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Tennis elbow

***Information for
patients and carers***

Physiotherapy Department

About tennis elbow

What is tennis elbow?

Tennis elbow is a condition which causes pain around the outside bony part of your elbow and down the forearm.

The medical terms for tennis elbow are:

- lateral epicondylitis or
- lateral epicondyle tendinopathy.

It mainly affects people between the ages of 40 and 60. Men and women are equally affected with their dominant arm (so your right arm if you're right handed) being more commonly affected.

Tennis elbow is often an overuse injury due to repetitive strain from tasks and activities that involve loaded and repeated gripping and/or extending the wrist. Wrist extension is when with your palm downwards, you bend your wrist to move your hand upwards.

What increases the risk of tennis elbow?

- Smoking
- Obesity
- Repetitive movements which are carried out for more than 2 hours each day
- Vigorous activity (managing loads of over 20kg)

What are the symptoms of tennis elbow?

You may have some or all of the symptoms listed below. The most common symptoms are:

- Pain on the outside of your elbow.
- Pain from your elbow down into the muscles of your forearm.
- Finding it difficult to grip things due to pain.
- Difficulty with twisting movements such as opening jars.
- The movement at your elbow is restricted.

The pain can vary in intensity and can happen when doing certain activities only or can become more troublesome, even when you're resting. It may even disturb your sleep at night time.

What causes tennis elbow?

Tennis elbow is caused by activities that involve repetitive use of the forearm muscles through repetitive extension movements of the wrist and hand.

This can include gripping and twisting activities that are done in manual jobs or by prolonged use of a computer or other activity when you have a static posture (how you hold yourself when you're not moving).

What can I do to help my tennis elbow?

The natural course of tennis elbow is favourable. In 80 to 90% of people with the condition (8 to 9 people in every 10) the condition recovers on its own. However, symptoms can take up to 12 to 18 months to resolve.

Changing your lifestyle and modifying the known causes, can reduce the chances of your symptoms getting worse. The one professional who can help you manage your symptoms is you!

- **Avoid aggravating movements**

If your elbow pain is made worse by some movements, try to avoid these if you can. Often symptoms and flare ups of tennis elbow can be settled by altering your activity or the length of time you spend on the activity.

If certain movements or activities at your work seem to be the biggest issue in making your symptoms worse, speak to your occupational health department (if your employer has one) for an assessment and support.

- **Ice**

Use a cold compress (such as a bag of ice wrapped in a damp towel) and place on the painful area. Leave for 15 minutes, checking your skin regularly.

Repeat this 3 to 4 times each day, particularly after activity.

If you have any concerns about your circulation or ability to feel this area, please speak to your GP before applying ice to the area.

- **Painkillers**

Medications can help to reduce your pain and so allow you to move more comfortably. Always consult a health professional before you take any new medication. If you are unsure what you can take, ask your local pharmacist, practice nurse or GP for advice.

Do not exceed the daily allowance of these medicines, even if your pain is high.

If you are prescribed medication, it's important to take it regularly and at the recommended dose (see medication packet for details).

All medicines can cause side-effects, particularly if they are not used as prescribed. Side-effects range from common to uncommon and vary from person to person. There is information on possible side-effects inside the packet of your medication.

If you do have side-effects, speak to your local pharmacist, practice nurse or GP who may be able to change the dose or the medication to something that suits you better.

- **Reduce or stop smoking**

Smoking will affect the circulation to tendons. This means the tendons are at increased risk of injury. If your circulation is poor, the tendons may take longer to heal or may not heal well.

Ex-smokers are also at increased risk of tennis elbow due to the previous exposure and effects of tobacco on the vascular system.

- **Weight loss**

Being overweight can increase the number of molecules in the body that cause inflammation, and so cause poorer healing and resolution of pain.

- **Exercise**

If you have a tennis elbow it is important to keep your arm moving. Rest can be helpful for a few days if you have a flare up of pain but it is important to keep your elbow moving so it does not stiffen up and get weak.

Exercises to maintain your elbow range of movement and strength are very important. General exercise is also important to help recovery for musculoskeletal pain and has been shown to reduce general inflammation levels in the body.

The link below takes you to some exercise advice and online classes.

 www.nhs.uk/conditions/nhs-fitness-studio

- **Sleep**

There is an association between poor sleep patterns and musculoskeletal pain.

This link:

 www.nhsinform.scot/illnesses-and-conditions/mental-health/insomnia

and the QR code below take you to some useful advice on how to improve your sleep.



What else can help tennis elbow?

- A support or brace: some people find an elbow orthosis or support (such as Epi Clasp) helps their tennis elbow. Research suggests they may be helpful in the short term but there is limited evidence to support their use and does not recommend any one in particular.
- Acupuncture: may give some short term relief in the treatment of tennis elbow. However, research remains unclear on long term benefits.
- Injection: current evidence has shown that a corticosteroid injection may give some short term relief of tennis elbow. However, the evidence shows long term (6 months to 1 year), in people who had a corticosteroid injection, the pain had returned or the pain was worse than people who had been treated with conservative measures only.

Corticosteroids may cause more damage to the tendons rather than encouraging healing and make the strengthening of the tendons more difficult.

- Surgery/other interventions: surgery is only considered in very severe and persistent cases of tennis elbow and when conservative measures (such as an exercise programme) have not been effective. Research shows there is only a 60 to 70% chance of surgery helping to improve symptoms.

The research shows the best outcomes for treatment of tennis elbow are when multiple treatments are combined.

Tennis elbow exercises

The exercises on the following pages can help with your tennis elbow pain. If you have any doubt about your fitness to do these exercises, please discuss this with your GP.

You may find that these exercises slightly increase your symptoms at first. However, they should become easier to do. These exercises can take up around 12 weeks for you to notice a great improvement.

If the exercises do cause some discomfort, then taking prescribed medication from your GP or pharmacist may help you to continue to exercise.

If these exercises cause a large increase in your pain or after 12 weeks there are no noticeable changes in your day to day symptoms, please contact your GP or healthcare professional.

The guide below will help make sure you are working at the right level:

What if I have pain during these exercises?

Aim to stay in the green or amber boxes (see diagram below).

0 = no pain		10 = worst pain imaginable	
0 to 3	4 to 5	6 to 10	
Minimal pain	Acceptable	Excessive pain	
green	amber	red	

If you are in the red area, try changing the exercises by:

- Reducing the amount of movement during an exercise
- Reducing the number of repetitions
- Reducing the weights
- Reducing your speed
- Increasing rest time between sets.

What if I have pain after these exercises?

Your pain or other symptoms should return to what they were before you exercised within 30 minutes of finishing your exercises.

You shouldn't feel an increase in pain or stiffness that lasts longer than 60 minutes the morning after your exercises.

Which exercise section should I do?

Section 1

Exercising when your pain is severe.

Section 2

Exercising when your pain has started to settle and you are ready to progress to strengthening exercises

Section 1:

Isometric strengthening exercises

Isometric exercises are a type of strength training that causes a gentle, static contraction of the muscle.

This is usually the first phase of tendon rehabilitation. This type of exercise can help to reduce your pain if done correctly. You need to repeat these exercises several times a day and slowly increase the “hold” time to 40 seconds to reduce your pain and to maintain some muscle capacity and load on the tendons.

If your tendons are very irritable, you may need to start with a shorter holding time. This means that this exercise phase takes longer to complete, but do keep steadily increasing your hold time to 40 seconds over several weeks.

This phase can take over 4 weeks to achieve before progressing to next section.

Exercise 1: Isometric wrist extension

To do this exercise, rest your painful arm on a table as shown below. Pull your hand back towards you, so that your fingers are pointing to the ceiling. Place your non-painful hand gently at the back of your hand.

Gently push for 10 seconds. Repeat 5 times.

Repeat this exercise 4 times a day. If it causes pain, you are pushing too hard so slightly ease off your push.

Once you have reached 10 seconds pushes, 5 times and you can do this exercise 4 times each day, slowly increase the time of your hold, so:

Week 2:

Increase to 20 seconds, 5 times, 4 times a day for a week

Week 3:

Increase to 30 seconds, 5 times, 4 times a day for a week

Week 4:

Increase to 40 seconds, 5 times, 4 times a day for a week.





Exercise 1: isometric wrist extension

Section 2: Strengthening exercises

Once your pain has slightly settled you can progress to Phase 2 and work on strength. Strength is the ability to produce force and we hope to improve the muscle and tendon's ability to produce force and manage load. Strength is essential for muscle function. Without adequate strength, your muscles will have poor power and endurance and your capacity to carry out tasks is reduced.

Exercise 1: Concentric strengthening

To do this exercise, place your painful arm on a table with your palm facing downwards. Hold a small hand weight (or can or bottle of water) then slowly raise the weight towards the ceiling and then lower back to the starting position. Repeat 15 times as pain allows. Once you become fitter and stronger, increase to 3 sets of 15 repetitions and try twice each day.



Start position	Finish position
	
Exercise 1: concentric strengthening	

Exercise 2: Eccentric strengthening

To do this exercise, rest your painful arm on a table with your wrist coming over the edge and palm facing downwards.

Hold a small hand weight (or can or bottle of water). Slowly raise your painful wrist with your non-painful hand. Then slowly lower back to the starting position. Repeat 15 times.

Try to increase to 3 sets of 15 repetitions as your become fitter and stronger as your pain allows.

Start position	Finish position
	
Exercise 2: eccentric strengthening	

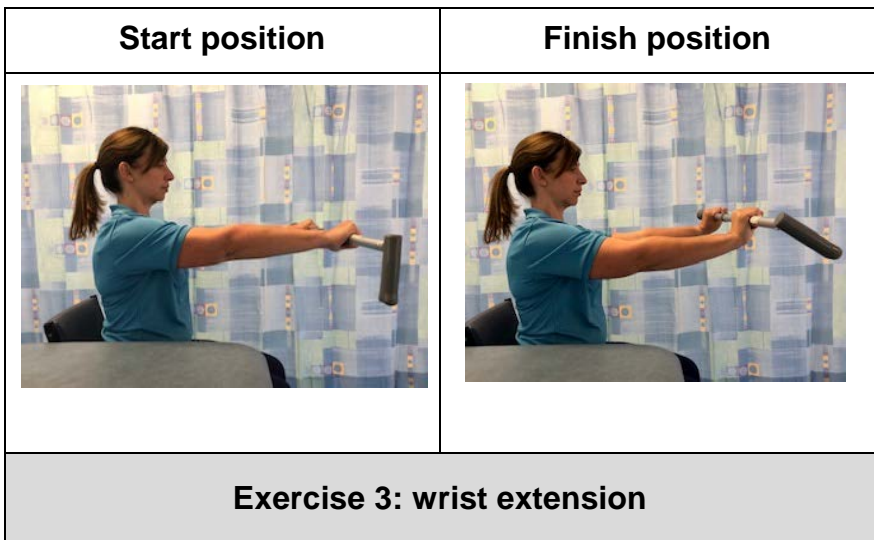
Exercise 3: Wrist extension (with a broom handle)

You can do this exercise while either standing or sitting.

Hold a broom handle or walking stick in both hands.

Lift your arms to shoulder level. Keep both elbows straight with your palms facing down, Roll the broom handle backwards like you are trying to reel something in. Repeat 15 times twice each day.

Once you become fitter and stronger aim for 3 sets of 15 repetitions twice a day as your pain allows.



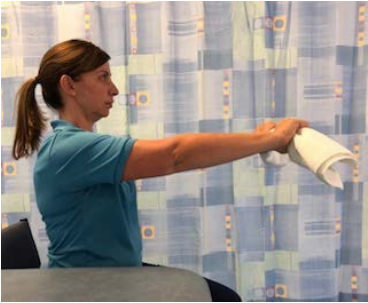

Exercise 4: Towel twist

To do this exercise, sit in a chair with your arms at shoulder level holding a rolled up towel in both hands. Keep elbows in straight position. Twist the towel - so you are turning the painful wrist towards the floor. Repeat 15 times.

Then slowly increase to 3 sets of 15 repetitions as pain allows. Taking a step forwards at the same time as doing this will increase the effectiveness.

To progress this exercise then twist the towel in opposite directions like you're trying to wring water from the towel.

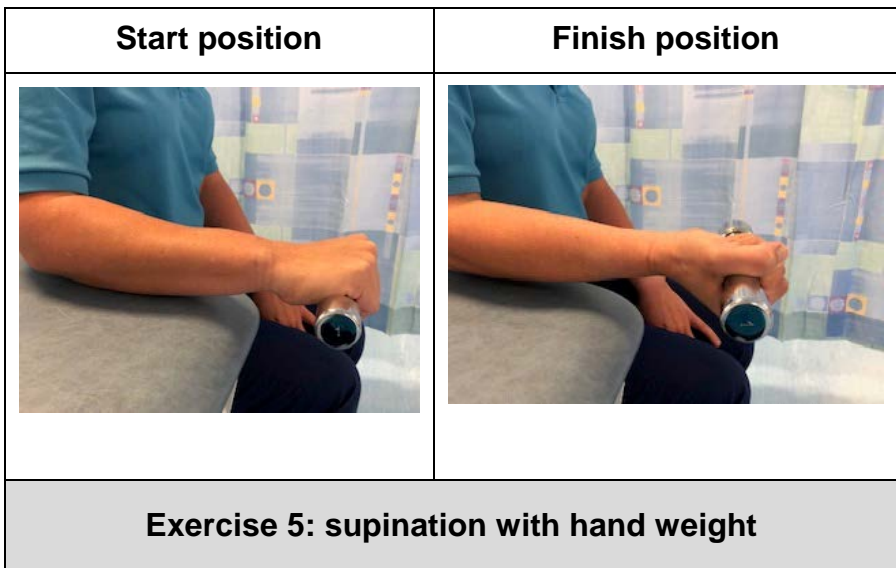
Repeat 15 times and then slowly increase to 3 sets of 15 repetitions as pain allows.

Start position	Finish position
	
Exercise 4: towel twist	

Exercise 5: Supination* with hand weight

To do this exercise sit in a chair with your painful arm resting on a table with a light hand weight in your hand (you can use a can, bottle or water or hammer). Position this vertically and have your elbow bent to 90 degrees.

Let the weight of the object you are holding rotate your forearm so your palm is facing towards the ceiling, then return to the starting position. Repeat 15 times. Once you become fitter and stronger, try to increase to 3 sets of 15 repetitions as your pain allows.



* supination of your hand means your palm is in a position where it is facing upwards.



Exercise 6: Weight bearing on the wall

To do this exercise, stand facing the wall with your hands on the wall at shoulder height.

Gently transfer your weight from one side to the other, holding for 3 to 5 seconds on each side.

Step further away from the wall as this gets easier to increase your body weight.

Repeat for 2 minutes.

Start position	Finish position
	
Exercise 6: weight bearing on the wall	

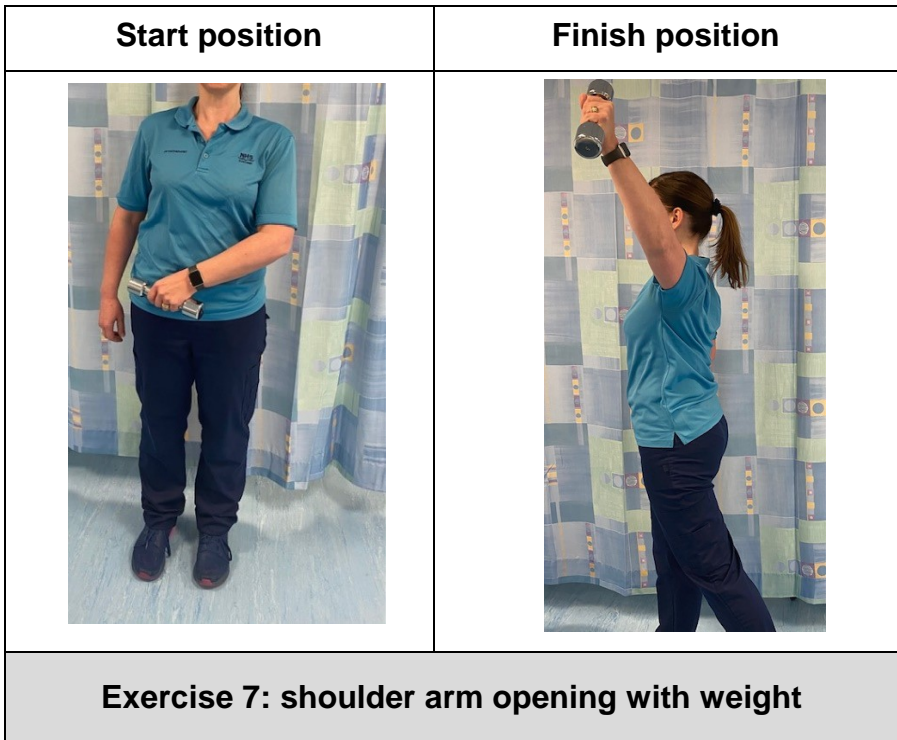
Exercise 7: Shoulder arm opening with weight

To do this exercise start with a 1kg weight in your hand on the opposite hip. See Start position below.

Lift your arm up and out in front of you in an arc out to the side, taking a step at the same time.

Repeat 8 to 15 times.

Increase the weight as you are able.



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