

Elbow Osteoarthritis

Lateral X-ray showing osteoarthritis of the elbow — joint space narrowing and bone spur formation.

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What you're feeling

Elbow osteoarthritis is wear-and-tear arthritis in your elbow joint. It is quite common, affecting more than half of people aged 40 and older. You may notice pain that feels deep inside the joint. This pain often flares up when you move your arm through its full range. You might feel stiffness, especially when you first wake up in the morning. The discomfort can also return after you have been using your arm for a while.

The pain tends to be worst at the very start and end of your movement. For example, pushing yourself up from a chair or lifting a heavy bag can trigger a sharp ache. You may find it difficult to fully straighten your arm or bend it all the way to your shoulder. Simple tasks like pouring a drink from a high shelf or reaching for a plate in an overhead cupboard can become frustrating. You might also feel a grinding sensation or hear clicking sounds when you move.

In some cases, you may experience tingling or numbness in your ring and little fingers. This happens because swelling in the elbow can press on the ulnar nerve. This nerve runs close to the joint surface. If you have had an injury to this elbow in the past, these symptoms may have started sooner. The condition often affects those who do heavy manual work.

Your symptoms will guide your treatment plan. We usually start with non-surgical options to manage early symptoms. These may include rest, activity modification, or gentle exercises. If the pain persists or limits your daily life significantly, we may discuss other options. Your surgeon will tailor the approach to your specific needs, age, and activity level. The goal is to reduce your pain and help you return to the activities you enjoy.

What's actually happening

Your elbow is a hinge joint. In primary osteoarthritis, wear-and-tear changes happen in specific areas. Bone spurs, called osteophytes, usually grow in the ulnohumeral compartment. This is where your upper arm bone meets your forearm bone. At the same time, the joint space narrows where your radius meets your humerus.

Think of your joint like a door hinge. Over time, the metal surfaces wear down. Rust builds up on the edges. This creates bony bumps that catch against each other. When you straighten your arm, these bumps can hit each other. This causes a mechanical block to movement. You may feel pain or stiffness when you try to extend your elbow fully.

The ligaments that hold your joint together also change. If the ulnar collateral ligament weakens, pressure increases inside the joint. This extra stress wears down the cartilage faster. It is like a rope fraying under too much tension. The joint becomes less stable. This instability can lead to further damage and pain.

In some cases, extra bone forms where it should not. This is called heterotopic ossification. It often happens after an injury or surgery. This new bone can physically stop your elbow from moving. It creates a hard block to function. You might find you cannot straighten or bend your arm as before.

Your surgeon explains that these changes happen gradually. The body tries to repair itself by growing more bone. But this new bone often causes more problems than it solves. It restricts movement and irritates the surrounding tissues. This is why you may experience a loss of range of motion.

We address these issues by removing the problematic bone and smoothing the joint surface. This helps restore normal movement. We aim to reduce the friction that causes pain. By clearing away the bone spurs, we give your elbow more room to move. This can significantly improve your daily function.

Our goal is to relieve the mechanical block you feel. We treat the root cause of the stiffness. This approach helps you regain confidence in using your arm. You will notice less pain during everyday tasks. Simple actions like lifting objects become easier.

We tailor each treatment plan to your specific joint changes. Some patients need minor cleanup procedures. Others may require more extensive surgery. We discuss all options with you clearly. You will understand what to expect at each stage.

Your recovery depends on how much damage has occurred. Early treatment often leads to better outcomes. We focus on preserving your natural joint function whenever possible. This helps you return to your normal activities sooner.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, starts with the least invasive options that suit your condition.

We begin with self-management and physiotherapy. This is the first step for early elbow arthritis. You will learn exercises to keep your joint moving. Physio aims to reduce stiffness and strengthen the muscles around your elbow. We also suggest activity changes to avoid heavy lifting or repetitive strain. Give this approach a fair trial. It may provide relief in the early stages of wear-and-tear arthritis.

If pain persists, we discuss medical management. This includes pain medication and anti-inflammatories to calm swelling. We may offer injections into the joint. Cortisone injections reduce inflammation for a short

period. Hyaluronic acid injections aim to lubricate the joint. Platelet-rich plasma (PRP) injections use your own blood cells to encourage healing. These treatments help manage symptoms but do not reverse the arthritis.

Surgery is considered when conservative care has not given enough improvement. We review your pain levels, movement, and daily function. If non-operative options are exhausted, we discuss surgical debridement. This procedure removes loose bone fragments and smooths rough surfaces. It is safe and effective for mild to moderate arthritis. It improves range of motion and reduces pain. For severe cases, we may discuss total elbow replacement or interposition arthroplasty. These options restore function when the joint is significantly damaged.

Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. A clinic assessment, including examination and imaging, establishes the diagnosis. We make treatment decisions based on your age, activity level, and the severity of your arthritis. We guide you through each step so you can make an informed choice about your care.

What to expect

Your journey begins with non-surgical care. This is the standard first step for early elbow osteoarthritis, also known as wear-and-tear arthritis. Your surgeon will tailor this approach to your specific condition, age, and daily needs. For many, this conservative management provides meaningful relief in the early stages.

If symptoms persist or worsen, surgical options become available. These range from minimally invasive arthroscopic debridement to more extensive procedures like joint replacement. Arthroscopic debridement involves cleaning out bone spurs and inflamed tissue to improve pain and movement. Evidence shows this procedure offers satisfactory function and pain relief with a low chance of needing further surgery in the medium term.

For patients with mild to moderate arthritis, arthroscopic osteocapsular arthroplasty (removing excess capsule tissue) is a safe and effective option. You can expect improvement in your range of motion and clinical outcomes. While some patients may experience a slight decrease in motion between short- and medium-term follow-up, the overall treatment outcomes remain favourable. Open debridement yields similar results in experienced hands, though some recurrence of symptoms or motion loss is possible.

Total elbow replacement is generally not recommended for active patients due to higher complication rates and limited durability. It remains a reasonable option only for select individuals with severe arthritis who have lower physical demands. For young or active patients with end-stage post-traumatic arthritis, elbow hemiarthroplasty (partial replacement) is an option, but it carries high rates of revision surgery.

Overall, most patients undergoing debridement or radiocapitellar replacement (partial joint surface replacement) experience an uneventful recovery with a painless elbow and satisfactory function in the short term. The goal is to restore stability and limit the progression of arthritis. Your surgeon will guide you toward the option that best balances pain relief with your long-term activity goals.

When to see someone

Ask for a specialist review if you have persistent elbow pain that does not improve with rest. Seek help if you notice weakness, instability, or if your joint locks or gives way. Symptoms that interfere with sleep or work also warrant attention. Sudden worsening of your condition is another reason to book an appointment.

Nonoperative treatment is the first step for early management and may provide relief. However, your surgeon will assess the severity and your age to determine the right path. This ensures you receive care tailored to your specific needs and functional demands.

In more depth

This section goes further than you need for your own treatment decisions. Elbow osteoarthritis is worth the extra reading because the operation that would seem the definitive answer – replacing the joint, as is done routinely at the hip and knee – behaves quite differently at the elbow, and that single fact shapes the whole treatment ladder.

WHY ELBOW REPLACEMENT IS NOT THE DEFAULT

Total elbow arthroplasty works, but it does not tolerate load the way a hip or knee replacement does. Pooling **2,118** patients with rheumatoid arthritis, elbow replacement continued to provide satisfactory results – while being associated with **substantially higher implant failure and complication rates than hip and knee arthroplasty** [1].

The consequence is a lifting restriction that is permanent rather than a recovery-phase precaution. Because the elbow sits at the end of a long lever, modest weights in the hand generate large forces at the implant, and those forces loosen it over time.

That is why the ladder at the elbow is inverted compared with the lower limb. At the hip, joint replacement is the standard operation for advanced arthritis. At the elbow, it is reserved – mostly for older, lower-demand patients, and for inflammatory rather than wear arthritis.

CAUSE MATTERS AS MUCH AS SEVERITY

Two people with equally worn elbows can face different prospects depending on why the joint wore out. Across **679** patients, the aetiology of the arthritis affected outcome in terms of specific modes of implant failure, and **patients with rheumatoid arthritis had better functional outcomes** than those having replacement for post-traumatic conditions [2].

That is worth stating because it is the reverse of what most people expect – that a joint damaged by a single injury should do better than one damaged by systemic disease. The explanation is demand: post-traumatic arthritis tends to occur in younger people with more physically demanding lives, and the implant meets forces it was not designed for.

DEBRIDEMENT IS THE OPERATION THAT DOES MOST OF THE WORK

For primary wear arthritis, the mainstay is not replacement but debridement – clearing the bone spurs and loose bodies that block the joint at the ends of its range, and releasing the tight capsule, while leaving the joint surfaces in place.

The evidence is consistent. Across **1,097** patients, debridement produced good mid-term functional outcomes, with **no increase in complications using an arthroscopic technique** [3]. In **871** patients, both open and arthroscopic osteocapsular debridement reliably improved flexion, extension and functional scores with low complication rates [4], and a meta-analysis of **586** patients found debridement effective for the disabling symptoms of primary elbow osteoarthritis with an acceptable complication rate [5].

Note what debridement is being asked to do. It does not resurface the joint or halt the arthritis. It removes the mechanical blocks at the end of range – which is why it helps the patient whose main complaint is that the elbow will not straighten or bend fully and catches painfully at the limit, and helps less the patient whose pain is present throughout the arc.

OPEN OR ARTHROSCOPIC IS NOT THE DECIDING QUESTION

As with several elbow operations, technique attracts more debate than the evidence supports. The reviews above found both approaches safe and effective, and a narrative review of **639** patients concluded it **could not establish which procedure is superior** [6].

The practical determinant is what needs to be reached. Arthroscopy handles anterior and posterior compartment work well; a stiff elbow requiring extensive capsular release, or one with distorted anatomy and a nerve that must be seen and protected, may be safer open.

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