



REHABILITATION

Thumb Osteoarthritis Management

The aim of this leaflet is to help patients who have arthritis at the base of their thumb. Here you will find helpful information on management, as well as our contact details should you need any further advice or assistance.

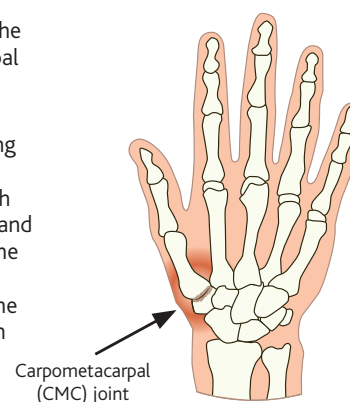
What is Arthritis at the Base of the Thumb?

This is a form of osteoarthritis between the base of the thumb metacarpal and one of the small bones of the hand, the trapezium. A joint is where two bones meet to allow movement.

This joint is very specialised and allows a large range of thumb motion which contributes significantly to the dexterity of the hand. As a result arthritis in this joint is often functionally very disabling.

Thumb arthritis occurs when the cartilage in the carpometacarpal (CMC) joint (see illustration) wears away.

The cartilage (the smooth lining of a joint) gradually thins and roughens. The bone underneath the cartilage starts to thicken and bony surfaces at the edge of the joints may start to grow outwards (known as 'spurs'). The joint may also become swollen and change shape.



Base of Thumb Arthritis Symptoms

This condition affects women ten times more commonly than men. Symptoms usually start in the mid-forties but can occur earlier. It may start with pain occasionally especially after gripping or pinching objects, and may worsen as the day progresses.

Symptoms may gradually become more constant over time and you may lose movement and strength. It may become difficult to turn keys or turn on taps. In severe cases a bump at the base of the thumb appears and the thumb becomes stiff.

Patients sometimes describe instability in the thumb and difficulty performing activities such as precision pinch or a strong grip - for example, lifting the kettle and removing lids from jars. You may start to avoid painful activities or using your thumb and this in turn can cause muscle wasting.

Base of Thumb Arthritis Treatment

Most patients with this condition do not need surgery and can manage their symptoms with pain relief, exercise, heat or ice

and splints. Techniques such as activity modification, joint protection and pacing will also help you protect your joints,

relieve symptoms, and may slow the progression of osteoarthritis and improve your grip.

Splints

Splints can support the thumb joints during activities that are painful, or resting splints that may be used at night.

Some splints are made of soft materials (e.g. neoprene), others can be custom made for you in a thermoplastic material which sets hard.

Alternatively in some situations an off-the-shelf more rigid splint might be appropriate. Your therapist will choose your splint according to your individual needs.





REHABILITATION

Joint Protection

It's important that you are aware of which activities cause your thumb pain so that you know when to wear your splints or to adapt the way you carry out this task.

Pain can be a warning that the way you are completing this task, or the length of time that you are doing the task could be causing damage to the joint.

Try the following:

- Spread the load over several joints (e.g. carrying plates/books with two flat hands rather than by gripping with your thumb).
- Use a larger stronger joint when possible (e.g. carrying a bag on your forearm or using a rucksack rather than straining your thumb).

- Use less effort (e.g. push/slide saucepans across work surfaces rather than lifting/carrying).
- Use less force by using assistive or labour-saving devices when possible and do ask for help.

Pacing

- Try to break down tasks to more manageable chunks, or for a specific amount of time only (this includes knitting/gardening/ironing) rather than being task-focused and needing to complete the whole job in one session.
- Be aware of your joints and what aggravates them (try keeping an activity diary). Instead of giving up activities

that you enjoy, plan your day so that you are still able to do them, but perhaps complete less at one time and incorporate rest breaks.

Try the following:

- Can you cut out part of the task to be more efficient or slow down a bit?
- Change activities regularly, planning out your day (this is

particularly important in the work environment). Pushing yourself to complete a task can increase pain the following day.

- Avoid activities that use the same joint position for a long time.

Remember to take more breaks when you do have inflammation.

Exercises

This must be in a pain-free range. Pacing and joint protection will help to reduce the strain on your joints, but exercise will strengthen the muscles that support the joints so are extremely important.

If the muscles are strong, then the joints are less likely to

develop deformities. Exercise will maintain your range of movement, if you do not move joints they will become stiff and the muscles will waste away.

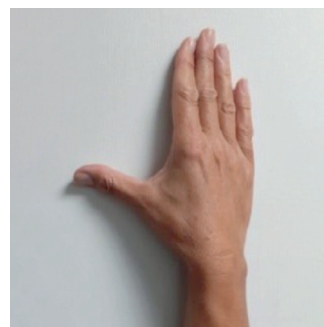
Using heat prior to exercise (particularly soaking your hands in warm water) helps to reduce pain and stiffness.

Stage One

These are designed to be done daily/alternate days, 10 reps each.

1. Thumb Adduction/ Abduction

Place your hand palm down on the table and slide the thumb out to the side and back to your fingers slowly and controlled.

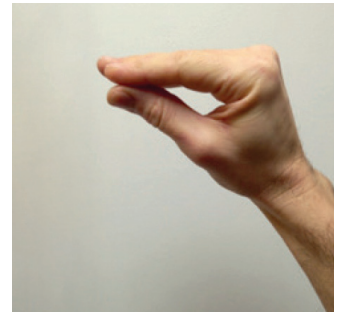
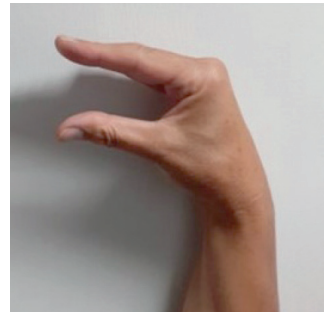




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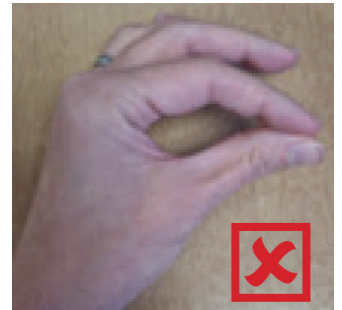
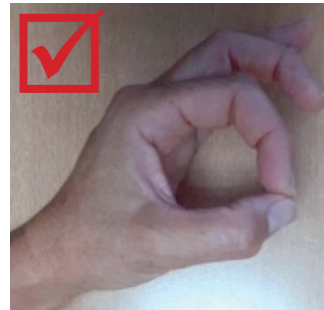
2. Palmar Abduction/ Adduction

Try to keep your fingers still and straight, then lower then thumb away and then raise the thumb back up to touch your fingers.



3. Opposition

Touch your thumb slowly to each fingertip as shown, trying to make a perfect circle.



Stage Two

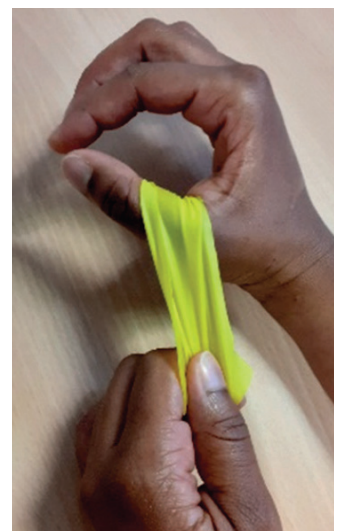
4. Resisted Opposition

Make a circle with both your thumbs and index fingers as shown and gently pull apart without letting go.



5. Resisted Opposition with Theraband

Hold the Theraband between thumb and fingers of the unaffected hand, then hook the band over the base of the thumb as shown in the picture. Slowly move the thumb towards the index finger while maintaining light resistance with the band.





REHABILITATION

Stage Three

6. CMCJ Circumduction

Roll your thumb across the ball as if stroking it.



7. Isometric Dorsal Interosseous Strengthening

Place your hand flat on the table, use the opposite hand to press against the index finger you are exercising, attempt to move that index finger away from your fingers.



8. Resisted Dorsal Interosseous Strengthening

Place the theraband loop or elastic band around the fingers as shown in the picture, hand flat on the table.

Move the index finger away from the other fingers towards your thumb and then return it to the original position.



Pain Relief Strategies

The use of the acupressure point in the thumb web space can relieve pain/discomfort in some patients. There is some medical research which shows it can help relieve certain types of pain - studies are still on-going. However, there isn't any scientific evidence to either accept or reject the use of acupressure.

To the right are photos demonstrating the use of this technique, holding the pressure for a slow count of 10.





REHABILITATION

The Four Ps of Protecting Your Thumb Joints:

- **Problem solve**
If a task causes you pain or discomfort, think about how you can do it differently.
- **Plan**
Plan the things you need to do for that day/week and try to space out the more demanding tasks.
- **Prioritise**
Decide whether something needs to be done today; done at all; or can be done partly or wholly by someone else.
- **Pace yourself**
Break tasks up and spread them throughout the day or week with regular short rest breaks. Change positions regularly.

Glossary of Terms:

Abduction

Opposite of adduction. The movement of a limb or other part away from the midline of the body, or from another part.

Active

Involving physical effort and action.

Adduction

Opposite of abduction. The movement of a limb or other part towards the midline of the body or towards another part.

Arthritis

Painful inflammation and stiffness to the joints.

Cartilage

A tough but flexible tissue that is the main type of connective tissue in the body.

Deformities

Misshapen or malformed.

Dexterity

Skill in performing tasks, especially with the hands.

Extension

The act of extending, lengthening or stretching out.

Flexion

The act of bending a limb.

Inflammation

A condition in which part of the body becomes reddened, swollen, hot, and often painful, especially as a reaction to injury or infection.

Passive

Opposite of 'active', not involving active participation.

Splint

Rigid material used to immobilise a fractured or dislocated bone, or to maintain any part of the body in a fixed position. Usually removable. Commonly made of neoprene or thermoplastic materials.