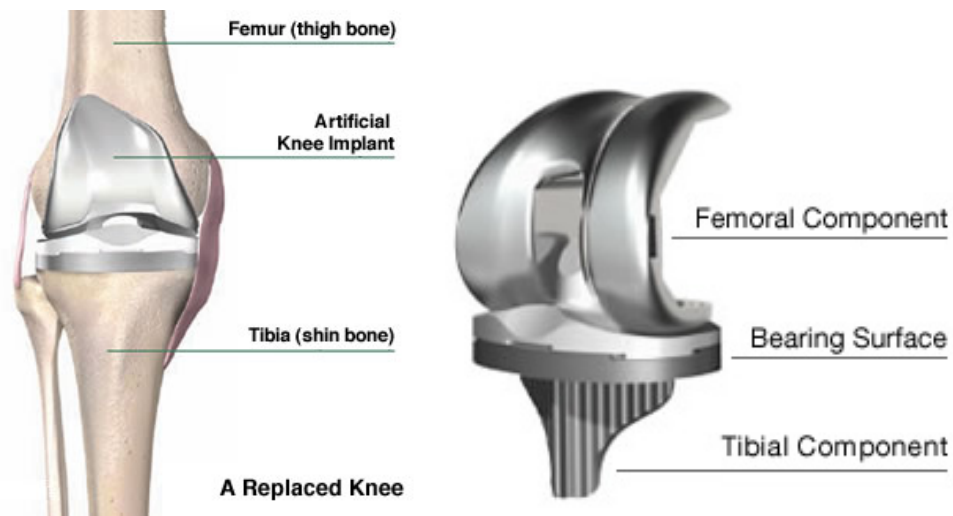


## Knee Replacement Surgery – Dr Sarah Watts



### Introduction

A Total Knee Replacement (TKR) is an orthopaedic procedure done for a knee severely damaged by arthritis or injury. People with severely arthritic knees may struggle with walking, climbing stairs, driving, sitting, and even resting. It may be hard to perform even simple day-to-day activities due to knee pain.

Some circumstances when a TKR may be done:

- Severe knee pain or stiffness that limits your everyday activities
- Moderate or severe knee pain while resting, either day or night
- A knee that has become deformed or bowed as a result of arthritis.
- Failure to substantially improve with non-surgical treatments

Most people with severe arthritis have tried “nearly everything” to try and ease their pain. Some non-surgical measures often already tried include use of arthritis supplements and medications, orthoses and braces, exercises and stretches, liniment and rubs, guided injections, and walking supports (walking stick).

When non-surgical measures no longer help, a knee replacement may be considered. Knee replacement surgery is a safe and effective operation, for arthritic knees. It can relieve pain, correct deformity, and help return to a better daily lifestyle. There is a low chance of risks and complications.

Knee replacements have been performed for nearly 50 years. There have been significant improvements over time, with regards to surgical techniques and prosthesis technology.

### Knee Anatomy ....”The knee bone’s connected to the.....

The knee links the thigh bone (femur) to the shin bone (tibia). Part of the link includes the patella or kneecap. There are strong ligaments that bind the joint together, and keep it stable.

Over the ends of each bone is a smooth cap of cartilage. The joint is lined by a layer of tissue called synovium, which makes synovial fluid (*syn = like, ovium = egg*). This is the lubricant of the joint, and (like the latin root), it looks like, and has the consistency of egg white.

This is the machinery of the joint, and the low-friction cartilage, plus the lubricant fluid, usually keeps the joint running very smoothly.

## **Arthritis**

Arthritis is simply wear and tear on the joint. It can be caused by

- Age and degeneration “osteoarthritis”. This is the most common cause.
- Inflammatory and Immune disorders “rheumatoid” or “inflammatory” arthritis
- Post traumatic arthritis

Arthritis wears down the smooth cartilage, causing it to become swollen, furry and shaggy. In places it wears away completely, and the bone wears on bone, making the bone hard, like polished concrete. The joint no longer runs smoothly, and the surface friction increases.

Then joint space starts to thin down and deteriorate, cysts form, and spurs can start at the edges of the surfaces. The effects of these changes make the joint painful, deformed, stiff, and hard to move.

## **TKR Surgery**

A TKR occurs via an incision down the front of your knee.

The steps include:

1. The damaged cartilage surfaces at the ends of the femur and tibia are removed
2. Surfaces are replaced with metal components that recreate the contours of the joint.  
The metal parts are cemented in.
3. Sometimes, the patella (kneecap) is resurfaced with a plastic button.
4. A medical-grade plastic (polyethylene) spacer is inserted between the metal components to create a smooth gliding surface.

## **Should I have a TKR?**

The final decision to have total knee replacement surgery is between you and your surgeon. Total knee replacements can be performed successfully at any age, but most people are between 50 and 80. The recommendation to go ahead is usually based on pain and disability, rather than age.

There are specific risks associated with a knee replacement, but these vary between individuals. Over all the risks are low. Dr Watts can advise you of your specific risks, relative to your other medical conditions. General TKR risk information is available in the other handout on TKR consent information.

