



Patient Education

Bell's Palsy (Basics)

by: *NeuroCare.AI*

What is Bell's Palsy?

Bell's palsy is a condition that causes one side of a person's face to become weak or droop. It is also known as idiopathic facial palsy. This can happen when one of the nerves that control the muscles in the face, or **cranial nerve VII (facial nerve)**, gets damaged or stops working. Damage to the facial nerve usually happens when the nerve becomes swollen or inflamed.

The facial nerve is responsible for the following:

- **Directs muscles** that control eye blinking and closing
- **Facial expressions** such as smiling
- **Carries nerve impulses** to the tear glands, the salivary glands, and the muscles of a small bone in the middle ear
- **Transmits taste sensations** from the tongue

Bell's palsy is the most common cause of facial paralysis, although its exact cause is unknown. Generally, Bell's palsy affects only one side of the face; however, in rare cases, it can affect both sides. Symptoms appear suddenly over a 48 to 72-hour period and generally start to improve with or without treatment after a few weeks, with the recovery of some or all facial function within six months. In some cases, residual muscle weakness lasts longer or may be permanent.

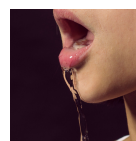


Symptoms of Bell's Palsy

Because the facial nerve has so many functions and is so complex, damage to the nerve or a disruption in its function can lead to many problems. The most common symptom is **sudden weakness of one side of the face**. Other symptoms include:



Drooping of one corner of the mouth



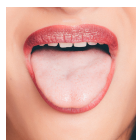
Drooling



Inability to close one eye completely



Facial pain or abnormal sensation



Altered taste

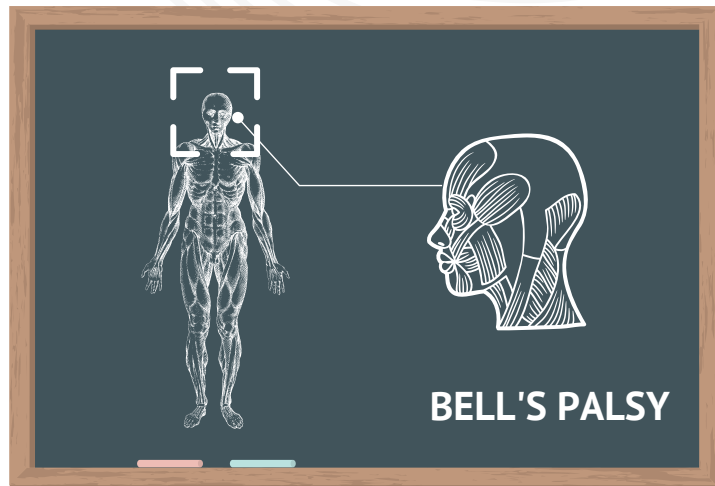


Intolerance to loud noise

It could be difficult to chew food on the affected side. Food residue may be trapped between gums and cheeks. Liquids may be spilled from the side of your mouth upon drinking.

Does Bell's palsy affect the brain?

No. The **facial nerve and facial muscles** are the only localized areas affected by Bell's palsy. There may be another cause if you experience additional symptoms like numbness or weakness in other areas of your body, so you should let your doctor know.

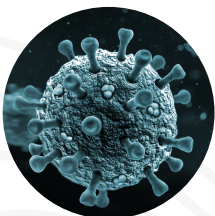


Triggers of Bell's Palsy

The cause of Bell's palsy is **unknown**. Swelling and inflammation of the cranial nerve VII is seen in individuals with Bell's palsy.

Some possible triggers could be:

- Reactivation of an existing (dormant) viral infection may cause the disorder
- Impaired immunity from:
 - Stress
 - Sleep deprivation
 - Physical trauma
 - Minor illness or autoimmune syndromes



Several other conditions can also cause facial paralysis, for example, brain tumor, stroke, myasthenia gravis, and Lyme disease. If no specific cause can be identified, the condition can be diagnosed as Bell's palsy.



People at Risk for Bell's Palsy

Bell's palsy affects about **40,000** people in the United States every year. **It can affect anyone** of any gender and age, but its incidence seems to be highest in those in the **15 to 45-year-old age group**.

Risk factors for Bell's palsy include:



Pregnancy



Preeclampsia



Obesity



Hypertension



Diabetes



Upper respiratory infections

Investigations to Diagnose Bell's Palsy

A diagnosis of Bell's palsy is made **based on clinical presentation**—acute facial nerve weakness or paralysis on one side of the face with onset in **less than 72 hours**—and by ruling out other possible causes of facial paralysis. There is no specific laboratory test to confirm diagnosis of the disorder.

Generally, a physician will **examine the individual for upper and lower facial weakness**. In most cases this weakness occurs to both upper and lower facial muscles, including the forehead, eyelid, and/or mouth.

Routine laboratory or imaging studies are **not necessary for most cases**, but sometimes they can help to confirm the diagnosis or rule out other diseases that can cause facial weakness.



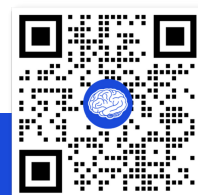
Electromyography



Blood tests



MRI or CT scan



Investigations to Diagnose Bell's Palsy

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- **Electromyography.** A test called electromyography (EMG, which uses very thin wire electrodes that are inserted into a muscle to assess changes in electrical activity that occur during movement and when the muscle is at rest) can confirm the presence of nerve damage and determine the severity and the extent of nerve involvement.
- **Blood tests.** Blood tests can sometimes help in diagnosing other concurrent problems such as diabetes and certain infections.
- **MRI or CT Scan.** Diagnostic imaging using magnetic resonance imaging (MRI) or a computed tomography (CT) scan can rule out other structural causes of pressure on the facial nerve (such as an artery compressing the nerve) and also check the other nerves.

Treatment of Bell's Palsy

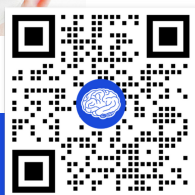
Medicines to reduce inflammation and swelling. For individuals with new-onset Bell's palsy, steroids are highly likely to be effective and can increase the probability of recovery of facial nerve function. In most instances, oral steroids should be started within 72 hours of symptom onset if possible, to increase the probability of good facial functional recovery. Some individuals with co-existing conditions may not respond well to or be able to take steroid drugs.

Medicines that help fight viruses. Due to the potential involvement of viral infection in the etiology of Bell's palsy, antiviral agents (in addition to steroids) may be prescribed and may increase the probability of recovery of facial function, although more studies are needed to clearly establish its benefits.

Pain reliever. Analgesics such as aspirin, acetaminophen, or ibuprofen may relieve pain. Because of possible drug interactions, individuals taking prescription medicines should always talk to their doctors before taking any over-the-counter drugs.

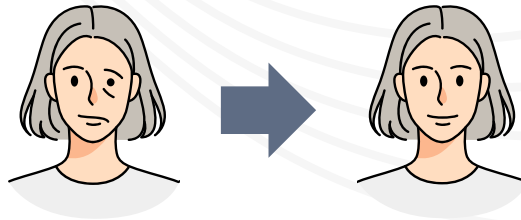
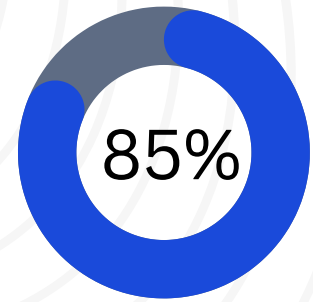
Protection for your eyes. Another important factor in treatment is eye protection. Bell's palsy can interrupt the eyelid's natural blinking ability, leaving the eye exposed to irritation and drying. Keeping the eye moist and protecting it from debris and injury, especially at night, is important. Lubricating eye drops, such as artificial tears or eye ointments or gels, and eye patches are also effective.

Other therapies such as physical therapy, facial massage, or acupuncture may provide a potential small improvement in facial nerve function and pain.



Prognosis of Bell's Palsy

The prognosis for individuals with Bell's palsy is **generally very good**. Clinical evidence of improvement occurs spontaneously within three weeks in 85% of cases, and most individuals eventually recover normal facial function.



Some individuals may be left with mild residual facial weakness or show moderate to severe deficits. Bell's palsy can have consequences from a previous injury or condition, such as involuntary mouth movements when trying to blink the eyes or incomplete recovery of facial muscle weakness resulting in trouble speaking or forming words (dysarthria).

What if the facial weakness does not recover?

For the small percentage of people with Bell's palsy whose facial weakness does not totally improve and remains unsightly, some approaches might be taken into consideration like the following:

Physiotherapy. Facial exercises used in a therapy called "facial retraining" may be helpful.

Botulinum toxin injection. Injections of botulinum toxin to facial muscles may help if spasm develops.

Surgery. Various surgical techniques can help with cosmetic appearance.

Visit a Doctor

If you have any symptoms of Bell's palsy, **see your doctor right away**. Effective treatments exist, but they **work best if you start them soon** after your symptoms start.

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