

Osteoarthritis

Osteoarthritis is the most common form of arthritis. Almost half of people over 60 and virtually all over 80 years of age have osteoarthritis, but it has also been found in a few people under 21.

Osteoarthritis has been called 'wear and tear' arthritis but a number of factors are involved. It occurs as a result of the mechanical breakdown of the structures of the joints. This often happens in the hands and the large weight-bearing joints, like the knees and hips. There is no cure for arthritis but there are many ways of managing the condition.

How does it affect the joints?

In a healthy joint, a firm rubbery material called cartilage covers the end of each bone. This cartilage acts as a cushion, or shock absorber, and provides a smooth, slippery surface between the bones.

The first major change in osteoarthritis is softening and pitting of the smooth cartilage surface. With time, sections of cartilage may be worn away completely, leaving the ends of the bones unprotected (see right hand picture). Without their normal gliding surface, joints become painful and difficult to move.

As the cartilage continues to break down, the joint loses its shape, and the bone underneath thickens and grows out at the sides, further reducing movement.

What causes osteoarthritis?

For years, osteoarthritis was thought to be a result of normal wear and tear during a person's lifetime. But researchers now recognise that a number of factors can lead to its development. These include age, damage by joint injury or infection, long term obesity, damage from joint disease such as rheumatoid arthritis or gout, an occupation involving heavy physical work and some genetic factors.

An injury such as a fracture or torn cartilage may result in osteoarthritis later in life. Being overweight over a long period of time is also thought to speed up the process.

Some forms of osteoarthritis do run in families, especially the form that affects the finger joints. However, in general, heredity is not a major reason for having osteoarthritis.

The precise causes and mechanisms leading to osteoarthritis are still unknown.



Healthy joint
Smooth cartilage
protects bone surfaces



Osteoarthritic joint
Rough, worn cartilage
results in joint damage

Symptoms of osteoarthritis

Osteoarthritis progresses slowly and develops over many years. It is often mild and does not always have many symptoms even though x-rays may show joint changes. Sometimes, however, the symptoms are more pronounced. It is important to see your doctor if you have symptoms of arthritis. There are different types of arthritis and some need very different treatments.

Pain and stiffness

Pain in a joint tends to increase with use but it is important to stay mobile and use any recommended pain relief. Stiffness, however, usually occurs when the joint has been rested and usually wears off as you get moving.

Swelling

Swelling occurs when irritation of the synovial membrane (joint lining) causes an outpouring of extra joint fluid – just as your eye produces tears when irritated. But in the joint, the extra fluid cannot escape as easily, and so it causes swelling. This most often occurs in the weight-bearing joints in the hips, knees and spine.

Creaking or cracking

Creaking or cracking sensations with joint movement reflect a loss of the cartilage and the smooth gliding movement of the joint that cartilage should provide.

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Patient information – Osteoarthritis



Bony growths

As a result of the changes in the affected joint, the ends of the bones can change shape, forming bony spurs called osteophytes. These may be felt as hard and bony swellings. They are especially apparent when osteoarthritis affects the finger joints.

Muscle weakness and wasting

The joint may feel unstable as if it is about to give way. The muscles around your affected joint may look thin and wasted.

TIP: If you have sudden redness, swelling, tenderness and aching in a joint you should get this checked out by your doctor without delay.

Diagnosis

There are no specific blood tests for osteoarthritis, but tests may be made to exclude other forms of arthritis. Your doctor will ask you what you are able to do and what aggravates your pain.

A physical examination will be carried out with close attention to your affected joints. X-rays help the diagnosis but are not a good guide to the severity of future symptoms. They may show extensive change, but this does not always mean great pain or disability will result.

Treatment

Treatment cannot reverse the changes that have already taken place in the joints, but there is still much that can be done, especially to slow down the disease process and control the symptoms. It is important to gain proper medical attention so the most disabling effects of the disease can be avoided. Neglect and delay are the worst enemies in overcoming osteoarthritis.

Your doctor is likely to advise a treatment that takes into account the severity of the disease, what joints are affected, your symptoms, other medical problems, your age, occupation and everyday activities.

Treatment for osteoarthritis usually starts with paracetamol or a non-steroidal anti-inflammatory drug (NSAID) applied to the skin. If these aren't enough to control the pain and stiffness, your doctor may prescribe an NSAID, like ibuprofen, as a pill or capsule. NSAIDs have some important side effects and are not suitable for everyone, but your doctor will decide if they are right for you.

If your osteoarthritis gets really bad, your doctor may refer you to a specialist, who may recommend:

- Injections – occasionally, injection into a joint with steroids to reduce inflammation or with a lubricant substance to temporarily ease joint movement may be used.
- Surgery – if joint damage is severe, a joint replacement may be necessary.

Living with osteoarthritis

Osteoarthritis can have a big impact on your lifestyle but you can make a big difference in how you manage day-to-day activities. Most of the disability in the early stages of osteoarthritis can be reversed with a programme of low impact exercises and losing weight if necessary. Regular exercise can help reduce pain and stiffness; swimming, walking, Tai Chi and gentle exercise classes are good options. Pain control and relaxation are also important to allow you to perform such activity. To reduce unnecessary stress on your joints, it may be necessary to modify your home or workplace – an occupational therapist can help with this.

Other self-help techniques include:

- wear low-heeled shoes with soft, thick soles, which help with shock absorbing (eg, sports trainers)
- a walking stick to reduce weight/stress on a painful knee or hip
- use handrails for support when climbing stairs
- relaxation techniques to help muscles relax
- spread physical activities/jobs through the day so you don't wear yourself out.
- heat/cold treatment – heat (eg, a warm shower or bath) can help with pain and stiffness. However, if a joint is inflamed a cold pack can help (and heat should not be applied).

Further information

Call 0800 663 463 to speak to an arthritis educator from Arthritis New Zealand, or visit www.arthritis.org.nz

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