

Dermal Fillers

Dermal fillers are used in order to restore the balanced fullness of the youthful face, with the first step being the selection of the right product for the area and problem to be treated.

About

Dr Sotirios Foutsizoglou is considered to be an authority in non-permanent facial and body implants. He has treated more than 3,000 people in UK and Europe with outstanding results. Dr Sotirios Foutsizoglou is also involved in teaching young doctors and dentists the various dermal filler injection techniques. Treatment with dermal fillers is a highly skilled procedure requiring knowledge of the anatomy of the skin and underlying tissues for optimal aesthetic enhancement in a safe and natural way.

Anatomy of the skin

The skin consists of two layers, the epidermis and dermis. The major cell types of epidermis and dermis are the keratinocyte and fibroblast respectively.

- Keratinocytes synthesize keratin, a protein whose structural matrix provides skin with a robust and waterproofing barrier. Keratin is also the key structural component of hair and nails. Keratinocytes also produce cytokines in response to injury.
- Fibroblasts synthesize collagen and elastin fibres. Collagen and elastin production is gradually diminishing as part of the ageing process.

The **epidermis** is divided in five layers:

- *Basal cell layer (Stratum Basale)*

- Keratinocytes originate from this layer.
- Melanocytes (responsible for skin colouring) are also present in this layer making up 5-10% of the cell population.
- *Spinous or prickle cell layer (Stratum Spinosum)*
 - Langerhans cell can be found in this layer providing an antiviral defense mechanism, destroying incoming viruses.
- *Granular cell layer (Stratum Granulosum)*
 - Keratinocytes in this layer contain intracellular granules of keratohyalin. This protein makes the outermost layer of the skin (i.e. horny layer) impermeable providing thus protection from the environment and a robust waterproofing barrier.
- *Stratum Lucidum*
 - Only present in the skin of palms and soles.
 - Contains transitional cells.
- *Horny layer (Stratum Corneum)*
 - Outermost layer of the skin.
 - In direct contact with the environment.

- Consists of corneocytes. That is keratinocytes that have shed their nucleus during their migrating process from the granular cell layer.
- The time from cell division to shedding from the horny layer is about 28 days under normal circumstances.

The **dermis** is a tough, resilient layer that protects the body against mechanical injury and contains specialised structures. It is divided in two layers:

- *Papillary dermis*
 - Thin upper layer of the dermis
- *Reticular dermis*
 - Composed of thick, densely packed collagen fibres, and is the primary location of dermal elastic fibres

Dermis also contains ground substance, a shapeless, gel-like, primarily composed of *glycosaminoglycans* (most notably **Hyaluronic Acid**), *proteoglycans*, and *glycoproteins*.

- Wrinkling
- Loss of volume
- Decreased elasticity
- Fatigued and dull-looking skin

Biodegradable dermal fillers can be injected below the skin's surface through a fine needle. A local anaesthetic in the form of a cream is usually used prior to the treatment in order to make the injection process much more comfortable. No allergy testing is needed before treatment as **SFMedica's** policy is to use only non-animal products which combine enduring quality and safety.

Dermal filler injections are used to

- fill lines by replenishing the age-related loss of hyaluronic acid
- stimulate the production of the body's own collagen
- rehydrate the skin tissue (e.g. face, neck, décolletage and hands)
- restore lost volume and bring back a fuller, smoother and healthier appearance
- rejuvenate skin
- reshape lips, cheeks, and chin
- improve overall skin quality which makes dermal fillers a fantastic treatment for all ages, even for those not yet experiencing the full-blown effects of ageing skin
- improve the structure, firmness and elasticity of the skin
- smooth scars (e.g. acne, trauma)

Reference:

Venus M., Waterman J. and McNab I. Basic physiology of the skin. Surgery. Volume 28:10. Medicine Publishing, October 2010.

Indications

Amongst the options available to treat lines and wrinkles, dermal fillers which contain either *hyaluronic acid* (e.g. **Juvederm Ultra**) or are made of synthetic calcium *hydroxylapatite* (e.g. **Radiesse**) are the most popular choice for both men and women. The choice of the right dermal filler for you depends on the area to be treated, the severity of your wrinkles and lines, the required volumisation and most importantly your expectations and needs.

Dr S. Foutsizoglou will be able to offer you a holistic approach to your aging skin which may require a combination of non-surgical treatments such as *Wrinkle Relaxing Injections, Dermal Fillers, Chemical Peels, Medical Microneedling, Mesotherapy* or *Sculptra* and a customised skincare protocol in order to optimize the results achieved by your treatment(s). A holistic approach not only does it correct the skin problems and the underlying cause (e.g. loss of elasticity or volume) but also prevents further collagen disintegration and formation of deeper lines and wrinkles. All our treatments are highly effective and safe.

In severe cases of photoaging and wrinkling a combination of cosmetic surgery and non-surgical treatments may be indicated for restoring the fullness of a youthful face, addressing the 'sagging' effects of gravity and reversing the actinic keratosis. Our **SFMedica** specialist doctors and surgeons will be able to advise you accordingly.

Why should I have dermal fillers?

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Treatment Explained

SFMedica offers a wide range of non-permanent fillers including the most popular *Hyaluronic Acid* and synthetic *Calcium HydroxylApatite (CaHA)* based fillers. Treatment is quick, safe and results can be seen straight away.

In most cases a topical application of a numbing cream is sufficient to make treatment comfortable. However if more sensitive areas (e.g. lips) need to be treated or individuals have a low pain threshold then a dental block or an anaesthetic injection can be used for a completely pain-free treatment. Nowadays most HA based fillers have integrated pain relief (i.e. lidocaine) for a more comfortable treatment experience.

The duration of effect varies among individuals depending on age, the treated area, the thickness (i.e. grade) of the product, the quantity of filler injected, the quality of the skin as well as general health and lifestyle. With the newer generation fillers such as **Juvederm Ultra**, however, the beneficial effects can be expected to last up to one year, or even longer, up to 18 months, in the case of volumising fillers such as **Juvederm VOLUMA** or **Restylane SubQ**.

SFMedica doctors use stabilised HA-based aesthetic products of non-animal origin manufactured by the leading companies such as:

- **Restylane** - First soft tissue filler to be granted FDA approval
- **Juvederm Ultra** – Most popular filler in the UK and USA
 - **Juvederm Hydrate**
 - **Juvederm Ultra 2**
 - **Juvederm Ultra 3**
 - **Juvederm Ultra Smile**
 - **Juvederm Ultra 4**
 - **Juvederm Voluma**
- **Belotero**
- **Teosyal**
- **Revanesse**
- **Rennova**
- **Succeev**

We also prefer *monophasic* (e.g. **Belotero**) to *bi-phasic fillers*. Bi-phasic fillers consist of HA particles suspended in HA fluid. Their particles are of various sizes and shapes. However particles may be too large to enter the required dermal space. In this case the HA fluid fills the space instead, but quickly breaks down leaving an unsupported region of soft tissue and a deposit of particles within the skin making it look and feel lumpy.

Dr S. Foutsizoglou also uses **Radiesse™** which is a unique dermal filler that stimulates collagen formation. It is made from synthetic calcium hydroxylapatite (CaHA) microspheres (30%) suspended in a water based gel carrier (70%). The tiny spheres are composed of calcium and phosphate ions that also occur naturally

in human tissue. The gel carrier provides the initial correction and then macrophages dissolve gel carrier and fibroblasts form new collagen providing natural long-lasting results.

Radiesse™ is 100% biocompatible and is FDA approved for the correction of moderate to severe facial folds and wrinkles and for restoration of the signs of facial fat loss (lipoatrophy) in HIV patients. In Europe, **Radiesse™** is CE-marked for plastic and reconstructive surgery, including soft tissue augmentation and nasal correction.

Radiesse™ can also be used for hand rejuvenation.

Our primary goal is to restore the balanced fullness of the youthful face, with the first step being the selection of the right product for the area and problem to be treated. Prior to your treatment a thorough consultation will be carried out and a medical questionnaire will need to be filled in to identify any potential contra-indications such as hypertrophic scarring or known hypersensitivities. Our experienced doctors will guide you in the choice of the right filler depending on the indication, and your needs and expectations.

Aftercare

Following the injection with the appropriate dermal filler, there may be some redness, swelling, bruising, tenderness and firmness around the injection site. There is always a very slim risk of infection, necrosis and granuloma formation post-treatment. However, most side effects are mild and resolve within a few days.

Applying some ice pack right after treatment is highly recommended in order to minimise pain and swelling.

Depending on the treated area and type of filler used you may be asked to massage the injected site until it becomes completely smooth.

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The results of the treatment with dermal fillers usually last 10 to 18 months, depending on the treated area, product and amount used and patients' individual factors.

It is recommended to use *Arnica* preparations such as the ***Restylane Recover Cream*** post-treatment. Arnica has been demonstrated to act as an anti-inflammatory and assist normal healing process minimizing bruising and swelling.

Please also be aware that dermal fillers cannot be used directly after laser treatments, deep chemical peels, dermabrasion or in patients who have had injections of permanent implants in the area to be treated.