CONDITION

Bell palsy

Learn how Bell palsy causes sudden facial weakness, how it is diagnosed, and why early treatment and eye protection are important.

WHAT IT IS
Sudden one-sided facial muscle weakness or paralysis

BODY SYSTEM
Nervous system

MAIN SYMPTOMS
Facial drooping, difficulty smiling, inability to close one eye, taste changes

WHAT CAUSES IT
Unknown, possibly viral reactivation

HOW IT IS DIAGNOSED
Clinical assessment excluding other causes

MAIN TREATMENT
Corticosteroids and eye protection

CAN IT BE CURED?
Sometimes - recovery can remain incomplete

IS IT AN EMERGENCY?
Sometimes - with arm or leg weakness

LONG-TERM OUTLOOK
Usually improves over weeks to months, sometimes with lasting weakness

Overview

Bell palsy is a sudden weakness or paralysis of the muscles on one side of the face. It happens when the facial nerve, also called cranial nerve VII, becomes inflamed and does not work normally. This nerve controls facial movement and also helps with taste, tears, saliva, and sensitivity to sound.

Symptoms often develop over several hours and reach their worst within about three days. The weakness usually affects both the forehead and the lower face on the same side. A person may have trouble raising an eyebrow, smiling evenly, or closing one eye.

Bell palsy is diagnosed when no other clear cause of facial weakness is found. It is not caused by a stroke. However, stroke and several other conditions can also cause sudden facial weakness. It is not always possible to tell the difference without a medical assessment.

Seek emergency help for facial weakness accompanied by any of the following:

Even without these symptoms, new facial weakness should be assessed promptly. Treatment for Bell palsy is most helpful when started early, and an eye that cannot close may need immediate protection.

Most people improve over several weeks to months. Some have lasting weakness, unwanted facial movements, or eye problems.

- Arm or leg weakness or numbness
- Trouble speaking, understanding speech, or swallowing
- Sudden vision changes
- Severe dizziness, loss of balance, or difficulty walking
- A sudden, unusually severe headache
- Confusion or loss of consciousness

Symptoms

Bell palsy usually affects one side of the face. Complete paralysis can occur, but some people have only mild or moderate weakness.

Possible symptoms include:

Facial weakness from Bell palsy commonly involves the forehead. The person may be unable to wrinkle the forehead or raise the eyebrow on the affected side. However, forehead movement alone cannot safely rule out a stroke or another neurological problem.

A dry, poorly closing eye needs special attention. Normal blinking spreads tears across the surface of the eye and clears away small particles. Without this protection, the cornea-the clear front layer of the eye-can become dry or scratched.

Severe eye pain, increasing redness, light sensitivity, or blurred vision requires urgent medical or eye care. These symptoms may mean that the cornea has been injured.

- A drooping eyebrow or corner of the mouth
- Difficulty smiling, puffing out the cheeks, or keeping liquids in the mouth
- Inability to close one eye fully
- Reduced blinking
- Drooling

- Changes in taste, especially at the front of the tongue
- A dry or watery eye
- Dry mouth
- Pain around the ear, jaw, or side of the head
- Increased sensitivity to sound in one ear
- Trouble speaking clearly because the lips are weak

Causes and risk factors

The exact cause of Bell palsy is not fully understood. Researchers believe that inflammation makes the facial nerve swell. The nerve travels through a narrow bony channel in the skull, so swelling can compress it and interrupt its signals to the facial muscles.

Reactivation of a dormant virus may trigger this inflammation. Herpes simplex virus type 1, which commonly causes cold sores, is one suspected trigger. This does not mean that everyone with Bell palsy has an active cold sore or can pass Bell palsy to someone else. Bell palsy itself is not contagious.

Bell palsy has been associated with:

Several other illnesses can look like Bell palsy and must be considered during diagnosis. These include Lyme disease, shingles affecting the facial nerve, middle-ear disease, injury, tumors, and inflammatory or immune system disorders.

Ramsay Hunt syndrome is caused by reactivation of the virus that causes chickenpox and shingles. It may produce facial paralysis, significant ear pain, hearing or balance symptoms, and a blistering rash in or around the ear or mouth. The rash is not always obvious at first.

Lyme disease can cause facial weakness, sometimes on both sides. It is more likely when there has been possible tick exposure or when symptoms such as a spreading rash, fever, headache, joint pain, or neck stiffness are present.

- A recent upper respiratory illness
- Diabetes
- Pregnancy, particularly later in pregnancy or shortly after delivery
- A previous episode of Bell palsy
- A family history of the condition

Diagnosis

There is no single test that confirms Bell palsy. A clinician makes the diagnosis from the pattern and timing of symptoms, the physical examination, and the absence of a more likely cause.

The clinician may ask:

The examination usually checks movement in different parts of the face, including the forehead, eyelids, cheeks, and mouth. The clinician may examine the ears, skin, eyes, and mouth. Strength, sensation, coordination, and other cranial nerves may also be tested.

Routine blood tests or scans are not usually needed when the symptoms and examination are typical of Bell palsy. Testing may be appropriate if the weakness developed gradually, affects both sides, has returned, or is accompanied by other neurological findings. Tests may also be considered when Lyme disease, an infection, a tumor, or another specific cause is possible.

Magnetic resonance imaging, or MRI, provides detailed pictures of nerves and nearby tissues. Electrical nerve tests measure how well the facial nerve and muscles are working. These tests are generally reserved for severe, unusual, progressive, or persistent cases.

- When the weakness began and how quickly it progressed
- Whether there are symptoms in an arm or leg
- Whether speech, swallowing, hearing, balance, or vision has changed
- Whether there is ear pain or a rash
- Whether there has been recent illness, tick exposure, injury, or surgery
- Whether facial weakness has happened before

Treatment and management

Treatment focuses on improving facial nerve recovery and protecting the eye. Because treatment decisions can be time-sensitive, new facial weakness should be evaluated as soon as possible.

Corticosteroids like prednisone or hydrocortisone

An oral corticosteroid is the main medicine used for Bell palsy. Corticosteroids reduce inflammation around the facial nerve. Evidence shows that they improve the chance of facial recovery, especially when treatment begins within 72 hours after symptoms start.

A clinician must decide whether corticosteroids are appropriate. The decision may be affected

by pregnancy, diabetes, other health conditions, and medicines the person already takes. People should not start leftover steroids or change a prescribed course without medical advice.

Antiviral medicines

An antiviral medicine may sometimes be added to a corticosteroid, particularly when facial weakness is severe or a herpes-family virus is suspected. Any additional benefit for routine Bell palsy appears to be modest and is not certain.

Antiviral medicine alone has not been shown to provide the same recovery benefit as corticosteroid treatment. Suspected shingles involving the facial nerve may require a different treatment approach and prompt evaluation.

Eye protection

Eye care is essential when the eyelid does not close fully. A clinician may recommend:

Taping must be done without scratching the eye or placing adhesive directly on its surface. A clinician, pharmacist, or eye professional can demonstrate a safe method.

Contact lenses may further irritate a dry or exposed eye and may need to be avoided until eyelid closure returns. People who cannot protect the eye adequately may need urgent assessment by an ophthalmologist or optometrist.

Pain and facial rehabilitation

Pain around the ear or jaw may improve with nonprescription pain medicine, if it is safe for the individual. A pharmacist or clinician can help account for health conditions, pregnancy, allergies, and interactions with other medicines.

Facial exercises or therapy may help some people with severe or persistent weakness. A therapist with experience in facial nerve disorders can teach controlled movements and relaxation techniques. Forceful, repetitive exercises may increase muscle tightness or unwanted linked movements in some cases.

Electrical stimulation has not been established as a routine treatment. Surgery to decompress the facial nerve is also not routinely recommended because its benefit is uncertain and it can cause serious harm.

- Lubricating eye drops during the day
- Lubricating eye ointment at night
- Glasses or sunglasses to protect against wind and debris
- A moisture chamber or another protective covering
- Carefully closing or taping the eyelid for sleep

Complications

The most immediate concern is injury to the eye. Incomplete eyelid closure can lead to dryness, inflammation, infection, or a corneal scratch or ulcer. Prompt lubrication and protection lower this risk.

Some people do not regain full facial movement. Long-term effects can include:

Synkinesis is a possible complication during nerve healing. It means that one intended movement triggers another movement. For example, the eye may narrow while smiling, or the corner of the mouth may move when blinking. Specialized facial therapy and, in selected cases, other treatments may help.

Some people develop tears while eating, sometimes called "crocodile tears." This can happen when healing nerve fibers reconnect to the wrong tear-producing pathway.

Changes in facial movement can also affect confidence, social interaction, and emotional well-being. These effects are valid reasons to discuss rehabilitation or mental health support with a healthcare professional.

- Residual weakness or facial asymmetry
- Tightness or muscle contracture
- Facial spasms
- Difficulty eating, drinking, or speaking clearly
- Ongoing changes in tear production or taste

Follow up

Routine follow-up may be used to check facial movement, eye closure, medicine effects, and signs of recovery. Improvement may begin within weeks, but nerve healing can continue for months.

Contact the treating clinician sooner if symptoms worsen, new neurological symptoms appear, or the diagnosis seems uncertain. A new rash around the ear, increasing ear pain, hearing loss, severe dizziness, fever, or weakness on both sides of the face also deserves prompt reassessment.

Arrange urgent eye care for eye pain, redness, light sensitivity, blurred vision, or continued difficulty protecting the eye.

Specialist assessment may be appropriate if facial weakness progresses beyond the expected

early period, returns after recovery, or has not begun to improve. Clinical guidance also recommends reassessment or referral when recovery remains incomplete after about three months. Depending on the findings, the person may be referred to an ear, nose, and throat specialist; neurologist; eye specialist; or facial rehabilitation therapist.

Call emergency services if facial weakness occurs with arm or leg weakness, speech difficulty, severe imbalance, confusion, sudden vision loss, or another possible stroke symptom.

Sources

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