



Getting you moving again

Your complete guide to knee replacement surgery

A PUBLICATION BY DRSTUARTMACKENZIE.COM.AU

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This booklet will help you understand how your knee works and the causes of knee problems. It also tells you how knee replacement surgery works, how to prepare for surgery and how to have the best recovery.

The information in this booklet is for educational purposes only. It is not intended to replace the expertise and guidance of your specialist. If you have any questions or concerns, it's important you talk to your orthopaedic surgeon.

1. Help for knee problems

EXPLORING YOUR OPTIONS

Knee problems can affect every aspect of your life. Activities like walking, driving, and standing may have become challenging, painful, and very difficult. You might even be experiencing pain when you are resting.

If you experience knee pain or feel something unusual about your knee it's important you seek medical help. Knee problems can be caused by wear and tear or by a disease like osteoarthritis. Whatever the cause, knee problems can be distressing.

The knee is the largest joint in your body and the joint that most commonly needs joint replacement surgery. Knee replacement surgery has made great advances in the last 30 years, improving the quality of life of many people.



2.The knee

UNDERSTANDING HOW YOUR KNEES WORK

The knee is a very complex joint, consisting of a combination of bones, cartilage, ligaments and capsule.

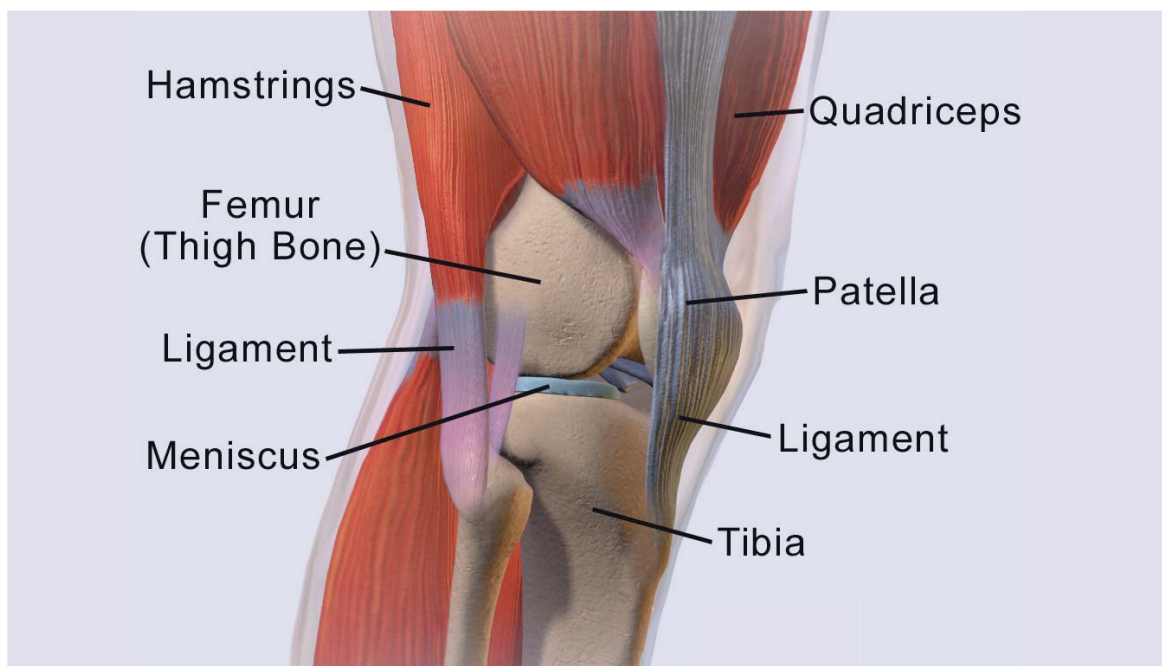
The end of your **femur** (thighbone) has two distinct surfaces called condyles, which rest on the **tibia** (shinbone).

Each side of the knee is referred to as a 'compartment'. A third compartment is found behind the **patella** (kneecap).

All of the bone surfaces in the knee are covered in **cartilage**. The cartilage provides a smooth, very low friction surface for painless movement. There are also ring cartilages, called **meniscus**, between the tibia and femur. The meniscus help cushion the joint.

Because of the shape of the bones, the knee relies on a number of ligaments to keep it stable. Muscles and tendons attach to the bones around the knee and move the knee joint.

Any of these knee structures can be injured or become diseased through wear and tear and ageing.

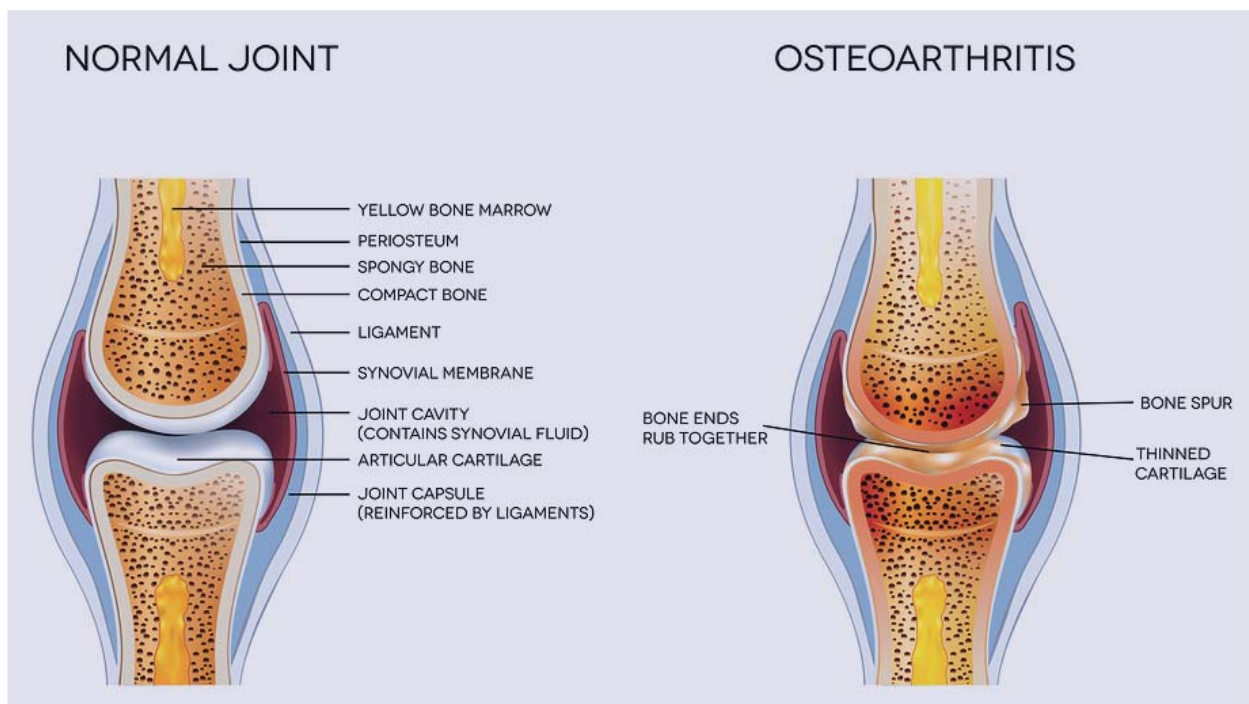


3. Causes of knee problems

UNDERSTANDING HOW AGE AFFECTS OUR KNEES

As people become older there is a greater chance of knee problems. The structures in the knee can be injured through wear and tear or they can be affected by knee disease.

Osteoarthritis is the most common disease affecting the knee. It's a wear and tear condition that affects joint cartilage. Osteoarthritis develops after years of constant motion and pressure on the joints. As the cartilage continues to wear away, the joint becomes increasingly painful and difficult to move. Eventually it can lead to complete loss of cartilage and 'bone on bone' in the knee.



Rheumatoid arthritis is an inflammatory condition where the body's own immune system attacks the joints. It can cause loss of cartilage as well as damage to ligaments and bone within the knee.

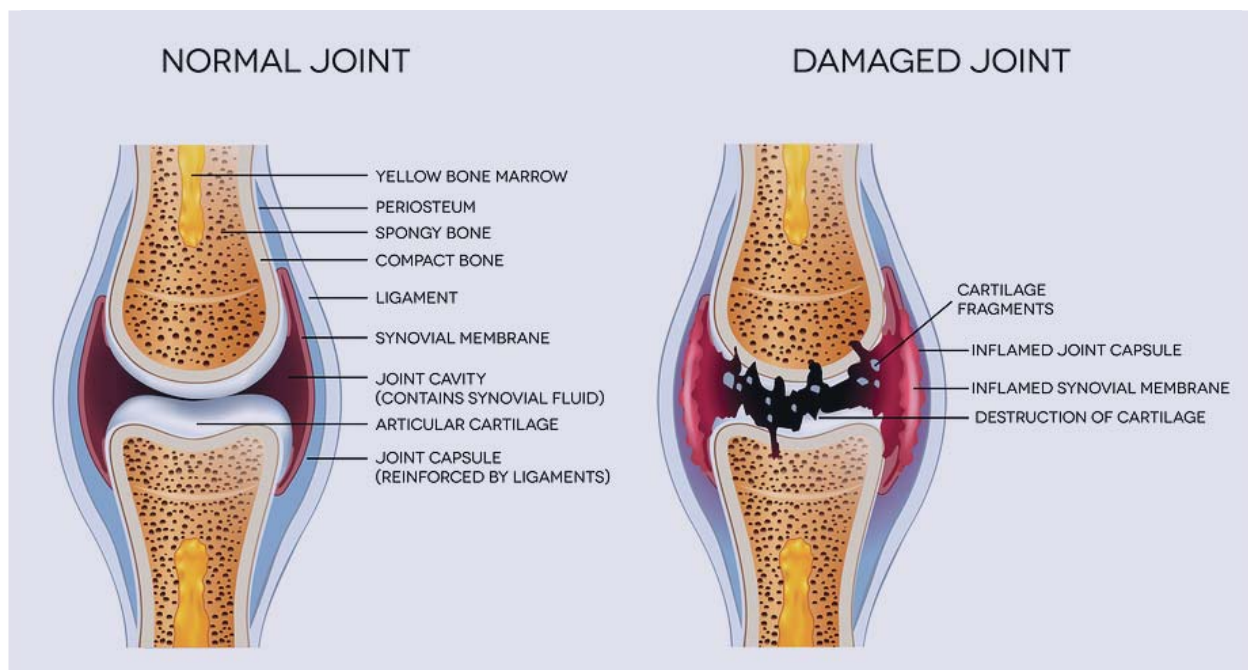
Spontaneous osteonecrosis of the knee (SONK)

is a condition where part of the bone in the knee dies. This can be extremely painful in the early stage. The bone can sometimes recover over time. Often the bone collapses causing permanent damage.

Right: Spontaneous osteonecrosis of the knee.
Image by Hellerhoff (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons



Injury to the knee (ligaments or meniscus, or knee bone fractures) can cause degeneration and the development of osteoarthritis over time.



If you are experiencing pain or discomfort in your knees, talk to your GP who can refer you to a knee specialist.

4. First steps

GETTING THE RIGHT HELP

Who should I talk to about my knee problem?

If you are concerned about your knees, first talk to your general practitioner (GP). He or she will recommend a course of action and refer you to a specialist surgeon, if needed.

What happens at the specialist consultation?

Your specialist surgeon will assess you and recommend a treatment plan. If surgery is the right solution for you, the surgeon will explain in detail how the surgery works as well as address benefits and risks.

Will I be asleep during surgery?

Yes, knee replacement is performed while you are under anaesthesia. Since there are various types of anaesthesia available, your anaesthetist will discuss options with you before the surgery and recommend the type that they think is best and safest for you.

How long does surgery take?

The length of surgery itself may be approximately 1 to 2 hours. You will also need to allow for another 2 to 3 hours for preparation before surgery and time spent in the recovery room immediately following surgery.

When can I go home?

Most people are ready to go home between 3 to 5 days after surgery.

5. Knee surgery

UNDERSTANDING YOUR OPTIONS

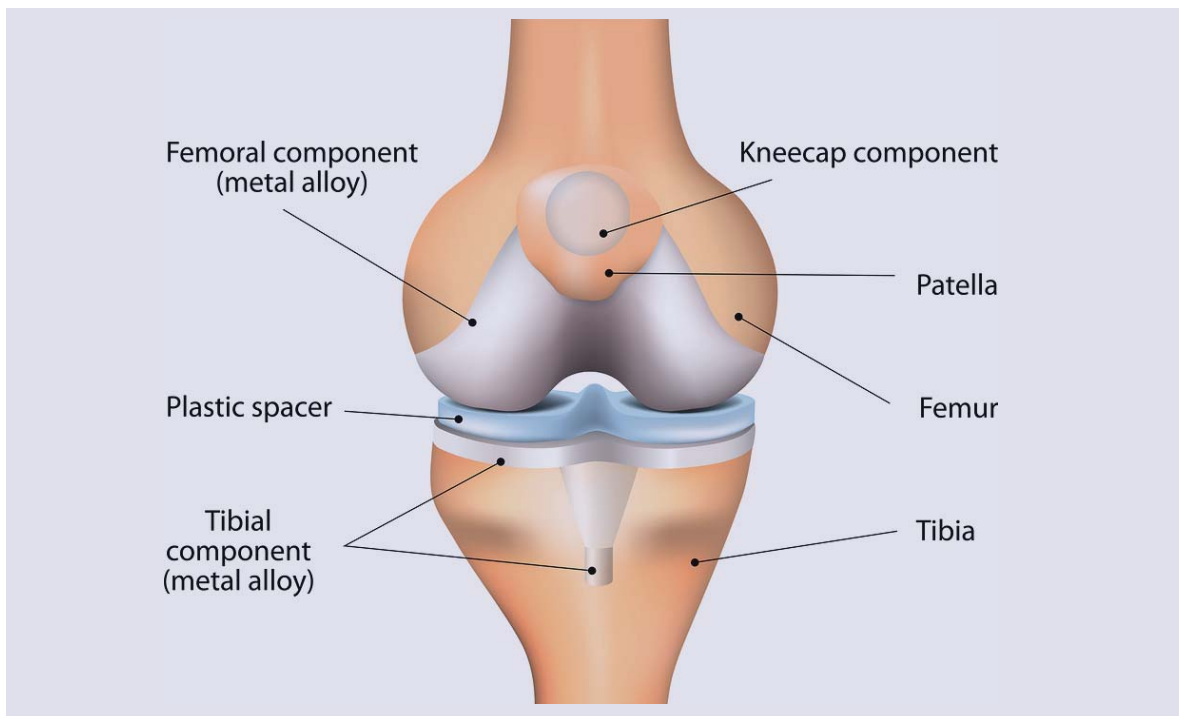
If you are considering knee replacement surgery it's important to understand what's involved. Your specialist will make a diagnosis then tailor your treatment to your situation and advise you on the best approach – every knee is different.

Total knee replacement (or total knee arthroplasty)

During this procedure the surgeon removes the diseased bone and cartilage and resurfaces it with orthopaedic implants.

An incision made down the front of the knee exposes the damaged area. The surgeon then removes damaged cartilage and bone ends and replaces them with implants designed to re-create the natural shape of the bones in a healthy knee. The metal and polyethylene (plastic) implants gently glide against each other, much like natural cartilage.

Total knee replacement is the most common type of knee replacement surgery and can be extremely successful. Since the first knee replacement procedure over 30 years ago, millions of people have received knee replacements and then resumed normal lives.



Partial (unicompartmental) knee replacement

This type of surgery consists of replacing only one part of a damaged knee. The surgeon can replace either the inside (medial) part, the outside (lateral) part, or the kneecap part of the knee.

Partial knee replacement is not for everyone but in appropriate patients can have faster recovery and better function than total knee replacement.

Double knee replacement (or bilateral knee replacement)

In this process, both of your knees are replaced during the same surgery. The surgery may be total or partial knee replacements.

Having both knees replaced at the same time means you will only have one hospital stay and one rehabilitation period to heal both knees. However, rehabilitation may be slower, as it is more difficult and more painful to rehabilitate both knees at once.

6. Robotic-assisted surgery

UNDERSTANDING ADVANCED KNEE SURGERY

With robot-assisted surgery, your surgeon can perform complex procedures with more precision, flexibility and control than is possible with conventional techniques.



Can anyone have robot-assisted surgery?

Not everyone will be suited for robotic-assisted surgery. Your surgeon can advise you on whether this is an option for you. Your orthopaedic surgeon will prepare a personalised plan based on a 3D model of your knee.

Where can I have robot-assisted surgery?

Not all surgeons or hospitals are equipped to perform robotic-assisted surgery. Talk to your surgeon about robotic-assisted surgery.

What happens during surgery?

During the operation, the surgeon controls the robot to prepare the bone for placement of the joint replacement implant. Using the robot results in a more accurate placement than traditional methods of bone preparation and implant positioning.

The first robot-assisted surgery in the Hunter region

Dr Stuart Mackenzie successfully performed the first robot-assisted surgery in the Hunter region. When performing this type of surgery, Dr Mackenzie first creates a plan personalised for you, based on a 3D virtual model of your knee.

During the surgery, Dr Mackenzie uses the advanced technology of the Mako system which allows him to carefully and precisely guide the robot to perform your knee replacement.



7. Your support system

GETTING PREPARED FOR SURGERY

At home, before the surgery

Preparing for the surgery by having a support system in place is important. You will need to arrange for someone to:

- Attend appointments with you and help you remember things
- Pick you up from the hospital after surgery
- Come and check on you in the first few days and nights
- Help your husband, wife or partner while you are recovering in hospital, if needed
- Look after your pets while you are recovering in hospital.

At the hospital, after the surgery

To help you regain mobility and strength in your knee, your physiotherapist will teach you some exercises to do when you get home. Your therapist will show you how to safely climb and descend stairs, how to get into and out of a seated position, and how to care for your knee once you return home.

Try to have a family member or friend attend a physiotherapy session with you at the hospital, so they can help you with the exercises when you're at home.

At home, after the surgery

Your family or your carer can help you with your rehabilitation exercises at home. You will also need help with everyday things, like house cleaning, cooking, caring for others or looking after pets.

8. After the surgery

PLANNING YOUR RECOVERY

What happens after surgery?

On the first day after your surgery you will get out of bed and walk with the help of a physiotherapist. You will also start working on exercises to strengthen and regain movement in your knee. You will have physiotherapy every day while you are in hospital.

Although not all pain can be eliminated, the goal is to make you comfortable and keep your pain at a level where you can tolerate all activities. You will receive regular pain medication. If you need more medication, ask your nurse. As you progress, you can expect your pain to lessen.

When can I go home?

Some people will go to a dedicated rehabilitation ward for a period. Most people will go directly home after to 3 to 5 days and begin supervised therapy at home and with a physiotherapist.



How will I feel when I get home?

It's normal to feel tired after surgery as your body is using all the strength to recover, leaving not much for anything else. Take it easy and make rehabilitation your priority. It's important to do your exercises regularly as instructed by your surgeon and physiotherapist.

Some pain and discomfort is also normal. You will be given pain medication to take home from hospital. If you experience unusual pain, or the pain is too much for you, contact your surgeon.

When can I return to driving and normal activity?

When to start driving again and return to normal activities depends on your response time, pain level and restored movement. Your surgeon will help you work out when it's appropriate to begin driving and doing other activities.

When can I return to work?

This will depend on the type of work you do. Most people will need 6 weeks to 3 months off work following knee replacement surgery.



9. Your rehabilitation

GETTING BACK ON YOUR FEET

Your rehabilitation after surgery is at least as important as the surgery itself. Even though you'll be feeling tired and sore, sticking to your rehabilitation plan is vital to your recovery.

How often do I need to do my exercises at home?

Once at home, you will need to do your exercises 3 or 4 times a day as instructed by your surgeon and your physiotherapist.

Do I need to see the physiotherapist after I leave the hospital?

It's also a good idea to visit a physiotherapist at least once a week in the initial period after you go home from hospital.



Do I need any special equipment?

Your surgeon and physiotherapist will tell you if you need any special equipment at home. This can be organised for you while you are in hospital if needed.

Do I need follow up appointments?

Yes, you will need ongoing surgical supervision until healing is complete, usually 2 to 3 months. It is very important to keep all follow-up appointments.

Following full recovery, have a check-up for your knee every 2 years for the rest of your life.

10. Maintaining your new knee

HELPING YOUR RECOVERY ALONG

Getting dressed

- To be more stable, sit on a chair or the edge of your bed.
- When putting pants, socks, or pantyhose on, put them on the surgery side first. When you undress, remove clothes from your surgery side last.

Sitting down

- Try not to sit in the same position for more than 45 to 60 minutes at a time.
- Sit in a firm chair with a straight back and armrests. A higher chair will make it easier to stand up.
- Use a slightly lower chair during your exercises.
- Avoid soft chairs, sofas, rocking chairs, and chairs that are too low.

Getting up

- When getting up from a chair, slide toward the edge of the chair, and support yourself by using the arms of the chair, your walker, or crutches.

Bathing or showering

- Shower standing up.
- Place a rubber mat on the shower floor to help prevent slips and falls.
- Do not bend, squat, or reach for anything while you are showering to avoid falls.
- Do not sit down in the bottom of a regular bathtub as it will be too hard to get up safely.

Lying down

- Lie flat on your back.
- Do not place a pillow behind your knee when lying down. Keeping your knee straight when resting will help you regain movement.



CALL DR MACKENZIE TODAY

for a consultation and to discuss possible solutions to
your knee discomfort **(02) 4963 3393**



Dr Stuart MacKenzie