

## Osteoarthritis & Rheumatoid Arthritis

**O**steoarthritis (OA) is degeneration of a joint resulting from an earlier trauma, and/or natural wear and tear of joint cartilage.

### Symptoms

- Stiffness and pain in the morning usually resolving after about 30 minutes
- Pain in the affected joint during activity or after an extended period of rest or immobilization

### Causes

- A previous trauma or injury that damages the joint cartilage
- Repetitive stress to the joint which may occur in certain occupations or when playing sports
- Severe ligament injuries that may change the forces across the joint causing abnormal wear on the cartilage lining the joint
- Natural wear and tear on the joint

**R**heumatoid Arthritis (RA) is destruction of a joint as a result of an autoimmune disease causing chronic inflammation of the connective tissue lining the joint (the synovial membrane), which eventually leads to the destruction of the joint cartilage.

### Symptoms

- Pain associated with swelling and inflammation in the affected joint
- Morning stiffness that lasts more than an hour
- Redness around the affected joint
- Deformity of joints and limbs
- Muscle soreness
- Fatigue, lack of energy
- Low-grade fever

### Causes

While the exact cause of Rheumatoid Arthritis is unknown, the following may play a role:

- Genetic predisposition
- Infection
- Environmental factors



Osteoarthritis



Rheumatoid Arthritis

- When inflammation is present the condition is considered “active.”
- When there is no inflammation present it is considered to be “inactive” or in “remission.”
- Osteoarthritis or degenerative arthritis only affects the joints.
- Rheumatoid Arthritis can affect joints, tendons, and other organs.

### Diagnosis and Treatment of Osteoarthritis & Rheumatoid Arthritis

Both conditions are diagnosed by taking a complete history, performing a clinical examination, and taking x-rays. Rheumatoid Arthritis may require a blood test to confirm the diagnosis.

Both types of arthritis may respond to conservative treatment that includes anti-inflammatory medications such as Ibuprofen, as well as cortisone injections, therapy and splinting. Disease Modifying Drugs such as Methotrexate may be recommended for RA patients. When these conservative measures no longer provide relief, surgical intervention to reconstruct the joint may be recommended. <sup>KSF</sup>

## Metacarpophalangeal Joint Arthroplasty (Joint Replacement)

**T**he Metacarpophalangeal (MCP) Joint is at the first knuckle of the hand at the base of each finger. It may be affected by both Osteoarthritis and Rheumatoid Arthritis.

### Symptoms

- Pain and/or limited range of motion at the MCP joint
- Progression of the disease can cause the MCP joint to subluxate (dislocate), making it difficult to place the hand flat
- In Rheumatoid Arthritis, the fingers may bend toward the ulnar or small finger side of the hand, this is called “ulnar drift”

### Causes

Arthritis is inflammation in a joint. The causes of osteoarthritis are general wear and tear of the joint which occurs with aging or following trauma. In rheumatoid arthritis, the immune system attacks the synovium (joint lining) and cartilage which progresses to destruction of the joint.

### Diagnosis

This condition is diagnosed by history, examination, and x-ray confirmation of joint destruction. Most patients complain of increasing pain, deformity, and inability to use the hand. Examination reveals limited motion and deformity of the joints. X-rays will show the amount of bony destruction and joint subluxation.

### Treatment

The goal of treatment is to restore function of the hand to the highest level possible. Early disease of the MCP joint is treated with medication or steroid injections to help the symptoms. Splinting is useful to treat the symptoms and prevent progression of the disease, decrease inflammation and swelling, and prevent deformity. Dr. Rosen may recommend evaluation and treatment by a rheumatologist to control progression of the arthritis. If the disease has progressed to severe deformity and loss of function, surgery is recommended. Joint replacement improves both pain and deformity and may also improve range of motion. Depending on the type of disease, Dr. Rosen may use either a silicone or metal prosthesis to replace the joint. Following surgery, hand therapy and splinting are essential to accomplish a good result. Hand therapy generally starts the day after surgery. <sup>KSF</sup>



*Before (Pre-Operative)*



*After (Post-Operative)*

## Carpometacarpal Joint Arthritis (Basal Joint)

The Carpometacarpal Joint (CMCJ) or the Basal Joint of the thumb lies at the base of the thumb just beyond the wrist. Arthritis of this joint is the most common arthritis seen by hand surgeons. Basal Joint Arthritis occurs more commonly in women usually beginning around middle age. It also may occur at a younger age if the thumb has been injured or fractured.

### Symptoms

- Pain at the base of the thumb
- Swelling and stiffness at the CMCJ
- Weakness when trying to pinch, twist or turn objects using the thumb and index fingers

### Causes

Basal Joint Arthritis occurs as we age and with joint wear and tear. It is more common in women than in men. Trauma to the thumb may contribute to early onset of this type of arthritis.

### Diagnosis and Treatment

A diagnosis of CMCJ arthritis is made after physical examination and review of x-rays. If diagnosed early, this condition may respond to conservative treatment including:

- A thumb spica splint worn continuously for six weeks to stabilize the joint and reduce inflammation
- Oral anti-inflammatory medication
- An injection of cortisone into the joint to decrease inflammation

If symptoms persist or if arthritis is severe, surgery may be recommended to stabilize the affected joint. The arthritic bone is removed and the joint stabilized with a portion of tendon that is transferred from the forearm. The recovery time from this surgery is about three months. During that time you will have use of your hand although it may be somewhat limited immediately following the surgery. A splint is worn for 6 weeks, followed by 6 weeks of hand therapy to regain range of motion and strength. <sup>KSF</sup>



Before (Pre-Operative)



After (Post-Operative)