NHS Buckinghamshire Musculoskeletal Integrated Care Service

Osteoarthritis of the carpometacarpal thumb joint
Anatomy of the thumb

The thumb carpometacarpal joint (CMC) is where the metacarpal bone attaches to the trapezium (carpal) bone of the wrist. This is a common site for osteoarthritis of the hand due to the mobility of the joint and the large forces translated through the joint with use of the hand.

What is Osteoarthritis?

Osteoarthritis (OA) is the most common form of arthritis and can affect any joint in the body.

The main problem is wear to the cartilage which covers the ends of the bones. Normally the smooth, slippery cartilage helps the joint to move smoothly. In OA the cartilage becomes thinner and rougher. The bone underneath then tries to repair this wearing but sometimes overgrows, altering the shape of the joint.

It’s more common in older people and particularly affects the joints that get heavy use, such as hips and knees, and also often the base of the thumb and the big toe joint.

Osteoarthritis can also result from previous damage to the joint, for example a fracture, or previous inflammation in the joint.

A healthy joint

A joint with Osteoarthritis
**Common symptoms of carpometacarpal osteoarthritis (CMC OA)**

**Pain**
- Usually a sharp pain on movement or aching pain at the base of the thumb. The pain is worse with movements and better with rest.

**Reduced grip strength**
- Difficulty with picking up objects or gripping them.

**Stiffness**
- Worse after periods of rest, generally first thing in the morning.

**Swelling**
- Around the base of the thumb.

**Deformity**
- In the later stages of the condition the thumb joints can collapse inwards.

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**Arthritic joint**

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**Common symptoms of CMC OA**

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**Treatment of (CMC OA)**

**Exercises**

1. Rest your hand on a table stretch your thumb away from your hand. **Repeat 10 times.**

2. Rest your little finger on a table and stretch your thumb away from your hand. **Repeat 10 times**

3. Touch the tip of your thumb to the tip of each finger. **Repeat 10 times**

4. Touch the tip of your thumb to the tip of your index finger. Link both hands together and gently pull apart resisting the movement. Hold for 5 seconds. **Repeat 10 times**

5. Support under the bottom joint of your thumb. Bend the tip of the thumb and lift up from the bottom joint of the thumb. **Repeat 10 times.** Progress to resisting with an elastic band.
**Assistive devices**
There are a variety of aids that can assist in tasks that you find painful for your thumb.

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**Splints to support the CMC joint**
Splints are designed to be worn when doing activities that aggravate your thumb pain. They help to reduce the pain that you feel and protect the joint from further damage. It is important that you don’t wear the splint for all activities as they can cause some of the muscles to become weak. Light functional activities should be completed without the splint. You should not wear the splint when driving or operating heavy machinery as it will restrict the movements of your hand.

Thumb spica/splints can be bought in most chemists or on the internet.

**Pain relief**
Some people find that paracetamol or anti-inflammatory medications can help to reduce the pain. This should be discussed with your GP as they can advise you on what medication and dosage is right for you.

If the pain cannot be controlled with oral pain relief, splinting and exercises, then a corticosteroid injection can be offered. This will provide temporary pain relief so it is easier to complete the exercises.

**Surgery**
If your symptoms cannot be adequately controlled with conservative measures then surgery can be an option. All conservative measures should be tried before you consider surgery. The most common procedure is a trapeziectomy where the arthritic bone is removed. This is then followed by a period of splinting and physiotherapy to regain the function of the hand.

**Joint Protection**
It is important that when you get pain into the thumb joint while doing activities that you look at different ways that you could do that activity without causing too much stress onto the joint.

For example:

- Using your pinch grip eg writing, opening clothes pegs. Keep the top joint of the thumb bent and the wrist extended
- Activities that involve turning and twisting eg keys in a lock, turning taps, jar tops.

  Avoid fully straightening the top joint of the thumb and the thumb crossing in front of the palm

Other useful tips on joint protection:

- Spread the load over several joints
  Carry items on 2 flat hands rather than gripping with your thumb
- Use larger stronger joints
  This takes the strain off your thumb
- Use less effort
  Push or slide heavy items rather than carrying them

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**Wide grip cutlery**

- Fork
- Knife
- Spoon

**Pen grips**

- Pencil grip

**Jar openers**

- Jar openers

**Tap Turners**

- Tap turners