KNEE ARTHROSCOPY
Information for Patients

WHAT IS KNEE ARTHROSCOPY?

Knee arthroscopy is a minimally invasive procedure by which the knee is examined with an arthroscopic camera, and its inner structures are displayed on a monitor. With the use of arthroscopic instruments, these structures are felt, trimmed and shaved, torn parts can be sutured in place, and damaged tissue, loose fragments of bone and cartilage and foreign bodies can be removed.

The main purpose of an arthroscopic procedure on the knee is to improve the patient's quality of life, and to prevent or slow down the wear of the joint which may occur if a disease or injury is not treated in time.

An arthroscopic procedure is not indicated in a patient with advanced wear in the knee joint.

WHAT IS TREATED BY KNEE ARTHROSCOPY?

Knee arthroscopy is used mainly in the treatment of a torn meniscus. The knee contains two menisci, one on the inner and one on the outer side of the joint. The menisci are damaged most frequently during twisting movements combined with bending of the knee. A torn meniscus usually causes a sharp, piercing pain in the knee or even a feeling of catching or locking during movement. When the torn part of the meniscus becomes impinged in the joint, the knee cannot be extended. Such a patient must undergo an arthroscopy as soon as possible.

During the procedure, the damaged part of the meniscus is removed or, in certain cases, it can also be sutured in place. In addition to the menisci, we also assess the condition of the anterior and posterior cruciate ligaments and inspect the synovial membrane, removing any thickened areas (synovial folds or plicae). Sometimes we may cut off a piece of inflamed synovial tissue and send it for histological examination. We also assess the condition of the articular cartilage, looking for possible damage and wear. If the cartilage is flaking off, we smooth it with a special instrument to obtain firm edges. In certain cases, we may remove a piece of
articular cartilage and send it to the laboratory, where new cells are cultured from it, which are then returned into the knee (autologous chondrocyte transplantation). A well demarcated and sufficiently small cartilage defect can sometimes be treated by the microfracture technique, which involves making minute holes in the bone surface at the site of the lesion, thus allowing growth factors from the bone to come to the area and form scar cartilage.

**WHAT COMPLICATIONS MAY OCCUR DURING AND AFTER KNEE ARTHROSCOPY?**

Serious complications after knee arthroscopy are rare, and the benefits of the procedure generally outweigh the risks. However, complications can occur during and after the operation. The following complications are possible:

- **Bleeding into the knee joint** is common after arthroscopic surgery. It depends on the type and location of the procedures performed during the operation. It is treated by elevation of the extremity and application of ice to the knee. In case of major swelling and accumulation of blood within the joint, this is removed by aspiration.

- **When the arthroscopic camera and instruments are inserted into the joint, small cutaneous nerve branches can be damaged,** resulting in transient or, rarely, permanent partial or complete loss of tactile sensation about the puncture site.

- **Postoperative bacterial infection** is an extremely rare complication in arthroscopic surgery, but its consequences can be serious. Fever, chills, soft-tissue oedema, redness of the skin about the joint, an increase in pain or an unpleasant discharge from the surgical wounds are signs of possible infection within the joint after the procedure. A knee infection following arthroscopic surgery is treated with antibiotics once the causative agent has been identified and its antimicrobial susceptibility tested. Repeated arthroscopic cleansing of the joint is often required. Since the treatment must start as soon as possible, you should return for a follow-up examination *immediately* if an infection in the operated area is suspected. You **must not** receive any antibiotics before you are seen by one of our surgeons.
• **Arthroscopic knee surgery slightly increases the risk of blood clot formation (venous thrombosis, pulmonary embolism).** The risk is minimal but may be significant if the patient has concomitant internal or oncological disease, excessive body weight, is on medication that augments this risk or has experienced similar complications in the past. In such cases medical thromboprophylaxis /anticoagulant therapy is prescribed.

• **Stiffness in the knee after an arthroscopic procedure may be a consequence of contractures of muscles, tendons or the joint capsule and usually develops due to failure to observe instructions for rehabilitation.**

• **All complications connected with local anaesthesia (allergic reaction) or spinal anaesthesia (headache, lumbar nerve root damage, inflammation at the puncture site) are also possible during an arthroscopic procedure, but are generally rare and transient.**

• **Muscle and tendon pain can develop during your rehabilitation if this is too fast or too aggressive. The symptoms are transient.**

**ARE THERE ANY ALTERNATIVES TO SURGERY?**

If you decide not to have an operation, you can expect the pain and restricted mobility to grow worse with time, leading to progressive loss of function in your knee and increasing difficulty with activities. The operation is intended to raise your quality of life, but it will not improve the status of your general health. Your decision against it can have no life-threatening consequences.

**HOW SHOULD YOU GET READY FOR ADMISSION TO HOSPITAL?**

Knee arthroscopy being an elective procedure, you must be completely healthy and adequately prepared for the operation. If you are being treated for any kind of disease, you should let your surgeon know about it and bring with you to the hospital records of your previous treatment as well as any medication you may be taking. All drugs that affect blood clotting must be stopped a week before the procedure. This is done in consultation with your primary doctor, who will also remove a sample of your blood for the basic laboratory tests (blood count, differential white cell count, ESR, CRP). The test results must not be more than
14 days old in order to reflect your condition before the operation. If the laboratory values are outside the normal range, the tests must be repeated just before your admission.
You must bring with you to the hospital your health insurance card, a referral note from your primary doctor requesting admission for surgery, and items for personal care. You should also bring all records of any previous treatment for your knee problem.

WHAT HAPPENS ON THE DAY OF SURGERY?

You will be admitted to the hospital on the day of the procedure. Before the operation, you will be asked to sign a consent form for the surgery and anaesthesia, and you will meet your surgeon, who will answer any questions you may have.
Knee arthroscopy is performed under local anaesthetic (injection of anaesthetic into the knee and area of the surgical wounds), or under spinal anaesthetic (injection of anaesthetic into the spinal canal). The method of anaesthesia is selected with regard to the type of procedure, concurrent diseases, expected postoperative pain, and your preferences.

HOW IS KNEE ARTHROSCOPY PERFORMED?

A knee arthroscopy takes between 30 and 90 minutes, depending on the type of the procedure and extent of pathological changes.
The patient lies supine during the procedure. The arthroscopic camera and instruments are inserted through 1 to 1.5cm long incisions, made at the front side of the knee. Usually, two incisions are necessary, one for the camera and one for arthroscopic instruments (graspers, shaver, forceps, probes). A third incision is sometimes required.
During the procedure, the knee is continually irrigated with an electrolyte solution, which distends the joint, controls bleeding and flushes out any loose debris to ensure good visibility.
At the end of the procedure, a drainage tube is sometimes inserted to allow excess fluid and blood to drain from the operated area. The drain is left in place for a day.

HOW LONG IS THE HOSPITAL STAY?
This depends on various factors. If there are no complications, most patients are discharged after 1 to 3 days.

After the operation, you will return to the ward, where you will receive pain medication, infusions of fluids, and a preventive antibiotic.

The day after surgery, you will start basic non-weight bearing range-of-motion exercises. You will be encouraged to put ice on the operated area and keep it elevated as long as possible.

During your hospital stay, your wound dressings will be changed regularly, and blood tests will be performed as required. In case of major swelling, knee aspiration will be performed to remove excess blood and fluid from the joint.

**WHAT IS THE RECOVERY LIKE AFTER KNEE ARTHROSCOPY**

The content and duration of the rehabilitation programme after knee arthroscopy depend on the damage found in the joint and the repair that was made. Following partial removal of a meniscus, the patient may bear weight on the operated leg as early as on the day of surgery. Depending on the amount of bleeding during the procedure, the surgeon decides individually at the end of surgery whether or not to place a tube for draining excess blood in the joint. If such a drain is inserted, it must be removed on the first postoperative day. Patients are usually discharged on the day after the procedure. If there is a lot of swelling after the procedure, the knee may need to be aspirated in the first postoperative days. Exercises to strengthen the thigh muscles are started on the day of surgery. Putting ice on the knee several times daily is also very important. Non-weight bearing crutch walking and passive range-of-motion exercises on an isokinetic exercise machine are required only in special cases.

**WHEN SHOULD YOU COME FOR A FOLLOW-UP EXAMINATION AND WHAT SHOULD YOU DO IN CASE OF DIFFICULTIES AFTER DISCHARGE FROM HOSPITAL?**
After discharge, further wound care will be provided by your general practitioner, who will also remove the sutures 10 to 12 days after the procedure. Follow-up examinations by the surgeon take place at 4 and 6 weeks. Further follow-up appointments with the surgeon may be arranged individually, depending on the problem in the joint and the repair that was made. Should you have any difficulties after discharge, first consult your GP, who will decide if an urgent specialist review may be required. If a bacterial infection is suspected, you must not receive any antibiotics before seeing an orthopaedic surgeon.