

Patient information from the BMJ Group

Bell's palsy

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Bell's palsy

If you wake up one morning and find your face droops on one side, you may have Bell's palsy. This can be alarming, but most people recover completely within a couple of months.

We've brought together the best research about Bell's palsy and weighed up the evidence about how to treat it. You can use our information to talk to your doctor and decide which treatments are best for you.

What is Bell's palsy?

If you have Bell's palsy, the muscles of your face suddenly become weak. This usually happens on just one side of the face. It means you can't move your face properly. You may find only half of your face moves when you smile, and you can't move one eyelid to open or close it.



The most common symptom of Bell's palsy is not being able to move the muscles on one side of your face.

Bell's palsy happens because one of the nerves sending messages from your brain to your face muscles has stopped working properly.

Some people who have a **stroke** also get weakness in the muscles of the face. But this is different from Bell's palsy. If you have a stroke, other parts of your body are affected too. And after a stroke you can usually move your forehead and eyelids.

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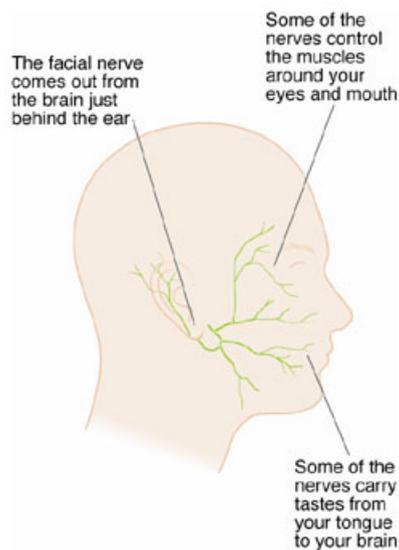
Bell's palsy happens when a nerve in your face is damaged.^[1] It's called the **facial nerve**. There's one on each side of your face.

Each facial nerve comes out from your brain through a small tunnel under your ear, and then divides into many branches. These branches are connected to the muscles that you use to blink, smile, and frown.

The nerves also go to the **glands** that make your tears and saliva, and they carry the sense of taste from your tongue.

We don't know for certain what causes Bell's palsy.

Doctors think there may be swelling (**inflammation**) around the facial nerve, which squashes the nerve as it passes through your skull. The nerve can't work properly until the inflammation goes. The messages the brain sends to your face muscles get interrupted. So, the muscles of your face become weak or paralysed (they can't move).



Facial nerves control the movement of the muscles in your face and send messages back to the brain.

Doctors think the swelling around the nerve is probably caused by the same viruses that cause **cold sores** and **chickenpox**.^[2] The virus that causes cold sores is called **herpes simplex virus**. The virus that causes chickenpox is called **herpes zoster virus**. Bell's palsy caused by herpes zoster virus is less common but can be more serious.^[3]

You might have had cold sores or chickenpox in the past. But some people carry these viruses in their bodies for a long time without getting any symptoms. Getting Bell's palsy does not mean you will go on to get cold sores or chickenpox.

Not everyone who has weak face muscles has Bell's palsy. About a third of people have another reason for their muscle weakness.^[4] These include:

- A stroke

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- An injury
- An ear disease
- Lyme disease (caused by a tick bite)
- A type of cancer (but this is rare).

Your doctor will examine you and ask you questions to rule out other possible reasons for your face muscles becoming weak. You won't be diagnosed with Bell's palsy until other problems have been ruled out.

There isn't a test that can tell you for certain whether you have Bell's palsy. But you can have investigations to look for other things that might make your face muscles weak. You might need to go to hospital for an MRI scan or a CT scan. And you might also need a test called electromyography (EMG) to see how badly your nerve is damaged.

To read more, see [Tests and investigations if you have Bell's palsy](#).

What are the symptoms of Bell's palsy?

If you have Bell's palsy, your face muscles suddenly become weak, usually on just one side of your face. You might find your face droops and you can't move one eyelid. This can be upsetting, but it is usually only temporary.

These are some of the symptoms you might get: ^[5] ^[1]

- Your face may droop on one side.
- You may find it difficult to close or open one eye.
- Your speech may be slurred.
- You may find it hard to keep saliva (spit) and drinks inside your mouth. So you might dribble from the affected side.
- Chewing food can be difficult on the affected side.
- You may get an ache behind your ear for a few days. But Bell's palsy isn't usually painful. ^[6]
- You may find loud sounds uncomfortable, and normal noises may sound louder than usual.
- You may lose your sense of taste on the side of your tongue that is affected.
- You may not be able to frown or smile.

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These symptoms might make you feel anxious and self-conscious. You might find communicating difficult if you can't use your face to smile or frown.

The weakness in your face muscles comes on quickly. It might get worse over the course of two days. ^[4]

How your face is affected depends on how serious the damage is to your nerve. The symptoms of Bell's palsy vary from person to person. You might have only a mild weakness. This is called **partial palsy**. Or you might not have any movement at all (paralysis) on one side of your face. This is called **complete palsy**. Some people get Bell's palsy (partial or complete) on both sides of their face, but this is rare.

If you can't close your eye properly, the eye may get dry and could get damaged. So you may need to use eye drops to keep it wet or surgical tape to keep it closed. Your doctor will be able to tell you what is most suitable for you. ^[5]

Bell's palsy only affects the nerves and muscles in your face. If you feel weak or numb in other parts of your body, you should tell your doctor.

How common is Bell's palsy?

Bell's palsy is the most common cause of sudden weakness of the face muscles.

About 1 in 60 people have Bell's palsy at some time in their life. ^[7]

You're most likely to get it when you are between the ages of 15 and 40. It's less common in children under 10 years of age. ^[7]

It affects both men and women equally. But women who are pregnant may be more likely to get Bell's palsy. ^[7]

What treatments work for Bell's palsy?

Most people completely recover from Bell's palsy whether or not they have treatment. But treatment with steroid tablets may improve your chances of recovering completely.

- Around 7 in 10 people get back to normal within three weeks, with or without treatment.
- If you do have treatment, a course of steroid tablets works best. The full name for these medicines is **corticosteroids**. They are similar to chemicals your body naturally makes to reduce inflammation. They are not the same as the anabolic steroids that some athletes and bodybuilders use.
- Researchers have also looked at antiviral tablets. But they don't seem to help.
- Some people have physiotherapy or an operation to relieve the pressure on the facial nerve. But we don't know how well these treatments work. Surgery also has serious risks.

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We've looked at the best research and given a rating for each treatment according to how well it works.

Treatment Group 1

Treatments for Bell's palsy

Treatments that are likely to work

- [Steroid tablets](#)

Treatments that need further study

- [Antiviral tablets as well as steroids](#)
- [Physiotherapy](#)
- [Surgery on the nerve in your face](#)

Treatments that are unlikely to work

- [Antiviral tablets alone](#)

Other treatments

We haven't looked at the research on the following treatment in as much detail as we've looked at the research on most of the treatments we cover. (To learn more, see Our method.) But we wanted to cover this treatment because it is sometimes carried out when Bell's palsy doesn't go away with normal treatment. You may find it helpful to discuss this with your doctor.

- [Surgery to help your eyes close](#)

What will happen to me?

You have a good chance of recovering from Bell's palsy within three weeks.

But some people are left with a slight weakness. And a few people are left with a more serious problem that can make their face look different: ^[4] ^[8]

- About 7 or 8 in 10 people make a complete recovery. This means their face muscles work properly and their face looks normal again.
- About 1 in 10 people find some of the muscles in their face remain weak.
- About 1 or 2 in 10 people are left with a more serious problem.

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If you have only a **partial palsy**, you have a very good chance of making a complete recovery. A partial palsy is when you still have some movement in whichever side of your face is affected. More than 9 in 10 people with partial palsy recover completely afterwards. ^[8]

More than 8 in 10 people are much better within three weeks of getting Bell's palsy. This is true whether or not they have treatment. ^[8] Most other people recover within five months.

If your symptoms haven't improved after three weeks, the nerve in your face may be permanently damaged. Or something else might be causing your face muscles to be weak. ^[4]

About 2 in 10 people get more long-term problems. For example:

- Your face may look different because your face muscles have shortened. Doctors call this a **contracture**.
- Different parts of your face may move together. For example, your chin may dimple each time you blink. This happens when the nerve in the face grows back in a different way.

If you get these problems, you may feel anxious and self-conscious. You might find communicating with people difficult if you can't smile and frown normally. You can talk to your doctor about further treatments. You may also find it helpful to have **counselling** to help you cope with the changes to your face.

You're more likely to have long-term problems if: ^[4] ^[8]

- You have no movement in the side of your face that is affected (a **complete palsy**). Only 6 in 10 people who have a complete palsy can use their face muscles fully again
- You are older than 60
- You have severe pain at the start
- You have **high blood pressure** or **diabetes**, or you're pregnant
- Tests show that your facial nerve is badly damaged
- You don't start to recover after six weeks.

If your Bell's palsy was caused by the herpes zoster virus, you might get a more serious condition called **Ramsay Hunt syndrome**. It's also called **herpes zoster oticus**. This can cause blistering inside your ear and on your tongue. You may also lose some hearing,

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either for a while or permanently.^[9] But this happens to fewer than 2 in 100 people who get Bell's palsy. Treatment for this condition is very similar to the treatment of Bell's palsy.

Treatments:

Steroid tablets

In this section

Taking steroid tablets may help you recover completely from Bell's palsy without getting long-term problems with your facial muscles, such as a changed appearance. You'll probably need to take the tablets for a week.

The name for the type of steroids used is **corticosteroids**. They are similar to chemicals your body naturally makes to reduce inflammation. They are not the same as the anabolic steroids that some athletes and bodybuilders use.

A common type of corticosteroid that has been tested in people with Bell's palsy is prednisolone (brand name Deltacortril).

Two big reviews of all the evidence showed:^[10] ^[11]

- Taking steroid tablets reduces the chance of getting long-term problems after Bell's palsy. The first review found 77 in 100 people who'd taken steroids recovered completely, compared with 67 in 100 people who didn't take steroids.
- People who took steroid tablets recovered faster.

Taking steroids for a long time and at a high dose can be harmful. The side effects include high blood pressure, diabetes, thinning of the bones, and stomach ulcers.^[12] You're unlikely to get these problems if you take steroids for only about a week. However, steroids can affect your mood after taking them for a short time. This can be serious. For example, some people get depressed or anxious, and in rare cases think about suicide. If you get any worrying symptoms while you're taking steroids, see a doctor straight away.

Antiviral tablets as well as steroids

In this section

Taking [steroid tablets](#) can help you recover completely from Bell's palsy. The full name for these medicines is **corticosteroids**. They are similar to chemicals your body naturally makes to reduce inflammation. They are not the same as the anabolic steroids that some athletes and bodybuilders use. Doctors also sometimes recommend taking **antiviral drugs** as well as steroids. However, it's not clear if this offers any extra benefit.

Bell's palsy happens because of inflammation in the nerves. Steroids are used to reduce the inflammation. It's possible that the inflammation is caused by a virus, so antiviral

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drugs are also sometimes prescribed. Antiviral drugs include aciclovir (Zovirax) and valaciclovir (Valtrex).

The research shows that:

- [Antiviral drugs on their own](#) don't work. ^[13] ^[11]
- Taking antiviral tablets on top of steroids may not give any extra benefit, compared with taking steroids alone. Different studies had different results, and any added benefit is likely to be small. ^[13] ^[11] ^[14] ^[15]

Antiviral drugs have side effects but they're usually mild. Stomach problems such as nausea, diarrhoea, and stomach pain are most often reported. ^[16] You'll need to take aciclovir five times a day. You don't need to take valaciclovir as often.

Physiotherapy

In this section

For this treatment you work with a specially trained therapist to strengthen the muscles of your face. This may make it easier for you to use your face muscles normally. Physiotherapy may also be called mime therapy or facial exercises.

One small study found that three months of physiotherapy helped reduce disability in people who'd had Bell's palsy for nine months. ^[17] They were able to move their lips better and their face felt less stiff. The study did not report any side effects from doing face exercises.

Two reviews of the research looked at several types of physiotherapy, including exercises and electrical stimulation of the nerves or muscles in the face. ^[18] ^[19] But it wasn't clear from the results whether these treatments helped or not. They may help people to move their face muscles more, but the evidence isn't strong.

Surgery on the nerve in your face

In this section

We don't know whether surgery on the nerve in your face can be helpful if you have Bell's palsy. There haven't been many good studies. There are also serious risks with this operation.

This operation is called **facial nerve decompression surgery**. It isn't usually done for Bell's palsy in the UK. ^[4]

This is a serious operation. It's done while you are asleep under **general anaesthetic**. The aim of surgery is to release pressure on the nerve. The surgeon cuts through the skull and takes away the bone around the nerve.

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One summary of the research found two studies looking at this surgery, which included 69 people with Bell's palsy. The summary found that around the same number of people recovered from Bell's palsy within a year, whether they had surgery or not. ^[20]

Operating on the facial nerve is risky. It could make you deaf in one ear. In one small study, this happened to 15 in 100 people who had the operation. ^[21]

Surgery to help your eyes close

In this section

If Bell's palsy leaves you with one eye that does not close properly, you might consider an operation to help. A surgeon can put a weight into your eyelid to help it close more easily. ^[4]

Antiviral tablets alone

In this section

Antiviral tablets on their own don't help you to recover from Bell's palsy. Studies show they don't work any better than a pretend (placebo) drug. They may even make you less likely to recover completely.

Bell's palsy happens because of inflammation in the nerves. It's possible that the inflammation is caused by a virus, so doctors have also tried using antiviral drugs as a treatment. Antiviral drugs include aciclovir (Zovirax) and valaciclovir (Valtrex).

However, two big studies of the research, looking at several thousand people, show that antiviral drugs alone don't work for Bell's palsy. ^{[13] [11]}

[Antiviral tablets are sometimes prescribed along with steroid tablets](#) . (The full name for these steroid medicines is **corticosteroids**. They are not the same as the anabolic steroids that some athletes and bodybuilders use.) But it's not clear whether taking antiviral medicines on top of steroids gives any extra benefit.

Further informations:

Tests and investigations if you have Bell's palsy

There is no test that can prove you have Bell's palsy. But your doctor may advise you to have a scan to rule out other conditions that might make your face muscles get weak. ^[4]

You may have a magnetic resonance imaging (MRI) scan or a computed tomography (CT) scan. Your doctor might ask you to have another test, called an electromyography test, to see what damage has been done to your facial nerve. This will probably only happen if you are considering having surgery on the nerve.

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MRI scan

This is used to check for any abnormalities that might be causing your symptoms. You are put inside a machine that uses a magnetic field and radio waves to make a detailed map of the tissues of your brain. This can take about an hour.

CT scan

A CT scan is a type of x-ray that uses a computer to get a more detailed picture of your head. It's a way to check for any problems that might be causing your symptoms.

Electromyography test

In this test, the doctor will put a needle into one of the muscles in your face. The needle is an electrode, and it can detect the electricity being transmitted to the muscle from the nerve. This will show up on a screen.

It might hurt a bit when the needle is put in, and your face might feel bruised and tender for a few days afterwards.

Glossary:

stroke

You have a stroke when the blood supply to a part of your brain is cut off. This damages your brain and can cause symptoms like weakness or numbness on one side of your body. You may also find it hard to speak if you've had a stroke.

gland

A gland is any group of cells in the body that makes and releases something for use by another part of the body. For example, the thyroid gland makes a hormone called thyroxine. This acts on receptors within cells. By acting on the receptors it gives the cells a message to speed up their metabolism and work harder.

inflammation

Inflammation is when your skin or some other part of your body becomes red, swollen, hot, and sore. Inflammation happens because your body is trying to protect you from germs, from something that's in your body and could harm you (like a splinter) or from things that cause allergies (these things are called allergens). Inflammation is one of the ways in which your body heals an infection or an injury.

chickenpox

Chickenpox is a common childhood illness caused by a virus. It usually leads to a fever, tiredness and an itchy rash. The virus can easily spread from person to person, and people usually get it about two weeks after they were near someone with the illness. About two days before the rash starts, you can give the virus to others. Chickenpox clears up on its own in most children, but adults and some children may get complications such as pneumonia, kidney problems or heart problems. In the UK, people aren't usually immunised against chickenpox unless they have an immune disease (or another disease that would make infection dangerous for them).

Lyme disease

Lyme disease is an infection transmitted by the bites of certain ticks. Lyme disease can lead to severe, flu-like symptoms, including fatigue, fever, headache, muscle pain and a rash. Lyme disease can be treated with antibiotics. In rare cases, if the infection is not treated, people can get more serious problems, such as arthritis in their joints and problems with their nervous system and heart.

MRI scan

A magnetic resonance imaging (MRI) machine uses a magnetic field to create detailed pictures of the inside of your body.

CT scan

A CT scan is a type of X-ray. It takes several detailed pictures of the inside of your body from different angles. CT stands for computed tomography. It is also called a CAT scan (computed axial tomography).

X-ray

X-rays are pictures taken of the inside of your body. They are made by passing small amounts of radiation through your body and then onto film.

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counsellor

A counsellor is a professional who is trained to help people, usually with the emotional part of their illness. Counsellors talk to people about their illness. They also suggest ways that people can make changes for the better.

high blood pressure

Your blood pressure is considered to be high when it is above the accepted normal range. The usual limit for normal blood pressure is 140/90. If either the first (systolic) number is above 140 or the lower (diastolic) number is above 90, a person is considered to have high blood pressure. Doctors sometimes call high blood pressure 'hypertension'.

diabetes

Diabetes is a condition that causes too much sugar (glucose) to circulate in the blood. It happens when the body stops making a hormone called insulin (type 1 diabetes) or when insulin stops working (type 2 diabetes).

stomach ulcer

A stomach ulcer is a break in the surface that covers the inside of your stomach.

general anaesthetic

You may have a type of medicine called a general anaesthetic when you have surgery. It is given to make you unconscious so you don't feel pain when you have surgery.

placebo

A placebo is a 'pretend' or dummy treatment that contains no active substances. A placebo is often given to half the people taking part in medical research trials, for comparison with the 'real' treatment. It is made to look and taste identical to the drug treatment being tested, so that people in the studies do not know if they are getting the placebo or the 'real' treatment. Researchers often talk about the 'placebo effect'. This is where patients feel better after having a placebo treatment because they expect to feel better. Tests may indicate that they actually are better. In the same way, people can also get side effects after having a placebo treatment. Drug treatments can also have a 'placebo effect'. This is why, to get a true picture of how well a drug works, it is important to compare it against a placebo treatment.

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