# **BMJ** Best Practice

## Patient information from BMJ

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## Wrinkles

Almost everyone gets wrinkles as they get older. There's no cure for wrinkles but if they bother you there are treatments that can make your skin look and feel smoother.

We've looked at the best and most up-to-date research to produce this information. You can use it to help decide which treatments are right for you.

## What are wrinkles?

Wrinkles are lines or creases on the surface of your skin. They are a natural part of ageing. But other things can affect the way your skin looks, too.

- The most common cause of wrinkles is simply getting older. As you get older your skin gets thinner, more fragile, and less elastic (stretchy), so it tends to wrinkle and crease.
- Too much exposure to the sun's rays can also damage collagen and elastin the parts of your skin that keep it smooth, firm, and elastic.
- Smoking also causes wrinkles. The toxins in cigarette smoke stop your skin from producing as much new collagen. Collagen is a protein that makes up a large part of your skin.

## What are the symptoms?

Having wrinkles is not an illness. But wrinkles can alter the way you look and this may change the way you feel about yourself.

Wrinkles are often especially noticeable on your face, particularly across your forehead, between your eyebrows, and around your mouth. You may also get lines around the front of your neck and on your hands.

## What treatments work?

There are many treatments for wrinkles, ranging from creams to injections and facelifts. Many people use more than one treatment.

You should always read the labels on any treatments carefully to check for possible side effects. You can also ask your doctor about side effects, especially if you are thinking about some of the more complicated treatments.

The treatments that might suit you will depend on how visible your wrinkles are and how much they bother you, as well as on things such as:

- your age
- your skin's type and texture
- your skin's thickness
- how damaged your skin has been by the sun
- what you want from your treatment
- your lifestyle.

Treatments are likely to work better and for longer if you:

- don't smoke
- avoid exposing the treated areas to too much sun
- use high sun protection factor (SPF) sunscreen on treated areas when in direct sun.

#### Treatments for fine wrinkles

For fine wrinkles, or for wrinkles that are only visible with certain facial expressions (for example, 'laugh lines' when you smile), the most common treatments are retinoid creams. But there are other treatments, such as superficial (mild) chemical peels.

#### Retinoids

Research suggests that creams containing retinoids work better than other creams for preventing and treating fine wrinkles. Retinoids work by encouraging the replacement of the very top layer of skin, and by helping to repair damage to skin and small blood vessels.

Retinoids may cause side effects in some people, including skin irritation and lightening or, sometimes, darkening of the skin. These colour changes are temporary.

#### Antioxidants

Antioxidants include green tea and vitamins, and come as creams and sometimes as tablets. They are intended to help prevent damage caused by sun, stress, and air pollution.

#### Superficial chemical peels

Superficial chemical peels are creams containing acid. They work by destroying the very top layer of the skin, revealing the younger, less-damaged skin beneath. This treatment is similar to treatments used to rub away (exfoliate) old skin cells.

This treatment can cause side effects in some people, including dry skin or skin irritation.

#### Botulinum toxin injections (Botox)

This treatment works by affecting the nerves in the skin. This stops some of the muscles under the skin from moving normally. This means that the treated areas of skin don't wrinkle as much as usual when your face moves: for example, when you smile, frown, or laugh. One treatment of Botox lasts about six months. If you have had a chemical peel, you must allow the skin to recover completely before you use Botox.

Botox can cause side effects, including pain at the site of the injection, bruising, headache, muscle weakness, and short-term loss of some feeling at the site of the injection.

#### Treatments for deeper wrinkles

There are several treatments that can help with deeper wrinkles.

#### Medium-to-deep thickness chemical peels

These are stronger versions of the chemical peels used for fine wrinkles. They remove more skin than the superficial chemical peels. They can cause side effects, including cold sores, changes in skin colour (which are usually temporary), and scarring.

#### Fillers

Fillers are substances that can be injected under the skin to fill wrinkles and make the skin look smoother. There are many different kinds and they vary in how long their effects last.

Examples of fillers include collagen, hyaluronic acid, or your own fat. Each has different advantages and disadvantages. For example, some substances may carry a risk of allergic reaction. Using fat means your own fat has to be extracted first.

#### Treatments for very deep wrinkles

If you have very deep wrinkles there are treatments that can help improve the texture and appearance of the skin. But you should think carefully before having any of these treatments.

You will need a local anaesthetic for many of these treatments. It also takes several days or even weeks to recover from some of them.

#### Dermabrasion

This treatment involves a therapist scraping or sanding away several layers of skin using a hand-held tool called a dermabrader, allowing fresh skin to take its place. It takes between 7 and 10 days for the skin to heal. If you have the treatment, you will be given a local anaesthetic and another painkiller called a nerve block.

Dermabrasion can have side effects, including scarring and skin infections.

#### Microdermabrasion

This treatment is similar to dermabrasion but involves tiny crystals or other abrasive substances being blown onto the face to remove old and damaged skin.

#### Fractional photothermolysis

This is a type of laser therapy that only targets damaged skin. It's quite a new treatment, which possibly has fewer side effects than other similar treatments.

#### Laser ablation

This treatment uses laser therapy to remove several layers of skin.

As with other treatments that remove layers of skin, your skin will need time to recover after laser ablation.

#### Autologous fat grafting

With this treatment, a therapist removes fat from other parts of your body - usually your thighs, belly, or buttocks - and injects it under areas of wrinkled skin in your face to make it look smoother and less wrinkled. This treatment is often favoured by older people who lose weight as they age. This weight loss can cause skin on the face to look sunken or wrinkled in places. The difference between this and using fillers is that this technique only uses your own body fat, not any other substances.

#### Rhytidectomy (facelift)

This is another treatment that may be suitable for older people, as skin tends to sag as we age. This operation tightens and lifts the skin of the face that has sagged. But it is not a treatment for wrinkles or for the texture of the skin.

The results of facelifts can last longer than many other treatments. But a facelift is surgery and, like all operations, it carries risks, including infections. Side effects of facelifts can include scarring, bruising, hair loss, and nerve damage.

## Is there anything I can do to prevent wrinkles?

There's no scientifically proven way to prevent wrinkles. But there are a few things you can try.

- High-factor **sunscreens** help to protect your skin from the sun, so it's possible that they might help prevent wrinkles.
- Avoiding too much sun. It's important for your health to get some sun. But too much sun can play a part in causing skin cancer, not just wrinkles. So it makes good sense to be sensible in the sun and avoid getting sunburn. That means using sunscreens, covering up, wearing a hat, and staying out of strong sunshine. Some treatments for wrinkles need to be used alongside sun avoidance.
- **Stopping smoking**. Smoking speeds up skin ageing. So stopping smoking is important.

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