

Basal Joint Arthritis of the Thumb



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What is basal joint arthritis of the thumb?

Any condition that irritates or causes any loss of cartilage in a joint is called arthritis. Normally cartilage covers both ends of bone in joints to allow the bones to move smoothly and painlessly against one another. In a condition termed osteoarthritis, the cartilage layer is worn, and bone rubs against bone with joint movement (degenerative arthritis). As the layer of cartilage wears out, symptoms of arthritis develop and increase, and the joint can be eventually destroyed. The second most common joint in the hand to develop osteoarthritis is the joint at the base of the thumb. The thumb metacarpal rests on a small bone of the wrist called the trapezium. The special shape and configuration of the joint allows for great motion of the thumb.

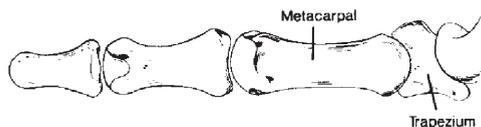


Diagram 1

The basal joint of the thumb is where the thumb metacarpal rests on a small wrist bone—the trapezium

What are the signs and symptoms?

The first problem that is noted is pain with any activity that involves gripping an object with a pinch motion using the thumb and fingers. Painful motions may include opening jars or car doors, and turning doorknobs or keys. Any activity that involves heavy loading of the thumb also causes pain. Oftentimes discomfort is noted in the thumb with changes in weather. As more cartilage is destroyed, less activity is necessary to cause discomfort. Pinch strength eventually decreases and swelling may develop. In advanced cases, the joint looks very large, and may appear to be dislocated. Motion of the joint often becomes limited.

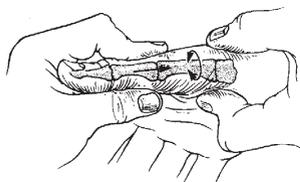


Diagram 2

The grind test involves pushing the thumb metacarpal against the trapezium

What causes it?

The cartilage normally thins with age so the older you become, the more likely you are to develop arthritis. Past injuries to a joint, such as fractures and sprains, can also increase the chances of developing arthritis of the basal joint of the thumb. Arthritis in the basal joint of the thumb is more common in women than men.

How is it diagnosed?

A detailed history of thumb use as well as previous injury will cause suspicion of basal joint arthritis. Observation may reveal swelling or displacement of the joint. Tenderness with loading of the thumb by forcefully pushing on the thumb metacarpal bone causes pain, and a grinding can be felt if the bone is rubbing on bone. Early in the progression of the problem, no deformity or loss of motion is noted. Later cases may have limited motion, and the thumb seems to protrude to the side. The worst cases are evident by collapse of the metacarpal into the palm when gripping small objects. This causes an abnormal alignment of the second joint of the thumb as well.

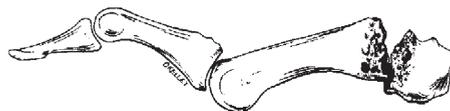


Diagram 3

In severe cases, the metacarpal collapses into the palm, which causes the proximal phalanx to overextend with grasp

How is it treated?

Arthritis that is treated in the early stages usually responds to non-operative treatment such as limiting thumb loading, splinting, and medications to decrease inflammation. Symptoms not relieved by other means often require surgery for relief of pain. The operation most used to treat basal joint arthritis replaces the affected joint, and is called arthroplasty.