Leicestershire Partnership NHS Trust

Patellofemoral Pain

Patient Information Leaflet

MSK Musculoskeletal Physiotherapy Service

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What is patellofemoral pain?

Patellofemoral pain is a term used to describe pain that is felt around or behind the kneecap (patella).

Common symptoms of patellofemoral pain can include pain with the following activities:

- Going up or down stairs.
- Squatting or kneeling.
- Getting up from a chair or on and off the toilet.
- Walking up or down hills.
- Sitting with your knees bent for a long period of time.

Clicking or cracking in the knee (also known as crepitus) is also common with patellofemoral pain. This is not usually a sign of damage, and many healthy, pain-free knees can make these noises. Although crepitus can occur alongside patellofemoral pain, it does not mean the knee is being worn away or harmed. On its own, knee noise is generally considered a normal and harmless finding.

Patellofemoral pain is a common cause of knee pain. It can affect people of all ages and activity levels.

Although it can be very painful, it does not mean that your knee is damaged. With the right advice and management, pain often improves.

Why does it happen?

There is not usually one single cause of patellofemoral pain.

A common trigger is doing more activity than your knee is used to. This can happen if you suddenly change how much activity you do.

Examples include:

- increasing your running or walking
- starting a new sport or activity
- exercising more often or harder than usual
- returning to an activity you have not done for a long time
- doing more stairs or hill walking

Other factors can also play a part including:

- an injury or a fall onto the knee
- the muscles around the hip and knee being less able to cope with certain activities
- wider health factors such as being overweight, sleeping poorly or experiencing stress

It is often a mix of things, rather than one single cause.

Diagnosis

Patellofemoral pain can usually be diagnosed based on the symptoms you report, such as:

- where your pain is
- what type of pain it is
- when you feel the pain
- what makes it better or worse

A clinical assessment may be helpful if the cause of your pain is unclear or if pain does not improve with initial advice provided.

Do I need a scan?

Scans, such as X-rays or MRI are usually not required.

Scans and X-rays show what your joints, muscles, tendons, ligaments and nerves **look like**, but they **cannot** tell us:

- how much pain you are in
- exactly where the pain is coming from
- how well you can move or function

Many scan results show normal changes that happen as we get older. These changes are often seen in people with and without pain.

However, scans or X-rays can be helpful in some less common situations, such as:

- when a serious injury, like a broken bone, is suspected
- when a serious condition such as an infection or cancer needs to be ruled out
- when your symptoms suggest you may need a different type of treatment, such as surgery

Your healthcare professional will be able to advise you if a scan or X-ray is needed.

Self-help

There are several things that you can do to manage your knee pain and help your recovery.

Exercise

Keeping active with regular exercise is important for your health and wellbeing. The best exercise is one that you enjoy, can afford, can fit into your daily life and are likely to continue with.

Guidelines suggest:

- a minimum of 150 minutes of moderate-intensity activity per week: something that raises your heart rate and gets you breathing more heavily
- strength exercises twice a week

Exercise can help for many different reasons:

Reducing pain

Exercise helps the body release hormones that can reduce pain.

Improving mood and wellbeing

Exercise can help reduce stress, anxiety and low mood.

Helps us feel more alert

Regular activity can help you feel more awake and focussed.

Improving sleep

Exercise can help you sleep better and for longer. However, try to avoid exercising too close to bedtime, as this may make it harder to fall asleep.

Building strength and flexibility

It is normal to feel a little achy when you start a new activity. This does not usually mean you have caused

harm. Start slowly and build up gradually over time. This gives your body a chance to adapt, become stronger, and improve fitness without causing a large increase in pain.

Exercises to try:

Below are some exercises you can try to help improve your pain. Aim to complete these exercises **once a day.**

Start with the Level 1 exercises.

If you find these too easy, progress to Level 2.

Level 1 Exercises

1. Isometric Knee Extension



Sit on a chair in front of a wall.

With your affected leg, push your foot into the wall like you are trying to straighten your knee.

Hold for **10 to 15 seconds**. Relax.

Repeat **5** times.

Watch a similar version this exercise here: https://youtu.be/awwy4y3ZNjc

2. Straight Leg Raise

Lie on your back on the bed or the floor.

With your leg straight, lift it approximately 6 inches off the floor or bed.



Hold for **5 seconds**. Slowly lower back down.

Repeat **10** times.

Watch the video here: https://youtu.be/67ajrE4Ajak

3. Bridge

Lie on your back on the bed or the floor with your knees bent.

Lift your bottom up off the bed or floor.



Hold for **1 to 2 seconds**. Slowly lower back down.

Repeat **10** times.

Watch the video here: https://youtu.be/fK_xUE3OKIE

4. Side Lying Hip Abduction

Lie on your side on the bed or floor with your legs straight and one leg resting on top of the other.



Lift your leg into the air.

Hold for **1 to 2 seconds**. Slowly lower back down.

Repeat **10** times.

Watch the video here: https://youtu.be/m48WZUmcw5Y

5. Single Leg Stand

Stand on one leg and hold your balance.



Aim to hold for **10 seconds**.

Repeat **5** times.

Watch the video here: https://youtu.be/hH4aQTBIYo0

Level 2 Exercises

1. Wall Sit



Stand with your back against a wall, with your knees bent in a squat position.

Hold for **10 to 15 seconds**. Relax by standing upright.

Repeat **5** times.

Watch the video here: https://youtu.be/vSrxia0hZiY

2. Single Leg Bridge



Lie on your back on the bed or the floor with your knees bent.

Lift your bottom up off the bed or floor. As you lift your bottom, straighten the non-affected leg as shown in the picture.

Hold for **1 to 2 seconds**. Slowly lower back down.

Repeat **10** times.

Watch the video here: https://youtu.be/x-b9yvFzLqk

3. Resistance Band Knee Extension

Sit on a chair with a resistance band tied around the chair leg and your ankle.

Straighten your knee.

Hold for **1 to 2 seconds**. Slowly allow your knee to return to a bent position.

Repeat **10** times.



Watch the video here: https://youtu.be/t6BOZqBny-Q

4. Resistance Band Side Lying Hip Abduction

Wrap a resistance band around your knees.

Lie on your side on the bed or floor with your legs straight and one leg resting on top of the other.

Lift your leg into the air.

Hold for **1 to 2 seconds**. Slowly lower back down.

Repeat **10** times.



To make this exercise harder, wrap the band around your ankles.

Watch the video here: https://youtu.be/H1bvu1yBNZg

5. Single Leg Mini Dip

Stand on one leg with your leg straight.

Bend the standing leg a small amount to perform a mini squat.

Push back up to the starting position.

Repeat **10** times.

Watch the video here: https://youtu.be/Rn3qU2xMYv4



Should I have pain when I exercise?

When managing your load and exercise, using a traffic light system can be useful to gauge whether you are doing too much.

Think of your pain on a scale from 0-10, with 0 being no pain at all and 10 being the worst pain imaginable:



Pain score 0-3

No or mild pain and exercises feel mangeable.

Consider **progressing** the exercises.



Pain score 4-5

Some pain, but it settles quickly. Exercises are challenging.

Continue exercises **at this level**.



Pain score 6-10

A flare-up of pain that does not settle quickly.

Reduce the difficulty of exercises.

Mild pain during activity is fine, providing it settles within 24 hours.

Lasting pain beyond 24 hours usually indicates an overload and is a sign you should not be doing so much.

Self-help continued...

Activity modification

You do not need to stop activity completely, but you may need to reduce it or change what you are doing for a short time. This may include:

- reducing how long you spend doing an activity
- reducing the speed or intensity of the activity
- reducing how often you do the activity

This should allow your pain to settle down. It is then important to gradually build your activity levels back up.

Symptom management

You may find that over-the-counter pain relief helps to manage your pain.

Before taking any medicine, make sure it is safe for you. Always follow the instructions on the packet. If you are unsure, speak to your pharmacist or GP.

You can also use heat or ice to help ease your pain.

Heat: Try a hot water bottle or wheat bag.

Ice: Try an ice pack or a bag of frozen vegetables wrapped in a towel.

Apply for up to 20 minutes at a time. You can repeat this every 2 to 3 hours if needed.

Do not place heat or ice directly on your skin, as this may cause burns or skin damage.

Weight management

Maintaining a healthy weight can help to reduce the load placed on your muscles, joints and bones, as well as reducing levels of inflammation in the body.

This may improve pain and movement, making everyday activities easier. Even a small amount of weight loss can make a difference.

Healthy weight management is best achieved through:

- gradual, long-term changes
- eating a balanced diet
- being physically active and reducing time spent sitting
- setting realistic goals
- making small, sustainable changes

This can lead to lasting improvements in both your physical health and overall wellbeing.

For more information on eating well and to support weight management visit www.leicestershirewms.co.uk/

How long does it take to improve?

Recovery time varies from person to person.

You may start to notice improvements within the first few months of exercise and activity changes.

However, for some people recovery can take longer, especially if you have had pain for a long time.

You may also have times where your pain feels worse again. These are called flare-ups. Flare-ups can happen during recovery and are a normal part of this process. They do not necessarily mean you have damaged your knee.

Although progress can sometimes be slow, perseverance is important and symptoms often improve over time.

When should I seek further help?

You may wish to seek further advice from a physiotherapist if:

- your pain is not improving despite following this advice
- your pain is getting worse
- your pain is affecting your ability to work, perform daily chores or do the hobbies you enjoy
- you have repeated episodes of knee pain or problems with other joints or tendons

You should **urgently** contact NHS 111 or attend an urgent treatment centre or A&E if:

- you cannot walk or put weight through your leg after an injury
- your knee looks a different shape following an injury
- your knee becomes very red, swollen or hot, especially if you also feel unwell

Remember

Patellofemoral pain is common and does not usually mean that your knee is damaged.

With the right advice and exercise, patellofemoral pain usually improves over time.

Complete rest is not advisable but modifying activity levels and making lifestyle changes can help recovery.

Recovery takes time and consistency; you may not see big changes happen quickly.

Acknowledgements

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If you need help to understand this leaflet or would like it in a different language or format such as large print, Braille or audio, please ask a member of staff.

MSK Physiotherapy Service

Find out more about the MSK Physiotherapy Service and what we offer www.leicspart.nhs.uk/service/musculoskeletal-msk-therapy-physiotherapy/

Further Resources

Access our other MSK Physiotherapy resources www.leicspart.nhs.uk/msk-physiotherapy-resources-getting-started/

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