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## Musculoskeletal Physiotherapy

### Information for patients

# Knee Pain

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## Introduction

The purpose of this leaflet is to provide you with some general advice about how to manage your knee pain and some simple exercises to help you achieve this. You may be sent this leaflet while waiting for your physiotherapy appointment.

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## Knee pain

Knee pain is a frequent complaint that affects people of all ages. Most knee pain is not serious and does not require a scan or x-ray to diagnose the problem. Possible causes include osteoarthritis of the knee, injuries such as muscle strains, ligament strains, bone fractures, tears to the cartilage and muscle imbalances of the muscles that surround the knee. These muscle imbalances can put stresses on the knee joint. In most cases the outlook for a full recovery is good and by adopting some simple approaches the knee will improve and get better.



## The knee joint

The knee joint is where your thighbone (femur) and shin bone (tibia) meet. Sitting on top of these two bones is the knee cap (patella). The end of each bone is covered with cartilage which has a smooth, slippery surface that allows the ends of the bones to move against each other without friction. Your knees have two additional rings of cartilage (menisci) that sit between the bones. This cartilage acts to promote friction free

movement, help with shock absorption and joint stability. Your knee joint is held in place by four large ligaments. These are thick, strong bands which run within or just outside the joint capsule. Together with the capsule, the ligaments provide joint stability. The thigh muscles support the joint and allow it to move.

## Conditions affecting the knee

There are many different causes of knee pain. A common cause is Osteoarthritis which is a disease that affects the joint cartilage surfaces so it doesn't move as smoothly as it should. The condition is sometimes called degenerative joint disease or wear and tear. The main symptoms are pain and sometimes stiffness, which are most likely to be felt at the front and sides of the knee.

Patellofemoral pain syndrome is very common in young adults and can be caused by weakness and tightness in the thigh, buttock and hamstring muscles (backs of thigh). Pain is felt in the front of your knee, around and behind the knee cap.

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## General Advice

Many of the problems above can be helped by addressing the factors below:

### Excess weight

Being overweight or obese increases stress on your knee joints. It can put you at increased risk of osteoarthritis.

### Lack of muscle flexibility or strength

A lack of muscle flexibility or strength are among the leading causes of knee injuries as less support is given to the knee joint to absorb the stresses/strains exerted on it.

### Change activities that make your symptoms worse

By modifying your activity levels you can help settle symptoms, minimize the development of secondary joint stiffness & muscle weakness and maintain your function and mobility. Avoid standing and sitting for long periods. Pace your activity levels, dividing your activity into manageable 'chunks' to avoid exacerbating your condition.

### Keeping moving

Moving and using your sore knee within a movement range that is tolerable is important. Movement helps to prevent stiffness and muscle weakness and aids circulation to the area.

### Try to relieve the pain and swelling

Some people find that applying a cold compress to the area helps. There are many pain relieving medications that may help. Your GP or pharmacist can advise you on what to take.

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### Try to get a good night's sleep

Sleeping lets your body rest and go into healing overdrive. It's an opportunity for your inflammation, bruising and swelling to go down while you're not physically active. Sleeping with a pillow between knees in a side-lying position with the painful joint upper most can prevent unnecessary stress on the joint.



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## Exercises

The exercises below are a good place to start. They can be done regularly during the day: Try to exercise about 3 times a day. Be guided by your pain. Stop these exercises if you feel they are making your symptoms worse. Start with 'low impact' (non-weight bearing e.g. sitting or lying on the floor, sofa or bed) and build up to weight-bearing exercises and functional activities e.g. walking.

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Sitting or lying down, keeping your foot on the floor (or bed) bend one knee until you feel it being stretched  
Hold for 3-4 secs.

Straighten your leg as far as you can; hold for 5 secs.

Do 10 bends, then repeat with the other leg.

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Sitting (with leg supported on stool) or lying down.  
Push down into the supporting surface straightening your knee, then pull your toes and foot towards you so that you feel your calf muscles stretch and so that your heel lifts off the floor.  
Hold for 5 seconds.

Do 10 contractions, repeat the exercise with the other leg.

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Sit well back in a chair with good posture. Straighten and raise one leg.  
Hold for a slow count to 10, then slowly lower your leg.  
Repeat this at least 10 times with each leg.

If you can do this easily, try it with weights on your ankles and with your toes pointing towards you.

Try doing this every time you sit down.

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Stand behind a chair and support yourself with both hands. Squat slowly, with your back at a slight angle and bending both knees. Don't squat too far and this must be 'pain free'. As you improve and the exercise gets easier squat a little further.

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**You may feel some mild discomfort during these exercises but if you feel a significant increase in pain then stop doing that particular exercise (or adjust it) until you can seek advice from your physiotherapist.**

If this advice sheet does not help your symptoms there are more resources available for you to look at on the TIMS website.

Most patients will improve within a six week period with this advice, however, should your knee problem persist then contact TIMS on the number below.

If you have had a recent significant injury to the knee and the knee is locked in a fixed position please contact TIMS on number below to make a referral to see a physiotherapist.

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### **For further information**

Please ring our Booking Office on **0191 4452643** or visit our website at: [www.tims.nhs.uk](http://www.tims.nhs.uk) which provides online guidance and support on managing your musculoskeletal (MSK) condition effectively.

The NHS website also provides trusted online information and guidance on all aspects of health and healthcare to help you manage your condition and/or inform your choices about your health: [www.nhs.uk](http://www.nhs.uk)

### **Feedback**

We also welcome feedback from patients about their experiences with our service and this can be done through our patient advice and liaison (PALS) team on 0800 032 0202 or [northoftynepals@nhct.nhs.uk](mailto:northoftynepals@nhct.nhs.uk)

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### **Tyneside Integrated Musculoskeletal Service**

TIMS is a partnership between Newcastle upon Tyne Hospitals NHS Foundation Trust and Gateshead Health NHS Foundation Trust

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Information provided by Senior Physiotherapist  
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