

Know Your Knee And ANTERIOR KNEE PAIN

Anterior knee pain is pain that originates at the front and centre of the knee. It is a very common source of pain, especially in the general population and athletes. Dr Michael Soon Yee Hoong, Orthopaedic Surgeon from Parkway East Hospital, takes you through the anatomy of the knee, as well as the different aspects of anterior knee pain.

REASONS BEHIND KNEE PAIN

The forces that act across the knee joint can be several times our body weight as we walk, climb the stairs and squat. An important part of the knee that does this is the knee cap, also called the patella. Its main function is to transmit the power of the thigh muscles to the shin and foot. Hence the cartilage overlying the knee cap is the thickest in the human body.

Although there are many different causes for anterior knee pain, the common conditions can be broadly divided into two groups: tendonitis (inflammation of the tendons around the knee) and chondromalacia (softening and damage of the cartilage of the knee).

Many of such conditions are due to overuse, like training excessively for a marathon can predispose one to overload the cartilage of the knee cap, leading to injury. If there is a mechanical issue, like mal-alignment of the knee cap, this can lead to uneven stress on the knee cap, leading to abnormal distribution of force and in turn damaging the tendons or the cartilage or both.

FIXING YOUR KNEE PAIN

First Line Of Treatment

For the first line of treatment, when the pain sets in, the best way is to stop that particular activity and rest. BRICE is an acronym that is commonly applied to an acute injury and stands for Brace, Rest, Ice, Compression and Elevation. Essentially, the mentioned measures seeks to reduce pain and swelling, and allow healing to take place.

Once the acute pain is resolved, it will be wise to determine the exact location and cause of the problem. Targeting possible risk factors like a flat foot or a mal-alignment can help significantly. Physiotherapy is an extremely important and integral part of the treatment of anterior knee pain. During such sessions, stretching of tight muscles and tendons and stretching of antagonistic muscles groups help to reduce overall stress across the joint. Medication in the form of anti-inflammatory as well as supplements can be useful as well.

Use of specific braces or specific taping methods (like Kinesio taping) can also be useful to allow training to resume before the pain has completely resolved. The rotation of training among different



exercises such as running, cycling and swimming exercises is also important. This encourages different muscle groups to be utilised, and can prevent repetitive actions which can worsen the injury.

Surgical Treatments When Symptoms Persist

However, there are occasions where the symptoms persist or the injury worsen. In such cases, invasive treatments in the form of injections or surgery may be required. The use of Platelet Rich Plasma (PRP) has been proven to stop inflammation and allow healing to occur. With this process, your blood is taken and carefully prepared to isolate the growth components in the blood. This is re-injected into the area of injury to stimulate healing. This entire procedure can be performed in the clinic and does not require hospitalization.

For more severe cases, keyhole surgery may be required to repair the cartilage in the knee joint or surgery to repair partial ruptures of tendons.

Although common, anterior knee pain can arise from different causes. It is important to obtain a proper diagnosis, so that effective treatment may be instituted early. Most of these can be treated with a combination of rest, medication and physiotherapy.

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