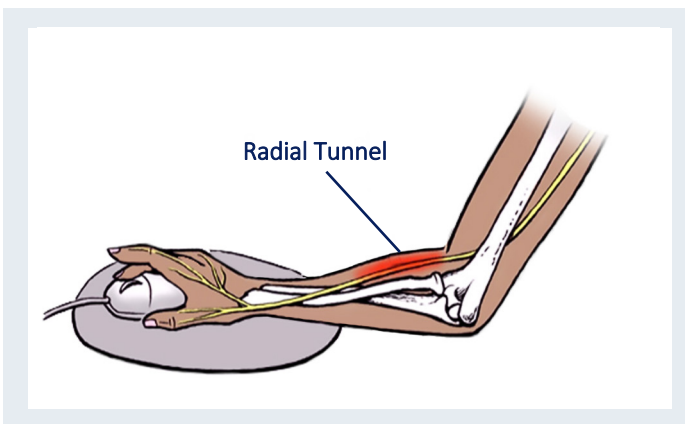


Radial Tunnel Syndrome

WHAT IS RADIAL TUNNEL SYNDROME, AND HOW DOES IT HAPPEN?

Radial tunnel syndrome can also be called posterior interosseous compression neuropathy. Radial tunnel syndrome happens when a branch of the radial nerve (PIN) is squeezed where it passes through a tunnel near the elbow. The radial nerve is one of the three main nerves in the arm. It runs from the neck, through the back of the upper arm, crosses the outside of the elbow and goes down the forearm to the hand. At the elbow, the radial nerve enters a narrow tunnel formed by muscles, tendon, and bone. This is called the radial tunnel.



Radial tunnel syndrome causes a dull aching pain on the top of the forearm that can radiate to the outside of the elbow, or the back of the hand. The pain can sometimes feel sharp, or like stabbing with movement. The pain happens most often when you straighten your wrist or fingers. Radial tunnel syndrome can cause fatigue and weakness in the forearm muscles and weakness in the wrist. Your grip may feel weak.

The pain may get worse with gripping and turning your forearm, having your elbow in one position for a long time, or when using your arm with a repetitive pushing or pulling movements, especially if you are bending your wrist. For example playing golf or using a screwdriver. Sometimes a direct blow or pressure to the forearm can also cause pain.

HOW IS RADIAL TUNNEL SYNDROME TREATED?

Hand Therapy

Your hand therapist will ask you questions about your pain, what activities affect the pain and will also discuss your work, sport and hobbies. They will look at your elbow and wrist movements and measure how strong your grip is. From this your hand therapist can tell you if you have radial tunnel syndrome and discuss how best to manage it.

Your hand therapy treatment may include

- Using a wrist splint to rest the elbow and wrist.
- Anti-inflammatory medications may help to reduce pain and swelling.

- Heat and massage may help to reduce your pain.
- Gentle exercises to mobilise the muscles and nerve.
- Specific exercises to gradually stretch and strengthen the forearm muscles and wrist.
- Advice about how to change the way you use your arm in work or sport activity to help reduce the pain.

Surgery

Usually surgeons recommend surgery only when things do not resolve with time and hand therapy. The operation is called a radial tunnel release. In this operation, the surgeon opens all compressive sites within the radial tunnel. This makes the radial tunnel bigger so the radial nerve has more space. After the operation, new tissue grows across the split, and builds a permanently larger tunnel. The immediate results of surgery for radial tunnel syndrome vary. Even though the pressure has been released, the nerve needs time to recover and heal which can take many months.



WHAT CAN I EXPECT FROM MY REHABILITATION?

When treatment is started early symptoms can settle in 6 - 12 weeks with a new injury or in milder cases. It can sometimes take a few months for things to completely resolve. Often it is good to continue the modifications you have learnt to prevent the symptoms from developing again.

Do

- Remember to wear your splint.
- Avoid or modify the activities that bring on your symptoms.
- Rest your arm between activities, especially if you are doing anything heavy or repetitive.
- Use ice, heat or pain relief to manage your pain.

Do Not

- Do lots of forceful gripping at one time.



Radial Tunnel Syndrome

WHAT SHOULD I LOOK OUT FOR?

- Look out for activity that causes pain, swelling or numbness in your hand and arm, try to avoid it, and tell your hand therapist.
- If your splint is uncomfortable or rubbing book an appointment to see your hand therapist.
- If things are getting worse book an appointment to see your hand therapist.
- Any flare up of symptoms or your pain getting worse, increased weakness with gripping or if you become aware that you are not able to straighten your wrist or fingers, and have difficulty turning your forearm palm up, book an appointment to see your hand therapist.

WHAT WILL HAPPEN IF I DO NOT HAVE TREATMENT?

The muscles supplied by the radial nerve, which turn the hand palm up, lift up the wrist, and straighten out the fingers, and thumb, will become weak. You will continue to have pain in your forearm. In most cases pain will get worse with time and become much harder to treat. This will affect you in everyday tasks. Treatment is more effective if started within the first few months of noticing your symptoms.

CONTACT DETAILS AND REFERENCES

Your hand therapist is

Merivale Hand Clinic (03) 3559775

<http://my.clevelandclinic.org/services/orthopaedics-rheumatology/diseases-conditions/hic-radial-tunnel-syndrome>

<http://www.houstonmethodist.org/orthopedics/where-does-it-hurt/elbow/radial-tunnel-syndrome/>

<http://www.paindoctorfortlauderdale.com/radial-tunnel-syndrome-2/>

Naam, N. H., & Nemani, S. (2012). Radial tunnel syndrome. *Orthopedic Clinics of North America*, 43(4), 529-536.