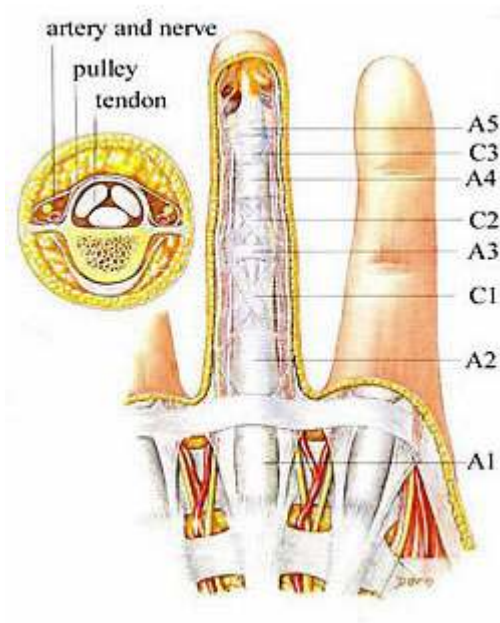


## CMC Arthritis/ Basal Joint Arthritis

Richard A. Bernstein, M.D.



Patients with osteoarthritis of the hand (photo at left from David Nelson, M.D. and at right from Atlas of Rheumatology)

Osteoarthritis is a disease affecting the joints. It is very treatable. It is rarely deforming or crippling, although it can be painful if not treated. Osteoarthritis is very common and affects almost everybody as they get older. The older you get, the more likely you are to have it, and around eight out of ten people over the age of 50 are affected. In the hand, it typically affects the base of the thumb first (see the image above and the x-ray at right), then the finger joints. Women are affected more than men.



Osteoarthritis can be thought of as "wear and tear" arthritis. It is not the same as rheumatoid arthritis, which is an autoimmune disease that is very deforming and can be crippling. Osteoarthritis does not deform the hands in the way that rheumatoid arthritis does. What are the symptoms of osteoarthritis?

The hallmarks of osteoarthritis are joint stiffness, swelling, and pain. This often improves with light activity but is usually worse again after forceful gripping or pinching, or after a period of rest.

### **Who gets osteoarthritis?**

Many people think osteoarthritis should come from a long history of hard work, but hard labor does not seem to be very related. Osteoarthritis can be due to trauma such as an old fracture, but it is usually just due to the effects of aging coupled with some hereditary contribution.

### **How is osteoarthritis diagnosed?**

The diagnosis is made by listening to the patient and by examining the patient. Most patients will have a history of slowly increasing pain, stiffness, and swelling over a period of years. Sometimes there is a fairly sudden onset of symptoms, usually associated with a single episode of trauma (typically a fall) or a period of overuse (weeding the garden, say, or packing to move). An x-ray examination confirms the diagnosis. Often there will be no correlation between the amount of pain and the severity of the arthritis as shown by the x-ray.

### **What does the x-ray show?**

The x-ray typically shows some joint space narrowing, that is, the white shape of the bones are closer together than they normally are (see the x-ray above). The bone along the joint is usually whiter (called "sclerosis") and may have little points of bone growing out (called "osteophytes"). There may be holes in the bone (called "cysts") and the bones may be starting to slide out of

alignment (called "subluxation"). I will review your x-rays with you and explain exactly what I see.



## How is osteoarthritis treated?

### My treatment includes:

- Diagnosis
- Patient education
- Activity modification
- Anti-inflammatory medication
- Steroid injection
- Surgery

### Patient Education

I believe that the key part of treating osteoarthritis is patient education, which is why I created this website and wrote this paper. Once the patient understands what is going on, they can take charge of managing their condition. Osteoarthritis cannot be made to go away; getting younger is the only thing that will do that (we are working on it!). Osteoarthritis is not "cured", but managed. Patient involvement in that management is key.

### Activity Modification

The next step after patient education is activity modification. Learn what activities exacerbate your pain and see if you can avoid them. For instance, opening tight jar lids puts a great strain on your thumb base joint. Get a plastic sheet from me when you see me or ask someone else to open jars. If you have faucets that are leaky or stiff, replace the gasket or grease the threads. Look at the activities throughout your day and identify which ones cause you pain.

Along with activity modification, there are a number of patient-directed therapies which can help. Pain can be relieved by applying heat to stiff and painful joints for 20 minutes up to three times a day. Various deep heat lotions, heating pads, infrared lamps, hot baths etc. can be used. Swimming in a heated pool can help.

### Medication

The first medication that you should try is acetaminophen (Tylenol). It will not upset your stomach and will help to offset the pain of minor arthritis. Most patients have tried this long before they have seen their doctor, and still need something more, so I will not dwell on this.

The next class of medications that should be tried are called non-steroidal antiinflammatory drugs, or NSAID's.

These can very useful. These drugs block the enzyme (cyclo-oxygenase) that creates the pain.



## **Steroid Injections**

Steroid injections can be very helpful to calm down a very painful joint. These are not the systemic steroids that cause road rage, osteonecrosis, and all the other bad things you have heard about steroids. These are highly localized treatments of steroids, which are a class of substances that your own body makes to calm down unwanted or excessive inflammation. I am allergic to pain, and presume that you are, too.

## **Surgery**

Surgery is reserved for last. It is for patients whose osteoarthritis is so bad that they cannot manage their disease with activity modification, anti-inflammatory medication, and steroid injections. Indications for surgery generally involve patients who are so uncomfortable with their arthritis that they cannot do the things in life that they want to do. Life is too short to give up all the things you like to do. If you have tried all of the above steps, and still have more pain and more limitations than you want to live with, talk to me about surgery.

When surgery is needed, there are two procedures that I offer. The first procedure goes by the abbreviation LRTI, that stands for ligament reconstruction tendon interposition arthroplasty. The procedure was invented and popularized in the 1970s, has stood the test of time and is still utilized by most hand surgeons. The procedure involves removing the arthritic portion of the joint and reconstruction using a slip of a tendon from the forearm. Scientific studies have shown that there is not any statistically significant loss of strength to the wrist by harvesting the tendon, and the procedure has worked very, very well in long term studies. The second option is prosthetic arthroplasty. Artificial hips and artificial knees have worked well for decades. A prosthetic replacement of the thumb joint has been difficult to create. However, a colleague of mine in 2014 released a cobalt chrome prosthetic joint replacement for the base of the thumb. The results are early but seem to obtain better strength long-term compared to the LR TI procedure, however at this point we only have a few years of results on this implant and long-term studies are pending.

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