

Information about fine lines and wrinkles of the face.

There are three main causes of fine facial lines and wrinkles, all of which may be present in combination in one person.

1. Muscle contractions.

Most facial lines and wrinkles are the result of excessive and repeated contractions of the muscles used for facial expression. Frequently this is a 'habit' which the person is not aware of.

These lines commonly include vertical frown lines of the lower central forehead between the eyes (normally expressing worry or anger, but commonly caused by unconscious habitual frowning when the person is concentrating, and resulting in a fixed worried or angry expression – which is often inappropriate). Horizontal lines of the forehead (expressing surprise or questioning) are also common, as are lines which radiate out from the outer corners of the eyes (formed while squinting or smiling, and often called 'crow's feet').

2. Sleep.

These lines / wrinkles result from sleeping on the same side with the face in the same position on most nights, and are usually vertical lines between the forehead and the cheeks.

3. Tissue loss.

These lines / wrinkles result from progressive thinning and loss of tissue supporting the skin, producing loss of skin elasticity. This is associated with a combination of factors, including the aging process, sun damage, excessive alcohol intake, and smoking. In general terms, the skin 'sags' in response to gravity.

Children and young people tend to have 'rounded' faces, and very rarely have wrinkles when their face is at rest. This is because their skin is healthy and elastic enough to return to its original position following facial expression. As time goes by, thinning of the skin and loss of elasticity causes the skin to become less pliable and 'crease', resulting in the appearance of wrinkles even when the face is at rest.

Available treatments for fine facial lines and wrinkles.

1. Chemical peels.

Skin peeling (part of the normal process of skin exfoliation) is accelerated by the use of chemical agents. Peeling stimulates growth of new skin, which improves the appearance of the skin surface. Chemical peels (e.g. TCA or ICP) are useful to improve the appearance of very fine facial lines and some forms of sun damage or over pigmentation. A course of 3 – 5 peel applications is commonly needed to produce an improvement lasting up to 10 – 12 weeks.

2. Light based treatments.

Laser or intense pulsed light (IPL) treatments are very useful for removal of unwanted hair, fine facial thread veins, 'port wine' birthmarks, tattoos, warts, and some scars. They also improve very fine facial lines, some forms of acne, sun damage, and over pigmentation.

We do not offer laser or IPL treatments at this Surgery, but ask Dr Oakley if you wish to be referred to a Specialist for this form of treatment.

3. Injectable Dermal fillers.

Injectable fillers provide a 'plumping' effect by increasing the volume of skin and subcutaneous tissues to correct wrinkles and deep folds, especially in the lower face. These include "nasolabial lines" ('smile' lines between the nose and the outer angles of the mouth), "smokers" lines of the lips, vertical "marionette" lines ('sad' lines from the outer angle of the mouth down vertically towards the chin), and horizontal melomental lines (horizontal lines between the chin and the mouth), etc.

Collagen has largely been replaced by newer synthetic 'non animal stabilised hyaluronic acid' (NASHA) fillers, of which there are currently more than 70 different types; the best known probably being Restylane®. NASHA fillers are safer and less likely to cause side effects than Collagen. Administration of fillers can be painful unless dental blocks or local anaesthetics are used. The 'plumping' effect of one treatment usually lasts 4 – 6 months although more recently introduced compounds such as Calcium Hydroxylapatite have a longer lasting duration of up to 2 years.

Side effects include: bleeding, bruising and swelling at the site of the injection, which are temporary but can take 10 – 14 days to heal completely. Longer lasting side effects include nodule formation under the skin, infection, and skin discolouration – especially if a filler is injected too superficially which may cause the filler to be visible as a 'blue/grey line' under the skin. Allergic reactions to the filler occur in about 1 in 10,000 treatments, but are generally minor and transient.

Dermal fillers should not be used in individuals who are pregnant or breastfeeding, allergic to any of the components of the filler, or those who have autoimmune disorders, severe diabetes, acute rheumatoid arthritis, a tendency to develop keloid scars, or if there is an infection, especially herpes simplex (cold sore infections), of the skin in the area to be treated.

Results can vary and depend very much on the skin and tissue characteristics and condition in the area to be treated, the expectations of the individual being treated, and the experience and skill of the person performing the treatment. Some areas are difficult to improve with a filler alone, particularly if there is a marked degree of muscle movement in the area to be treated.

It is increasingly recognised that often the best treatments are obtained by using a filler in combination with BTA (see later), as many wrinkles are caused by a combination of loss of tissue and skin elasticity PLUS muscle activity.

4. Botulinum Toxin 'A'. (BTA)

This is often mistakenly referred to as 'Botox®' which is the Registered Trademark of Allergan Ltd who manufacture and market one specific type of BTA.

BTA is a protein produced from bacteria, which relaxes muscles only in the area in which it is injected. The effect is always temporary, usually lasting 3 – 6 months in small facial muscles, but often longer in other areas. BTA temporarily prevents transmission of a biochemical (Acetyl Choline) from nerve endings to muscle fibres, thus reducing muscle activity at the site of injection. When the effects of BTA wear off, further injections are needed to maintain the desired effect.

BTA is not a filler, and is not a treatment for lip enhancement; it treats only those wrinkles caused by muscle activity. It is a very effective and extremely safe treatment because only tiny amounts are injected which remain in the muscle at the site of injection.

BTA has been licensed for medical use since 1973 when it was first used to treat squints (crossed eyes). In 1987, Professor Jean Carruthers pioneered the use of BTA to treat facial wrinkles. BTA is now used to effectively treat a wide range of conditions including: excessive sweating (hyperhidrosis) – particularly in the under arm areas, incontinence of urine, muscle spasticity (particularly in children with cerebral palsy), migraine, facial tics, tremors etc.

Currently BTA is fully licensed in this Country for treatment of excessive sweating (see later), but for treatment of only vertical frown lines between the eyes. For treatment of other lines and wrinkles, BTA is obtained under license with permission from the Medicines and Healthcare products Regulatory Agency (MHRA) on a "meet the special need of a named patient" basis, when an equivalent product is not available.

Most frown and other facial lines are caused by excessive and repeated muscle activity. BTA injections relax the muscles reducing their ability to cause wrinkles. Repeated treatments with BTA help PREVENT excessive muscles contractions, minimizing facial aging by preventing the otherwise inevitable and progressive increase in depth and number of wrinkles, thus maintaining a more relaxed and youthful appearance.

BTA greatly reduces the often habitual ability to frown and produce other facial expressions. As a result over a period of time the habit is lost, which frequently means that the desired result can be achieved and maintained for longer periods of time before further treatment is needed.

Most people prefer treatment to produce a more relaxed and youthful appearance, whilst still maintaining a degree of facial expression. The blank, immovable facial appearances that can be produced are reserved for those people who prefer it.

Each person is an individual; the dose of BTA required varies greatly between individuals, depending on the size and strength of their muscles. Bigger / stronger muscles need a bigger dose of BTA to produce the required effect. As a result, men tend to need bigger doses than women; older people need less than younger people.

Experienced and well trained Practitioners will adjust the dose of BTA administered to meet the needs of each individual to account for these differences, plus the variation in dose required to meet the needs of facial asymmetry present in most people. It is important that treatment achieves the realistic and achievable expectations of each individual.

BTA is typically used in people aged 18 – 65. There are few people in whom treatment is not indicated. Contraindications include: disorders of muscles and nerves, pregnancy or breastfeeding, infection in the area to be treated, allergy to any of the ingredients of the injection, and some medications (e.g. warfarin, quinidine, some antibiotics such as lincomycin and ledermycin, St. Johns wort, ginkgo biloba). It is important to tell your Practitioner if you are taking ANY medication.

Treatment

Prior to treatment the number, site, and dose of each injection will be determined by your Practitioner, depending on the desired effect that you have indicated, providing your expectations are realistic and achievable. Administration takes approximately 5 – 10 minutes, is NOT painful, but may cause brief discomfort. A local anaesthetic is not required.

After Treatment

After treatment it is important that you do not lie down for at least 4 hours. Do not have a hot bath, shower or sauna, carry out strenuous exercise, eat spicy food, drink alcohol, apply creams, or massage the treated area for 24 hours. The reasons for these protective measures are to avoid infection being introduced into the skin, and also to avoid the BTA diffusing (spreading) under the skin to adjacent muscles not meant to be treated. It may be helpful to exercise the treated muscles by frowning and squinting etc during the first few hours after treatment to spread the BTA more evenly through the treated muscle.

Particularly when treating a person for the first time, experienced Practitioners tend to adopt a 'less rather than more' approach. This allows for the possibility of injecting further small amounts of BTA (if needed) to 'top up' the effect of treatment. Conversely, it is NOT possible to remove small amounts of BTA if excessive amounts have already been injected.

You should notice an improvement within 2 – 3 days but it can take up to 2 weeks for the full effect to occur. The effects of treatment usually last for 4 – 6 months until retreatment is required to maintain the desired effect.

An objective assessment of the benefits of treatment can be made by comparing differences between photographs taken immediately before and 2 weeks after treatment. Particularly following the first treatment with your Practitioner, it is important and helpful to attend for assessment about 2 weeks after treatment. This provides your Practitioner with valuable information which can be used to improve the results of subsequent treatments.

Providing treatments are spaced at intervals of NOT less than 12 weeks, repeated treatments tend to make the treated muscles progressively less active, producing longer lasting results and less frequent need for treatments.

It is known however that repeated treatments with BTA, at intervals of LESS than 12 weeks between each treatment, can result in the development of antibodies which, while not harmful, can make subsequent treatments ineffective

Side effects

The likelihood of side effects occurring is rare when the Practitioner pays careful attention to the muscular anatomy of your face and adjusts the injection sites and dose of BTA at each site accordingly. Accuracy of injection site position and precision of dose each play a vital role in achieving a natural result without side effects. Side effects are far more likely to occur in Practitioners who are poorly trained and/or inexperienced in the advanced injection techniques used to administer BTA.

Side effects are rare, always temporary, and almost invariably mild. The most common side effects are redness, bruising, bleeding, or swelling at the injection site. To help avoid these, treatment with aspirin, anti-inflammatory drugs and vitamin E should be avoided for 48 before and after treatment.

The following side effects have been reported following the use of BTA for facial wrinkles:

- Minor transient headaches.
- Transient numbness in the treated area.
- Flu-like symptoms.
- Temporary eye lid or brow drooping (ptosis).
- Slight feeling of nausea.
- Squint / double vision.
- Twitching of the eye.
- Facial pain.
- Weakness / tiredness in muscles near to the treated area.
- Mild irritation / inflammation of the surface of the eye.
- Difficulty closing the eye.
- Stinging from the injection.
- Dryness / watering of the eye.

Please note: you will be able to drive your car immediately after treatment.

At NO stage is a patient committed to going through with treatment. You are free to change your mind at any time, even after you have given valid informed consent. You will be made aware of the fixed total cost of your treatment BEFORE treatment is commenced.

If you have any queries or are concerned that you may be developing side effects please contact your Practitioner. There is no additional fee for this aftercare.

You will be provided with information about your treatment which you can forward to your General Practitioner if you wish.

Hyperhidrosis (excessive sweating).

Excessive sweating is a common complaint but is a topic rarely discussed, even between friends and relatives. There is a genetic component and excessive sweating frequently also occurs in other family members. Often the excessive sweating is focal and limited to specific areas, particularly the under arm areas, the palms of hands and soles of feet. Sufferers usually try to hide it because it is a persistent cause of social embarrassment, frequently requiring multiple changes of clothing during the day and often resulting in loss of self esteem and poor quality of life. Odour occurs only when sweat remains on the skin for a long enough period of time to allow increasing bacterial growth.

Sometimes antiperspirants containing aluminium salts are helpful but often cause skin irritation.

The Gold Standard treatment for this condition is BTA which, when injected into the skin, prevents transmission of nerve impulses (acetyl choline) from the nerve endings to the sweat glands. This usually dramatically reduces sweating for 3 – 6 months. With repeated treatments the effect of treatment usually lengthens, and it is not unusual for sufferers to be free of excessive sweating for more than a year before further treatment with BTA is required.

As the injections are very superficially placed in the skin, they do not affect muscle movements or sensation in the arms.

Normally treatment takes 2 – 14 days to be effective, but on VERY rare occasions there is no effect at all, even after repeated injections at higher doses. It cannot be predicted before injection whether this is going to happen or not, but I have personally never known treatment to be ineffective.

Dr John Oakley

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