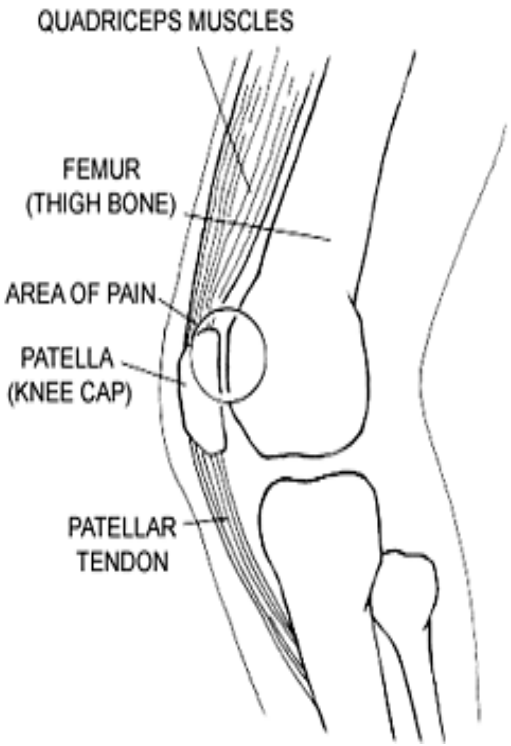
Anterior Knee Pain

What is it?

Pain at the front of the knee is often referred to as patellofemoral syndrome, chondromalacia patella or patella maltracking. Each of these refers to a slightly different condition, but all have the common symptom of **pain around or behind to the knee cap** (patella). It's not to be confuse with patellar tendinopathy (also known as jumper's knee), which refers to pain in the tendon just below the knee cap.

These conditions are commonly due to overuse or a rapid increase in volume of activities where the knee is repetitively bent and straightened such as running, jumping or stairclimbing, or acutely following a fall directly onto the patella[1]. Other factors such as muscle tightness or weakness, biomechanics of the whole lower leg, or previous injury may change the alignment of the patella in relation to the thigh bone (femur)[2]. Any of these events can lead to an irritation of the surface behind the patella or adjacent tissues which can lead to anterior knee pain.



What are the typical symptoms?

- **Pain** often felt as an ache deep to the patella which can be sharp with activities that put more load through the patella.
- Clicking or grinding sensation on repeated bending of the knee, particularly in weight bearing such as squatting or kneeling.
- **Swelling** or increased temperature if the knee is more acutely inflamed
- Feeling as if the knee is going to 'go' or **"give way"** usually due to muscle inhibition arising from pain.

What activities tend to worsen anterior knee pain?

- Running, especially downhill
- Going up or down stairs
- Squatting and kneeling
- Sitting for prolonged periods (historically the condition was called 'moviegoers knee')
- A rapid increase in activity levels such as walking, running, cycling, gym or even home renovations and gardening.

How will physio help me?

Accurate diagnosis and clarification of the contributing factors to your symptoms is crucial in the management of Anterior Knee Pain[3]. Your Physiotherapist will fully assess your knee and advise you on the best injury management. As this is commonly an overload condition, management has two phases:

1. Reduce the load on the irritated tissues, which provides pain relief and recovery of movement[3].
2. Strengthening the muscles that support your patella to enable correct positioning even under load, which will stop the problem recurring.

These phases of treatment will typically include:

Anterior Knee Pain

- **Home exercise.** Your physiotherapist will assess the length, strength and coordination of the muscles throughout your legs including your hips and sometimes your lower back. Although there are some passive techniques such as massage that will help, ultimately your rehabilitation will rely on you performing exercises to help improve the flexibility and coordination of these muscles under load[4,5].

- **Taping** is effective in facilitating pain free strengthening and good recruitment of muscles around the knee[1,4]. Tape can be used in the early phase of recovery to settle pain and later to enable early return to activity; your physiotherapist can teach you to tape yourself if required.

- **Adapting your current activity levels**. This does not mean that you will be encouraged to stop exercising, but may involve doing less aggravating activities such as running, and more cycling[3]. Your physiotherapist will guide you through the process of gradually reintroducing these activities as they cease to be aggravating.

- **Orthotics** (corrective inner soles) or advice on your choice of footwear, may be necessary to improve the biomechanics of your legs by altering the posture of your foot[6]. Depending on your circumstances this may be recommended as a temporary or permanent change.

Is surgery ever required?

Surgery is very rarely indicated for management of anterior knee pain, because the vast majority of people improve with non-operative measures such as physiotherapy.

Returning to work or sport

Essentially your anterior knee pain is likely to be an overload problem and will require a graded return to previously aggravating activities. Timeframes will depend on your adherence to your therapist's advice and exercises, your general health, duration of symptoms and activity goals[7].

Your therapist will advise you and those involved in your care regarding alternative activities that you can participate in to maintain fitness or allow you to perform modified duties at work.

What is the likelihood of it recurring?

As this is commonly an overload problem there is the potential that if you do not continue to address the contributing factors highlighted by your physiotherapist this condition may return (2). This may require continuing a maintenance program of exercises, wearing orthotics, monitoring for signs and symptoms, and adapting your activity levels before pain becomes a problem.

References

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