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EAR, NOSE AND THROAT, HEAD AND NECK SURGEONS

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# Bell's Palsy

Bell's palsy is a paralysis of cranial nerve VII (the facial nerve)) resulting in inability to control facial muscles on the affected side. Named after Scottish anatomist Charles Bell, who first described it, Bell's palsy is the most common acute mononeuropathy (disease involving only one nerve), and is the most common cause of acute facial nerve paralysis.

## Causes of Facial Palsy

Bell's palsy occurs when the nerve that controls the facial muscles is swollen, inflamed, or compressed, resulting in facial weakness or paralysis. Exactly what causes this damage, however, is unknown. Several conditions can cause a facial paralysis, e.g. brain tumor, stroke, and Lyme disease. However, if no specific cause can be identified, the condition is known as Bell's Palsy. All these other conditions **must** be excluded before it is called Bell's Palsy.

Most scientists believe that a viral infection such as viral meningitis or the common cold sore virus – herpes simplex – causes the disorder. They believe that the facial nerve swells and becomes inflamed in reaction to the infection, causing pressure within the Fallopian canal and leading to an infarction (the death of nerve cells due to insufficient blood and oxygen supply). In some mild cases (where recovery is rapid), there is damage only to the myelin sheath of the nerve. The myelin sheath is the fatty covering-which acts as an insulator-on nerve fibres in the brain.
The disorder has also been associated with influenza or a flu-like illness, headaches, chronic middle ear infection, high blood pressure, diabetes, sarcoidosis, tumors and trauma such as skull fracture or facial injury.

## Symptoms

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. Symptoms of Bell's palsy, which vary from person to person and range in severity from mild weakness to total paralysis, may include twitching, weakness, or paralysis on one or both sides of the face, drooping of the eyelid and corner of the mouth, drooling, dryness of the eye or mouth, impairment of taste, and excessive tearing in one eye. Most often these symptoms, which usually begin suddenly and reach their peak within 48 hours, lead to significant facial distortion.

Other symptoms may include pain or discomfort around the jaw and behind the ear, ringing in one or both ears, headache, loss of taste, hypersensitivity to sound on the affected side, impaired speech, dizziness, and difficulty eating or drinking.

## Who gets it?

It affects men and women equally and can occur at any age, but it is less common before age 15 or after age 60. It disproportionately attacks pregnant women and people who have diabetes or upper respiratory ailments such as the flu or a cold.

**Treatment**

- There is no cure or standard course of treatment for Bell's palsy. The most important factor in treatment is to eliminate the source of the nerve damage.

- Bell's palsy affects each individual differently. Some cases are mild and do not require treatment as the symptoms usually subside on their own within 2 weeks. For others, treatment may include medications and other therapeutic options.
- Recent studies have shown that steroids are an effective treatment for Bell's palsy and that an antiviral drug such as acyclovir-used to fight viral infections-combined with an anti-inflammatory drug such as the steroid prednisone-used to reduce inflammation and swelling-may be effective in improving facial function by limiting or reducing damage to the nerve. Analgesics such as aspirin, acetaminophen, or ibuprofen may relieve pain. Because of possible drug interactions, patients taking prescription medicines should always talk to their doctors before taking any over-the-counter drugs.

**Eye Care**

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. Therefore, keeping the eye moist and protecting the eye 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. You may be requested to see an ophthalmologist to check your eye.

**Physical therapy:**

To stimulate the facial nerve and help maintain muscle tone may be beneficial to some. Facial massage and exercises may help prevent permanent contractures (shrinkage or shortening of muscles) of the paralyzed muscles before recovery takes place. Moist heat applied to the affected side of the face may help reduce pain. I.e. a wheat bag/heat pack

Other therapies that may be useful for some individuals include relaxation techniques, acupuncture, electrical stimulation, biofeedback training, and vitamin therapy (including vitamin B12, B6, and zinc), which may help nerve growth.

**Surgery:**

In general, decompression surgery for Bell's palsy -to relieve pressure on the nerve-is controversial and is seldom recommended. On rare occasions, cosmetic or reconstructive surgery may be needed to reduce deformities and correct some damage such as an eyelid that will not fully close or a crooked smile.

**Prognosis:**

The prognosis for individuals with Bell's palsy is generally very good. The extent of nerve damage determines the extent of recovery. Improvement is gradual and recovery times vary. With or without treatment, most individuals begin to get better within 2 weeks after the initial onset of symptoms and most recover completely, returning to normal function within 3 to 6 months. For some, however, the symptoms may last longer. In a few cases, the symptoms may never completely disappear. In rare cases, the disorder may recur, either on the same or the opposite side of the face.