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## PINCHED NERVES CAN HAPPEN ANYWHERE

Alan C. Dang, MD, and Craig M. Rodner, MD. Unusual Compression Neuropathies of the Forearm, Part I: Radial Nerve. In Journal of Hand Surgery. December 2009

### Setting the scene:

The aim of this study is to describe and present Radial nerve compression in three peripheral areas in the arm: posterior interosseus nerve syndrome, radial tunnel syndrome, and superficial radial nerve compression. Excel Physical Therapy patients who are presented with arm pain, or paralysis, may find this article of interest, but should take caution that there is the possibility of nerve pinching to be occurring more proximally, like in the neck area.

### What did they do?

Peripheral nerves to the arms and legs can get compressed, pinched, or entrapped in soft tissue causing sensory symptoms of pain, numbness, and tingling. This condition is called a peripheral neuropathy. If the motor portion of the nerve is affected, muscle weakness and paralysis called palsy can occur. Carpal tunnel syndrome and sciatica are probably the two most common peripheral neuropathies. But any of the peripheral nerves can be affected and any place along the nerve as it leaves the spinal cord and travels down the arm or leg. In this first part of a two-part review on compression neuropathies, three more unusual compression neuropathies are presented. All three conditions are the result of one particular nerve being affected: the radial nerve in the forearm. Compression of the radial nerve is fairly uncommon and can present as posterior interosseous nerve syndrome, radial tunnel syndrome, or superficial radial nerve compression. To help us understand these syndromes, the authors provided a detailed review of the radial nerve anatomy as it travels down the arm. The nerve gets started up near the neck as part of a group of nerves called the brachial plexus. Once it leaves the brachial plexus, the radial nerve travels down from the neck through the shoulder area to the upper arm and then down the forearm to the wrist and hand. Loss of blood supply for any reason, direct injury to the nerve, or compression from swelling, scar tissue, or tumors can lead to changes in the nerve causing a peripheral neuropathy. Any local change of this sort can affect the tiny nerve fibers that raise an alarm sending pain messages along the nerve to the spinal cord and then up to the brain. Mild pressure can be treated conservatively without surgery. The patient may begin with a trial of rest and anti-inflammatory medications. Sometimes the treatment

is as simple as removing a wristwatch or bracelet that is pressing on the nerve. The surgeon may follow up with steroid injections to confirm the diagnosis and/or help treat any of these problems that persist after the initial period of conservative care. A hand therapist will advise the patient in ways to modify activities and positions of the arm to protect the nerve. The therapist may provide a splint for the patient to wear to accomplish the same thing. Sometimes special neural mobilization techniques can be used by the therapist to release tension from around the nerve and restore a more natural sliding and gliding of the nerve in its sheath (lining around the nerves) needed during arm motion. More severe conditions can lead to deterioration of the nerve and may require surgical intervention. Surgery to release pressure from around the nerve is called nerve decompression. If there is a cyst, tumor, or scar tissue pressing on the nerve, the surgeon will remove it. The basic decompressive surgical procedure doesn't change much with these syndromes.

### Take away message:

The rehabilitation and treatment of this problem ,I think it can helps is to do neuro-dynamics and nerve mobilization to release the tension and compression on the nerve that happens due to compression on any level of this nerve ,that can used as test or treatment also .