-A) given at 18-week intervals for browlift, periorbital dynamic lines, and chin.](image-url)
Figure 50. BeautiPHIcation™: HA filler (cheeks, tear troughs, lateral brow, forehead, nose, prejowl sulci, mental crease, lips, philtral columns) and neuromodulator (browlift, glabella, forehead, crow’s feet, chin). Results at 18 months. Repeat treatment of BTX-A at 4-month intervals; HA enhancement of lips at 1 year.

products with procedures, of combining fillers, neurotoxin, skin creams, lasers, and energy devices, is where technology and creativity meet (Figs. 42 and 43).

SUMMARY

Phi Relationships can be approached for all facial features (see Fig. 36), and rely on the establishment of smooth ogee curves in all dimensions. As for the cheek, the use of cool ultrasound gel, which enhances proprioception, is beneficial to mold, blend, and feather all treated aesthetic zones and reveal areas that may require more attention. The point must be emphasized that having a plan and using pretreatment markings to achieve desired results is the critical element to volume restoration in the face. The aesthetic patient budgets to look great and is willing to pay for outstanding clinical results. Once goals have been determined and a budget established, a logical syntax is used to create an algorithm for selecting products and procedures. The methodology leads to consistent and pleasing results with a high rate of patient satisfaction (Figs. 44–50).

REFERENCES