

Sun damage, frequent expression muscle use and time conspire to produce lines on our faces. There are a number of ways to overcome these.

If there is considerable looseness of the skin along with the lines then a face lift, whether complete or limited would be the best solution. If the looseness is of a lesser degree then something like the light-based treatments of the Titan on the Xeo Cool Glide laser base is effective. Fine lines on the face can be improved with a series of non-ablative laser treatments like the Genesis programme with the Xeo Cool Glide Laser. There is also the more aggressive treatment of vapourising the skin with a CO2 or Erbium Laser.

Otherwise lines are best looked at as to whether they are dynamic (produced from active muscle action) or due to loss of the underlying support tissue (from collagen in the dermis to underlying fat and muscle) or due to constant folding as occurs with sleeping on the same side each night.

If lines are **dynamic**, then the best treatment is usually something that reduces excessive muscle action such as botulinum toxin of which we use the British produced Dysport very effectively.

For **non-dynamic** lines then a filler of some sort is the best approach. Often these areas are in the lower two-thirds of the face. Botulinum toxin (if the lines are somewhat dynamic) needs to be used with caution here as there are important face muscles present.

TYPES OF FILLERS

The earliest fillers were based on relatively inert **silicone**. This had problems in use in the skin and needed to be placed quite deeply. Next came **collagen** which could be used quite superficially. For many years this was produced from cow's hide and people receiving it needed allergy tests a

month and a week before treatment to ensure they had not developed an allergy to collagen. However there is a human form produced biologically from a baby's foreskin. It tends to last about three to six months.

Hyaluronic acid is being used extensively these days because of its longer action (six to twelve months) and general lack of allergy considerations. Known about for over sixty years, it is found in many parts of the body, and was initially felt to be of no particular interest or function except as a space filler. Basically a helical coil of a long chain sugar molecule (a polysaccharide), it retains water within its structure (up to 1000 times as much as the weight of the molecule itself). The binding of water is now thought to be one of the main ways water is kept in place in the area between cells in the body.

In 1970 researchers documented its effect in improving arthritic race horses when it was introduced as a solution into their joints. For about 20 years it has found use in eye surgery to protect delicate membranes and for a solution in the anterior chamber of the eye.

The form we use, **Restylane**, is produced as a byproduct of a bacterial fermentation process, not using any animal products. In the body natural hyaluronic acid is broken down within minutes to days to carbon dioxide and water. To stabilise it more for cosmetic use a chemical bond every 200 units has been introduced to the molecule.

A huge range of filler agents is available through the world. But great care needs to be taken with their suitability in the body and side effects after introduction. Agents such as **polylactic acid** are also available. Some of these are more particulate in nature and can have the tendency to form small local reactions known as granulomas. They can

also migrate from the area they were placed, which is obviously not ideal. There are also plastic-type implants, like gortex, that can be used.

For a longer effect than hyaluronic acid, something like **calcium hydroxyapatite (Radiesse)** is the form we use) is effective. This agent is the major component of bones and teeth. When placed about bone it allows the formation of new bone. If placed in other tissue it will act as a scaffold for the local tissue to increase within it. It has been used from the mid 1980s for applications in orthopaedics, neurosurgery, dentistry, ear, nose and throat (in such things as vocal chord enhancement) and ophthalmology.

For injection it is suspended within a gel carrier (mainly after and glycerin with some sodium carboxymethylcellulose). The carrier parts are removed by the body and replaced with local tissue. It lasts two to four years in the area it is placed. Its nature requires deeper placement than for hyaluronic acid.

For something longer-lasting again, then **polyacrylamide gel** is very effective. We use the form known as **Aquamid**. Used in a number of countries in the world as a water-purifying agent it appears to remain stable in the body where it is placed for years and years. It had been used in the USSR as a breast enhancement many years ago and shown to be still localised with no obvious adverse effect related to its placement. The body tends to build a thin wall of cells about it to contain it. Water from the surrounding tissues freely exchange with it.

None of these fillers, except collagen, is registered for cosmetic use in New Zealand. They are in Australia where they can be treated as an implant. When used in New Zealand the name (or in our case, identifying number) of every person who has

received them, the amount that was used and the date it was administered is required to be supplied monthly to the company for the licencing agency to monitor any problems that might possibly occur.

GENERAL CONSIDERATIONS OF USE

As mentioned before Restylane is effective in filling fine lines and instilled within the skin structure. Denser forms of it can be used in deeper layers and last a little longer. Both Radiesse and Aquamid need to be instilled below the skin and are therefore more useful for larger lines or folds such as the nasolabial line between the nose and the lip. It is usually recommended a shorter term filler is used before a longer one to ensure a person will like the effect afterwards. With a shorter-lasting one at least it will resorb relatively early if not appreciated. Also something like Aquamid needs careful consideration with the likelihood it will be there for life. Will you still want a particular look late in life?

WHERE CAN THEY BE USED?

- Fine lines about mouth, cheeks etc – Restylane
- Larger lines like nasolabial fold – Restylane, Perlane, Radiesse, Aquamid
- Lip edge definition – Restylane
- Lip fullness enhancement – Restylane, Perlane, Aquamid
- Enhancing cheeks, chin, etc, Perlane, Radiesse, Aquamid

WHAT PRECAUTIONS ARE THERE?

- Skin needs to be clean, free from makeup, moisturisers, sunblocks etc.
- No active local infection including cold sores
- Avoid agents like aspirin and ginkgo in the days before treatment to minimise bruising

HOW IS IT DONE?

A very fine needle is used to inject a line or a sequence of small dots of the filler under the area to be lifted. The areas can be numbed by local injection before or by the application of an anaesthetic cream. Ice aids comfort.

WHAT ARE THE POSSIBLE SIDE-EFFECTS?

- Swelling, redness and occasional bruising which may last two to four days.
- Fluctuating swelling of the area treated associated with varied water intake. Keep intake regular.
- Infection – usually low grade and readily treated if noted early. A longer than usual course of an oral antibiotic may be needed to achieve clearance.

INSTRUCTIONS AFTER TREATMENT

- **Avoid applying makeup or other face treatments until the next morning.** This is to prevent spreading infection through the puncture sites.
- **Be aware that other treatment near to the site in close time association may affect the treatment sites.** Blood can track from dental injection sites nearby to stain the filler with its colour just under the skin.
- **Avoid too vigorous physical activities and hot drinks in the first 24 hours.** To reduce bruising.
- **Any redness should settle quite quickly; selling may take two to four days.** Occasionally there is a tender sensation about day ten with Aquamid.
- **Any discomfort outside this range should be check with the clinic.** If infection occurs it can present as a persisting or increasing tenderness.



Dermal Fillers

Face Line Treatments

Dr Mark Denekamp
739 Chapel Rd
Howick

Ph: (09) 273 2133
Fax: (09) 273 2433
www.springdale.co.nz