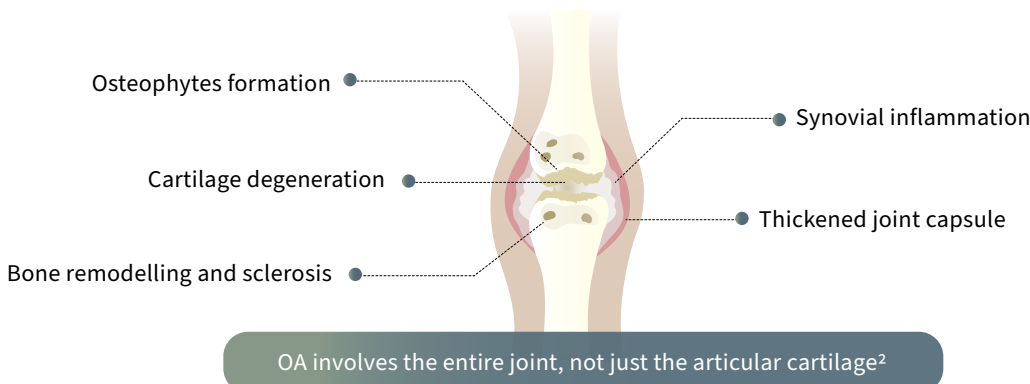


Osteoarthritis and its management

Osteoarthritis is a degenerative joint disease that is chronic and often progressive

Osteoarthritis (OA) is the most common form of arthritis, characterised by **pain, stiffness, and restricted mobility**.¹



OA typically affects the joints that have undergone repetitive stress or injury, with the knee being the most common OA site.¹



Knee



Hand



Hip

OA is more common in older adults, but various factors can elevate the risk of developing the condition



Older age¹

About **73%** of people with OA are older than 55 years



Overweight or obese^{3,4}

High body mass index accounts for about **20%** of the OA burden



Family history⁵

Having other members in the family with OA



Previous joint injury³

A history of joint damage or joint stress from repetitive movements

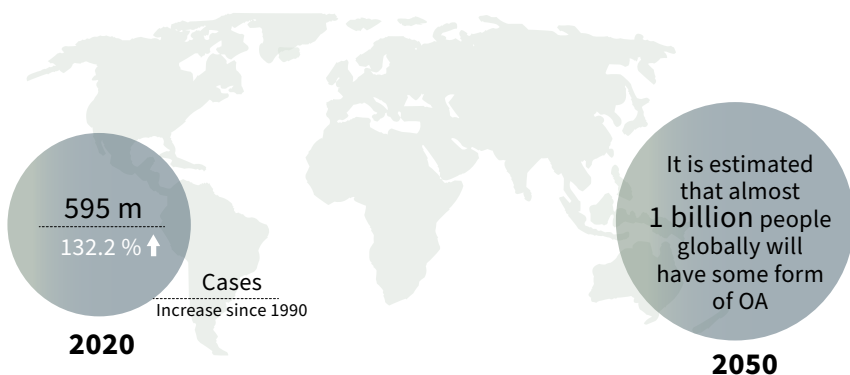


Female sex¹

About **60%** of OA cases occur in females

OA burden is increasing with a significant impact on people's quality of life and daily function

In 2020, around **595 million** people had OA worldwide, and it accounted for **21.7 million years** lived with disability. Given the ageing population and rising obesity cases globally, the prevalence is expected to increase further.⁴



As one of the leading causes of adult chronic pain and long-term disabilities, OA significantly impacts daily activities, social interactions, and mental health,¹ ultimately **diminishing quality of life**.⁴



OA is associated with substantial **direct healthcare costs** due to doctor visits, diagnostic procedures, and treatment

OA additionally involves **indirect healthcare costs** related to absenteeism, reduced work productivity (presenteeism), and early job loss

In 2019, **52.31%** of incident OA cases were of **early-onset OA** (under 55 years). Such cases accounted for global economic expenses exceeding **US \$106.87 billion**, with indirect productivity losses around of **60%**.⁶

Several common symptoms are associated with OA that usually develop slowly over time



Joint pain that typically increases due to joint overuse and is relieved after rest⁷



Joint swelling and tenderness due to fluid buildup in the joint⁷



Joint stiffness first thing in the morning, which typically lasts less than 30 minutes⁷



Joint instability, buckling or giving way⁷



Crepitus, i.e. sounds like cracking, crunching, or grinding that occur during joint movements⁷

Diagnosis of OA is primarily based on a combination of patient symptoms and physical examination

In clinical practice, OA should be diagnosed based on **patient history** and **physical examination**, with **imaging tests** reserved for confirming the diagnosis, excluding other conditions, and evaluating surgical interventions.^{5,7}



Patient history and symptoms^{2,7}:

This includes checking the patient's age and assessing pain characteristics and functional limitations.



Physical examination⁷:

This involves body weight assessment and joint palpation to look for signs such as:

- Swelling and hypertrophy of the joint
- Crepitus with joint movement
- Joint tenderness and pain, usually located near the joint line
- Reduced joint range of motion
- Muscle weakness



Imaging tests⁷:

The severity of radiographic abnormalities in OA does not consistently reflect the severity of patient symptoms.

- **X-ray** is the first-choice imaging modality, used for confirming diagnosis in advanced stages.
- **MRI** is primarily used for differential diagnosis.

Currently, there is no way to stop OA from progressing, but effective management can reduce the disease burden

- OA management goals include controlling symptoms, improving joint function, reducing disability, enhancing quality of life, and minimising healthcare costs.⁸
- Current OA management strategies include non-pharmacological and pharmacological therapies, with surgical intervention reserved for necessary cases.
- **Exercise, patient education and/or access to information, and weight loss (if a patient is overweight)** form the core OA treatment approach. Individualised strategies tailored to the patient's needs can help achieve the desired OA management goals.^{9,10}



Exercise⁹

Aerobic exercise (brisk walking, cycling, swimming), muscle strength training, and Tai chi exercise therapy is strongly recommended.



Patient education⁹

Patients should be constantly informed of OA management strategies through education on supportive device use and exercise therapy.



Weight loss (if needed)⁹

Weight loss (at least 5.0–7.5% of body weight) for overweight or obese patients can reduce pressure on weight-bearing joints and provide symptomatic benefits.



Supportive devices¹¹

Assistive devices such as hand orthoses, knee braces and/or canes help provide symptom relief and improve function.



Medication¹⁰

Topical NSAIDs are recommended as first-line treatment; non-selective NSAIDs, COX2 inhibitors, or intra-articular corticosteroids are reserved as stage 2 treatments



Surgery⁹

Joint replacement surgery is an option for those patients showing radiographic signs of OA, significant disability, and inadequate pain relief from other treatment options.

1. WHO: Osteoarthritis. Available at: <https://www.who.int/news-room/fact-sheets/detail/osteoarthritis/>. Accessed January 15, 2025.
2. Hunter DJ, et al. BMJ. 2006;332:639–642.
3. Dong Y, et al. J Orthop Surg Res. 2023;18:634.
4. Steinmetz JD, et al. Lancet Rheumatol. 2023;5(9):e508–e522.
5. OARSI. Understanding Your Osteoarthritis. Available at: <https://oarsi.org/education/patients#top>. Accessed January 15, 2025.
6. Weng Q, et al. Ann Rheum Dis. 2024;83(7):915–925.
7. Hunter DJ, et al. Rheum Dis Clin North Am. 2008;34(3):623–643.
8. Bruyère O, et al. Semin Arthritis Rheum. 2019;49(3):337–350.
9. Conley B, et al. Arthritis Care Res (Hoboken). 2023;75(9):1897–1907.
10. Arden NK, et al. Nat Rev Rheumatol. 2021;17(1):59–66.
11. Kolasinski SL, et al. Arthritis Care Res (Hoboken). 2020;72(2):149–162.