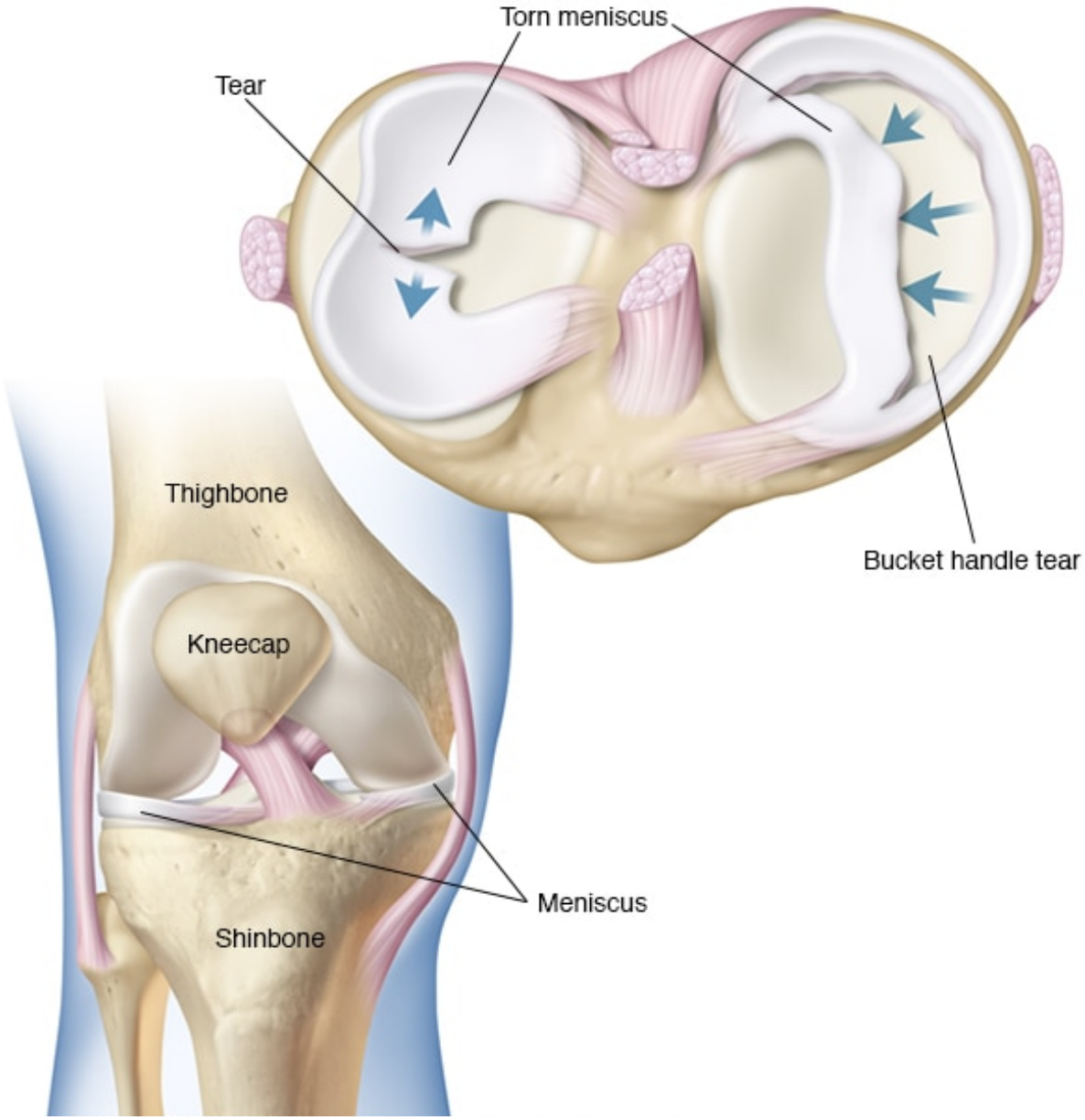
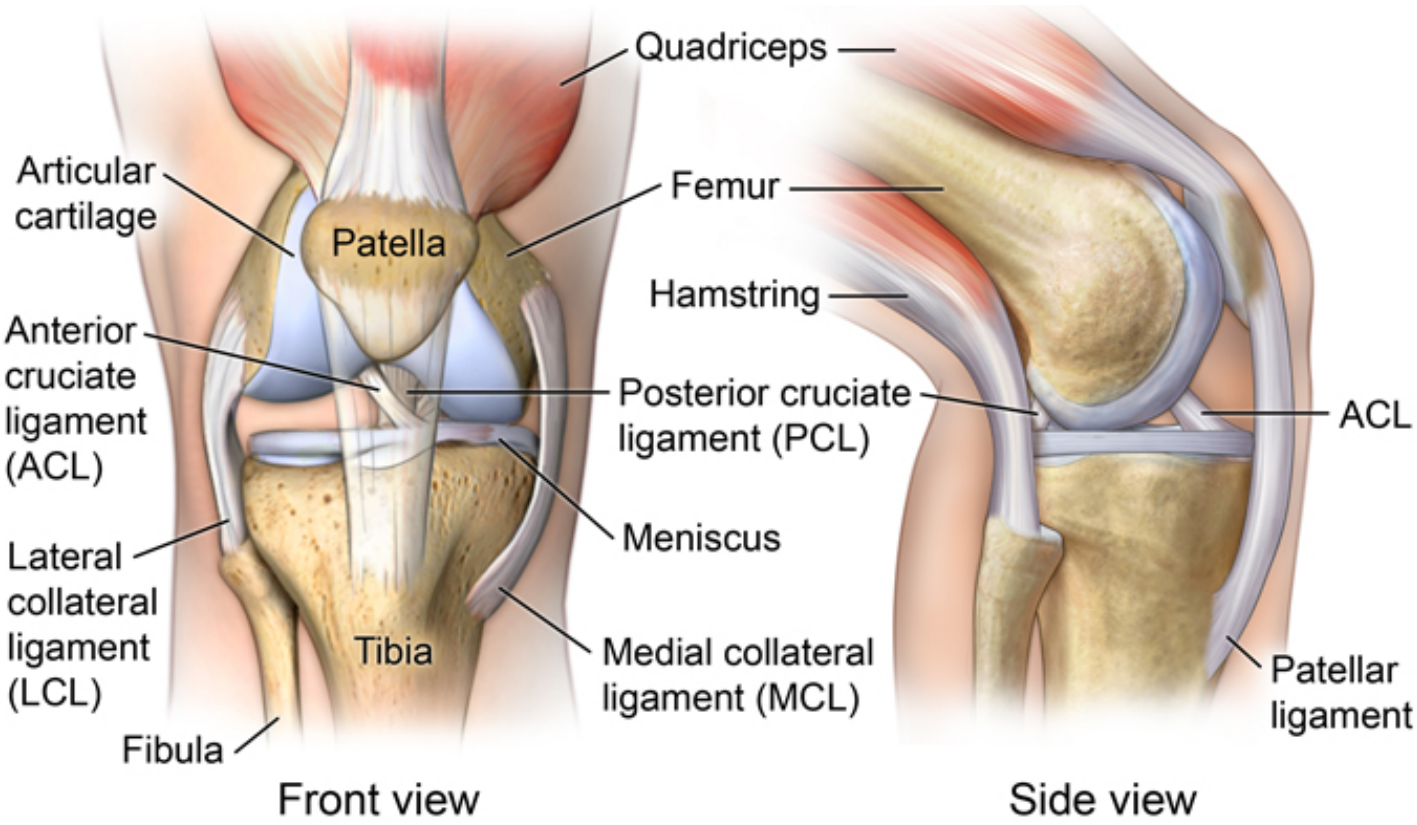
STEWART
ORTHOPAEDICS

Meniscus tear



Normal Anatomy of the knee



The knee joint is a complex weight bearing joint that relies on ligaments and muscles to provide stability. The knee is made up of three bones: The thigh bone (femur), the shin bone (tibia), and the kneecap (patella). There are 4 major ligaments in the knee: the Anterior cruciate (ACL) and posterior cruciate ligaments (PCL), Medial collateral (MCL) and lateral collateral ligaments (LCL). There are a number of other smaller ligaments as well as tendons around the knee which contribute to stability and function.

The surfaces of the femur, tibia and patella inside the joint are covered by articular cartilage which is smooth, and together with the joint fluid, act to reduce friction inside the knee during movement.

Inside the joint there are 2 “C-shaped” discs of cartilage attached to the tibia known as the medial and lateral meniscus. These important structures give extra cushioning to the cartilage inside the joint to prevent wear and tear. If a meniscus is damaged, extra load will be placed on the cartilage, resulting in accelerated wear and tear. This will lead to arthritis. The severity and timing of this arthritis depends on many factors including your age, activity levels, weight and degree of meniscal damage.

A meniscus tear is often caused by a single acute injury—such as a sudden twist or quick turn during sports activity. Because the menisci weaken and wear thin over time, older people are more likely to experience a degenerative meniscus tear. The meniscus has a very poor blood supply and rarely heals without intervention.

Symptoms And Signs

Some people feel a pop in the knee. The injury is not usually severe and most people can continue with sports or at least can walk around without too much pain.

- Swelling usually begins the next day and is usually not severe.
- Pain is usually localised to the side of the knee where the tear is located.
- Locking of the knee is when the knee gets stuck so you can't move it (Usually it can't be straightened because a fragment of the meniscus gets stuck in between the bones).
- Giving way (usually caused by pain rather than true instability).
- Clicking.

Diagnosis

This can usually be made based on the history and examination alone. An MRI test may be ordered to confirm the diagnosis and to exclude other pathology but this is usually not needed and may delay treatment.

Treatment

The meniscus rarely heals itself (due to its poor blood supply) and treatment for a meniscal tear usually involves surgery. The torn meniscus can be trimmed, removed or repaired using keyhole surgery (arthroscopy). The decision to repair is based on age, activity levels, occupation and sporting demands. Only tears in the outer half of the meniscus have the potential to heal. The final decision can not be made until the time of surgery as it depends on the size, site and the quality of the remaining meniscus tissue. Most patients with a repairable meniscus are under 45 years of age and up to 80 percent of these are associated with a tear of the anterior cruciate ligament. There is no point in repairing a meniscus which is unlikely to heal.
Repair can usually be performed arthroscopically using special stitching devices but one or two additional incisions in the skin may be required. There are advantages and disadvantages of meniscal repair.

Advantages

- Maintain protective role of meniscus.
- Reduces the risk of arthritis.

Disadvantages

- Longer rehabilitation period.
- Longer restriction of work and sport activities.
- Failure of the meniscus to heal (15-20%) because of it's poor blood supply. If it does not heal and is symptomatic you may require a repeat surgery to remove the torn fragment.

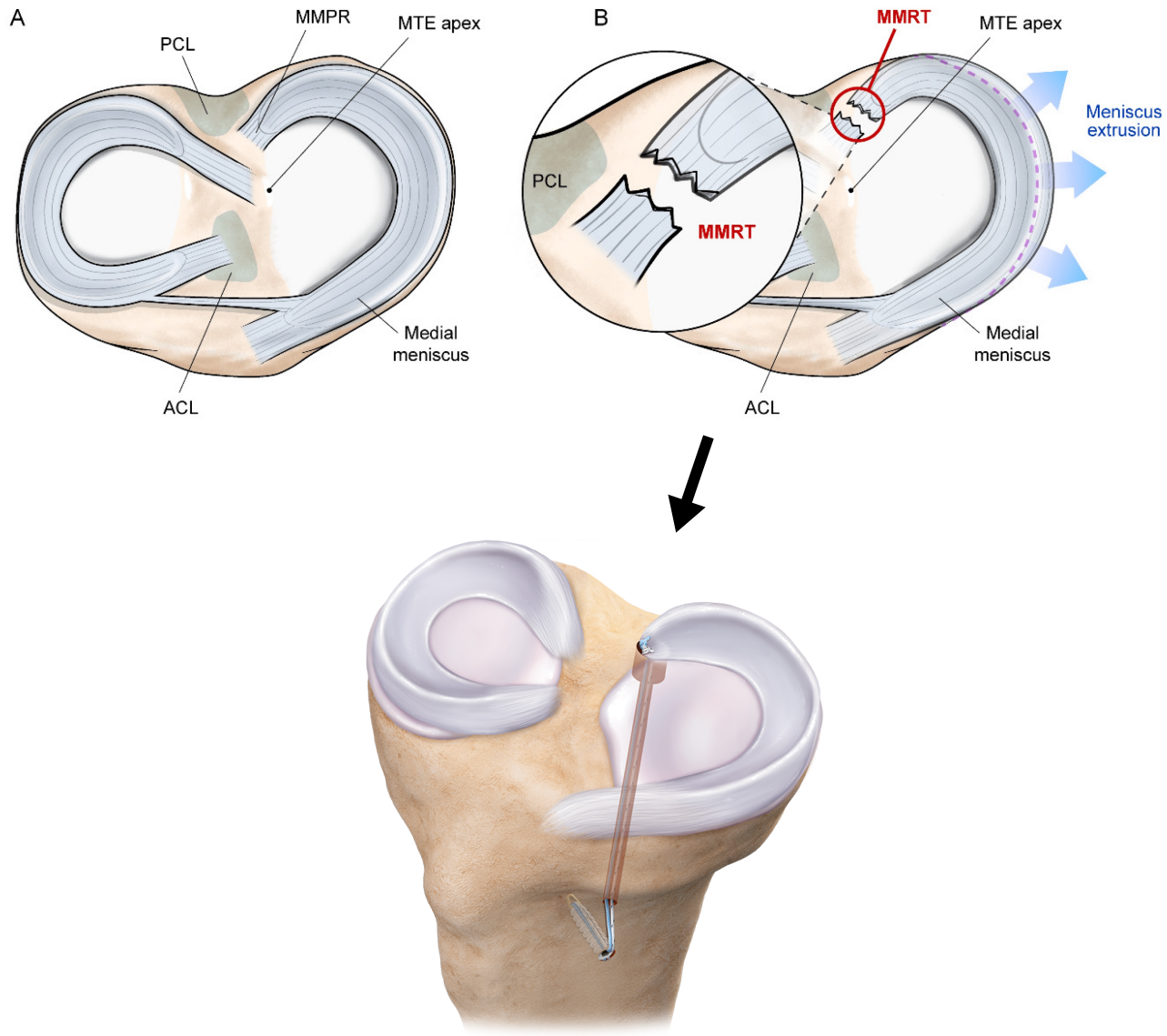
Overall if a meniscus can be repaired (in the right patient with the right type of tear) it is best to do so as it protects the knee from premature arthritis.

Meniscus root tear

Meniscal root tears are devastating tears of the meniscal cartilage in the knee at the point where it connects to bone. In essence, the root is the anchor point of the meniscus. Such tears can lead to significant knee pain, dysfunction, instability and rapid development of osteoarthritis.

Depending on how they occur, meniscal root tears can be defined as traumatic or degenerative. Traumatic meniscal root tears generally occur in the younger, athletic population and are typically more commonly located in the lateral meniscus in conjunction with an ACL tear. They may be caused by a sudden twisting motion when planting the foot.

Degenerative meniscal root tears generally occur in patients above the age of 40 years and are more common in the medial meniscus. Patients with medial meniscus root tears will typically complain of a mild ache in the back of the knee for a few weeks and then report a sharp increase in pain and inability to bear weight (walk) after a trivial injury (stepping of a curb or stair). In these scenarios, the meniscus root is under going some wear and tear and then finally fully tears – sometimes patients will hear or feel a “pop”. After a few days of pain and swelling, the symptoms generally improve to the point of being able to walk on the knee, but not without some level of pain or dysfunction. Symptoms include pain, swelling, and feeling as if the knee is going to “give out.” Without surgery, healing potential for these meniscus root injuries is poor, with a nonoperative natural history of 95% failure and advanced arthritis within 12 - 18 months.



Surgery

Should you decide on surgical management you will be admitted into the hospital on the morning of the surgery.

Please take note of the following:

- Ensure that you do not eat or drink anything on the day of surgery, unless otherwise instructed by Dr. Stewart or his receptionist. You can drink a small amount of water to take your chronic medication on the day of surgery.
- Remember to bring all your chronic medication with you for your hospital stay.
- If you are taking any "blood thinners" such as Warfarin, Ecotrin, Plavix or Xarelto - please inform Dr. Stewart of this and please consult with your physician or cardiologist who prescribed the medication. This medication needs to be stopped five days prior to surgery.
- Please ensure that you have received medical aid pre-authorisation prior to the day of surgery. It is your responsibility to contact your medical aid to obtain pre-authorisation. Please forward the authorisation number to admin@stewartorthopaedics.co.za at least one day before admission.

On the day of surgery you will be seen by an anaesthesiologist who will discuss the anaesthetic with you. The surgery takes approximately 60 - 90 minutes. After the surgery you will be seen by a physiotherapist who will instruct you on the post-op protocols and teach you how to walk with crutches. Most patients will be able to go home the same day provided they have someone at home to care for them.

Post-Op

The post-op instructions will vary between patients depending on the extent of the damage, the need for repair and possible damage to other structures. You may require crutches and a knee brace. Your weight bearing and bending may be restricted again depending on the extent of the repair. Time required off work varies from a few days to a few weeks depending on your occupation. Sporting activities can resume at 3-6 months. If your meniscus does not heal, you may develop ongoing symptoms and require further arthroscopic surgery to remove the torn portion of the meniscus which has not healed.

Bleeding:

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 rooms and occasionally a repeat arthroscopy is needed.

Oozing:

Oozing from incisions can occur, and is usually not a problem. If the dressings are heavily soiled then please contact Dr. Stewarts rooms to have the dressing changed.

Complications

Every surgical procedure has a risk of complications. These are rare with an arthroscopy, however they can occur. Every precaution is taken to minimise the risk. Complications can be related to the anaesthetic or may be specific to knee arthroscopy.

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

Damage to Vessels or Nerves:
Damage to vessels or nerves can occur, particularly with meniscal repair. It is however very rare. 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.

Deep Venous Thrombosis:
DVT or blood clots in the leg can cause calf pain and swelling. These are also rare after arthroscopy. If they do occur you may require blood thinning medication in the form of injections or tablets. If the clot breaks off and travels in the venous system it is called an embolus. This isa potentially fatal condition.

Failure to Relieve Pain:
This is not common but unfortunately some operations may not be entirely successful in relieving pain. Some knees may require further investigation or even a repeat arthroscopy.

Joint Stiffness:
Joint Stiffness can occur no matter what the procedure, this is minimised and treated with physiotherapy.