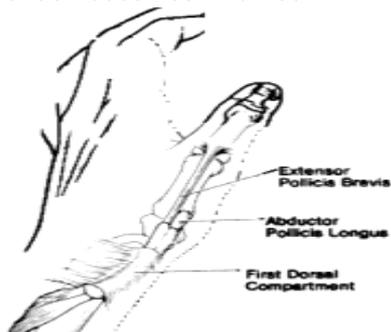
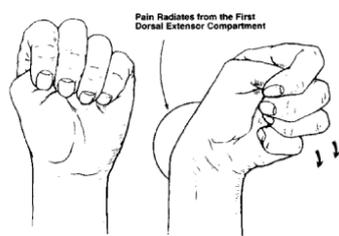


What is tenosynovitis?

Tendons attach muscle to bone, and are usually housed in fibrous fluid lined tunnels. These tunnels allow the tendon to glide freely during a contractile response of the muscle, especially over a bony prominence such as the wrist. A tenosynovitis results when this fluid (synovium) housing the tendon becomes inflamed.



In **De Quervain's tenosynovitis**, this occurs in the two tendons indicated in the figure above. Certain movements of the thumb joint are limited and painful, such as gripping, especially under load, writing and/or sustained spreading of the thumb. Swelling can also irritate nearby tissue such as nerves and occasionally crepitus (a creaking or grinding noise with repeated movements) can be observed. Your Ethos Health Physiotherapist will question you about this and test certain movements to determine the diagnosis.



Finkelstein's test to determine De Quervain's

How do I manage a tenosynovitis?

A review of the latest research combined with clinical experience suggests that the key elements in managing the acute stages of De Quervain's tenosynovitis are:

✦ **Early diagnosis** by a Physiotherapist or medical practitioner to classify the nature of your injury and then advise on the best course of treatment.

✦ **Ice** wrapped in a damp towel, or alternatively submerging your thumb and hand in an ice bath, for 10-20 minutes every two to three waking hours to reduce pain and swelling.

BE WARNED: ICE CAN BURN so check your skin regularly to ensure it is a healthy pink, and never leave the pack on for more than 20 minutes

✦ **Anti-inflammatories** in the form of a gel or cream, or taken orally as a tablet. They have been shown to promote healing and reduce pain after an acute thumb sprain. Ask your GP or pharmacist which anti-inflammatories are right for you.

✦ **Advice** on activity modification including changing grip position when loading the thumb.

✦ **Splinting** to discourage movements of the thumb that aggravate your symptoms. Splinting is usually applied in the early stages to allow a return to function with a view to weaning off this as pain decreases.

✦ **Early Movement** to encourage pain free loading of the tendons whilst controlling the movement of the thumb, leads to a speedier return to normal function.

Avoid the following **harmful** factors in the first 24-72 hours after injury:

✦ **Heat** – wheat bags, heat packs and deep heat rubs cause an increase in circulation to the injured area which can increase the swelling and thus pain

✦ **Alcohol** – dilates blood vessels which may increase swelling.

✦ **Rigorous activity** – places the injured thumb at risk of further injury by overloading it, and thus prolonging the healing phase.

✦ **Massage** – to the injured area can increase circulation and thus increase inflammation.

How will physiotherapy help me?

Current research suggests that early intervention and advice from a Physiotherapist will be beneficial in the recovery of your injured thumb and will more likely lead to an early return to sport and/or work.

Your Ethos Health Physiotherapist will physically examine your injured thumb and provide a diagnosis, along with some indication of how long the recovery will be. If required, they can refer you for further medical advice.

Early treatment would aim to reduce pain and swelling, provide advice on aggravating activities to avoid and suitable activities to return to, and to help regain normal and full movement through exercise. Depending on the severity of the inflammation, you may require a short period of time in a splint to assist with avoidance of aggravating movements whilst still allowing you to return to some form of normal function.

As the pain and swelling settles, treatment usually involves physical mobilisation of the wrist and thumb joints, soft tissue releases of the surrounding muscles to restore lost movement and weaning off the splint/brace. A functional exercise program to address any muscle weakness will be prescribed. These exercises are necessary to retrain the muscles for a return to activities that involve repetitive actions of the wrist and/or thumb such as pinching type movements.

Returning to work or sport

This depends on the severity of your injury, your rate of recovery, and how well you adhere to the advice of your Physiotherapist. The specific physical demands of your work or sport will also determine how quickly you can return to these activities in full. Taping or application of a splint may facilitate a gradual return to your usual activity.

Your Ethos Health Physiotherapist will work closely with your doctor and/or employer if further opinion is required, and can assist in the return to work process by recommending appropriate duties for you to perform in your job while you recover and advice regarding modifying work tools or equipment.

How can I prevent it happening again?

Research suggests you should continue to perform the exercise program as prescribed by your Ethos Health Physiotherapist and take appropriate measures to ensure you frequently rotate from activities that will involve repetitive use of your thumb, pincer grip type actions or sustained spreading of the thumb.

Your Ethos Health Physiotherapist will have given you a home exercise program to continue to help keep your wrist and thumb strong and thus assist in preventing a recurrence of your symptoms.

References

1. Tenosynovitis. (2006). Skinner, H.B. McGraw – Hill
2. Ilyas, A., Ast, M., Schaffer, A.A., Thoder, J. (2007). De Quervain's tenosynovitis of the wrist. *J of American Academy of Orth Surgery*. 15 (12), 757-764.
3. Fournier, D. Bourbonnais, D., Bravo, G., Arsenault, S., Harris, P., Gravel, D. (2006). Reliability and validity of pinch and thumb strength measurements in de Quervain's disease. *J of Hand Therapy*. Jan-Mar; 19 (1), 2-11.
4. Glajchen, N. & Schweitzer, M. (1996). MRI features in de Quervain's tenosynovitis of the wrist. *J of Skeletal Radiology*. Jan; 25 (1), 63-65.
5. Bleakley C, McDonough S, MacAuley D (2004) The use of ice in the treatment of acute soft tissue injury. A systematic review. *AJSM* 32,1, 251-262.
6. Lane, L.B., Boretz, R.S., Stuchin, S.A. (2001). Treatment of de Quervain's : role of conservative management. *J of Hand Surgery (Br.)*. Jun; 26 (3), 258-260.