

# InfoSheet – Basal Joint Arthritis of the Thumb

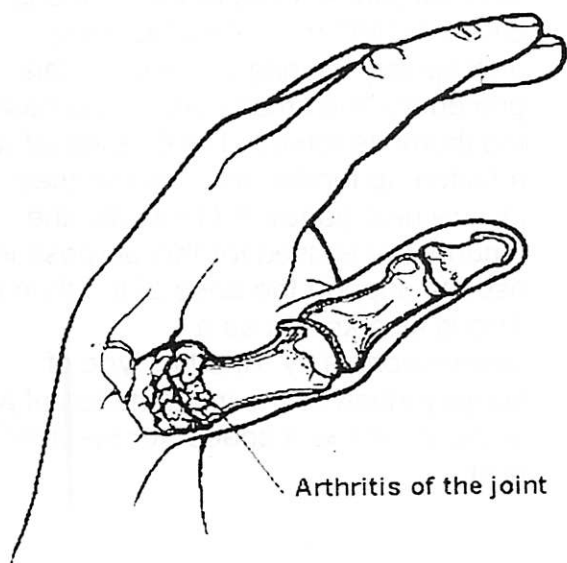
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## WHY DOES IT HURT ?

Arthritis at the base of the thumb is the second most common location for arthritis in the hand. It is considered a genetic trait rather than related to activities. Pain occurs generally related to activities especially those that involve gripping and pinching. Common activities that cause pain include opening jars, turning keys, and opening doorknobs. Additionally pain can occur with changes in the weather and changes in humidity and temperature.

## WHAT CAUSES THE PROBLEM?

The basal joint of the thumb is one of the most mobile joints in the body. Rather than a ball and socket joint such as the hip, the basal joint of the thumb takes the shape of two saddles fitting onto each other. This allows a sliding movement in many directions, but does not allow much rotation. In a normal joint, the cartilage is a smooth lubricated surface that covers the end of the bones and permits free and painless motion.



With arthritic processes, the cartilage wears away and the ends of the bone can become exposed. Additionally, destructive chemicals start to eat away at the joint's lining producing pain, swelling, and a looseness or laxity of the joint. It is the swelling and laxity of the joint that results in the lump that is visible at the base of the thumb.



In some people who are at an early stage, laxity of the basal joint can occur without arthritic changes. This is often present in patients aged 30-50. As basal arthritis of the thumb gets worse, the motion of the thumb is decreased. The next joint of the thumb has to

perform more motion than usual, leading to hyperextension of this joint.

### **WHAT HAPPENS AS TIME PASSES?**

In some people, arthritis at the base of the thumb stabilizes and then begins to stop being painful. It is common for older men and women to have severe arthritis on x-ray, but no pain and no trouble with the functioning of their thumb. In other people, the disease continues to worsen and become more painful. These people eventually may need operative treatment for their arthritis.

### **WHO GETS BASAL JOINT ARTHRITIS?**

It is far more common for basal joint arthritis to occur in women rather than in men. Usually they are in their 50's or older, but some younger people can get looseness of the joint without x-ray evidence of arthritis. In some cases, pain at the base of the thumb can occur after an injury such as a fracture or a sprain of the wrist. The x-rays may show chronic arthritic changes, but the person has not had pain before in this location.

### **HOW IS BASAL JOINT ARTHRITIS TREATED?**

Basal joint arthritis can be treated by taking anti-inflammatory medications by mouth, which usually lessens the amount of pain. Additionally, for exacerbations of the pain, cortisone or a synthetic variant can be injected into the basal joint. This may "quiet things down". Other medications by mouth are often helpful in controlling basal joint arthritis symptoms. These medications include Glucosamine and Chondroitin Sulfate as well as taking oral preparations of aloe such as those available from health food stores.

Another mainstay in treatment of basal joint arthritis is a hand-based splint that is worn for activity. This type of a splint can be "off the shelf" or can be custom fabricated by a hand therapist. Patients often benefit from wearing the splint for 4-8 hours while they are awake and busy using their hands. Unlike splinting for a carpal tunnel syndrome, it is usually not helpful to wear the splints at night. Certainly, if someone has thumb pain at night, the splints may be useful. It may be several weeks or months before a splinting regimen will quiet down the arthritis of the thumb. Once a person is doing well with a splint, they may need to wear the splint less often. Likewise, in periods of worsening of their symptoms, it may be useful to wear the splint more often. In some patients, the splint either stops relieving the pain or is not of use in relieving the pain. These people are usually good candidates for surgical treatment.

### **WHAT IS THE SURGICAL TREATMENT FOR BASAL JOINT ARTHRITIS ?**

The most common operative treatment of basal joint arthritis of the thumb is called a CMC (carpal metacarpal) arthroplasty. During one type of this procedure, the small bone at the base of the thumb is removed and replaced with a folded up tendon as a spacer (see picture next page). Additionally, the tendon that is used for this purpose is used to support the base of the thumb. This is also known as a *suspensionplasty*. Another type of surgery involves the implantation of an artificial joint as a spacer for the arthritic joint.

Following surgery, the thumb may be immobilized in a splint or a cast for several weeks, followed by part-time splinting and return to activity. It is often 4-6 months until significant improvement is made following this type of operation. Patients who had a weak grip because of the significant pain in their thumb often find that they are much stronger after having the operation performed.

