Patient

View this article online at: patient.info/bones-joints-muscles/tendinopathy-and-tenosynovitis-tendinosis

Tendinopathy and tenosynovitis (Tendinosis)

Tendinopathy is a general term for disease of a tendon. Tendinosis is another name for this. Tenosynovitis is a general term for disease of the sheath surrounding a tendon.

What are tendinopathy and tenosynovitis?

Tendinopathy and tenosynovitis are types of tendon injury. They can often occur together. Strictly speaking:

- **Tendonitis** means inflammation of a tendon. The term tendonitis is usually used for tendon injuries that involve acute injuries accompanied by inflammation.
- **Tendinosis** means chronic degeneration of a tendon without inflammation. The main problem is failed healing of repeated minor injuries rather than inflammation.
- **Tendinopathy** is a more general term than tendonitis and tendinosis and just means tendon injury, without specifying the type of injury.
- **Tenosynovitis** means inflammation of the sheath that surrounds a tendon. (The sheath is called the synovium.)

What are tendons and tendon sheaths?

A tendon is a strong tissue that attaches a muscle to a bone. For example, the tendons that you can see on the back of your hand come from muscles in your forearm and allow you to move the bones of your fingers.

Some (but not all) tendons are covered by a sheath called the synovium. The synovium makes a tiny amount of oily fluid which lies between the tendon and its overlying sheath. The fluid helps the tendon to move freely and smoothly when it pulls on the bone to which it is attached.

What causes tendinopathy and tenosynovitis?

It is thought that inflammation of the tendon and the tendon sheath is not the whole picture in all cases. Most of the time there is overuse, or history of several repeated small injuries or tears, to the tendon. This may initially cause some inflammation of the tendon. But, in the longer term, if these injuries continue, it can lead to tendon damage (degeneration). Doctors now feel that tendonitis and tenosynovitis should actually be called tendinosis or tendinopathy.

Repetitive strain injury

These injuries typically occur when tendons are overused. For example, this may be after playing a lot of sport, or overuse in the course of your work. Tenosynovitis commonly occurs around the wrist. Overuse by lots of writing, typing, assembly line work, etc, can trigger injury. This type of overuse tendon injury is also known as repetitive strain injury (RSI).

However, in some cases, there is no history of overuse of the tendon, and tendinopathy or tenosynovitis seem to occur for no apparent reason.

There are also some other causes of tendinopathy and tenosynovitis:

Arthritis

Some types of arthritis such as rheumatoid arthritis can sometimes cause inflammation of tendon sheaths as well as joints. You would normally have joint pains and swelling in addition to tendon problems.

Infection

This is a rare cause. The infection may occur because a cut or puncture wound to the skin over a tendon may allow germs (bacteria) to get in to infect the tendon and/or tendon sheath. However, infection sometimes spreads from other parts of the body via the bloodstream to infect a tendon sheath. For example, a small number of people who have the sexually transmitted infection called gonorrhoea develop tenosynovitis as a complication.

Who develops tendinopathy and tenosynovitis?

These problems are more common in middle-aged adults and particularly in people who are quite sporty. Some kinds of tenosynovitis, such as tennis elbow, are more likely to develop if you suddenly start using a set of muscles which have not been exercised much in the past.

They may be more common if your work involves repetitive movements such as writing, typing, supermarket checkout or use of a computer mouse. This is particularly likely if you use the same muscles repeatedly by doing the same movements.

What are the symptoms of tendinopathy and tenosynovitis?

Tendinopathy usually occurs at the part of the tendon that attaches to the bone: the sheath of the tendon that is affected in tenosynovitis is close to this attachment. The main symptoms are:

- Pain.
- Tenderness.
- Swelling.
- A lump in the affected part of the tendon.

The pain is typically when you move the affected area. The overlying skin in that area may also feel warm. You may not be able to move the part of the body that is pulled by the affected tendon as easily as normal or it might feel weak. The area may feel stiff. In some cases the condition lasts just a few days and then goes away on its own. In other cases it can last weeks or months if not treated.

Any tendon of your body may be affected. However, some areas of your body are more prone to these problems. For example, tendons around your wrist and hand are the most commonly affected.

Some types of tendinopathy and tenosynovitis cause very characteristic symptoms and have their own name. For example:

- **De Quervain's tenosynovitis**. This is a common condition that affects the tendons that are used to straighten (extend) your thumb. The typical symptom is pain over your wrist at the base of your thumb that is made worse by activity and eased by rest.
- **Trigger finger**. This most commonly affects your ring finger. The condition prevents your finger from straightening fully. See the separate leaflet called Trigger Finger for more details.
- **Tennis elbow (lateral epicondylitis)**. In this condition, you have pain on the outer side of your elbow. It is usually due to overuse of your forearm muscles. See the separate leaflet called Tennis Elbow for more details.
- **Golfer's elbow (medial epicondylitis)**. This is similar to tennis elbow but the pain is felt on the inner side of your elbow.
- **Achilles tendinopathy**. This affects the large tendon just behind and above the heel. See the separate leaflet called Achilles Tendinopathy for more details.
- **Rotator cuff tendinopathy**. Your rotator cuff is a group of four muscles that help to lift and rotate your shoulder. The tendons from these muscles can sometimes become irritated due to overuse. See the separate leaflet called Rotator Cuff Disorders for more details.

When to see a doctor

If you think you are developing either a tendinopathy or tenosynovitis and can treat it yourself by avoiding whatever set it off and taking other simple measures such as those listed below, that is great. However, you should get medical advice if you have symptoms that are:

- Persisting.
- Affecting your ability to work or exercise.
- Constant (pain).

How is tendinopathy or tenosynovitis diagnosed?

As well as listening to you describe your symptoms, your doctor or other clinician e.g. physiotherapist will need to examine you to diagnose either tendinopathy or tenosynovitis.

Tendinopathy

Tendinopathy may make the tendon thicker than normal and often makes it tender, especially when the doctor asks you to use the muscle of the affected tendon while they feel over it. For example, feeling the tendon at the back of your ankle while asking you to point your foot to the floor.

Other tests might involve pressing on the muscle of the affected tendon slightly away from the affected area and asking you to contract the muscle. Pressing on the muscle in this way can take some of the tension away from the tendon and the activity can be less painful than it would be otherwise. For example, pressing on the forearm muscles while asking you to cock your wrist up in the case of tennis elbow.

Tenosynovitis

Tenosynovitis may make the affected area feel slightly swollen. There can be a grating sensation when you feel the affected area and move the affected tendon at the same time - it can feel like there is sandpaper or bubble wrap under the skin.

Are tests needed?

Usually not. The diagnosis of tenosynovitis and tendinopathy can usually be made when your doctor talks to you and examines the affected area. If an infection is the suspected cause (rare) then blood tests and other tests may be done to find the cause of the infection.

Sometimes, if the diagnosis is uncertain, your doctor may suggest an X-ray, an ultrasound scan or an MRI scan of the affected area but this is usually to make sure it isn't something more serious.

What is the treatment for tendinopathy or tenosynovitis?

If your symptoms have been caused by carrying out the same movement repeatedly, it is important to try to avoid this movement. Otherwise, the best treatment for tendinopathy or tenosynovitis is uncertain. However, one or more of the following treatments may be used:

- **Rest**. It is important to rest, or at least reduce the use of the affected area, to allow the condition to settle. Sometimes a splint, firm bandage or brace is put on a wrist if this is the area affected. This forces your hand and wrist to stay in the same position for a time to allow rest of the affected tendon.
- Ice packs over the affected area may ease swelling and pain. A simple ice pack can be made by wrapping a pack of frozen peas in a tea towel. Apply it to the affected area for 10 minutes twice a day to reduce pain.
- Anti-inflammatory painkillers are often prescribed (for example, ibuprofen). These ease pain and reduce inflammation. However, as discussed above, inflammation may not be the main problem in tendinopathy and tenosynovitis. They will, however, provide pain relief. Some anti-inflammatory painkillers also come as creams or gels which you can rub over the painful area. These tend to produce fewer side-effects than those taken by mouth. There are various brands which you can buy, or obtain on prescription. Ask your doctor or pharmacist for advice.
- **Other painkillers**. Other painkillers such as paracetamol, with or without codeine added, may be helpful.
- **Physiotherapy** is recommended if the condition is not settling with the above measures. A physiotherapist will give you a programme of exercises to gradually make the muscles of the affected tendon stronger. This will involve doing exercises that increase the load that the muscle can bear. These exercises are called eccentric loading exercises. They may be a bit painful but this does not mean they are harmful.

- **A** steroid injection into the affected area may be given if the above measures do not work. Steroid injections may be helpful in easing pain in the short term but they don't treat the underlying problem and pain tends to come back in many people.
- **Surgical release of a tendon** is a rarely needed option.
- Antibiotic medicines are needed in the rare situation where infection is the cause.

Other treatments for tendinopathy and tenosynovitis

These include:

Shock-wave therapy

This uses high-energy sound waves to treat the condition. A special device allows the shock waves to be passed through your skin to the affected area. A local anaesthetic may also be given, as sometimes the shock waves can be painful.

One or more treatment sessions may be needed. The procedure appears to be safe but it is not clear yet exactly how well it works; more research is needed.

Autologous blood injection

Blood is taken from you and then injected into the area around the damaged tendons. It is thought that the blood helps to heal the tendons. A local anaesthetic is often given as a pain relief during the procedure. Several treatment sessions may be needed.

This procedure is generally only considered if all other treatments have failed. Again, it is not clear yet whether this treatment works; more research is needed.

What is the outlook?

Recovery usually takes weeks to several months. How long depends on which tendon or tendon sheath is affected. It also depends on whether it is possible to rest the affected area easily. For example, if you are left-handed and have developed tenosynovitis in your left wrist brought on by a particular activity that you don't usually do, this is likely to settle more quickly than if you have it in your right wrist and can't identify what triggered it.

If your problem is work-related, your employer has a legal duty to try to prevent the development of tendinopathy or tenosynovitis by making the work environment comfortable and doing whatever is reasonable to achieve this.

Can tendinopathy or tenosynovitis be prevented?

There is no proof that anything can prevent a bout of tenosynovitis or tendinopathy. However, the following are sensible suggestions that may help to prevent either coming back:

- Avoid a sudden increase in repetitive movements and overuse of the affected area. This may be very difficult if your job involves repetitive movements. If it is a problem that keeps returning, you should discuss this with your employer. A change of duties may help.
- Physical therapy to strengthen the muscles around the affected tendon may help. It may be best to seek advice from a physiotherapist to find the best exercises to use.
- If taking up a new sport or activity, build up your level of exertion gradually and make sure you have appropriate equipment - for example, footwear for running in.
- Take regular short breaks from long, intense, repetitive, or eccentric exercises (slow, lengthening muscle contractions e.g. slowly lowering into a squat or press up). .

Further reading

- Extracorporeal shockwave therapy for refractory tennis elbow; NICE Interventional procedure guidance, August 2009
- Churgay CA; Diagnosis and treatment of biceps tendinitis and tendinosis. Am Fam Physician. 2009 Sep 1;80(5):470-6.
- Autologous blood injection for tendinopathy; NICE Interventional procedure guidance, January 2013
- Achilles tendinopathy; NICE CKS, June 2020 (UK access only)
- Lipman K, Wang C, Ting K, et al; Tendinopathy: injury, repair, and current exploration. Drug Des Devel Ther. 2018 Mar 20;12:591-603. doi: 10.2147/DDDT.S154660. eCollection 2018.
- Abat F, Alfredson H, Cucchiarini M, et al; Current trends in tendinopathy: consensus of the ESSKA basic science committee. Part II: treatment options. J Exp Orthop. 2018 Sep 24;5(1):38. doi: 10.1186/s40634-018-0145-5.
- Abat F, Alfredson H, Cucchiarini M, et al; Current trends in tendinopathy: consensus of the ESSKA basic science committee. Part I: biology, biomechanics, anatomy and an exercise-based approach. J Exp Orthop. 2017 Dec;4(1):18. doi: 10.1186/s40634-017-0092-6. Epub 2017 May 30.
- Ray G, Sandean DP, Tall MA; Tenosynovitis. StatPearls 2023.

Authored by:	Peer Reviewed by: Dr Hayley Willacy, FRCGP	
Originally Published: 19/11/2023	Next review date: 11/09/2023	Document ID: doc_4579

View this article online at: patient.info/bones-joints-muscles/tendinopathy-and-tenosynovitis-tendinosis

Discuss Tendinopathy and tenosynovitis (Tendinosis) and find more trusted resources at Patient.

Patient Access

To find out more visit www.patientaccess.com
or download the app

Download on the App Store

GET IT ON Google Play

Follow us