

Sports Therapy  
Manual Therapy  
Electrotherapy  
Manipulation  
Rehabilitation  
Pre-habilitation  
Clinical Pilates  
Pre-Season Screening  
Exercise Prescription  
Massage

1 Launder St, Hawthorn VIC 3122  
Tel – 9819 2827 Fax – 9819 4471  
www.hawthornphysio.com.au

5 Studley Ave, Kew VIC 3101  
Tel – 9851 8888 or Tel – 9851 8845  
www.svpm.com.au

## UNICOMPARTMENTAL KNEE REPLACEMENT

### Partners

Chris Ward  
B.App.Sc. (Physio)

Charlie Schall-Riaucour  
B.Physio (Hons.),  
B.App.Sc. (Phys.Ed.),  
Post Grad Dip (Exs for  
Rehab)

### Physiotherapists

Richard Webber  
B.App.Sc (Physio)

Sarah Tulloch  
B. Health Sc., M. Physio

Eleanor Dwyer  
B. Sc., M. Physio

Daniel Ford  
B. Physio

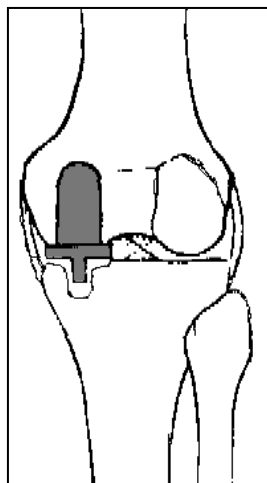
Nicole Forster  
B. Physio

### Practice Manager

Anne Mellor  
BA (Hons)

### What is a unicompartmental knee replacement?

A unicompartmental knee replacement is a surgical procedure designed to replace the diseased knee joint surfaces which have usually been damaged by arthritis. The operation replaces the degenerative cartilage surface, on one side of your knee joint only. The end of the femur bone is removed and is replaced with a metal shell. The end of the lower bone (tibia) is also removed and resurfaced with a metal 'T-piece' and a plastic top. Depending on the condition of the kneecap, a plastic 'button' may also be added under the kneecap to improve the surface.



### Who should have a unicompartmental knee replacement?

A unicompartmental knee replacement is considered for patients in whom one side of their knee joint has been severely damaged by either progressive arthritis, trauma or other destructive diseases of the joint, whilst the other side is still in good condition. The most common reason for knee replacement in Australia is severe osteoarthritis. It is recommended that when the arthritic pain becomes so severe that it becomes too difficult to perform your daily activities then it is time to have the replacement.

### **What are the risks of undergoing a unicompartmental knee replacement?**

These should be discussed with your surgeon prior to surgery. Risks of knee replacement include blood clots in the legs, that can travel to the lungs (pulmonary embolism). Pulmonary embolism can cause shortness of breath and chest pain. Other risks include bleeding into the knee joint. Long term risks include 1) Infection of the knee that may cause the prosthesis to loosen and may require re-operating. 2) Nerve damage and 3) Blood vessel damage. Furthermore the risks of anaesthesia include potential heart, lung, kidney and liver damage. These risks will be discussed by the appropriate practitioner.

### **What do I do prior to surgery?**

Preparing mentally and physically for surgery is an important step towards a successful result. We find that patients who come well prepared cope better during the recovery period and have fewer problems.

One of the best ways to prepare for your knee replacement is to attend Hawthorn Physiotherapy Clinic for a program of Prehabilitation. Prehabilitation is a 4 week individualised exercise program aiming to prepare you both mentally and physically for the demands of surgery. It will help you improve your fitness, improve your strength in both arms, legs and core muscles, improve your knee's flexibility, and gain fitness in a supervised gentle gym setting. These exercises will make it easier to mobilise following surgery, speed up your recovery of strength and range of movement, reduce length of hospital stay, and lead to smoother recovery. Becoming familiar with hospital physiotherapists at the clinic, meeting other patients, and having any further questions answered will also help reduce anxiety and increase your preparedness.

Mental preparation is also achieved through education sessions. These 'pre-admission' sessions are held by hospital nurses and physiotherapists, and aim to teach you how to re-arrange your environment and overcome challenges that commonly emerge following surgery.

If you are unable to attend Hawthorn Physiotherapy Clinic for Prehabilitation, you will be given a sheet of home exercises to help you physically prepare for surgery.

It is important to stop smoking and to achieve a healthy weight range prior to surgery. This will help to reduce the risk of complications following surgery

If you are a smoker, you should stop smoking prior to surgery as it increases risks associated with having an anaesthetic and also delays tissue healing after the operation. Hormone replacement therapy and anti-inflammatory tablets such as Voltaren, Naprosyn, Celebrex etc should be stopped 7-10 days before your surgery. ***If in doubt about any medication that you are taking, please ask your surgeon.***

### **What happens after surgery?**

A unicompartmental knee joint replacement generally requires one to two hours of operative time. After surgery, patients are taken to a recovery room where vital organs are frequently monitored. When stabilised, patients are returned to their hospital rooms.

Passage of urine may be difficult in the post-operative period therefore a catheter may be inserted to help drain the bladder. You will also have a drip in your arm for analgesia and fluids; and a drain tube in the knee to drain away any blood and fluid from the knee.

**Physiotherapy is an extremely important part of rehabilitation** and requires full participation by the patients for optimal outcome. Patients begin simple exercises the day after the operation and progress with each day after. Some degree of pain, discomfort and stiffness can be expected during the early days of physiotherapy. You will have physiotherapy at least once daily during your stay in hospital.

A continuous passive motion (CPM) machine is beneficial to you after your knee replacement. This is started quickly after the procedure and the range is increased throughout your stay. *Generally the CPM is applied twice a day for 2 hours at a time, but can be used up to 8 hours a day in intervals for the first few days.*

### **Continuous Passive Motion (CPM):**

Continuous passive motion is most important in the first few days following surgery. This is the period of time where pain limits what you can do actively with your knee. The CPM supplements what you are unable to do during this period.

### ***Benefits of CPM include:***

1. Improved healing after surgery due to the gentle rhythmic motion of the leg which helps decrease the swelling and increase blood circulation.
2. Less post-operative pain as movement helps to reduce joint stiffness and muscle spasm.
3. Maintains knee range of movement when not actively participating in exercise

**The following is a general guide to what is expected after your surgery:**

### **Day 1**

- You will generally rest in bed on the first day following surgery but may be stood at your surgeons request
- You will be expected to perform some gentle bed exercises
- The continuous passive motion machine and ice packs will be applied throughout the day.

### **Day 2**

- Your bed exercises (strength and knee range of movement) are progressed
- You will stand up with the aid of a frame and the physiotherapist and walk into the shower

### **Day 3**

- Continue Exercises to start to regain control of your leg.
- You will often start to walk with crutches today with the physio supervision
- You will sit out of bed for your meals.

### **Day 4-6**

- You will increase weight bearing and ambulation will be encouraged
- Practice of walking and transferring will help to increase your confidence.
- You will learn how to independently negotiate stairs.
- You will attend the rehabilitation gym for further exercises to progress your knee bend, and control of the knee
- You will usually be discharged home during this period, once all goals have been achieved.

### **Ambulation**

Initially, you will require a frame while ambulating. Once your walking pattern improves and you become more confident, you will be progressed to walking with elbow crutches. Your physiotherapist will show you how to use these correctly.

### ***Walking pattern***

1. Walking frame or crutches
2. Operated leg
3. Un-operated leg

### ***Stairs***

**The sequence is:**

### ***Going UP Steps (See Diagram)***

1. Un-operated leg
2. Operated leg



### 3. Crutches

#### **Going DOWN Steps (See Diagram)**

1. Crutches
2. Operated leg
3. Un-operated leg

Black = operated leg White = un-operated leg
---

#### **Home**

Most Patients who undergo unicompartmental knee replacements now go home around day 4-6. You will then require further follow-up exercise with the physiotherapist to ensure a full recovery.

Your time spent in hospital will teach you the skills required for you to manage independently at home. When you go home you will be given a home exercise program that will help you to maintain and continue to improve your functional level. If social or physical problems restrict your recovery you may get referred to a rehabilitation hospital for further treatment. This will be decided in consultation with the specialist, physiotherapist and case managers depending on individual circumstances. Your physio in the hospital, or your surgeon may refer you to our clinic to progress your exercises, work on your Flexion and Extension and check your Gait.

#### **Discharge Criteria**

You are discharged from hospital once the following goals are reached:

1. Independent transfers into and out of bed.
2. Bend the knee to 90°.
3. Walk 30 meters with crutches and safely negotiate stairs.

#### **What happens after discharge?**

Looking after your new knee will influence how quickly and how well you heal.

#### **Ways to look after your knee include:**

##### **Exercise**

- Continue with your exercise program following discharge from hospital.
- Attend a physiotherapy follow up session 1-2 weeks following discharge from hospital in order to:
  - Monitor your progress
  - Address any problems
  - Progress your home exercise program

##### **Infection**

*It is important to watch your knee for any sign of infection. Signs to look out for include:*

- Abnormal redness
- Increasing warmth
- Swelling
- Unusual pain

##### **Activities:**

- Patients generally spend the first 6 weeks after surgery recovering and allowing their body to get over the stress of surgery. It is important over this

time to listen to your body and not try to do too much activity too quickly. Increases in swelling and pain are all signs that you need to slow down a little with your general activity, but continue your home exercise program.

- For the first few months following your knee replacement surgery kneeling, bending, jumping and carrying heavy objects is not encouraged
- Using elbow crutches may be necessary for approximately 6 weeks

#### **Work:**

- You may be able to return to pre-operative employment depending on the demands of your work environment
- *Climbing ladders, heavy lifting and other activities involving excessive strain on the knee are not encouraged*

#### **Sport:**

*Low impact sports are encouraged. These include sports such as:*

- Golf
- Non-competitive doubles tennis
- Bowls
- Swimming / Hydrotherapy (with surgeons clearance)

**It is important to notify the surgeon immediately following any injury to your knee.**

### **COMMONLY ASKED QUESTIONS**

#### **How long will my leg continue to hurt and swell?**

**Pain** - Pain after a total knee replacement usually decreases rapidly during the first month. Pain felt while sleeping may persist for up to 6 weeks. Stiffness when standing up may be present for as long as 2 years following your knee replacement surgery.

**Swelling** - Swelling in your feet occurs if you keep your legs in a dependent position for long periods of time. This can be improved by spending time with your feet elevated. Swelling in your knee will remain until your knee overcomes the trauma of surgery. This type of swelling can be controlled by ensuring you balance rest and exercise and with the application of ice. Swelling may persist for 6-12 months post surgery.

#### **How much exercise should I do and how can I tell if I've done too much?**

It is important to complete your home exercise program and progress your activity levels. However, in order to give your knee the time required to heal, you need to balance activity and rest and avoid over-exercise. You will know if you have over-exercised if your knee is painful and swollen following activity.

#### **How long do I have to walk with crutches?**

Most people are required to use crutches for 3-6 weeks following surgery.

*You will be able to walk without crutches when:*

- You're confident you can manage on your own
- You can walk un-aided without a limp
- You can walk un-aided without pain and swelling

Walks inside the house without the crutches will not harm the knee but excessive pressure too early can cause pain and swelling.

### **When can I drive?**

You will not be allowed to drive a car for up to 6 weeks following your surgery as the knee control required to do so is not present. Long distance travel in a car should be avoided for the first month following your surgery as this may cause excessive swelling in your operated leg.

### **When can I swim?**

You can safely immerse your knee in water when your wound has totally healed (usually 2-3 weeks, pink skin and no scabs). Prior to this, infection risk is high and soaking the wound may delay wound healing. Hydrotherapy is a great way of exercising.

**\*\*You must get clearance from your surgeon prior to immersing your knee in water.\*\***

### **How long should I wear my compression stockings for?**

If you have stockings, you will need to wear them for 4 weeks. This is thought to reduce the risk of blood clots and any swelling in your legs.

### **Should I use heat or ice packs?**

Both heat and ice are effective at relieving pain in your knee. Generally it is recommended to use heat prior to exercise to increase joint mobility and allow soft tissues to stretch more easily. The application of ice following exercise of your knee will help to reduce pain and swelling.

### **Should I inform anyone that I have a knee replacement?**

You should alert your dentist that you have a knee replacement in the presence of a dental infection and/or prior to major dental surgery.

To gain clearance at airports while travelling, you will also require a document from your G.P. outlining the particulars of your knee replacement surgery.