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Ulnar nerve dysfunction

Neuropathy - ulnar nerve; Ulnar nerve palsy

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Ulnar nerve dysfunction is a problem with the ulnar nerve, which travels from the shoulder to the hand and allows movement or sensation in the wrist or hand.

Causes, incidence, and risk factors

Damage to one nerve group, such as the ulnar nerve, is called a mononeuropathy. Mononeuropathy means there is nerve damage to a single nerve. Both local and body-wide disorders may damage just one nerve.

The usual causes of mononeuropathy are:

- An illness in the whole body that damages a single nerve
- Direct injury to the nerve
- Long-term pressure on the nerve
- Pressure on the nerve caused by swelling or injury of nearby body structures

Ulnar neuropathy occurs when there is damage to the ulnar nerve, which travels down the arm. The ulnar nerve is near the surface of the body where it crosses the elbow. The damage destroys the nerve covering (myelin sheath) or part of the nerve (axon). This damage slows or prevents nerve signaling.

Damage to the ulnar nerve can be caused by:

- Long-term pressure on the elbow
- An elbow [fracture](#) or [dislocation](#)

Temporary pain and tingling of this nerve can occur if the elbow is hit, producing the experience of hitting the "funny bone" at the elbow.

Long-term pressure on the base of the palm may also damage part of the ulnar nerve.

In some cases, no cause can be found.

Symptoms

- Abnormal sensations in the little finger and part of the ring finger, usually on the palm side
- Loss of coordination of the fingers
- [Numbness](#), decreased sensation
- Pain
- Tingling, burning sensation
- [Weakness](#) of the hand

Pain or numbness may awaken you from sleep. Activities such as tennis or golf may make the condition worse.

Signs and tests

A careful history of when the problem started and what you might have been doing that could have injured the nerve is important.

An exam of the hand and wrist can reveal ulnar nerve dysfunction. Signs may include:

- "Claw-like" deformity (in severe cases)
- Difficulty moving the fingers
- Wasting of the hand muscles (in severe cases)
- Weakness of hand flexing

Tests may be needed, depending on your history, symptoms, and findings from the physical exam. These tests may include:

- Blood tests
- Imaging scans
- Nerve conduction tests
- Recording of the electrical activity in muscles (EMG)
- X-rays

Treatment

The goal of treatment is to allow you to use the hand and arm as much as possible. The cause should be identified and treated. Sometimes, no treatment is needed and you will get better on your own.

Medications may include:

- Over-the-counter pain relievers or prescription pain medications to control pain (neuralgia)
- Other medications, including gabapentin, phenytoin, carbamazepine, or tricyclic antidepressants such as amitriptyline or duloxetine, to reduce stabbing pains
- Corticosteroids injected into the area to reduce swelling and pressure on the nerve

A supportive splint at either the wrist or elbow can help prevent further injury and relieve the symptoms. You may need to wear it all day and night, or only at night.

Surgery to relieve pressure on the nerve may help if the symptoms get worse, or there is proof that part of the nerve is wasting away.

Other treatments may include:

- Physical therapy exercises to help maintain muscle strength
- Occupational counseling, occupational therapy for changes you can make at work, or retraining

Expectations (prognosis)

If the cause of the dysfunction can be found and successfully treated, there is a good chance of a full recovery. In some cases, there may be partial or complete loss of movement or sensation. Nerve pain may be severe and last for a long period of time.

If pain is severe and continues, see a pain specialist to be sure you have access to all pain treatment options.

Complications

- Deformity of the hand
- Partial or complete loss of sensation in the hand or fingers
- Partial or complete loss of wrist or hand movement
- Recurrent or unnoticed injury to the hand

Calling your health care provider

Early diagnosis and treatment increase the chance of curing or controlling symptoms.

Call your health care provider if:

- You have symptoms of ulnar nerve dysfunction
- You have been injured and you experience persistent tingling, numbness, or pain down your forearm and the 4th and 5th fingers.

Prevention

Avoid prolonged pressure on the elbow or palm. Casts, splints, and other appliances should always be examined for proper fit.

References

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