Osteoarthritis (Hip & Knee)

ALCHEMY IN MOTION

What is Osteoarthritis?

Osteoarthritis (OA) is a condition that affects the entire joint, including cartilage, bone, ligaments, and surrounding muscles. It is characterised by low-grade inflammation, changes to joint structures, and weakening of the tissues that support joint function. OA most commonly affects the hips, knees, and hands, leading to pain, stiffness, and reduced ability to perform everyday activities.

OA is the most common chronic condition affecting adults over the age of 65, although it can occur at any age. In Australia, approximately 30% of individuals aged 45 and over report hip and/or knee pain, and OA accounts for around 1.5 million GP visits each year. Traditionally, OA has been described as a "wear and tear" condition. However, this understanding is outdated. OA is now recognised as a complex, whole-joint condition in which tissues respond and adapt to mechanical load.

Importantly, movement is essential for joint health. Cartilage relies on regular loading to stay healthy, and avoiding activity can lead to increased stiffness, muscle weakness, and reduced function.

A large body of evidence supports exercise as a first-line treatment. Activities such as walking and resistance training can reduce pain, improve strength, and enhance overall function when appropriately prescribed.

Risk Factors

Risk increases with the number of contributing factors:

Non-modifiable

- Age
- Sex (more common in women)
- Genetics (family history of OA)

Modifiable

- Previous joint injury (e.g. ACL or meniscus injury)
- Joint overload or poor load management
- Higher body weight / poor nutrition
- Physical inactivity
- Muscle weakness

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Common Signs and Symptoms

- Pain during or after movement (especially weight-bearing)
- Joint stiffness and reduced range of motion
- Swelling
- Joint noises (clicking, grinding)
- Feeling of instability
- Pain at rest (in more advanced stages)

How OA Affects Daily Life

OA can significantly impact daily life. Pain, stiffness, and reduced mobility may make walking, climbing stairs, and driving more difficult.

Daily tasks such as cleaning, cooking, or carrying items can become challenging. Some people also experience difficulty with fine motor tasks if the hands are affected.

Over time, people may reduce participation in hobbies, exercise, and social activities, which can lead to isolation. Chronic pain may also disrupt sleep, causing fatigue.

The ongoing impact of pain and reduced independence can affect mental health, increasing the risk of anxiety and depression. In more severe cases, OA can interfere with work and financial stability.

Diagnosis

OA can be diagnosed with or without medical imaging.
Diagnosis is often based on:

- Symptoms
- Medical history
- Risk factors
- Physical examination

X-rays may show changes such as reduced joint space, bone spurs, or cysts. However, these findings do not directly show cartilage damage, and symptoms often appear 10–15 years before changes are visible on imaging.

Early diagnosis based on clinical assessment allows earlier treatment and better outcomes.

Treatment and Management

Management aims to reduce pain, improve function, and maintain quality of life. Treatment typically starts with conservative approaches.

Important
Lifestyle interventions—including exercise, diet, and weight management—are first-line treatments. Medication and surgery should support, not replace, these strategies.

Lifestyle

- Modify activities to reduce joint strain
- Pace tasks and use joint protection strategies

Diet

- Focus on a balanced, anti-inflammatory diet
- Support overall health and symptom management

Weight Management

- Reduces load on joints
- Helps decrease inflammation (body fat is metabolically active)

Exercise

- Improves strength, mobility, and joint stability
- Reduces pain and stiffness
- Includes aerobic, strengthening, and flexibility training

Medication

- May include paracetamol, NSAIDs, topical treatments, or injections
- Used to help manage symptoms when needed

Surgery

- Considered in severe cases when conservative care is no longer effective
- Joint replacement can improve pain and function

Exercise is Medicine

Exercise is a cornerstone of OA management.

It helps reduce chronic, low-grade inflammation, which is different from short-term inflammation seen with injury or illness. This type of inflammation is common in long-term conditions like OA.

Exercise also reduces local inflammation within the joint, leading to improved pain and function.

Regular, targeted exercise can:

- Reduce pain
- Improve mobility
- Strengthen muscles
- Enhance quality of life

The type, structure, and dosage of exercise matter, which is why supervised and individualised programs are recommended.

Common Myths and Facts

Myth: "It's just wear and tear."
OA is a complex condition involving joint tissues and inflammation.

Myth: "Exercise will make it worse."
Appropriate exercise is safe and beneficial.

Myth: "You should rest as much as possible."
Too much rest can worsen stiffness and weakness.

Myth: "Only older people get OA."
OA can affect younger individuals, especially after injury.

Myth: "Pain means damage on X-ray."
Pain and imaging findings do not always match.

Myth: "Surgery is inevitable."
Most people manage well without surgery.

Myth: "Nothing can be done."
Effective strategies can significantly improve symptoms and quality of life.

When to Seek Help

- Persistent joint pain lasting more than a few weeks
- Pain limiting daily activities
- Swelling or instability
- Sleep disruption due to pain

Key Takeaways

- Exercise is first-line treatment
- Movement is safe and beneficial
- Imaging is not always required
- Early management leads to better outcomes
- Surgery is not inevitable