

MANAGING MY PATELLOFEMORAL PAIN



Patellofemoral pain (pain around, behind or under the knee cap) is very common, and affects both males and females of all activity levels. It often results in pain during simple daily activities such as walking, running, sitting, squatting and walking up and down stairs.

Patellofemoral pain has many causes, and as such there are a lot of treatment options available. The information contained within this leaflet will help guide you on the most appropriate treatment for your knee pain. It is recommended you see an appropriately qualified health care professional to guide your treatment further.

WHAT MIGHT CAUSE MY KNEE PAIN?

Excessive loading or varied and rapid increases to physical activity which your knee cannot cope with (**Figure 1**) are thought to contribute to pain development. Poor biomechanics (movement) can also contribute, with the knee cap thought to move toward the outside of the knee (**Figure 2**), stopping it from tracking normally in its groove. A number of factors can lead to this poor tracking (**Figure 3**). There are numerous other contributing factors to patellofemoral pain including the structure of your knee, trauma, surgery and systemic disease, which you may wish to speak to your therapist about.



Figure 1 Varied and rapid increases to physical activity levels which can lead to patellofemoral pain

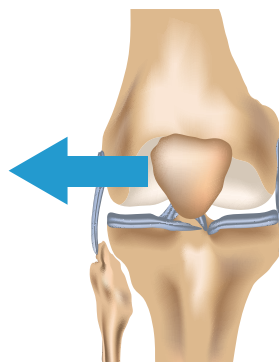


Figure 2 Illustrates abnormal tracking of the knee cap

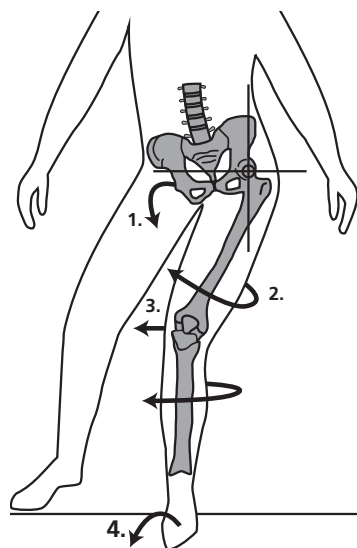


Figure 3 Movement factors contributing to abnormal tracking of the knee cap

1. **Pelvis** drops on opposite side, placing increased tension on the outside of the leg and pulling the knee cap outward.
2. **Hip** collapses inward and rolls under the knee cap due to poor function and weakness of the hip muscles.
3. **Thigh** muscles are weak or function poorly, meaning there is inadequate support for the knee and knee cap.
4. **Foot** rolls in too much, causing the shin and knee to collapse inward under the knee cap.

TREATMENT OPTIONS

(Good quality exercise rehabilitation is the key)

Exercise

WHAT EXERCISE PRINCIPLES ARE IMPORTANT?

1. Your therapist may suggest a period of rest before starting exercise again.
2. Exercises in sitting or lying at the beginning may help to get your hip and thigh muscles functioning without pain.
3. As soon as pain allows, exercises should be performed in standing postures which mimic everyday activities.
4. Your therapist should supervise you with any new exercises to ensure correct techniques.
5. Using mirrors and video recordings may help you to complete correct exercise techniques at home.
6. Exercises will not help unless you perform them with the correct technique and on a regular basis.

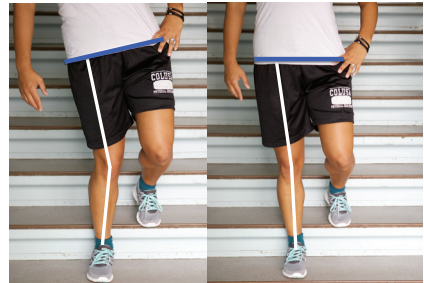
WHAT EXERCISES SHOULD I BE COMPLETING?

1. Weakness and poor function of the hip and thigh is common, so you will most likely need exercises to improve this.
2. Sometimes exercises for the foot or back are also required.
3. You may need to stretch your calf, hamstring or thighs.
4. Exercises should be progressed to activities you previously had pain with (squatting, stairs, running, etc.), ensuring good movement patterns during their completion. (Figure 4 - example)

Additional treatments

PAIN REDUCTION

1. Taping or strapping can relieve pain in the short term – your therapist can apply this or teach you how to do this.
2. Braces can also help relieve pain.
3. Foot orthotics sometimes reduce pain - your therapist will help you decide if they are appropriate, or refer you to someone who can.



4a. Poor control of hip and pelvis. 4b. Improved control of hip and pelvis.

Figure 4 Walking down stairs

HOW ELSE CAN MY THERAPIST HELP?

1. Guide you on your most appropriate exercises and other helpful treatments.
2. Answer questions related to your knee pain, and explain in greater detail the contents of this information leaflet where necessary.
3. Help you understand why you have knee pain, what factors have most likely caused your pain and how to modify your activity to improve your pain and recovery.
4. Provide manual therapy which may be important to improve pain and flexibility.

KEY FACTORS AND TREATMENT OPTIONS

(See inside for greater details)

KEY BIOMECHANICAL FACTORS TO ADDRESS

1. Poor function and weakness of hip muscles
2. Poor function and weakness of thigh muscles
3. Too much foot roll (pronation)



KEY TREATMENT OPTIONS

1. Exercises to improve strength and function of the hip and thigh muscles
2. Taping of the knee cap to reduce pain in the short term
3. Foot orthotics if you have too much foot roll (pronation)

PRIORITIES TO MANAGE YOUR PATELLOFEMORAL PAIN

1. If you think you have patellofemoral pain, you should seek help as early as possible – this will improve your chances of a successful recovery.
2. There are many effective treatment options which you should discuss with your treating therapist.
3. Your recovery will be best if you actively participate in your rehabilitation.
4. Appropriately modifying your physical activity level is often the first step towards successful recovery.
5. Ensure you slowly and safely build up your physical activity levels (**Figure 5**).



Figure 5 Gradual and safe build up in physical activity levels

This information brochure has been created as part of a not for profit endeavour by Dr Christian Barton and Michael Rathleff. Further information related to managing patellofemoral pain can be found at patellofemoral.completesportscare.com.au