

## ANTERIOR KNEE PAIN – PATIENT INFORMATION

### WHAT IS IT?

Anterior knee pain is an umbrella term to describe conditions that cause pain at the front of the knee. It encompasses a wide range of related but significantly different conditions, which may, therefore, require related but significantly different approaches to treatment.

Anterior knee pain is considered to be the most common disorder affecting the knee. It is estimated that 25% of the population will be affected at some point in their life, second only to low back pain.

It is thought to be the second most common problem seen by physiotherapists and recognised as the most common overuse syndrome afflicting sportspeople – accounting for an estimated 25% of presentations to sports injury clinics.

Anterior knee pain is also acknowledged to be the leading cause of chronic knee pain in adolescents

Symptoms include:-

- Dull ache/sharp twinges in the front part of your knee, you may also experience:-
  - occasional swelling
  - a feeling of painful locking at the front of your knee
  - a feeling of weakness or painful giving way, especially when going down hills or stairs
  - clicking or grating noises at the front of your knee

Symptoms are made worse by:-

- walking down hill or downstairs
- sporting activities
- sitting for a long time

## **WHAT CAN I DO ABOUT IT?**

- Anterior knee pain in general is an overuse injury, so try to reduce where possible any activity that is aggravating the knee.
- Try to identify any changes in your lifestyle either internal (e.g. put on weight) or external (e.g. wearing different shoes) and consider whether they could have coincided with the onset of your problem. If so try reversing this to see what effect it has on your pain.
- Stretch out the various muscles in your legs. (see videos on the website). Stretches should be held for 30seconds and not elicit your pain but feel 'stretching'.
- Strengthen the various muscles in your legs. For key exercises see website videos. It is very important that these exercises are performed pain free and achieve an element of 'fatigue'.
- Gradually return to full activity as pain improves.

## **HOW CAN I PREVENT IT?**

- Remember that in general anterior knee pain is an overuse injury so try to vary the stresses you apply to your knee e.g. runners mix it up, not always doing hill work.
- Keep the muscles in your legs as flexible as possible by regular stretching (see above).
- Keep the muscles in your legs in good condition by regular strengthening (see above).
- Wear well fitting appropriate footwear especially when doing sporting activities such as running

## EXERCISES FOR ANTERIOR KNEE PAIN

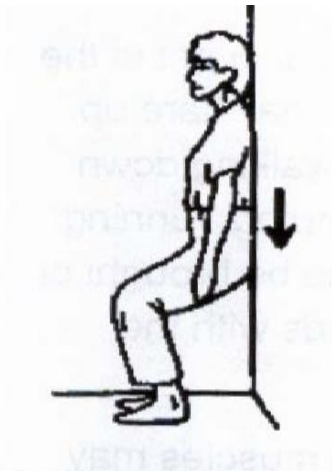
The following exercises should be done regularly (about 3 times a day) starting gradually and within pain limits.

You should expect some discomfort with the exercises at first, but if your symptoms get worse STOP and seek advice from your GP or Physiotherapist.

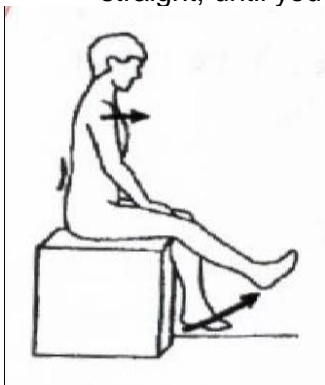
1. **Straight leg raises** – lying on your back (or sitting with your legs out straight in front), brace your thigh and lift your leg around 20cm off the bed/floor, keeping your knee straight. Hold 5 seconds. Repeat 10 times.



2. **Wall slides** – lean your back against a wall or door, feet around hip distance apart. Slide down the wall, aiming the centre of your kneecaps over your third toes. Only go as far as is comfortable, then return to start position. Repeat 10-20 times.



3. **Hamstring stretch** – Sit upright on a chair. Extend your knee, keeping your back straight, until you feel a pull behind your thigh. Hold 30 secs, then relax.



4. **Quadriceps stretch** –standing, holding onto a wall, pull your heel towards your bottom, until you feel a gentle pull in the front of your thigh. Do not force the movement. If you have difficulty reaching you foot with your hand, you can use a towel to help pull your foot in towards your bottom. Hold 30 seconds, and then relax.



5. **Calf stretch** – step standing, push the back knee straight, keeping your heel on the floor. Make sure that the back foot is pointing straight forward, not out to the side. You should feel a stretch in the back of your lower leg. Hold 30 seconds, and then relax.



Weak buttock muscles can also contribute to AKP, so you need to do exercises to strengthen your buttocks.

6. Lie on your back, with your knees bent and feet on the bed / floor. Squeeze your buttocks together and lift your hips towards the ceiling. Only go as far as you comfortably can. Hold at the top for 5 seconds. Repeat 10 times.
7. Lying on your side, knees bent, so that your feet are in line with your bottom, but a couple of feet away from your bottom. Keep your ankles together and lift your top knee a few inches. Do not let your top hip roll backwards. You should feel a pull in your buttock / outer hip. Hold at the top 5 seconds. Repeat 10 times on both sides.



