



MSK + **together**

An integrated MSK service for Mid-Nottinghamshire

Nottinghamshire Integrated Care System

ANTERIOR KNEE PAIN

Information for patients



Information in this booklet is intended to be used as a guide. It gives you an idea about how *Anterior Knee Pain* can be managed. However, you should remember that every case is different, and symptoms and management can vary from person to person.

Anterior Knee Pain

***Anterior Knee Pain* is a term used to describe pain at the front of the knee and is often referred to as an overuse injury.**

It can be caused by several factors such as increased load on the knee such as running, walking or kneeling, as well as increased weight gain or inappropriate footwear. The pain is normally because the knee is struggling to deal with the load and demand that is required. There are many things you can try to do to help your pain and symptoms. These are management techniques such as exercises, ice, heat, medications and activity modification. If *Anterior Knee Pain* is left untreated, it can become a chronic knee condition.

What is Anterior Knee Pain?

***Anterior Knee Pain* is a term used to describe pain at the front of the knee. There are a variety of conditions that could be causing your knee pain such as, patella tendinopathy, bursitis or fat pad irritation.**

The condition can normally be diagnosed by your reported symptoms and an assessment completed by your health care professional. Further investigations are often not needed. If the diagnosis is unclear, then an X-Ray or ultrasound can be performed to aid the diagnosis.

Why me?

***Anterior Knee Pain* is the most common condition that affects the knee. It is thought to affect 25% of the population, at some point in their life.**

Risk factors include:

- Sudden gains in weight or if you are overweight
- Lack of muscle flexibility
- Lack of muscle strength

- Lack of muscle control
- Previous injury to the knee
- Wearing shoes with poor cushioning or little support or heels
- Lots of running, walking or standing when you are not used to it

Symptoms can develop gradually or follow from an injury. Often, there is no clear cause of the pain.

Symptoms

As Anterior Knee Pain includes a few different conditions, the symptoms can vary. Pain is the main symptom; this can be anywhere at the front of the knee. They can range from very mild to more intense symptoms and can include:

- Dull ache or sharp twinges at the front of the knee
- Occasional swelling around the front of the knee
- Feeling of painful locking at the front of the knee
- Feeling of weakness or giving way (especially when going downstairs or hills)
- Clicking or grating noises at the front of the knee

Symptoms may be worse with the following:

- Walking downhill or downstairs
- Kneeling
- Sitting for long periods of time
- Sporting activities

If you don't treat anterior knee pain, it may become a chronic condition. It is thought to be the leading cause of chronic knee pain in young people.

Diagnosis & Investigations

Anterior Knee Pain is diagnosed from the signs and symptoms that you describe. Assessment of the knee and lower legs by health care professional may help to inform this diagnosis. If the diagnosis is unclear, then an X-Ray or ultrasound can be performed to aid the diagnosis.

Will it get better?

Your symptoms can often be managed with advice and exercises from the physiotherapist. Most cases will resolve with conservative treatment within 3-12 months.

Treatment is aimed at:

- Reducing pain and inflammation and promoting healing
- Restoring flexibility and normal movement
- Improving and normalising function

We work with a team of Orthopaedic Advanced Practitioners and Consultants. If you do not respond to physiotherapy, we can escalate your care such as considering steroid injections.

(cont'd overleaf)

Anterior Knee Pain

Will it get better?

Steroid injections are sometimes used to facilitate physiotherapy exercises. They offer a window of opportunity of reduction in symptoms to allow participation with the exercises. Injections are only offered in conjunction with physiotherapy.

Surgery for Anterior Knee Pain is rare.

Management

Anterior Knee Pain is treated with a variety of different management techniques. Below is a list of ways you can help yourself.

- **Rest:** Anterior knee pain in general, is an overuse injury, so try to reduce where possible any activity that is aggravating the knee.
- **Strength:** Strengthen your lower legs (knees, hips and feet). It is important that these exercises are performed relatively pain free (discomfort is expected) and achieve an element of “fatigue”.

- **Ice / Heat:** This is specific to each individual. Depending on the structure you may find benefit more from one or the other to help manage the pain.
- **Activity:** Activity modification and gradual return to full activity as pain improves.
- **Other Factors:** Try to identify any changes in your lifestyle either internal (e.g. weight gain) or external (e.g. different footwear) and consider if they could have coincided with the onset of your problem. If so, try reversing this to see what effect it has on your pain.

What to Avoid

In general, Anterior knee Pain is an overuse injury so try to vary the stresses you apply to your knee.

For example, if you are a runner mix it up, so you're not always doing hill work.

Keep the muscles in your legs as flexible as possible by regular stretching.

Keep the muscles in your legs in good condition by regular strength and conditioning.

Wear well-fitting appropriate footwear especially when doing sporting activities such as running.

Good tips:

- Avoid confined seating
- Use a handrail to help you up and down stairs, one step at a time, if needed
- Avoid kneeling / sitting back on heels.
- Avoid prolonged wearing of high heel shoes
- Avoid riding a bike with a low seat

MEDICATION FOR PAIN CONTROL

Controlling your pain allows you to continue to function and helps you cope. Your GP may have already discussed medication to help with your pain and the correct ways to take pain relief. They may recommend that you take it as a short course rather than 'as and when' the pain is bad. This often includes non-steroidal anti-inflammatory medication such as ibuprofen, paracetamol or Zapain. Anti-inflammatory gels can also be trialled. Please always read the instructions before using these products.

ACTIVITY

If your job involves prolonged sitting, ensure that you keep your knee moving by bending and straightening your knees at your desk.

If you are sitting on public transport or at the cinema etc. make sure you choose an aisle seat so you can stretch your knee and stand up occasionally.

If kneeling is involved use kneepads or a cushion to reduce the pressure through your knees and try to avoid kneeling/squatting for long periods by standing occasionally.

If your job involves long periods of walking or standing, ensure you change position and take breaks regularly.

RETURN TO SPORT

Make a gradual return to running when you knee pain has settled and you can walk pain free. Do not be in a hurry to do this; it may make you worse if you start too soon. Warm up and stretch gently before and after training.

If possible, start your running on a treadmill (on a slight incline).

Running all the time on hard or uneven ground can increase knee pain. Try to regularly change the ground you run on, avoiding concrete and hard paving as much as possible. Try to avoid uneven ground.

Gradually increase your jogging distance, initially do interval jogging; such as, walk, jog, walk, jog. Your health care professional may advise what distance these jog sections should be.

When you can jog comfortably for 30 minutes, gradually increase your speed if appropriate. Initially do intervals of varying speed.

Slowly introduce hill training if appropriate. Don't do hill running early on.

If your sport involves changes in direction or running around bends, once you can jog comfortably for 30 minutes, introduce a change of direction; such as slow jogging in zigzags, round cones, figure of 8's.

Do some other fitness training as well as running, such as swimming, cycling, rowing, stepper, cross trainer.

EXERCISES



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EXERCISE 1

Straight leg raise:

- Lie on your back and bend one leg at the knee
- Try to lift the straight leg off the floor by approximately 1-3 inches
- Hold for a slow count of 5, then lower in a controlled manner

Repeat 5 times with each leg, gradually building up to 15

Complete at least twice per day. If you are unable to get on the floor you can do it on your bed



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EXERCISE 2

Knee flexion / extension mobility (Complete this exercise if range of movement or stiffness is an issue):

- Lie on your back
- Bend and straighten your affected knee

Repeat 5-10 times with each leg.

Complete at least twice per day

If you are unable to get on the floor you can do it on your bed

EXERCISES



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EXERCISE 3

Hamstring stretch:

- Sit on a chair with your leg straight in front of you
- Place your hands on your thigh just above your kneecap
- Keeping your back straight, lean forwards over the straight leg
- Use your hand to assist with the stretch of you knee

Hold for 20-30 seconds

Repeat 3 times in one go

Repeat 2-3 times per day



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EXERCISE 4

Quadriceps stretch:

- Stand holding on to a support with one hand and with the other hand hold onto the ankle
- Pull the ankle towards your bottom
- Keep your knees together and push your hip / pelvis forward

Hold for 20-30 seconds

Repeat 3 times in one go

Repeat 2-3 times per day

EXERCISES



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EXERCISE 5

Step-ups:

- Stand in front of a 20 - 40 cm step
 - Only using one leg step up and slowly lower down
 - This exercise must be done with control making sure your thigh does not wobble and your kneecap stays facing forward
 - Repeat with the other leg leading
- Hold for 20-30 seconds
Repeat 3 times in one go
Repeat 2-3 times per day



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EXERCISE 6

Sit to stand squats:

- Stand tall in front of a chair
 - Squat down as if you were sitting down, sticking your bottom out
 - Briefly touch the chair with your bottom and then stand back up (squeezing through your bottom)
 - Make sure you maintain the gap between your knees all the way through
- Repeat 5-15 times
Repeat 2-3 times per day