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MENISCAL TEAR
WHAT TO DO?

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So, if you remove one meniscus (especially the outer one due o bony anatomy) the pressure in the joint will be transmitted through a small zone on the cartilage between the thigh bone and the shin bone. The menisci also make it possible for the cartilage of the two bones to glide without much resistance. Without the menisci this gliding will occur with very high local peak stresses, damaging the cartilage.

Besides distributing the load and optimising the gliding, the menisci also stabilise the knee. When the ACL is torn the inner meniscus on its own ensures that the thigh bone and shin bone in the knee stay in contact relative to each other when bending the knee. This movement provoces very high pressures and this explain why the meniscus often wears quickly in people who do not have an ACL anymore.

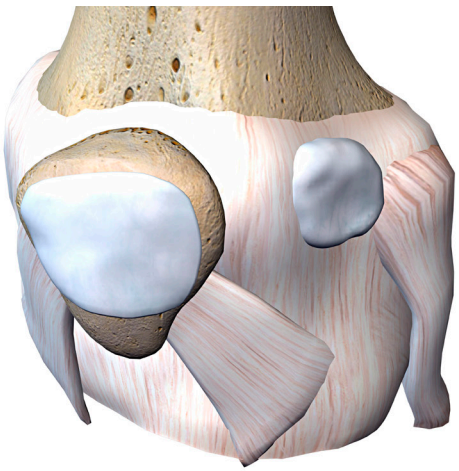
Partial meniscectomy

If the meniscus has sustained an irrepairable tear, the loose fragment scan be removed during a key hole surgery with special instruments, scissors and shavers. Only the damaged part of the meniscus is removed, and the healthy not torn parts are left in place. Worldwide the partial meniscectomy is the most frequent arthroscopic procedure (the etymology comes from Ancient Greek: arthron “a joint”, -skopion “to look at”), performed with promising results in more than 90% of patients. Nevertheless, the chance of further wear of the joint is increased after a long period (more than 20years). In a limited number of patients, pain, swelling and an accelerated wear of the cartilage can develop shortly after the surgery. These patients can be considered for additional surgery such as as meniscal replacement solutions (see further), osteotomy or even knee replacement.

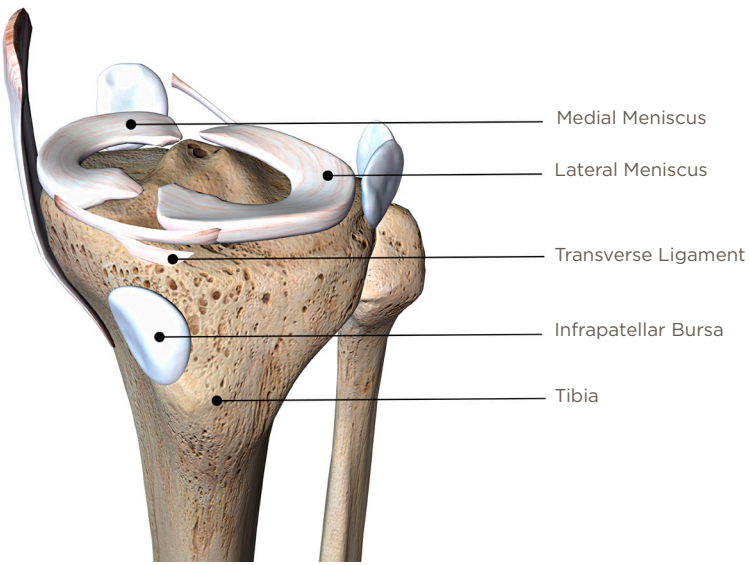
Frequently degenerative meniscal tears are seen above the age of 50 years (25%) and should ideally be treated non-surgically in the first three months with physiotherapy, bicycling, swimming, pain medication and, if needed, by an injection. The majority of the patients will have improvement of the complaints after three months and so avoiding surgery. However, if the pain persists an arthroscopy with a partial meniscectomy can help.

The meniscus: an important shock absorber and so much more

Each knee contains menisci. At the inner part of the knee a crescent sickle is present, and at the outer part of the knee we find an open round structure. They provide three functions to the knee: disribution of pressure, sliding and stability. Around 50% of the load in the knee is taken by the inner meniscus. The rest is supported by the cartilage. Even more load is put on the outer meniscus, approximately 70%. The menisci distribute the joint load over a large area.



Left Knee



Frequent asked questions

- When can I drive a car? This depends on the strength and coordination of your knee. Your physiotherapist can advise you when this is responsible. Mostly this will be possible after one week.

- When can I resume work? Obviously this depends on the kind of work you do and varies from four days up to approximately four weeks.

- When can I take a shower? When the wound is dry or when it is covered by a waterproof dressing. Normally no stiches are placed as the wounds close by themselves.

- When can I start to walk? Dependent on the surgery - you can either put full weight on your knee immediately (you will see the physiotherapist in the ward some hours after the arthroscopy) if a partial meniscectomy was done, or you will be non-weight bearing if the meniscus was repaired. The duration of non-weight bearing and the restriction of bending of the knee depends of the complexity and extent of the repair and will be tailored to your condition.

- Post-operative problems? In some cases the patient may experience longer term pain over the joint line where the surgery was performed (post-meniscectomy or –meniscal repair pain), however this is temporary.

- How long do I have to stay in the hospital? Day case or one night.

- Complications? Blood clot and phlebitis can occur however this is very rare. When these blood clots become loose they can migrate to the lungs creating a lung embolism. Painful swollen hard calf muscles and breathing problems can be a red flag when this happens. Infection is very rare as well and can be located in the wound or deeper around the ligament. Superficial wound infections mostly can be treated by oral antibiotics. Deep infection mostly require an arthroscopical cleaning and debridement.

Meniscal repair

In some cases the torn meniscus can be repaired by an arthroscopic meniscal suture. Unfortunately not all tears are repairable, only lesions in young patients in the well vascularised part of the meniscus. During the key hole surgery the tear is stiched by advanced techniques with needle and thread. The success rate six months after the surgery is around 60%.

Synthetic meniscus or scaffold

In recent years, how to maintain the meniscus and its function has been explored. One option is to use a porous artificial meniscus as a scaffold to replace the missing part of the meniscus. Cells from your own body could migrate and grow in this scaffold, resulting in a meniscal like structure over time. Until today this technique is only advised for partial or smaller painful defects. The surgery is performed by an arthroscopy. The present data with short to medium long-term follow-up with these kind of scaffolds are promising.

Meniscal transplantation

Young patients with pain in the knee and a severely damaged or completely removed meniscus but with healthy cartilage, intact ACL (or after ACL reconstruction) and good alignment of the leg, are ideal candidates for this procedure. A donor meniscus is placed in the part where the whole meniscus previously was removed, so this technique is for larger defects. Initially this procedure was done by an open procedure, however now by arthroscopy.

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