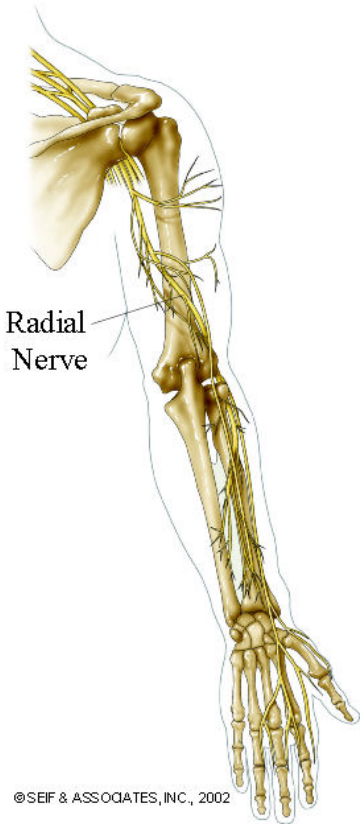
Wrist Drop, Radial Nerve Palsy

Wrist drop is also known as radial nerve palsy. It is a condition in which you can not extend your wrist. This means if you are standing with your elbow bent at a right angle and with the top of your hand pointed at the ceiling, you can not hold your hand up. It falls toward the floor.



This action of extending your wrist is caused by the muscles in the back of your arm. These muscles are controlled by the radial nerve. This means that anything affecting the radial nerve so it can not tell the muscles how to work will cause wrist drop. This is medically called radial nerve palsy. Also the radial nerve is a motor and sensory nerve so anything affecting it causes problems with movement and feeling.

SYMPTOMS

The wrist drop is an obvious problem, but there may also be numbness in the back of the arm, forearm or hand which provides feeling in these areas by the radial nerve. There can be difficulty straightening out the elbow in addition to the wrist. There may be numbness, tingling, pain, burning sensations or other abnormal feelings. Symptoms depend entirely on where the radial nerve is injured.

CAUSES

Some more common causes of wrist drop are:

- A break (*fracture*) of the large bone in the arm between your shoulder and your elbow (*humerus*). This is because the radial nerve winds around the humerus.
- Improper use of crutches causes this because the radial nerve runs through the armpit (*axilla*). Crutches which are too long can put pressure on the nerve. This is sometimes called crutch palsy.
- Falling asleep with your arm over a chair and supported on the back is a common cause. This is sometimes called Saturday Night Syndrome.
- Wrist drop can be associated with lead poisoning because of the effect of lead on the radial nerve.

DIAGNOSIS

- Wrist drop is obvious just by looking at it. Your caregiver may make the diagnosis by taking your history and doing a couple tests.
- One test which may be done is a nerve conduction study. This test shows if the radial nerve is conducting signals well. If not, it can determine where the nerve problem is.
- Sometimes x-ray studies are done. Your caregiver will determine if further testing needs to be done.

TREATMENT

- Usually if the problem is found to be pressure on the nerve, simply removing the pressure will allow the nerve to go back to normal in a few weeks to a few months. Other treatments will depend upon the cause found.
- Only take over-the-counter or prescription medicines for pain, discomfort, or fever as directed by your caregiver.
- Sometimes seizure medications are used.
- Steroids are sometimes given to decrease swelling if it is thought to be a possible cause.

PROGNOSIS

Usually when the palsy has come simply from putting pressure on the nerve, it is completely reversible. This may not be possible if the problem has been neglected for a long time.

POSSIBLE COMPLICATIONS INCLUDE:

- A permanent palsy with loss of wrist or hand movement.
- A permanent loss of sensation in the hand.
- A mild deformity of the hand from loss of muscle use.

FOLLOW UP WITH YOUR CAREGIVER AS DIRECTED.

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