

# de Quervain's Tenosynovitis

## What is it?

de Quervain's tenosynovitis refers to inflammation of the soft tissues surrounding the tendons that move the thumb – it is an overuse injury. de Quervain's tenosynovitis affects two thumb tendons. These tendons are responsible for extending the thumb backwards and for moving the thumb away from the palm of the hand. These tendons connect their respective muscles in the forearm to the thumb. On their way to the thumb, the tendons slide through a thick fibrous sheath that forms a tunnel. Normally the tendons glide easily back and forth within this tunnel but in de Quervain's tenosynovitis the tunnel is tight and irritates the tendons. See figure 1.



Figure 1

## What are the symptoms?

de Quervain's tenosynovitis results in pain and tenderness over the thumb tendons as they cross the top of the wrist joint. Here the tendons may also be swollen. Pinch grasping and when the thumb and wrist are moved causes pain. Crepitus or creaking of the tendons may also be felt or heard.

## How is a diagnosis made?

The diagnosis of de Quervain's tenosynovitis is suggested by the characteristic nature of wrist pain and physical examination findings. Sometimes X-Rays, ultrasounds or other scans may be ordered to eliminate any other causes of pain.

## How did I get it?

Repetitive or unaccustomed use of the thumb that involves pinching with the thumb while moving the wrist (e.g., gripping and grasping) leads to thickening of the fibrous tendon sheath. Thickening results in inflammation and tightening as the tendon sheath passes over the wrist bone. de Quervain's tenosynovitis is the most common entrapment tendonitis of hand and wrist after trigger finger. It is most commonly seen in women between 30 and 50 years of age. Mothers caring for infants aged 6 to 12 months may be affected and symptoms are often noted in both wrists. Day Care workers and other persons who repetitively lift infants are frequently affected as well. de Quervain's tenosynovitis can also develop after direct trauma to the area.

## What should I do?

Left untreated, this friction-induced tenosynovitis can progress to fibrosis and lack of flexibility of the thumb.

It generally does not get better without medical intervention. You should avoid activities which aggravate or provoke your pain. These may lead to further rubbing of the tendons and their surrounding tissues against the bone, aggravating the pain and resulting in a prolonged recovery. If you have or suspect that you have de Quervain's tenosynovitis, you shouldn't ignore the problem. This can lead to your injury getting worse which may prolong your recovery.

## What does rehab involve?

The goals of treatment of de Quervain's tenosynovitis are to reduce inflammation in the tenosynovial sac, to prevent the formation of adhesions and to prevent recurrent tendinitis. This normally involves exercises and altering lifting and grasping actions.

**Acute therapy:** Therapy in the acute setting consists of pain relief and restriction of thumb gripping and grasping. Pain relief can be accomplished with ice applications to the area of pain for 15 minute periods every four to six hours. Nonsteroidal anti-inflammatory drugs may also be helpful if symptoms are recent and are not severe.

**Splinting:** In severe cases splinting of the thumb helps alleviate symptoms quite dramatically.

Gentle passive stretching may help with symptoms and restore the ability of the tendon to glide in the sheath. See figure 2.

## Persistent symptoms

If symptoms persist it is often necessary to treat the condition more aggressively.

**Cortisone injection:** A local intralesional glucocorticoid injection into the sheath may be considered necessary if pain or swelling is persistent for two to six weeks despite the above measures. See figure 3. The injection may be repeated at four to six weeks if symptoms are not reduced by 50 percent. Up to 90 percent of patients treated within six months of developing symptoms have relief of pain following glucocorticoid injection. Complications are rare, and most can resume normal activities within three weeks (often within the first week). Approximately 50 to 60 percent of patients have complete resolution of symptoms with a single injection, 30 to 40 percent have complete resolution after a second injection, and 10 percent fail to respond and require surgery. Patients who have had symptoms for longer than six months prior to treatment are at risk of fibrosis and have lower success rates.

**Referral and surgery:** surgical consultation is indicated if symptoms are recurrent or persist after two injections within one year.



Figure 2



Figure 3



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