

Osteoarthritis of the thumb carpometacarpal joint

What is osteoarthritis?

'Osteo' means bone and 'arthritis' means joint swelling (inflammation). Osteoarthritis is a progressive disorder where there is degeneration of the protective surface of the bones in the joint, which causes pain. It is often inherited. Although there is no cure for osteoarthritis, there are many ways in which you can relieve your symptoms and reduce the likelihood of progression.

Causes of thumb osteoarthritis

Osteoarthritis in the carpometacarpal joint (CMC joint) at the base of the thumb is the most common cause of pain in this area. The CMC joint is formed where the metacarpal bone of the thumb meets the trapezium bone of the wrist.

Due to the movement required at the base of the thumb, you rely on your ligaments and bony structures to maintain stability. Damage or overuse can place high loads through the base of the thumb and lead to degeneration. A good point to remember is that any pressures placed through the tip of the thumb during pinching activities are multiplied by around twelve times through the CMC joint.



Symptoms of thumb osteoarthritis

Pain is the primary symptom associated with thumb osteoarthritis. Initially, pain is present with movement or activity (e.g. turning a key, opening a door, lifting a cup). If the osteoarthritis progresses, pain may be present even during inactivity or rest. Other symptoms of thumb arthritis include:

- Difficulty gripping objects
- Swelling, stiffness, or tenderness at the base of the thumb
- Enlarged appearance and altered posture of the CMC joint
- Limited range of motion

Treatment of thumb osteoarthritis

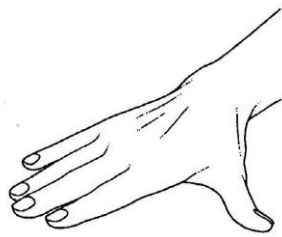
Early osteoarthritis of the thumb can be effectively managed using non-surgical treatment options. These treatments aim to reduce the pain caused by wear and tear of the joint:

- Some medicines can help to reduce inflammation, swelling and pain. You should discuss this with your GP.
- Steroid injections can be given into the joint.
- You can see the team in Hand Therapy for advice on joint protection, splinting and exercises.

If you have worsening symptoms, you should discuss other options with your GP or consultant.

Exercise

Range of movement exercises are aimed to prevent muscle wasting and the formation of scar tissue that can limit range of movement.



Place the palm of your hand on a table.

Bring your thumb away from the index finger and then back again.

To isolate the movement to the base of your thumb, it may help to place a pencil along the outer border to guide the movement, as shown by your Hand Therapist.

Repeat ___ times.

Note: Can also use with band for STRENGTHENING

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Place your little finger on a table.

Bring your thumb away from the palm and then back to the index finger.

Repeat ___ times.

Check movement is occurring at the base of the thumb.

Note: Can also use with band for STRENGTHENING

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a) Elbow or back of your hand on a table.

Put your thumb against each fingertip in turn. Making an 'O'.

Repeat ___ times.

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Wrist and fingers straight.

Make a fist, bring your thumb in over your fingers and run your thumb across the top of your fingers. Starting at the index finger and finishing at the little finger.

Repeat ___ times.

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Make a loose fist, rest thumb on top of index finger. Raise your thumb keeping the tip bent, hold and lower back onto index finger.

Repeat ___ times.

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Hand Therapy

Splinting:

The goals of splinting are to increase stability, reduce pain, decrease inflammation, improve function, and reduce the mechanical stress that may be causing the instability. Splinting generally will not prevent abnormal joint posture, but can provide rest and support. You should not wear the splint continuously.

The two main types of splint are a thermoplastic thumb support (rigid) and a neoprene (soft) thumb support. Your therapist will advise you which type you need and when to wear it.

Joint protection:

Joint protection can reduce joint damage, preserve range of motion, and lessen osteoarthritis pain by reducing the general stress and strain on the joint. The following principles will help you:

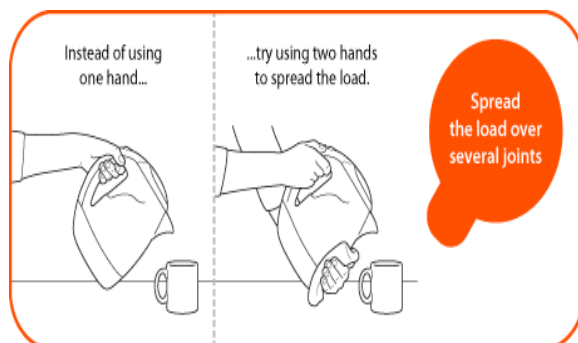
- Respect pain: if you are experiencing pain after an activity, you must consider that you have been too active or have done too much.
- Pace your activities through the day. Spread physically hard jobs (such as housework or mowing the lawn) at intervals through the day, rather than tackling them all at once.
- Avoid any activity that causes pain and find a better way of accomplishing the task. Avoid a tight grip that strains joints and muscles. Avoid a prolonged or continuous grip. Small joints can take little weight, so gripping a pen or cutlery can be hard work. Holding a larger object involves more joints, so spreads the grip.
- Make handles larger with padding, e.g. sponge tubing for pipe lagging. A solid surface is harder to grip than a soft surface; also a larger surface area means less strain. Wear padded gloves when gardening.



- Spread the load over several joints. Picking up an object with two hands halves the load on each hand.
- Use adaptive devices, i.e. larger grips on peelers, scissors, built-up key turners and pens, and an electric tin opener and toothbrush.

Domestic tasks:

- Straining vegetables: instead of lifting and tipping the pan, place vegetables in a wire basket in the pan to cook. When ready they can be lifted and drained in the basket. Leave the saucepan to cool before moving it.
- Kettle: use a plastic jug to fill the kettle from the tap and only fill the kettle up as required. A kettle tipper can be used, or a small lightweight travel kettle. Also, kettles with the handle over the top have been reported to be easier to lift using two hands rather than the kettles with the handle on the side.



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