



SOFT TISSUE AUGMENTATION

A variety of materials can be injected to increase tissue volume and modify the appearance of a cosmetic unit. For that reason, a thorough understanding of facial aesthetic proportions and anatomical landmarks is essential to achieve good results. Fillers are classified as:

- Permanent
- Resorbable
 - Short duration
 - Longer duration

Three permanent fillers are commonly used worldwide: silicone, polymethylmethacrylate (PMMA), and polyacrylamide. Although permanent results are achieved with single to a few sessions, permanent fillers can induce granulomatous reactions during a lifetime. Delayed reactions can occur, when the body is under pro-inflammatory conditions; i.e. when fighting infections or after administration of interferon. The more superficial the filler is placed, the higher is its potential to produce undesirable granulomas. When applying silicone, the microdroplet technique should be used.

Poly-L-lactic acid and hydroxyapatite are longer lasting resorbable fillers (18 months or longer). Their main action is the induction of neo-collagenesis through a continuous low-grade inflammatory response.

Hyaluronic acid and collagen are typical short duration fillers (less than 8 months duration). Recent technological advances have yielded longer lasting hyaluronic acid and collagen products that are more suitable for augmentation procedures.

There are two cosmetic indications for performing augmentation:

- Replacement of tissue loss associated with aging or diseases (HIV associated lipoatrophy, scleroderma).
- Construction of a more harmonious anatomical unit through volumetric alteration.

While age related volumetric loss is pronounced in the subcutaneous tissue, it also occurs in the dermis. This results in deep nasolabial folds and a concave appearance of the malar, buccal, and perioral areas. It is also pronounced in the lips and temporal areas. Augmenting these areas can restore a more youthful appearance. When combined with a surgical facelift in older patients, it offers a more natural look.

Careful augmentation to the nose, lip, zygoma, and chin areas alters significantly their appearance. This concept can be used in younger patients to provide plastic surgery grade aesthetic modifications. The perception of size to those units is provided by angles and shades, and their relationship with adjacent facial units. A good example is filler rhinoplasty, where the illusion of a smaller nose is usually created by the augmentation procedure.

The following table lists some fillers available for augmentation. N.B. prices are estimates and vary according to the filler used and the physician. The number of sessions over a ten year period is highly variable and depends upon the amount of product used per session, technique, and product

specificities; i.e. degree of hyaluronic acid or collagen cross-linkage, centrifugation of fat, etc.

	Safety	Longevity	Cost per session	Sessions/10 year
Autologous Fat	Very good	Variable	\$2000 - \$10,000	1 – several
Poly-L-Lactic Acid	Good	2 years	\$1000 - \$2000	+/- 15
Silicone	Acceptable (µdroplet)	Permanent	\$600	+/- 10
Poly-methyl-metacrylate	Acceptable	Permanent	\$500	2 – several
Aquamid	Acceptable	Permanent	\$2000 - \$4000	1 – several
Hydroxyapatite	Very good	18 months	\$1000 - \$4000	+/- 8
Hyaluronic acid highly (cross-linked)	Excellent	6 – 12 months	\$1500 - \$2500	+/- 15
Collagen (cross-linked)	Very good	6 - 12 months	\$3000	+/- 15

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