

## **Bell's palsy**

Bell's palsy is a weakness (paralysis) that causes nerve damage; it affects the nerve fibres that control the muscles of the face. It is due to a problem with the facial nerve. It develops suddenly, usually on one side of the face. The cause is not clear but most cases are probably due to a viral infection. Most people make a full recovery within 2–3 months. A course of steroid tablets started within 72 hours of it starting improves the chance of full recovery even further. You should protect your eye if you cannot close your eyelids fully.

### **What is Bell's palsy?**

Bell's palsy is a sudden and unexplained weakness or paralysis of the facial muscles on one side of the face. In most cases, the weakness is temporary and improves within a few months.

# Bell's palsy symptoms

- **Weakness of the face**, which is usually one-sided. The weakness normally develops quickly, over a few hours or so. You may first notice the weakness after getting up in the morning and so it may appear quite dramatic. It may gradually become worse over several days. The effects of the weakness vary, depending on whether the nerve is partially or fully affected. These include the following:
  - Your face may droop to one side. When you smile, only half of your face may move.
  - Chewing food on the affected side may be a problem. Food may become trapped between your gum and cheek. Drinks and saliva may escape from the side of your mouth.
  - You may not be able to close the eye on the affected side. This may cause a watery or dry eye.
  - You may not be able to wrinkle your forehead, whistle or blow out your cheek.
  - You may have some difficulty with speech, as the muscles in the side of the face help in forming some words. For example, words beginning with a P.
- **Most cases are painless** or cause just a mild ache. However, some people develop some pain near the ear which can last for a few days.
- **You may have increased sensitivity to sounds, such that loud sounds may be uncomfortable** and normal noises may sound louder than usual. This is because a tiny muscle in the ear may stop working.
- **You may lose the sense of taste** on the side of the tongue that is affected.

## Who gets Bell's palsy?

Anyone can develop Bell's palsy and it affects men and women equally. It most commonly occurs between the ages of 15 and 60 years. About 1 in 60 people have a Bell's palsy at some stage in their life.

## What causes Bell's palsy?

It is thought that inflammation develops around the facial nerve as it passes through the skull from the brain. The nerve then partly, or fully, stops working until the inflammation goes. If the nerve stops working, the muscles that the nerve is connected to also stop working.

The cause of the inflammation is not known but, in most cases, it is probably due to a viral infection. Viruses linked to Bell's palsy include:

- [Cold sore \(herpes simplex\) virus.](#)
- [Chickenpox \(varicella-zoster\) virus.](#)

Most people have chickenpox at some stage (usually as a child) and many people have cold sores. The virus does not completely go after you have chickenpox or a cold sore. Some particles of virus remain dormant (inactive) in the nerve roots. They do no harm there and cause no symptoms.

For reasons that are not clear, the virus may begin to multiply again (re-activate). This is often many months or years later. In some cases, the re-activated virus is thought to cause inflammation around the facial nerve to cause Bell's palsy. It is more common in people with diabetes and also in women who are pregnant.

## Does Bell's palsy affect the brain or other parts of the body?

No. Bell's palsy is a local problem confined to the facial nerve and facial muscles. If you have other symptoms, such as weakness or numbness in other parts of your body, there will be another cause and you should tell your doctor.

## Other conditions that may be confused with Bell's palsy

Bell's palsy is a common cause of a facial palsy. Less commonly, facial palsy is caused by other things that can damage or affect the facial nerve – for example:

- [A head injury.](#)

- [Sarcoidosis](#).
- [Lyme disease](#).
- Growths in the ear.
- [Tumours in the parotid gland](#).
- [Tumours in the brain](#).
- In some people who have a [stroke](#), facial weakness can develop.

With these conditions you are likely to have other symptoms too. This helps doctors to tell the difference between a Bell's palsy and other causes of a facial palsy. For example:

- With a stroke, the forehead muscles are not affected. Also, you are likely to have other nerves that are affected in addition to the facial nerve. If you think you are having a stroke, call 999/112/911. [See the separate leaflet called Stroke for more details](#).
- With tumours, the symptoms usually develop slowly – over weeks or months. This is unlike a Bell's palsy when symptoms develop quickly – often 'overnight'.
- Conditions such as sarcoidosis and Lyme disease tend to cause various other symptoms in addition to nerve palsies.

In particular, Bell's palsy is uncommon in children under 10 years old. Other conditions should be carefully ruled out in children who develop facial weakness.

## **How does Bell's palsy progress?**

Without treatment, full recovery is still likely and occurs in about 15 in 20 cases. With treatment, the chance of full recovery is improved (see below). In most people the function of the nerve gradually returns to normal.

Symptoms usually start to improve after about 2–3 weeks and have usually gone within two months. Sometimes it can take up to twelve months to recover fully.

## Complications of Bell's palsy

Some weakness may remain for good. However, it is often a slight weakness of part of the face and hardly noticeable. It is uncommon to have no improvement at all; however, some people are left with some degree of permanent facial weakness.

## How is Bell's palsy diagnosed?

When a doctor sees a patient with a sudden facial muscle weakness, he or she will aim to rule out other causes of the problem before diagnosing Bell's palsy. Most other causes can be ruled out by the absence of other symptoms and by a doctor's examination.

No tests may be needed. However, some tests are done in some situations. For example, in areas where Lyme disease is common (due to tick bites) then tests to rule out Lyme disease may be done. This is because a facial weakness is, rarely, the first indication of Lyme disease. Other tests may be advised if the diagnosis is not clear-cut.

## Bell's palsy treatment

As mentioned, there is a good chance of full recovery without any treatment. However, treatment with medication is usually advised to improve the chance of full recovery even more. Also, you need to protect your eye if your eyelids cannot close (see below).

### **Steroid tablets**

A course of [steroid tablets](#) is usually prescribed for about 10 days. The steroid tablet most commonly used is called [prednisolone](#). Steroids help to reduce inflammation, which is probably the reason they help. Serious side-effects from the short course of steroids are very unlikely to occur.

Roughly, from the studies, it seems that if you do not take steroids you have about a 15 in 20 chance of full recovery of the nerve function. But, if you take a steroid medicine, you have about a 17 in 20 chance of full recovery.

So, taking a course of steroids does not guarantee full recovery of the nerve function. However, it can increase the chance of full recovery compared to no treatment. You should start the course of steroids as soon as possible after the onset of symptoms; ideally, within 72 hours of symptoms starting. They may not have much effect if they are taken after this. There is no strong evidence for the benefit of steroid treatment for children with Bell's palsy.

### **Antiviral medicines**

As most cases of Bell's palsy are probably due to a viral infection, it seems logical that antiviral medicines may help. Some medicines can stop the chickenpox and cold sore virus from multiplying.

It is possible that taking a course of steroids plus a course of antiviral medicine may work a little better than taking a course of steroids alone. However, the research trials give conflicting results about this. If there is any benefit from this combination, it is likely to be small and NICE suggest that specialist advice is sought if antiviral medicines are being considered.

### **Eye protection**

If you cannot close your eyelids fully, the front of your eye is at risk of becoming damaged. Also, your tear glands may not work properly for a while and your eye may become dry. Dryness could cause damage, so treatment is needed to keep the eye moist.

Therefore, your doctor may advise one or more of the following until the eyelids and tear production recover:

- An eye pad or goggles to protect the eye.
- Eye drops to lubricate the eye during the day.
- Eye ointment to lubricate the eye overnight.
- An option of taping the upper and lower lid together when you are asleep. Other procedures are sometimes done to keep the eye shut until the eyelids recover.

### **If the facial weakness does not recover**

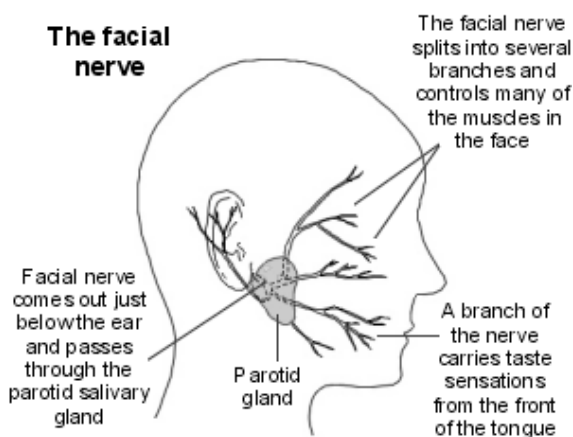
For the small number of people where the facial weakness does not recover fully and remains unsightly, some techniques may be considered. For example:

- Physiotherapy; a treatment called 'facial retraining' with facial exercises may help.
- Injections of [botulinum toxin \(Botox®\)](#) may help if spasm develops in the facial muscles.
- Various surgical techniques which can help with the cosmetic appearance.

## Will it happen again?

In most cases, a Bell's palsy is a 'one-off'. About 1 in 14 people who have a Bell's palsy can have further episodes sometime in the future, often several years afterwards. This may be more likely if you have close relatives who have also had Bell's palsy.

## What is the facial nerve?



You have a facial nerve (also called the seventh cranial nerve) on each side of your face. Each facial nerve comes out from your brain, through a small tunnel in your skull just under your ear.

The nerve splits into many branches that supply the small muscles of the face that you use to smile, frown, etc. It also supplies the muscles that you use to close your eyelids.

Branches of the facial nerve also take taste sensations from your tongue to your brain.

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## Further reading

- [Teixeira LJ, Valbuza JS, Prado GF](#); Physical therapy for Bell's palsy (idiopathic facial paralysis). Cochrane Database Syst Rev. 2011 Dec 7;(12):CD006283. doi: 10.1002/14651858.CD006283.pub3.
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- [Madhok VB, Gagyor I, Daly F, et al](#); Corticosteroids for Bell's palsy (idiopathic facial paralysis). Cochrane Database Syst Rev. 2016 Jul 18;7:CD001942. doi: 10.1002/14651858.CD001942.pub5.
- [Bell's palsy](#); NICE CKS, February 2023 (UK access only).
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