

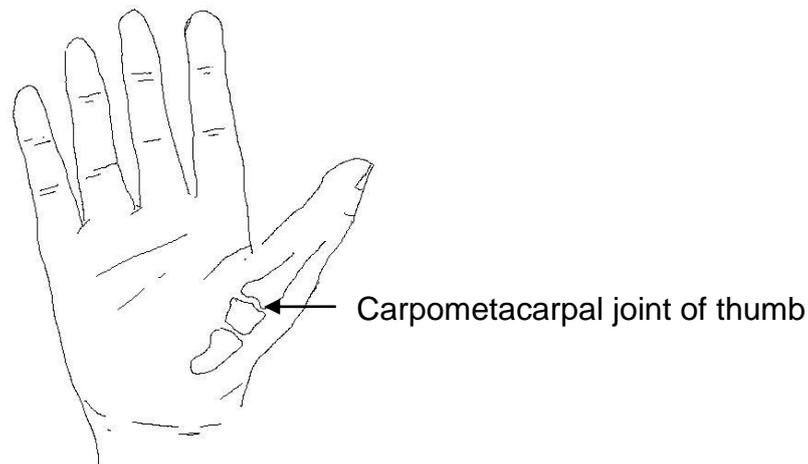
# Thumb Basal Joint Arthritis

Orthopaedic Department  
Patient Information Leaflet

## Arthritis of the CMC joint of the thumb

The joint where the thumb attaches to the hand can suffer from wear and tear. This joint is designed to give the thumb its rather large range of motion, but the downside is that the joint suffers a lot of stress over the years. This can lead to painful osteoarthritis of this joint that may require surgical treatment as the arthritis progresses.

The CMC joint (an abbreviation for carpometacarpal joint) of the thumb is where the metacarpal bone of the thumb attaches to the trapezium bone of the wrist. This joint is sometimes referred to as the trapeziometacarpal or basal joint of the thumb. This joint allows you to move your thumb into your palm, a motion called opposition.



## What are the symptoms?

Pain is the main problem with arthritis of any joint. This pain occurs at first only related to activity. Later, when the condition worsens, pain and aching may be present even at rest. The most noticeable problem with CMC joint arthritis is that it becomes difficult to grip anything. It causes a sharp pain at the base of the thumb in the thick part of the heel of the hand.

The diagnosis of CMC joint arthritis of the thumb begins with your doctor taking a detailed history of the problem. Specifics about any injuries that may have occurred to the hand are important because they may suggest other reasons why the condition exists. X-rays will be taken to see how much the joint is damaged.

## What can be done for CMC joint arthritis?

The treatment of degenerative arthritis of the CMC joint of the thumb is based on the severity of symptoms. The goals of treatment are to relieve pain, decrease disability, and prevent deformity. Treatment can be divided into the nonsurgical means to control the symptoms and the surgical procedures that are available to treat the condition. Surgery is usually not considered until the symptoms have become impossible to control without it.

### Nonsurgical treatment

Treatment usually begins when the CMC joint first becomes painful. This may only occur with heavy use and may simply require mild anti-inflammatory medications, such as ibuprofen. Reducing the activity, or changing from occupations that require heavy repetitive gripping with the hand, may be necessary to help control the symptoms.

**A brace or splint** may also be prescribed to support the thumb. These devices are designed to help reduce pain, prevent deformity, or keep a thumb deformity from getting worse. Patients with CMC joint arthritis usually only wear the splint at night and when the joint is flared up. It should also be worn to protect the thumb during heavy or repeated hand and thumb activities.

**An injection of cortisone** into the joint can give temporary relief. Cortisone is a very powerful anti-inflammatory medication. When injected into the joint itself, it can help relieve the pain. Pain relief is temporary and usually only lasts several weeks to months. There is a small risk of infection with any injection into the joint, and cortisone injections are no exception.

Although temporary pain relief is possible, there is no long-term improvement in hand function, joint stiffness, or tenderness. Steroid injection(s) combined with splinting has been shown more successful in patients during the early stages of CMC arthritis.

### Surgery

The surgical treatment for arthritis of the CMC joint includes several options. At one time, joint replacement with an artificial joint made with silicone was very popular.

Problems with silicone implants in other parts of the body have led many surgeons to return to more traditional operations such as fusion and excision arthroplasty instead.

A fusion, or arthrodesis, of any joint is designed to eliminate pain by allowing the bones that make up the joint to grow together, or fuse, into one solid bone. Fusions are used in many joints and were very common before the invention of artificial joints for the replacement of arthritic joints. Even today, joint fusions are still commonly used in many different joints for treating the pain of arthritis.

A fusion of the CMC joint of the thumb is done quite often in younger people who need a strong grip or pinch more than they need the fine motion of the thumb. People who use their hands for heavy work may prefer a fusion to an arthroplasty (described below).

The traditional operation for treating CMC joint arthritis is a resection (excision) arthroplasty. This method has been used for many years and has withstood the test of time.

The purpose of resection arthroplasty is to remove the arthritic joint surfaces of the CMC joint and replace them with a cushion of material that will keep the bones separated. The trapezium bone is removed in a procedure called a trapeziectomy. A rolled up piece of tendon is placed into the space created by removing the bone. During the healing phase after surgery, this tendon turns into tough scar tissue that forms a flexible connection between the bones, similar to a joint.

Your surgeon decides whether to perform resection arthroplasty with or without tendon interposition and/or ligament reconstruction. Studies so far have not shown a biomechanical or clinical advantage to interposition.

## **Complications**

Infection, nerve injury, scar tenderness or continued pain can occur after surgery for CMC arthritis. When tendons are used as graft material for ligament reconstruction, problems can occur such as tendon rupture or tethering. Tethering means the tendon develops scarring or adhesions that bind it and keep it from gliding smoothly inside its sheath or outer covering.

## What should I expect following treatment?

### Nonsurgical Rehabilitation

If you don't need surgery, range-of-motion exercises for the thumb should be started as pain eases. You'll be given tips on keeping your symptoms controlled.

### After surgery

Your postoperative recovery and rehab program may depend on the type of surgery you have had. Your hand will be bandaged with a well-padded dressing and a thumb splint for support after joint replacement, or ligament reconstructive surgery.

With fusion, there's a high risk of non-union, so a cast is used to immobilise the joint for as much as three months. Often the thumb is fused in a functional position. Physical or occupational therapy sessions may be needed after surgery for up to eight weeks. The first few treatments are used to help control the pain and swelling after surgery. Some of the exercises you'll begin to do are to help strengthen and stabilise the muscles around the thumb joint. Other exercises are used to improve fine motor control and dexterity of your hand. You'll be given tips on ways to do your activities while avoiding extra strain on the thumb joint.

### Trapeziectomy

After surgery, your thumb will be bandaged with a well-padded dressing and a splint for support. The splint will keep the thumb in a natural position during healing. Stitches will be removed after 10 to 14 days, though most of your stitches will be absorbed into your body. You will have some discomfort after excision arthroplasty. You will be given pain medicine to control the discomfort.

You should keep your hand elevated above the level of your heart for several days to avoid swelling and throbbing. Keep it propped up on a stack of pillows when sleeping or sitting up.

After surgery, you'll wear a thumb brace for up to six weeks to give the repair time to heal. A physical or occupational therapist will probably direct your recovery program. You will likely need to attend therapy sessions for one to two months, and you should expect full recovery to take up to six months.

The first few therapy treatments will focus on controlling the pain and swelling from surgery. Heat treatments may be used. Your therapist may also use gentle massage and other hands-on treatments to ease muscle spasm and pain.

Then you'll begin gentle range-of-motion exercise. Strengthening exercises are used to give added stability around the thumb joint. You'll learn ways to grip and support items in order to do your tasks safely and with the least amount of stress on your thumb joint. As with any surgery, you need to avoid doing too much, too quickly.

Some of the exercises you'll do are designed get your hand and thumb working in ways that are similar to your work tasks and daily activities. Your therapist will help you find ways to do your tasks that don't put too much stress on your thumb joint. Your therapist's goal is to help you keep your pain under control, improve your strength and range of motion, and regain your fine motor abilities with your hand and thumb.

## **Further information**

Orthopaedic and Fracture Clinic:  
Monday to Friday  
Tel: 01384 456111 ext. 2220

If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

The Orthopaedic and Fracture Clinic on 01384 456111 ext. 2220  
(Monday to Friday)

Russells Hall Hospital switchboard number: 01384 456111

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