

Gonarthrosis is osteoarthritis of the knee.

In more than half of cases where the knee is affected, both knees are affected.

Between 65 and 75 years of age, x-rays of the knee reveal osteoarthritis lesions in 35% of women and 21% of men.

In the first instance, the treatment comprises non-drug measures only.

The use of drugs is only required after a certain time of evolution.

Why does knee osteoarthritis develop?

Knee osteoarthritis is the result of stress exerted on the cartilage of the joint, whether the latter is healthy or already "weakened". The main risk factor is excess weight. **Being overweight or obese** play a major role since it is sufficient for the body mass index* to be greater than 27 for the risk of developing knee osteoarthritis to be multiplied threefold.

Practising top-level sports is another risk factor. Contact sports (especially football and rugby) expose knees to serious ligament injuries. The frequency of training and competitions especially encourages repetition of microtrauma and, on retiring from the sport, the onset of osteoarthritis.

The removal of the meniscus (partial or total) and a **knee deformity** (bow-legged or knock-kneed) are two other risk factors for developing osteoarthritis.

* **The body mass index (BMI) is the weight (in kilograms) divided by height squared (in metres).**

Height squared is equal to height multiplied by height.

E.g. W: 72 kg and H: 1.78 m. BMI is $72/1.78 \times 1.78$ which is $72/3.16 = 22.7$

How is knee osteoarthritis recognised?



When osteoarthritis begins to manifest itself (pain and stiffness), the radiological images are already "speaking".

Hence, the doctor has no difficulty in making the diagnosis.

The pain is described as **"mechanical."**

It occurs on mobilisation and bearing weight on the knee. It is relieved by rest.

Stiffness is brought to light by the doctor's examination. Knee mobility is reduced. The knee is stiff.

Radiography of the knee shows characteristic images of knee osteoarthritis:

- decrease in the distance between the femur and the tibia; this is "joint space narrowing" which reflects the decrease in thickness of the cartilage;
- densification of the bone beneath the cartilage (sclerosis) and "holes" in the bone (geodes);
- Bony spurs at the bone-cartilage junction (osteophytes).

How is knee osteoarthritis treated?

The treatment is initially a non-drug treatment.

It consists of:

- fighting against excess weight and obesity when they are present;
- adapting the lifestyle of the patient to their new "osteoarthritis" condition by giving advice on "going easy on joints" (avoid carrying heavy loads, walking over rough ground, etc.)
- prescribing physiotherapy sessions, the main purpose of which is educational: their aim is to enable patients to learn exercises to maintain joint mobility and strengthen muscles, and once patients have learnt them, they can do them on their own;
- considering an aerobic physical fitness programme (without breathlessness) based on the patient's personal preferences;
- using "technical aids" when they are needed (orthopaedic insoles, knee support, walking stick, etc.).



These measures are set in motion and the use of drugs is considered if:

- there is pain (analgesics and preferably paracetamol for its good tolerance);
- there is an acute flare-up (short-term non-steroidal anti-inflammatory treatments, intra-articular injection of corticosteroids);
- if the condition is chronic (Symptomatic slow-acting drugs, intra-articular injection of hyaluronic acid).

Surgery is not always considered as a "last resort"

Surgery is indicated as a preventive measure and early enough when osteoarthritis occurs in knee deformities (bow-legged or knock-kneed). Realignment of the knee can delay placing a prosthesis by 10 to 12 years.

The knee prosthesis is reserved for patients whose pain is not relieved by the usual drugs and whose images of osteoarthritis are very advanced on the x-rays.