

Tennis Elbow

Tennis elbow causes pain on the outer side of the elbow because of tiny injuries causing inflammation of tendons around your elbow. In many people, symptoms improve over time just by stopping activities that bring on the symptoms. Painkillers may help to ease the pain until the condition improves. A steroid injection may also ease pain in the short term. However, the pain often returns. Physiotherapy is another treatment option. Other treatments are sometimes used if symptoms persist.

What is tennis elbow and what are the symptoms?

Tennis elbow causes pain on the outer side of your elbow. The medical term for tennis elbow is lateral epicondylitis. This is because the pain is felt around the area of the lateral epicondyle (the lower, outer, bumpy part of your humerus bone in your upper arm).

For most people with tennis elbow, the pain only occurs when they use their forearm and wrist, particularly for twisting movements such as turning a door handle or opening a jar. However, for some people the pain is constant; it occurs at rest and can affect their sleep. The pain may travel down your arm from your elbow towards your wrist. You may find it difficult to hold items such as a knife or fork, a cup or a pen, or to straighten your arm fully. Some people also notice a stiffness in the affected arm.

Golfer's elbow is the name given to a similar condition that produces pain around the inner side of your elbow.

What causes tennis elbow?

The site of the pain in tennis elbow is where some tendons from your forearm muscles attach to the bone around your elbow. The pain is thought to be due to an injury, or several tiny injuries, to one or more of these tendons. An injury can cause a tiny tear to a tendon and lead to inflammation and scarring of the tendon.

Injuries are usually caused by overuse of your forearm muscles in repeated actions such as wringing clothes or manual work (particularly with twisting movements such as using a screwdriver). Playing tennis or other racquet sports can also cause tendon injuries. However, despite being called tennis elbow, racquet sports are only thought to be the cause in about 5 in 100 cases. In most people, tennis elbow affects your dominant arm (the arm that you write with).

Who gets tennis elbow?

About 5 in 1,000 adults develop tennis elbow each year. It mainly affects people between the ages of 35 and 55. Women and men are affected equally.

Tennis elbow is more likely to occur if you have unfit forearm muscles. For example, if you suddenly play a lot of tennis whilst on holiday, or you do a DIY project or some gardening when you are not used to strong forearm actions. However, even if you are used to heavy work, you can overdo it and injure a tendon. People whose work involves repeated twisting and gripping actions, such as carpenters and plasterers, are prone to getting tennis elbow.

However, it can sometimes be difficult to pinpoint an exact event that started your symptoms. In some people, the condition develops for no apparent reason without any prior overuse or injury to their arm.

How is tennis elbow diagnosed?

Your doctor can usually diagnose tennis elbow by talking to you about your symptoms and by examining your arms. You will typically experience pain when the doctor examines the outer part of your elbow. Your doctor may also ask you to move your wrist, as this will usually bring on your pain.

Tests are not usually needed to diagnose tennis elbow. However, if after some time your tennis elbow is not improving, your doctor may suggest that they refer you to a specialist. The specialist may suggest tests such as an [MRI scan](#).

What are the treatment options for tennis elbow?

Modifying activities that bring on your symptoms

You will be able to recognise which movements tend to bring on your pain and you should try to avoid these as much as possible. Typically, pain is made worse by lifting, gripping and twisting movements of the affected arm. Resting from activities that bring on pain can help to reduce inflammation so that the tendon injury can heal. In some people, just modifying their activities and cutting out repetitive movements of the arm or hand can be enough to improve tennis elbow.

You may need to discuss with your doctor and/or your employer if you feel that your job may be contributing to your tennis elbow. There may be different tasks that you can do at work while your tennis elbow is healing. It is also advisable for everyone to take regular breaks when they are working.

Pain relief

Ice can sometimes be a good pain relief if you have tennis elbow. Try using an ice-pack (such as a pack of frozen peas wrapped in a towel) on the tender area twice a day for ten minutes.

Also, [anti-inflammatory painkillers](#) such as ibuprofen are commonly used to ease pain in tennis elbow. Some anti-inflammatory painkillers also come as creams or gels which you can rub over your painful elbow. These tend to produce fewer side-effects than those taken by mouth. There are various brands which you can buy, or get on prescription. Ask your doctor or pharmacist for advice.

If you cannot take anti-inflammatory painkillers, other painkillers such as paracetamol, with or without codeine added, may be helpful.

Physiotherapy

Physiotherapy has been shown to be helpful in the treatment of tennis elbow. Your physiotherapist may be able to use techniques such as massage, laser therapy and ultrasound therapy as well as exercises to treat your tennis elbow. It is not certain if any one of these physiotherapy treatments is better than others.

Studies have shown that physiotherapy may not be as good as a steroid injection at relieving pain in the short term (that is, within the first six weeks). But, it may be superior to steroid injections in the long term. However, there may be a wait for your physiotherapy appointment.

Supports and splints

These can include wearing a special elbow armband or bandage. This may help to give support and protection to your elbow until symptoms ease. Another option may be to wear a wrist splint which may ease pain by helping to rest the muscles that pull on your elbow. Wearing supports such as these and having physiotherapy at the same time may give you better symptom relief in the long term.

Steroid injection

If the above measures do not work, or if you have severe pain and difficulty using your arm, an injection of a steroid into the painful area of your elbow may ease the pain.

A number of studies have shown that steroid injections may be helpful in easing pain in the short term but that pain tends to come back in many people. In one study, short-term (six weeks) success rates were greater for steroid injections than for physiotherapy or a wait-and-see policy. However, in the long term (one year), success rates were greater for both physiotherapy and a wait-and-see policy than for injections. The short-term benefit may be sufficient to warrant an injection, for example, for a student about to sit important examinations.

Remember that, even if a steroid injection has eased your pain, you still need to rest your arm and avoid any activities that may have brought on your pain previously. Build up your activities over some weeks to try to reduce the chance of your tennis elbow coming back.

A steroid injection may sometimes be repeated after some weeks if pain recurs. However, it is usual to have no more than three injections at the same site. There may also be some side-effects of steroid injections; for example:

- Pain on injection.
- Atrophy (shrinking) of the fatty tissue under the skin at the injection site.
- Depigmentation (loss of colouration) of the skin around the injection site.
- Damage to the tendon around your elbow (this is very rare).

Shock wave therapy

Shock wave therapy using high-energy sound waves is sometimes used to treat tennis elbow. A special device allows the shock waves to be passed through the skin around your elbow 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.

Shock wave therapy appears to be safe but it is not clear yet exactly how well it works and more research is needed. This does not mean that the procedure should not be done but you should discuss the benefits and risks fully with your doctor.

There is a small chance of side-effects, including short-term reddening of your skin, swelling of the area that is treated and pain during the procedure. It is thought that there may also (rarely) be a risk of the tendon around your elbow rupturing.

Autologous blood injection

This procedure is generally only considered if other treatments have failed. It is not clear yet how effective this treatment is and more research is needed. You should discuss the possible benefits and risks with your doctor before you have the procedure.

Blood is taken from you and then injected into the area around the damaged tendons at your elbow. 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. You may need to wear a splint after the procedure and will often be offered physiotherapy.

Possible problems with this procedure include pain, bruising, damage to other structures near the tendon (such as nerves or blood vessels) and infection.

Botulinum toxin A injection

Injection of botulinum toxin into muscles in the forearm has been shown to be an effective treatment for tennis elbow. Injection of botulinum toxin may be considered if symptoms are severe enough for surgery to be considered.

Surgery

If your tennis elbow symptoms persist for some time and are really troublesome, then a specialist may advise an operation. The common operation to ease symptoms is to remove the damaged part of the tendon. Only a small number of people require surgery to relieve symptoms.

What is the prognosis (outlook) for tennis elbow?

If you rest your arm and avoid any activities that bring on your symptoms, your tennis elbow will usually settle over time. Rest and painkillers is all that most people with tennis elbow need.

Pain from tennis elbow usually lasts for six to twelve weeks. In some people it can go after as little time as three weeks. However, in other people, pain can last for longer (for between six months to two years). Unfortunately, once you have had tennis elbow, it may return.

Can tennis elbow be prevented?

You often cannot avoid a sudden overuse of the arm, which can cause tennis elbow. However, if you increase the strength of your forearm muscles, it may help to prevent a further bout of tennis elbow in the future. The aim is to exercise and strengthen the muscles, but to avoid twisting movements. It is best to see a physiotherapist for advice on how to strengthen your forearm muscles.

If your tennis elbow has been brought on by playing some kind of sport, seek advice from a professional coach about your technique, racquet grip size, etc.

Further reading & references

- [Autologous blood injection for tendinopathy](#), NICE Interventional Procedure Guideline (January 2009)
- [Extracorporeal shockwave therapy for refractory tennis elbow](#), NICE Interventional Procedure Guideline (August 2009)
- [Tennis elbow](#), Prodigy (December 2008)
- [Johnson GW, Cadwallader K, Scheffel SB, et al; Treatment of lateral epicondylitis. Am Fam Physician. 2007 Sep 15;76\(6\):843-8.](#)
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- [Calfee RP, Patel A, DaSilva MF, et al; Management of lateral epicondylitis: current concepts. J Am Acad Orthop Surg. 2008 Jan;16\(1\):19-29.](#)

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