KNEE ARTHROSCOPY

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What is Arthroscopy?
Arthroscopy involves the inspection of the inside of the knee joint with a small telescope. The image is projected onto a television monitor via a fibreoptic cable.

This modern technique allows the surgeon to fully inspect all of the interior structures of the knee joint without needing open surgery. Arthroscopic surgery is usually performed as an outpatient procedure in a hospital or day surgery unit.

Preparing for your Operation:

1. Exercise:
   It is useful to do some quadriceps exercises prior to your operation. These exercises are designed to maintain muscle strength to the quadriceps group, which is on the front of your thigh. It is very important to also continue these exercises post-operatively.
   Exercise up to the point of mild discomfort is reasonable and is unlikely to cause you any damage.

2. Medical History:
   We ask that you complete a health questionnaire at the time of your consultation and prior to your operation. We require information about your past and present illnesses, previous operations, current medications and any known allergies. It is important that you inform me of any change in your medications or health status.

3. Medications:
   Please take a list of your current medications and known allergies to the hospital on the day of admission and provide this to the anaesthetist, who will see you pre-operatively. Anti-inflammatory medication such as Feldene, Voltaren and Naprosyn should be ceased 10 days prior to surgery. Medication containing aspirin (e.g. Cartia) should also be ceased 10 days prior to surgery. If you are taking aspirin for a cardiac condition you should ask your cardiologist if it is safe and appropriate to stop taking the aspirin for 10 days prior to surgery.

4. Smoking:
   You are advised to stop smoking for as long as possible prior to surgery.

The Operation:
You will be admitted to hospital on the day of your operation.

For your admission time to hospital and fasting details you will need to phone the St Vincents Private Hospital DSU (8382 6325) on the day prior to your surgery. If your surgery is at the Prince of Wales Private Hospital the hospital will phone you the evening prior to your surgery (9650 4000).

The anaesthetist will see you before your operation. You will need to discuss with the anaesthetist your medical history, current medications and any previous anaesthetic problems. Please feel free to discuss with the anaesthetist the type of anaesthetic that will be used (usually a general anaesthetic) and its possible side effects and complications.

The operation is usually performed under general anaesthesia. At the end of the procedure the knee is injected with long acting local anaesthetic (Naropin) to keep pain to a minimum.

After Surgery:
I will visit you in the ward before discharge. I will discuss the operative findings with you.

The physiotherapist will also visit you in the ward after surgery. You will be shown some exercises to do at home. Most people do not require crutches. If crutches are required they will be supplied by the hospital physiotherapist.

Driving:
You cannot drive a motor vehicle for 24 hours after having a general anaesthetic. You will therefore need to arrange other transport home from the hospital. You may go home with a relative or a friend, or in a taxi.
You can resume driving only when your knee is comfortable and you have no restrictions in operating your vehicle.

Travel:
It is recommended that you do not travel long distances by car or plane for three weeks following surgery as prolonged travel can increase the risk of forming blood clots in the legs. If such a trip cannot be avoided you should take half a 300mg aspirin tablet every day after surgery to reduce the risk of venous thrombosis.

Post-operative Appointment:
I will need to see you in the office seven to ten days after surgery. Please make an appointment.

Return to work:
You may return to work as your knee function improves well enough for you to do your particular job.

This does not mean that all discomfort must have resolved, as there will be some tenderness around the incision sites. It is normal for there to be some discomfort in the knee for several weeks after arthroscopic surgery.

I will provide you with a medical certificate at your first post-operative visit if required.

Early recovery:
Recovery from this operation involves reducing the swelling, strengthening the muscles and reducing pain.

Please read and follow the <u>**Post-Operative instructions.**</u>

1. Please note that it is normal for the knee to be sore and swollen following arthroscopy. Activity should be increased gradually. You should avoid prolonged walking or standing for the first few days. You should avoid squatting or kneeling or attempting to bend your knee beyond 90 degrees if the knee is painful or swollen. It is safe to walk but do not spend too much time on your feet.

2. You may remove the bandage at home.

3. It is preferable to leave the waterproof dressings which are under the bandage intact until your post-operative review one week after surgery. These dressings allow for showering. Do not soak in a bath or swim. Remove and replace dressings only if they become wet or lift off. Please note that it is normal for some blood to collect under these dressings. It is also normal for there to be some bruising around the knee after surgery.

4. <u>Reduce pain</u>: Take Panadol or Panadeine Forte for pain or other prescribed pain killers.
   Excessive pain in the knee following arthroscopic surgery is usually due to overactivity or spending too much time on your feet before the thigh muscles have been adequately strengthened. Excessive swelling can also cause pain in the knee.

5. <u>Reduce swelling</u>:
   Keep the leg elevated as much as possible after the operation. Apply an ice pack to the knee for 20 minutes at a time to reduce swelling and pain. Anti-inflammatory medications can also be helpful in reducing swelling. When applying ice packs, ensure that you place a wet cloth between your skin and the ice pack to prevent an ice burn.

6. <u>Quadriceps strengthening exercises</u>:
   Strengthening your quadriceps is important in restoring function to the knee. Do the straight leg raising exercises as shown by the physiotherapist. Do 10 straight leg raises every hour whilst awake. It is safe to bend the knee up to the point of mild discomfort. Avoid deep squats.

7. Report any unusual or worrying symptoms, e.g. excessive swelling, calf pain, redness or persistent increase in temperature

If you have any problems you can contact me through the **office 83826199** or through the hospital after hours **St Vincents 83827111, POWP 96504000**

Conditions Treated by Arthroscopy

1) Meniscal injury is the most common. The meniscus is very important to the normal functioning of the knee. If the meniscus tears it can cause a number of symptoms including pain and swelling. The larger the fragment of meniscus removed the greater the chance of degeneration or wear of your knee in the long term. Occasionally in younger patients the meniscus can be repaired, which may require a separate incision and take longer before full activities can be resumed. Because of its importance every effort is made to either repair it or preserve as much of it as possible.

2) Articular cartilage is the smooth lining of the joint. Damage to the articular cartilage by injury or wear and tear can cause pain and swelling in the knee. Arthroscopy can help with this, but is less reliable than with meniscal tears. An arthroscopy cannot cure arthritis, and hence recovery may be less than complete. Results in these cases can be disappointing with worsening of symptoms.

3) Loose bodies are loose pieces of cartilage or bone and can occur from a variety of causes. These are readily removed during arthroscopy.

4) Diagnosis of ligament tears, injury to bone or cartilage (lining of the joint), biopsies or unexplained pain. Arthroscopy is useful to assess the inside of the knee to determine the suitability for other surgical procedures.

5) Patella (knee cap) pain is usually treated by physiotherapy first, as it is a difficult disorder to treat surgically. Occasionally if there are loose fragments of cartilage behind the kneecap these can be treated with an arthroscopy. Another treatment of patella pain is to perform a lateral release. This is a procedure where tight structures pulling the wrong way on your kneecap are released. This has a longer recovery period, and bleeding into the knee is expected. Supervised physiotherapy will almost certainly be required after the operation.

6) Assessment for suitability for other surgical procedures e.g. unicondylar knee resurfacing or replacement or cartilage transplantation.

7) Arthritis can occasionally be helped by arthroscopy, especially if there are recent mechanical symptoms (i.e. locking, clicking). This is what we regard as a grease and oil change for a knee that will eventually require a knee replacement or resurfacing.

8) Cruciate ligament reconstruction. Arthroscopy is an integral part of this procedure.

9) Cartilage biopsy if you are a candidate for cartilage transplant. A specimen may be taken at the time of your arthroscopy which may be used to grow your own cartilage in the laboratory for reinsertion at a later time. This may avoid a repeat operation to take a sample of cartilage.

Results:

The results from arthroscopic surgery depend on the arthroscopic findings and the underlying condition. In cases of a torn meniscus with no other damage to the joint, the results are usually excellent.

Patients who are found to have damage to the articular cartilage which lines the joint, are likely to continue to experience symptoms. This is due to the underlying nature of the condition. The results in this situation may be less favourable than when arthroscopic surgery is done for meniscal tears or other reasons. Some patients may be advised to consider further procedures such as articular cartilage resurfacing.

Arthroscopic surgery for osteoarthritis can give good results if there are meniscal tears or unstable joint linings with pieces of articular cartilage breaking off into the joint, but the results are less predictable than in non-arthritic patients. Patients with osteoarthritis are unlikely to gain full relief of symptoms following arthroscopic surgery, as the underlying condition is not changed, although many patients gain enough benefit to enable them to put off further interventions such as knee replacement. Arthroscopy can occasionally cause a temporary increase in the symptoms of arthritis.
Arthroscopy can be very useful to assess the joint for unicompartmental resurfacing, a conservative procedure whereby only the damaged surface of the joint is replaced or resurfaced, and thereby avoiding total knee replacement.

Complications:

Complications following arthroscopic surgery to the knee are not common but can and do occasionally occur. Please read the enclosed information regarding possible complications and fill in the patient questionnaire. You should read the following documents before proceeding with surgery; anaesthetic complications, general complications of surgery, and specific complications of arthroscopy.

The complication rate for arthroscopic surgery has been shown to be between 1.5 and 2% of cases. The most common complication is haemarthrosis (bleeding into the joint). Infection is uncommon and has been shown to complicate around 1 in 500 arthroscopic procedures. Damage to nerves and vessels is extremely rare but can occur.

1) Bleeding into the joint can occur as a result of the surgery. A small amount of bleeding is not uncommon, however if your knee becomes swollen and tight, you should rest, elevate and ice it. The knee may need to be drained in the office and occasionally a repeat arthroscopy is needed.

2) Oozing from incisions can occur, and is usually not a problem. You can change the dressing yourself using antiseptic or have your local doctor do it if you are concerned. The waterproof dressings can be removed and replaced with a Band-Aid if required.

3) Infection is rare. If you become unwell, or the knee becomes increasingly swollen or red you should be assessed as soon as possible. Infection can cause damage to the surfaces of the joint and result in stiffness. Treatment involves antibiotics and often further surgery.

4) Damage to vessels or nerves can occur, particularly with meniscal suturing. This can result in numbness in the skin and weakness in the lower leg. Some numbness, tingling or irritation around the skin cuts can occur but significant damage to major structures is extremely rare.

5) Reflex Sympathetic Dystrophy is a condition resulting from overactivity of the nerves around the operative site. Its cause is not well understood by the medical profession and it is difficult to treat. Fortunately it is very rare after arthroscopy.

6) DVT, or blood clots in the leg can cause calf pain and swelling, which damage vessels or nerves. These are also rare after arthroscopy. If they do occur you may require blood thinning medication in the form of injections or tablets. Special precautions are taken in patients considered at higher risk of forming blood clots after surgery. Please notify the anaesthetist if you have a personal family history of blood clotting abnormalities.

7) Ongoing pain can occur, especially in an arthritic knee. Some knees may require further investigation and, possibly, surgery.

Summary:

Arthroscopy of the knee is a safe and effective procedure. The results of arthroscopic surgery are usually better than open forms of surgery. Complications are uncommon. Remember that every knee is unique, and recovery time and the results of the procedure reflect that uniqueness. Not all knees can be made better as there may be some damage that cannot be reversed

If you have any questions regarding your proposed operation, please call me or the clinical nurse consultant at the office. You can be assured of my best attention at all times.

Associate Professor Craig Waller

www.hipandkneesurgery.com.au