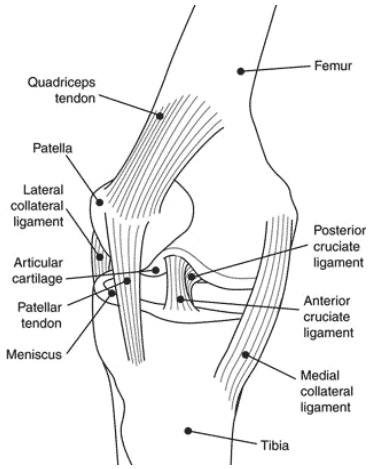
Knee Pain

The knee joint allows you to run, walk and play sport. Awkward movements, falls and collisions, sudden twists, excessive force or overuse can result in a range of injuries to the knee joint and the supporting structures. Pain can hinder your sport, work or day-to-day activities. **Early treatment** from a skilled physiotherapist is the key to help determine the cause and resolve your knee pain.



The knee joint supports the body weight and at the same time allows movement and flexibility.

It is formed by the bones of the femur, the tibia and the patella (knee cap), and held together by the muscles, ligaments and tendons.

To reduce the risk of knee injuries:

- ✓Warm up joints and muscles by gently going through the motions of your sport or activity and stretching muscles.
- ✓Wear appropriate footwear.
- ✓Avoid sudden jarring motions.
- ✓Try to turn on the balls of your feet when you're changing direction. Don't twist.
- ✓Cool down after exercise by performing light, easy and sustained stretches.
- ✓Build up your strength with an exercise program slowly over time.

Causes of Knee Pain

- ***Ligament sprain:*** Ligaments are strong bands of tissue that connect the femur and tibia to provide stability to the joint. The main ligaments in the knee are the cruciate ligaments that cross in the centre and collateral ligaments on either side. Overstretching during a twist, collision or excessive force can cause the ligament to tear and bleed. This results in swelling, pain and the feeling of giving way. Severe tears may need surgery.
- ***Cartilage (meniscus) tears***: Cartilage helps provide shock absorption to the knee joint. Severe impact or twisting, especially during weight bearing exercise, may tear the cartilage. Tears of can also occur in older people due to wear and tear. Tears result in swelling, pain, inability to straighten the leg or locking of the knee joint.
- ***Tendon strains:*** Tendons connect muscle to bone. The patella tendon connects the knee cap to the shin. Inflammation of the tendon (Patella tendonitis) is an overuse injury commonly caused by excessive impact or running.
- ***Patello-Femoral Pain Syndrome:*** excessive friction between the knee cap and the femur result in pain felt behind the kneecap. Squatting, walking up and down hills or stairs, or sitting still for extended periods of time can exacerbate the pain. Abnormal movement of the kneecap as the knee is bent and straightened can lead to wear and tear of the cartilage on the back of the kneecap. Imbalances in muscle strength, tight muscles and structural abnormalities of the lower limb can contribute to the problem. The pain usually comes on gradually over time.

Knee pain can also result from inappropriate footwear, an increase in the intensity and frequency of activity and compensation for an injury elsewhere.

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Physiotherapy Treatment

Early treatment and exercise are the key to a speedy recovery.

Physiotherapists are trained to assess your knee and determine the source of the problem. An individual treatment program will be developed. Depending on the type, and degree of the injury, the program may include:

- Swelling reduction measures – ice, massage, ultrasound.
- Stretching exercises to increase the movement of the joint. Stretches may include: hamstring, quadriceps, calf, iliotibial band, groin, hip flexor and buttocks.
- Strengthening exercises are vital to build up the muscle supporting the knee. This provides stability to the joint, especially the knee cap. The quadriceps muscles at the top of the kneecap are the most important muscle to strengthen.

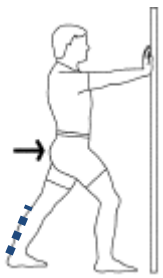
Physiotherapists are skilled in assessing to determine if a review from a specialist is required. If surgery is needed, physiotherapy is important before surgery to reduce swelling, improve movement and prepare the muscles. After surgery, physiotherapy is vital in regaining muscle strength and flexibility of the knee joint.

Here are some sample exercises for knee pain:

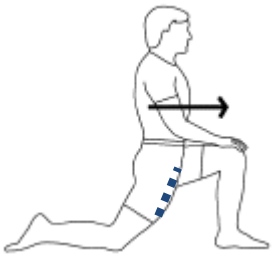
Stretches:

• Gently hold for 15 to 20 seconds each side. Twice daily. If you experience pain, please stop and seek advice from your physiotherapist.

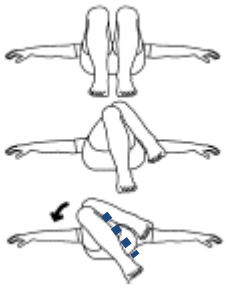
Calf:



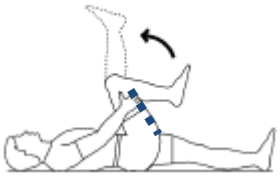
Hip Flexor:



Iliotibial band:



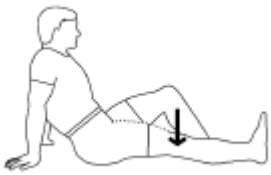
Hamstrings:



Quadriceps VMO Strengthening:

• Gently push down your knee cap to tighten the muscles above your knee cap.

•Aim to hold for 10 seconds, 10 times



The VMO muscle is one of the quadriceps muscles that sits above and to the inside of the knee cap. Commonly, the VMO is weak in people with knee pain.

It is vital to strengthen this muscle to help relieve knee pain.

These exercises have been provided as a guide. In the absence of a visit with a qualified health care professional information in this handout must be considered as an educational service only.

Sapphire Coast Physiotherapy are happy to discuss your knee pain further. A physiotherapist can complete a thorough assessment of your knee and symptoms to develop the best treatment plan to treat your symptoms. For more information, or for an appointment, please phone your nearest clinic.

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