CONDITION

Osteoarthritis

Osteoarthritis is a long-term condition that causes pain, stiffness, and structural changes in one or more joints.

WHAT IT IS
Long-term breakdown and change within a joint

BODY SYSTEM
Joints and movement

MAIN SYMPTOMS
Joint pain, stiffness, swelling, reduced movement

WHAT CAUSES IT
Joint changes from multiple interacting factors

HOW IT IS DIAGNOSED
Symptoms and joint examination, sometimes X-rays

MAIN TREATMENT
Exercise, weight management, pain relief, sometimes surgery

CAN IT BE CURED?
No - joint changes cannot be reversed

IS IT AN EMERGENCY?
Sometimes - sudden hot, swollen joint with fever

LONG-TERM OUTLOOK
Usually gradual, with symptoms that can improve or worsen

Overview

Osteoarthritis is a long-term condition affecting the whole joint. It is sometimes simply called "arthritis," although arthritis is a broader term covering many different joint conditions.

In osteoarthritis, cartilage and other joint tissues gradually change. Cartilage is the smooth, protective tissue covering the ends of bones. As the condition develops, cartilage may become thinner, the bone underneath may change, and small bony growths called osteophytes can form. The joint lining, muscles, and nearby ligaments may also be affected.

Osteoarthritis most often affects the knees, hips, hands, feet, and spine. You may have it in one joint or several joints. Changes seen on an X-ray do not always match how you feel: some people have clear X-ray changes with little pain, while others have significant symptoms without advanced changes.

Osteoarthritis is not simply unavoidable "wear and tear." Age is an important risk factor, but previous injuries, genetics, body weight, muscle strength, and joint shape can also contribute. Symptoms can often be managed, even though the underlying joint changes cannot currently be reversed.

Symptoms

Symptoms usually develop gradually, although pain can sometimes become more noticeable after an injury or change in activity.

Joint pain is the main symptom. It may be worse while using the joint or later in the day. More advanced osteoarthritis can also cause pain at rest or during the night.

Stiffness is common after sitting still or waking in the morning. Morning stiffness from osteoarthritis usually eases within about 30 minutes. Longer-lasting morning stiffness may suggest another type of arthritis, although this is not a diagnosis by itself.

Other possible symptoms include:

Knee osteoarthritis may make stairs, walking, or getting up from a chair difficult. Hip osteoarthritis often causes pain in the groin, thigh, buttock, or knee. Hand osteoarthritis can cause firm swellings at the finger joints and reduced grip strength.

Clicking or cracking without pain is common and does not necessarily mean that a joint is damaged.

- Reduced movement or difficulty bending the joint
- Mild swelling or tenderness around the joint
- Grinding, clicking, or crackling sensations
- Weakness or a feeling that the joint may give way
- Changes in joint shape over time

Causes and risk factors

Osteoarthritis develops through a combination of changes in cartilage, bone, joint lining, muscles, and other tissues. It is not usually caused by one event.

Your chance of developing it increases with age, but osteoarthritis is not limited to older adults. Genes can affect joint shape and how tissues respond to stress, so the condition may run in families.

Previous joint injury is another important factor. A fracture, ligament injury, or meniscus injury in the knee can increase the likelihood of osteoarthritis years later. Repeated heavy loading through work or sport may also contribute, especially when a joint has already been injured.

Additional risk factors include:

Everyday movement does not normally "use up" a healthy joint. Appropriate physical activity generally supports joint function and strengthens the muscles that protect it.

- Excess body weight, particularly for knee and hip osteoarthritis
- Reduced muscle strength around a joint
- A joint formed or aligned differently from usual
- Other joint conditions, including rheumatoid arthritis or gout
- Some metabolic or bone disorders

Diagnosis

Osteoarthritis is often diagnosed from your symptoms and a physical examination. A healthcare professional may ask when the pain occurs, how long stiffness lasts, and how the problem affects walking, sleep, work, or daily tasks.

During the examination, they may assess tenderness, swelling, joint movement, muscle strength, and the way you walk. They may also look for signs that point to another condition.

An X-ray is not always needed. When used, it may show narrowing of the joint space, bone changes, or osteophytes. X-ray findings alone cannot show how much pain you have.

Blood tests do not confirm osteoarthritis. They may be ordered when another cause, such as rheumatoid arthritis, gout, or infection, is being considered. MRI scans are not routinely needed, but they may help when the diagnosis is uncertain or another joint problem is suspected.

Treatment and management

Treatment aims to reduce pain, maintain movement, and help you continue activities that matter to you. Management is usually based on symptoms and function rather than X-ray appearance alone.

Therapeutic exercise is a central treatment. Strengthening exercises support the joint, while aerobic activity helps overall fitness and stamina. Movement may cause some discomfort

when you begin, but a suitable programme should be built up gradually. A physiotherapist may help you choose exercises and adjust them to your abilities.

If you are above a healthy weight, weight loss can reduce pressure on weight-bearing joints and may improve pain and movement. Even modest weight loss may help. Weight management is not relevant to everyone and should not be treated as the only explanation for joint pain.

Pain medicines may be considered alongside exercise rather than as a replacement for it. Options can include anti-inflammatory gels applied to the skin, particularly for knee or hand osteoarthritis. Oral non-steroidal anti-inflammatory drugs, or NSAIDs like ibuprofen or naproxen , may help some people but can affect the stomach, kidneys, heart, or blood pressure. Their suitability depends on your health and other medicines.

Paracetamol may provide limited benefit for some people. Opioid pain medicines are generally avoided for long-term osteoarthritis because benefits are often small and harms can include drowsiness, constipation, tolerance, and dependence.

A corticosteroid injection into the joint may provide short-term relief for some people. It does not repair cartilage, and the benefit may wear off.

Other helpful measures can include supportive footwear, walking aids, braces in selected cases, pacing activities, and changes to the home or workplace. An occupational therapist can suggest ways to reduce strain while maintaining independence.

Joint replacement may be considered when pain and loss of function have a major effect on daily life despite non-surgical care. Hip and knee replacements are major operations. Assessment includes the likely benefits, surgical risks, rehabilitation, and your goals.

Medicines commonly used for this include celecoxib , diflunisal , etodolac and ketoprofen . Which one suits you, if any, is a decision for you and your doctor.

Complications

Osteoarthritis does not usually damage internal organs. Its main complications come from ongoing pain, stiffness, and reduced movement.

Difficulty staying active can contribute to muscle weakness and reduced fitness. Pain may disturb sleep or affect mood. A painful or unstable knee or hip can also increase concern about falling.

Joint shape may change over time. In the hands, bony enlargements can become permanent even if tenderness settles. Severe hip or knee osteoarthritis can make walking and daily tasks

increasingly difficult.

A sudden hot, very swollen joint is not a usual progression of osteoarthritis. It can be caused by gout, bleeding into the joint, or infection and needs prompt assessment.

Prevention

Osteoarthritis cannot always be prevented. Age, inherited traits, joint shape, and some previous injuries cannot be changed.

Reducing avoidable joint injuries may lower risk. This includes building activity gradually, using suitable protective equipment for sports or hazardous work, and completing rehabilitation after an injury.

Regular physical activity helps maintain muscle strength, balance, and a healthy body weight. A mix of strengthening and aerobic activity is generally useful. Exercise should be adjusted if it repeatedly causes marked swelling or prolonged pain.

Maintaining a weight that is healthy for you can reduce stress on the knees and hips. However, people at any body weight can develop osteoarthritis.

There is no strong evidence that a particular supplement or diet prevents osteoarthritis. A balanced diet can support general health, but it cannot guarantee protection from joint changes.

Living with it and what to expect

Osteoarthritis usually continues over years, but its course is not predictable from one person to another. Structural changes may progress slowly, while symptoms can improve, worsen, or remain stable for long periods.

Pain often comes in flares. A flare may follow increased activity, illness, poor sleep, or have no clear trigger. Short periods of adjusting activity can help, but complete rest can increase stiffness and weakness. Returning gradually to normal movement is usually more helpful.

Exercise does not reverse osteoarthritis, but stronger muscles and better fitness can improve function and reduce symptoms. It is often necessary to adapt the type, pace, or amount of activity rather than stop it.

Some people manage the condition for many years without surgery. Others eventually need a joint replacement because pain and limited movement continue despite other treatments. The decision is based on how osteoarthritis affects your life, not simply your age or X-ray findings.

Regular follow-up may be useful if symptoms change, treatment is not helping, or medicines need review. People using anti-inflammatory medicines may need monitoring based on their health risks.

When to get medical help

Arrange a routine appointment if joint pain or stiffness lasts for several weeks, keeps returning, affects sleep, or limits everyday activities. Assessment is also appropriate if a joint is giving way, symptoms are changing quickly, or you are relying often on pain medicines.

Seek urgent medical assessment if:

Seek emergency help after an injury if the joint or limb is visibly deformed, bone is exposed, bleeding is severe, or the limb becomes cold, pale, blue, or numb. These signs can indicate a serious injury or reduced blood flow.

- A joint suddenly becomes hot, red, very swollen, or intensely painful
- Joint symptoms occur with fever or feeling seriously unwell
- You suddenly cannot put weight on a joint
- Severe pain follows a significant injury

Common questions

Is osteoarthritis the same as rheumatoid arthritis?

No. Osteoarthritis involves changes throughout a joint and is influenced by factors such as age, injury, joint shape, and genetics. Rheumatoid arthritis is an autoimmune condition in which the immune system attacks joint tissue. Their treatments and typical symptom patterns differ.

Does osteoarthritis always get worse?

Not always. Joint changes may progress, but pain and function do not follow a fixed path. Symptoms can remain stable or improve with exercise, strengthening, weight management where relevant, and suitable pain relief.

Can exercise make osteoarthritis worse?

Appropriate exercise does not usually damage an osteoarthritic joint. Some temporary discomfort can occur when starting or increasing activity. Marked swelling, sharp pain, or symptoms that remain substantially worse may mean the activity needs adjusting.

Can osteoarthritis be cured?

There is no treatment that restores an osteoarthritic joint to its original state. Symptoms and function can often improve. Joint replacement removes and replaces damaged joint surfaces when other treatments have not provided enough relief.

What is the best diet for osteoarthritis?

No specific diet has been shown to cure osteoarthritis. A balanced eating pattern can support general health and weight management. Supplements marketed for cartilage or joint repair have uncertain or limited benefits and may interact with medicines.

Why does my X-ray look severe when my pain is mild?

X-rays show bone and joint-space changes, not the full experience of pain. Pain is also influenced by muscles, sleep, activity, stress, and how the nervous system processes signals. Treatment should consider your symptoms and daily function, not the image alone.

Sources

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