

Osteoarthritis

Osteoarthritis causes pain and stiffness in joints. Symptoms may be helped by exercises, some physical devices and treatments, and losing weight if you are overweight. Paracetamol will often ease symptoms. Other medicines are sometimes advised. The food supplements glucosamine, chondroitin and avocado/soybean help in some cases. Joint replacement surgery is an option for severe cases.

What is osteoarthritis?

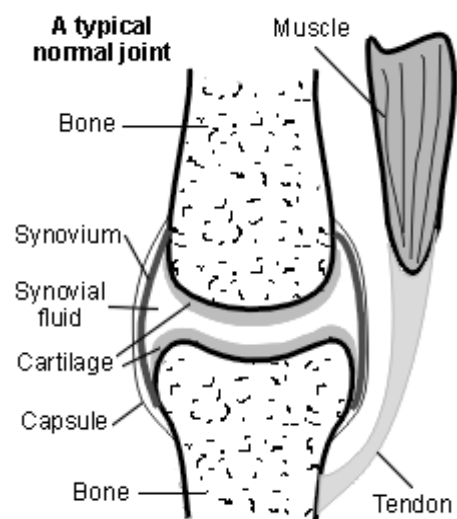
Arthritis means inflammation of the joints. Osteoarthritis (OA) is the most common form of arthritis in the UK. OA mainly affects the joint cartilage and the bone tissue next to the cartilage.

Understanding joints

A joint is where two bones meet. Joints allow movement and flexibility of various parts of the body. The movement of the bones is caused by muscles which pull on tendons that are attached to bone.

Cartilage is a hard, smooth tissue that covers the end of bones. Between the cartilage of two bones which form a joint there is a small amount of thick fluid called synovial fluid. This fluid 'lubricates' the joint which allows smooth movement between the bones.

The synovial fluid is made by the synovium. This is the tissue that surrounds the joint. The outer part of the synovium is called the capsule. This is tough, gives the joint stability, and stops the bones from moving 'out of joint'. Surrounding ligaments and muscles also help to give support and stability to joints



What causes osteoarthritis?

In joints with OA, the cartilage becomes damaged and worn. OA is often called the 'wear and tear' arthritis. This is too simple, and the exact reason why the cartilage of some joints becomes damaged is not clear. Factors that may play a role include:

- **Age.** OA becomes more common with increasing age. It may be that the state of the blood supply to the joint and the state of the natural mechanisms of repair become less efficient in some people as they become older.
- **Genetics.** There may be some inherited tendency for OA to develop in some people.
- **Obesity.** Knee and hip OA are more likely to develop, or be more severe, in obese people.
- **Ethnic origin.** Hip OA is more common in white Europeans than in black people or Asians.

Who gets osteoarthritis?

- **Primary OA** develops in previously healthy joints. Most cases develop in people over 50. By the age of 65, at least half of people have some OA in some joint(s). It is mild in many cases, but about 1 in 10 people over 65 have a major disability due to OA (mainly due to OA of the hip or knee).
- **Secondary OA** develops in joints previously abnormal for a variety of reasons. For example, it may develop in injured or deformed joints. This can occur in younger people.

Which joints are affected?

The hips, knees, finger joints, thumb joints, and lower spine are the common joints affected. Less commonly affected joints are shoulders, elbows, wrists, ankles, and toe joints. In many cases, just a few joints develop symptoms with one or two becoming the most troublesome. In some people, OA develops in many joints.

What are the symptoms of osteoarthritis?

- Pain, stiffness, and limitation in full movement of the joint are typical. The stiffness tends to be worse first thing in the morning but tends to 'loosen up' after half an hour or so.
- Swelling and inflammation of an affected joint can sometimes occur. (However, large joint swellings are unusual in OA. Tell your doctor if a joint suddenly swells up as this is a symptom that more commonly occurs with other types of arthritis.)
- An affected joint tends to look a little larger than normal. This is due to overgrowth of the bone next to damaged cartilage.
- Deformities of joints due to OA are uncommon, but sometimes develop.
- You may have poor mobility if a knee or hip is badly affected.
- No symptoms may occur. Quite a number of people have X-ray changes that indicate some degree of OA but have no, or only very mild, symptoms. The opposite can also be true. That is, you may have quite severe symptoms but with only minor changes seen on the X-ray.

What is the outlook (prognosis) for people with osteoarthritis?

To have a certain degree of OA can almost be considered a normal part of ageing. A common wrong belief is that OA is always a progressive and serious disease. The severity of symptoms varies. In many older people, OA is mild, does not become worse, and does not make you any more disabled than expected for your age.

Symptoms often wax and wane. Sometimes this is related to such things as the weather. Symptoms often improve in warmer months. A bad spell of symptoms may be followed by a relatively good period. However, in some cases, the severity of OA and the disability it causes is out of proportion to your age. One or more joints may become particularly badly affected.

General measures to help treat osteoarthritis

Exercise

If possible, exercise regularly. This helps to strengthen the muscles around affected joints, to keep you fit, and to maintain a good range joint movement. Swimming is ideal for most joints, but any exercise is better than none. Many people can manage a regular walk.

Weight control

If you are overweight, try to lose some weight as the extra burden placed on back, hips, and knees can make symptoms worse. Even a modest amount of weight loss can make quite a difference.

Shoe insoles and other devices

Some research trials have shown that the following may help to ease symptoms from OA of the knee in some cases.

- Wearing a knee brace.
- Using shoe insoles.
- The use of a special sticky tape which 'pulls' the kneecap inwards.

These measures slightly alter the distribution of weight and pressure on the knee joint, which is why they are thought to ease symptoms in some cases. A podiatrist or physiotherapist can advise exactly how to use them.

Walking aids

If you have OA of a hip or knee, when walking try using a cane (walking stick). Hold it in the hand on the opposite side of the body to the affected joint. This takes some pressure off the affected joint and helps to ease symptoms in some cases.

Physiotherapy

Sometimes advice or treatment from a physiotherapist is helpful. For example:

- For advice on which exercises to do to strengthen the muscles above the knee (quadriceps) if you have OA of the knee. Strengthening the 'quads' has been shown to improve symptoms caused by OA of the knee.
- For advice on how to keep active and fit.
- For advice on shoes insoles, knee braces, taping to the knee, and how to use walking aids properly (to make sure you have one of the correct height).

Occupational therapy

May help if you need aids or modifications to your home to cope with disability caused by OA.

Other therapies

Some people have found that TENS machines help to ease pain from OA. A TENS machine (Transcutaneous Electrical Nerve Stimulator) delivers small electrical pulses to the body via electrodes placed on the skin. Acupuncture may also help to ease symptoms in some cases.

Medicines and food supplements used to treat osteoarthritis**Paracetamol**

Paracetamol is the common medicine used to treat OA. It often works well to ease pain. It is best to take it regularly to keep pain away, rather than 'now and again' when pain flares up. A normal adult dose is two 500 mg tablets, four times a day. It usually has no side-effects, and you can take paracetamol long-term without it losing its effect.

Anti-inflammatory painkillers

These medicines are not used as often as paracetamol as there is a risk of serious side-effects, particularly in older people who take them regularly. However, one of these medicines is an option if paracetamol does not help. Some people take an anti-inflammatory painkiller for short spells, perhaps for a week or two when symptoms flare-up. They then return to paracetamol when symptoms are not too bad. There are many different brands of anti-inflammatory painkillers. If one does not suit, another may be fine.

Side-effects occur in some people who take anti-inflammatory painkillers:

- Bleeding from the stomach is the most serious possible side-effect. This is more of a risk if you are over 65, or have had a duodenal or stomach ulcer. Stop the medicine and see a doctor if you develop indigestion, upper abdominal pain, or if you vomit or pass blood. Read the leaflet that comes with the medicine for a list of other possible side-effects.
- Some people with asthma, high blood pressure, kidney failure, and heart failure may not be able to take anti-inflammatory painkillers.

Some types of anti-inflammatory painkillers come as topical preparations that you rub on affected joints. Compared to tablets, the rub-on preparations may not work as well. However, the amount of the drug that gets into the bloodstream is much less, and there is less risk of side-effects.

Codeine

Codeine is sometimes combined with paracetamol for added pain relief. Constipation is a common side-effect from codeine. To help prevent constipation, have lots to drink and eat a high fibre diet.

An injection of steroid medicine

An injection directly into a joint is an option if the joint becomes badly inflamed.

Hyaluronic acid

Regular injections of hyaluronic acid directly into a joint is a relatively new treatment. The exact way it may help is not clear. It may help with 'lubrication' and 'shock absorption' in a damaged joint. It may also stimulate cells which make cartilage. Further research is needed to clarify the role of this treatment. Currently it is sometimes used when symptoms are severe, particularly in the knee.

Glucosamine and chondroitin

These have become popular treatments. They are classed as a food supplements and not as medicines. You can buy them at health food shops and pharmacies. Glucosamine and chondroitin are chemicals that are part of the make-up of normal cartilage. They may have a role in making and maintaining cartilage. The theory is that taking these supplements may help to improve and repair damaged cartilage.

Research studies have found that some people with OA of the knee have modest pain relief when they take glucosamine every day. However, it does not help everyone. It is also not clear whether it has any effect in slowing the progression of the disease. Therefore, they may be worth a try, but further research is needed to clarify the role of glucosamine and chondroitin in treating OA.

Avocado/soybean unsaponifiables

Some research trials have studied a product called 'avocado/soybean unsaponifiables'. This is an extract derived from one-third avocado oil and two-thirds soybean oil. The results of the trials showed that some people with OA who took this product had less pain and required less amount of usual painkillers. It is not clear how it works. It is thought that one or more of the chemicals in this mixture may have some kind of protective effect on joints. Some manufacturers are starting to make capsules containing this mixture to buy as a food supplement. Further research is needed to clarify the role of this product.

Surgery for osteoarthritis

Most people with OA do not have it badly enough to need surgery. However, OA of a joint may become quite severe in some cases. Some joints can be replaced with artificial joints. Hip and knee replacement surgery has become a standard treatment for severe OA of these joints. Some other joints can also be replaced.

Joint replacement surgery has a high success rate. However, like any operation, joint replacement surgery is not without risk.

Further help and advice**Arthritis Research Campaign - ARC**

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