

ROBOTIC ASSISTED - PARTIAL KNEE REPLACEMENT

Preparing for surgery

Once you have decided to undergo surgery, it is important that you prepare yourself both mentally and physically for the procedure. The following information is intended to answer some common questions that may apply to all patients. Specific considerations for you as an individual may require different preparation or expectations – if you require further clarification please seek this from Dr Mandziak or his secretary before your operation. Please also read my 'Considerations Before Surgery' information sheet.

Should I have a partial knee replacement?

Partial knee replacement replaces only the worn part of the knee whilst retaining the healthy parts. In general, patients must therefore have pain and arthritis localised to only one part of the knee. Further criteria include intact ligaments (e.g the ACL must be functional) and no major knee deformity. Strict patient selection criteria are essential for a good long term outcome, and can be discussed further with Dr Mandziak.

Surgery is considered when a patient has pain related to knee arthritis, and non-operative measures such as pain tablets and weight loss are insufficient.

The aims and benefits of a partial knee replacement are to:

- Relieve pain
- Improve mobility and function.

Many people have significant arthritis on their x-rays, but they should not consider surgery unless the knee is painful.

How is the Knee Replaced?

Following your appointment with Dr Mandziak, a specialised CT scan is arranged to map bony anatomy and alignment. This scan is then used to develop a detailed pre-operative surgical plan including implant sizing and positioning. During the operation, the surgeon-controlled robotic arm aids in implant positioning to achieve the desired plan. The robotic arm is held by the surgeon and provides live visual image and haptic (tactile) feedback.

Expectations of Surgery

Patients are happiest after their surgery when they have clear understanding of their surgical recovery, and realistic expectations of their rehabilitation. Partial knee replacement surgery has excellent outcomes, though patients often report a full recovery taking up to 12 months following these operations. Every patient is different and it is quite common for two patients with exactly the same treatment to experience a very different recovery.



Image: The Mako robotic arm (patients.stryker.com)



IMAGE: 3D Pre-operative plans for a partial knee replacement (patients.stryker.com)

Joint replacements are designed firstly to relieve pain, and to restore function. They are excellent for low impact activities such as walking, swimming, golf, bowls and cycling.

They are not designed for repetitive stressful activities such as running, jumping or kicking a ball. If you use your joint for repetitive stressful activities it will wear out sooner or may be damaged. Most people are not comfortable kneeling on their knee following surgery.

In general terms, partial knee replacement is easier to recover from compared to total knee replacement. Most patients can cease using a walking stick a few weeks post-surgery. However, each individual can expect a slightly different recovery timeframe.

How Long Will My Partial Knee Replacement Last?

A number of factors affect long term outcome, including the patient's weight, activity levels and bone quality. Approximately 80-90% can be expected to be functioning well 10 years after surgery.

Preparation for Surgery

Every patient is unique. Dr Mandziak will discuss with you the suitability, benefits and risks of the procedure that are important to you as an individual. Blood tests, urine tests, an ECG heart tracing and x-rays will be requested in preparation for your operation.

Please read my 'Considerations Before Surgery' sheet on my webpage for further information.

Potential Risks

Operations are safer than ever, though some small risks of surgery are unavoidable. These include:

- Risks of anaesthesia
- Infection (approximately 1 in 100 patients)
- Bleeding or blood loss requiring transfusion
- Nerve or major blood vessel injury (note: some numbness around the scar is normal)
- Blood clots – deep vein thrombosis or pulmonary embolism
- Instability
- Stiffness
- Fracture
- Ongoing joint discomfort
- Progression of arthritis in other parts of the knee
- Wear and tear of the prosthesis over time.

What is the recovery after surgery?

SWELLING

Swelling is normal after surgery. After surgery on your knee, swelling is greatest for the first 6 weeks, but will persist to some degree for 6 months. You may notice the swelling worsens throughout the day due to the effect of gravity and activity.

DISCOMFORT

Pain is a very individual experience, and each patient reports differing levels of discomfort. Some discomfort after major surgery is unavoidable, however many different measures are taken to ensure you are as comfortable as possible. I use the latest techniques for reducing pain after joint replacement surgery, allowing early rehabilitation and improved comfort for the patient.

CONSTIPATION

The medications, changes in diet and activity levels in hospital predisposes patients to constipation. You will receive medications to help with this in hospital, but after you leave it is important to stay regular with simple pharmacy stool softeners if required.

STITCHES AND INCISION CARE

I routinely use dissolving sutures. A sterile waterproof dressing will be placed on your incision in the operating theatre, and ideally this stays on for 2 weeks. It is then removed by the Orthopaedics SA nurse at your 2 week nurse checkup. If you notice persistent discharge or ooze of fluid from your wound after leaving hospital, or have other problems with your dressing you should phone (08) 8267 8287 and ask to talk to an Orthopaedics SA nurse.

BLOOD CLOT PREVENTION

I use a combination of techniques to prevent blood clot formation. These include:

- Early mobilisation and exercises after the operation
- Pneumatic foot pumps to help venous blood flow
- Compression stockings for 6 weeks postoperatively
- Medications to thin the blood, via injections or tablets.

PHYSIOTHERAPY

Your postoperative physiotherapy will begin within 24 hours of surgery, and in some cases on the day of surgery. Being able to stand and move your limb is important to reduce complications and start your rehabilitation as soon as possible.

Walking and gentle exercises are important during the recovery from a knee replacement. See the 'Your Journey' booklet for more information and pictures of routine exercises.

The hospital physiotherapist may also give you written material, and will refer you for ongoing outpatient physiotherapy. Physiotherapy once or twice per week is particularly beneficial in the first 6 weeks after knee replacement surgery.

HYDROTHERAPY

I do not recommend hydrotherapy or swimming in public pools until 6 weeks after the operation.

SHOWERING

You may shower with the clear waterproof dressing intact on your knee. If the dressing comes off or water is getting onto your incision please call us or arrange for a new dressing to be fitted. Avoid soaking your incision in a bath, pool or spa for the first 6 weeks post-operatively.

SEX

You may resume sexual activities as soon as you are comfortable.

TRAVEL

Avoid flying in the first 6 weeks post-operatively. If you need to fly, wear compression stockings, go for short walks up the aisle regularly and keep your calf muscles pumping while seated, to help prevent deep vein thrombosis. If you need to take a long-haul flight unexpectedly in the early recovery period, let us know as you may need extra blood thinning medication.

When Will I Go Home After My Operation?

Ideally you are discharged from hospital as soon as possible to reduce the chance of complications. Most patients are in hospital for only 1-2 nights.

Your discharge timing is judged based on your level of pre-operative function, support at home, and early progress post-operatively. Functional 'milestones' determine your discharge.

The main determinants of discharge include reaching these simple milestones:

- Walk short distances with a walking aid
- Toilet yourself
- Get in to and out of bed by yourself
- Walk on stairs (if necessary).

In addition, there should be no ongoing ooze from your incision site. Occasionally patients require additional services at home, or inpatient rehabilitation. Having a family member or friend visit you briefly at home each day may be sufficient. Some preparation around the house before the operation will help, such as freezing a number of meals.

What Do I Do Once I'm Discharged From Hospital?

- Keep your dressing intact until your 2 week nurse check. You can shower with the clear waterproof dressing intact
- Oral pain tablets as directed
- Ice the joint regularly throughout the day (ice cubes wrapped in a tea towel; do not place ice directly on skin)
- Walk as much as is comfortable
- Compression stockings for 6 weeks
- Blood thinning injections or tablets as instructed
- Exercises – see the 'Your Journey' booklet for simple exercises. Aim to achieve a straight knee, and to bend more than 90 degrees
- Physiotherapist reviews once per week are beneficial after a partial knee replacement (for the first 6 weeks)
- Avoid kneeling on your operated knee
- Avoid resting/sleeping with a pillow under your knee

Post-Operative Follow Up

- 2 weeks post-operative wound check and progress check by Orthopaedics SA nurse
- 6 weeks post-operative x-ray and progress check by Dr Mandziak
- 1 year post-operative x-ray and progress check by Dr Mandziak
- Further reviews may be required in some cases.

For more information visit: www.orthosa.com.au