

Intersection Syndrome

Introduction Intersection Syndrome is a painful condition that affects the thumb side of the forearm where two muscles cross over - or intersect - two underlying wrist tendons.

Anatomy The upper muscle group tendons connect with the thumb to pull it away from the hand - and the lower set of tendons bends back, or extends, the wrist.



There are many bursae all over the body where tissues must move against one another. Intersection syndrome is often confused with another condition called DeQuervain's tenosynovitis, which is an irritation of two of the tendons at the wrist also, but in a different location.

Causes The major cause of intersection syndrome is overuse of the wrist and hand from wringing, grasping, turning and twisting type motions. The repeated movements of the tendons rubbing against one another eventually causes irritation of the tenosynovium surrounding the tendons. This condition is referred to as tenosynovitis. The synovium loses its slippery coating and the two sets of tendons begin to rub together as they move. Most of the reported cases involve a combination of heavy and repetitive use of the wrist.

Symptoms The constant friction causes pain and swelling in the tenosynovium surrounding the tendons. This can cause a restriction in the movement of the tendons. A squeaking sound (referred to medically as crepitus) may be heard as the tendons attempt to move against one another. Crepitus is actually something you can feel better than you can hear. If you place your fingers over the skin above the intersection point and move the thumb there is a slight vibration - like two rough surfaces moving against one another. Swelling and redness may occur over the area where the two tendons rub against one another - at the intersection point. Pain can spread down to the thumb or back up along the thumb (lateral) side of the forearm.

Treatment Ice can decrease the size of blood vessels in the sore area, helping to halt

inflammation and relieve pain. Ice massage is an easy and effective way to provide first aid. Simply freeze water in a paper cup. When needed, tear off the top inch, exposing the ice. Rub three to five minutes around the sore area until it feels numb.

A special brace called a thumb spica may be used to help rest the area, keeping it in a safe position. Pain with activity is a sign that irritation is occurring. Avoid movements and activities that increase pain. Try and decrease your activities that are making the pain worse. Take frequent breaks or limit the amount of time you are performing tasks that require repetitive wringing, grasping, turning and twisting type movements of the wrist.

Anti-inflammatory medications may be prescribed by your doctor, such as aspirin or ibuprofen. An injection of cortisone in the area of the bursa between the two sets of tendons may give relief.

Surgery is rarely necessary in this condition. In cases where nothing else has been of value in the treatment of intersection syndrome surgical release of the bursa may be indicated. Surgery is performed by making an incision in the skin above the intersection point. The tendons and the tenosynovium around the tendons that are involved are inspected and any irritated thickened tissue is removed. The skin is then repaired with sutures and allowed to heal. Hopefully, removing the inflamed thickened tenosynovium tissue will reduce the pain and allow the tendons to glide more normally together once again.

This surgery can usually be done as an outpatient. The surgery can be done using a general anesthetic (where you are put to sleep) or some type of regional anesthetic. A regional anesthetic is a type of anesthesia where the nerves going to only a portion of the body are blocked. Injection of medications similar to novocaine are used to block the nerves for several hours. This type of anesthesia could be an axillary block (where the arm is asleep). The surgery can also be performed by simply injecting novocaine around the area of the incision.