Patient Information:
Knee Arthritis

This information is a general overview only and does not replace specific medical advise about your condition and how best to care for it.

Introduction
About one in four people over the age of 65 has worn joints. The most commonly affected joint is the knee. Osteoarthritis is the most common type of arthritis. In general terms this is a gradual wearing out of the cartilage layers inside the knee. In its end stage, the cartilage inside the knee is completely worn away and the bone on bone movement begins to happen with every step. This leads to pain, stiffness, swelling and deformity. The knee is the largest joint in the body and carries almost half your body weight with every step. In a normal, healthy knee the moving parts of your knee are lined with smooth cartilage which allows easy movement. Arthritis occurs when this cartilage layer is eroded exposing the underlying bone. This smooth layer becomes rough and the joint then becomes stiff, swollen and painful. There are many causes or types of arthritis that leads to their common end-point.

Osteoarthritis

- This is by far the most common arthritis in the knee. This is age related wear and tear.

Autoimmune Arthritis

- Some general autoimmune conditions erode joint cartilage. The most common form of this type is arthritis is Rheumatoid Arthritis.

Post-Traumatic Arthritis

- An injury to the joint prematurely roughens or damages the cartilage which wears out over time. This process may happen months to years after an injury.

Birth Defects and Growth Disorders

- Structural changes to the knee joint from birth leads to abnormal wearing out of the knee joint, leading to arthritis.

What are the Symptoms?

The symptoms of arthritis can vary considerably from person to person. Arthritis tends to come on slowly, over months or even years with a gradual decline in function. There will be days where your knee is very good, and other days where your knee functions poorly without clear reason why.
The most common symptoms are pain and stiffness of the joints. These sensations are usually worst with activity initially but can be more constant in later disease. In the later stages the pain affects your ability to sleep well, and the stiffness takes a while to work out, especially first thing in the morning. These symptoms may affect your ability to do normal daily activities, such as walking and climbing stairs. Other symptoms may include clicking noises, grating sensations, locking or giving way.

**Who is at Risk?**

Research shows there are some things that may put you at more risk of developing knee osteoarthritis, such as a prior injury, cartilage tears, jobs that involve repetitive kneeling, climbing and / or squatting and being overweight.

**How is it diagnosed?**

Your doctor will diagnose arthritis from a combination of the symptoms you describe and the physical examination. Plain x-rays can confirm the diagnosis and give an objective appreciation of the severity of the arthritis. X-rays do not tell us the whole picture however. It will not tell your doctor how bad your pain is. Sometimes x-rays can show tell-tale signs of arthritis in a persons with a pain free knee and similarly sometimes very painful knees have x-rays with less pronounced changes.

Blood tests are only helpful to rule out other types of more rare arthritis.

**Is there a cure?**

Currently there is no cure for arthritis. While there are many different treatments that can effectively control symptoms, you should be wary of any products or therapy that claims to cure arthritis.

**What treatments are there for arthritis?**

Because overweight makes your knee wear out faster there is no one answer that works best in all situations. Your doctor can recommend which treatments are likely to give you the best result. In general terms, treatment can include any or all of the following:

**Weight Loss**

Being overweight makes your knee wear out faster and can worsen your pain day to day. Even a modest weight loss of 5% or more (e.g. from 100kg to 95kg) has been shown to improve pain and quality of life.
Physiotherapy
Programs supervised by a physiotherapist aimed at improving flexibility, muscle strength and the way you walk can improve pain and function.

Braces, Sticks or heel wedges
Physical aids can help you function day to day by offloading weight going through the worn part of your knee.

Pain relief medication
Paracetamol is a simple pain reliever that can have dramatic effects in the earlier stages of arthritis. Anti-inflammatory medication may also be of benefit. Always discuss this with your doctor or pharmacist before you take this as they are not always suitable for all people especially if you suffer from stomach ulcers or kidney problems.

Stronger pain medication such as tramadol or codeine may be of benefit if the simple measures listed above are no longer helpful.

Sometimes an injection into the knee of a corticosteroid medicine can help relieve pain.

Anti-inflammatory gels have also been shown to have some benefit in knee arthritis.

Complementary therapies
There are many different over-the-counter preparations available. Listed below are some of the more readily available supplements:

- **Fish Oils**
  Oils extracted from fish tissues have a high concentration of omega-3 fatty acids. Some specific subtypes of omega-3 fatty acids have been shown to act as a natural anti-inflammatory thus relieve joint pain. There is better evidence for its use in controlling the symptoms from autoimmune arthritis, such as rheumatoid arthritis although there is some evidence for its use in osteoarthritis. Eating foods rich in omega-3 fatty acids may help your general health but it is unlikely you can obtain enough from your diet without fish oils supplements. Research suggests you need to take a dose of 2.7g omega-3 (EPA plus DHA) per day to reduce inflammation.

- **Glucosamine**
  This is a building block of joint cartilage. There is currently no consensus in the scientific literature whether taking supplements of glucosamine improved pain when compared to a placebo (fake pill). The suggested dose is 1.5g/day (glucosamine sulphate).

- **Chondroitin**
  This is a substance found in the body that is thought to help retain water and essential nutrients within cartilage, keeping it functioning normally. There is no consensus in the scientific literature whether taking supplements of chondroitin improved pain when compared to a placebo (fake pill). The suggested dose is 800 - 1000mg/day.

  Recent studies have however shown that taking both chondroitin and glucosamine may be helpful in reducing pain in osteoarthritis.

- **Acupuncture**
  There are promising results from multiple studies regarding the use of acupuncture in knee arthritis, but there are still some doubts about its effectiveness.
Exercise
This is one of the most important treatments for knee arthritis. It can help reduce pain and maintain your general health. Low impact activities are recommended such as swimming, cycling and walking.

Joint replacement surgery
After discussion with your doctors, the decision to have knee replacement is yours and yours alone to make. Your doctors will always give you the options and if appropriate offer the surgery. The recommendation is usually made keeping in mind the following factors:

- Pain that has not been relieved by pain killers, physiotherapy or walking aids.
- Pain severe enough that it prevents work, walking, recreation and daily activities.
- Sleep is disturbed due to pain
- Stiff and swollen knee

For online resource to help you best care for your knee, please visit www.myjointpain.org.au