

What to Expect After Surgery for Arthritis at the Base of the Thumb (LRTI Procedure)

“Working with a knowledgeable hand therapist can make the difference between success and failure in complex hand surgical cases. The therapist extends the continuum of our care, as well as functioning as coach and trainer for our patients.”

Marybeth Ezaki, MD, Past President, American Society for Surgery of the Hand

What is an LRTI procedure?

Arthritis at the base of the thumb is also known as CMC (carpal metacarpal) arthritis, or basal joint arthritis. This arthritis causes pain at the base of the thumb, which may be treated with rest, medicine or use of a thumb orthosis for support. If the pain continues, a doctor may recommend surgery. There are many different types of surgery that treat this type of thumb pain. One surgery is called a ligament reconstruction tendon interposition procedure (LRTI).



Area of arthritis at the base of the thumb

What is done during an LRTI procedure?

During surgery, the arthritic parts of the bone at the base of the thumb are removed. A small cut in the forearm is then made to get a tendon that will be rolled up and used to fill the space at the base of the thumb. Now the bone in the thumb will not rest on the piece of bone that was causing the thumb pain. Part of the tendon from the forearm is also used to rebuild the ligament that provided support to the thumb. Removing the tendon to use for this surgery will not affect wrist motion or strength.



If arthritis pain at the base of the thumb is present after non-surgical treatment, an LRTI procedure may be recommended

What should I expect after surgery?

After surgery, the wrist and thumb will be immobilized in a cast or orthosis. It is important to keep the hand above the heart to limit any swelling. It is also important to move the shoulder, elbow and fingers to prevent stiffness and help with swelling. The wrist and thumb will be immobilized until the doctor instructs you to begin exercising them. After surgery, the doctor may refer you to a hand therapist to assist in recovery.

What can a hand therapist do for me?

A hand therapist can assist in care after surgery. A hand therapist can make a custom orthosis and demonstrate exercises to increase range of motion and strength. A hand therapist can also teach you how to take care of your scar and recommend ways to limit the force you put on your healing thumb. Several hand therapy sessions may be needed to help regain functional use of your wrist and hand.



Example of custom orthosis for wrist and thumb following an LRTI procedure