

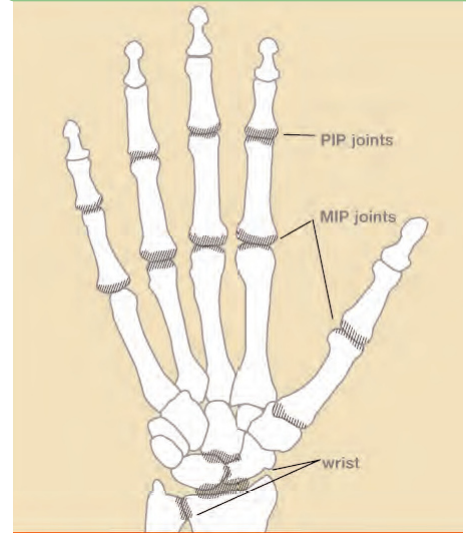
## Rheumatoid Arthritis of the Hand

Arthritis literally means inflammation of a joint. Normally a joint consists of two smooth, cartilage-covered bone surfaces that fit together as a matched set and that move smoothly against one another. Arthritis results when these smooth surfaces become irregular and don't fit together well anymore and essentially wear out. Arthritis can affect any joint in the body, but it is most noticeable when it affects the hands and fingers. Each hand has 19 bones, plus 8 small bones and the two forearm bones that form the wrist. Arthritis of the hand can be both painful and disabling. The most common forms of arthritis in the hand are osteoarthritis, post-traumatic arthritis (after an injury), and rheumatoid arthritis. Other causes of arthritis of the hand are infection, gout, and psoriasis.

### Rheumatoid arthritis of the hand

Rheumatoid arthritis affects the cells that line and normally lubricate the joints (synovial tissue). This is a systemic condition (can affect the whole body), which means that it may affect multiple joints, usually on both sides of the body. The joint lining (synovium) becomes inflamed and swollen and erodes the cartilage and bone. The swollen tissue may also stretch the surrounding ligaments, which are the connective tissues that hold the bones together, resulting in deformity and instability. The inflammation may also spread to the tendons, which are the rope-like structures that link muscles to bones. This can result in stretching out of and ruptures of the tendons. Rheumatoid arthritis of the hand is most common in the wrist and the finger knuckles (the MP and PIP joints (see Figure 1).

Figure 1: Joints affected by rheumatoid arthritis



### Signs and symptoms

Stiffness, swelling, and pain are symptoms common to all forms of arthritis in the hand. In rheumatoid arthritis, some joints may be more swollen than others. There is often a sausage-shaped (fusiform) swelling of the finger. Other symptoms of rheumatoid arthritis of the hand include:

Drift of the fingers away from the thumb

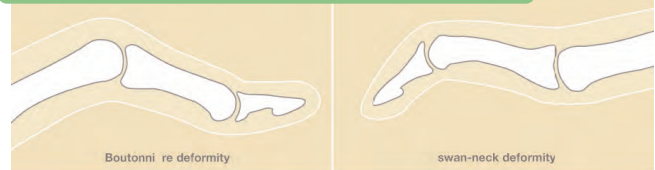


- ↑ R d' WJf a` gVc dV SRT \ ` W V YR\_U d' Re ^` gVd h ZY d' V d' U` \_d d' Red d' R X Y d' d' d' V` \_XVd
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- ↑ d h V j Z X R\_U Z -R ^` R e Z` \_` W V V' d' U` \_d d' R e S V\_U d' V` \_XVd d' d' f' j e X Z` T j Z \ X` c
- triggering of the finger as it bends, and sometimes causing numbness and tingling in the fingers (carpal tunnel syndrome)
- ↑ d' a f' d' d' W V\_U` \_d h Z Y` j` d d' W S Z j` e` d e R X Y d' \_` c S V\_U T V d' R Z` \_XVd` c e V d' f ^ S
- ↑ f` \_d e R S j` [ Z e d' d' V h c Z d` \_XVd d' R\_U d' f ^ S
- ↑ U W W c` Z j` Z` h Y Z Y d' V ^ Z U J V [ Z e` W V V` \_XVc S V T` ^ V d S V\_e R\_U d' V V\_U [ Z e Y j a V d i d' U V U
- (Boutonniere deformity (see Figure 3)
- ↑ Y j a V d i d' d Z` \_` i d h R j` I S R T V R e d' V ^ Z U J V [ Z e` W V V` \_XVc R d d' T R e U h Z Y R S V\_e` \_XVc a Z` i d h R\_f` V T`
- deformity (see Figure 3)

### How arthritis of the hand is diagnosed

Your doctor will examine your hand and other joints and assess the impact of the arthritis on your life and activities. The clinical appearance of the hands and fingers helps to diagnose the type of arthritis. X-rays will also show certain characteristics of rheumatoid arthritis, such as narrowing of the joint space, swelling and diminished bone density near the joints, and erosions of the bone. If your doctor suspects rheumatoid arthritis, he or she may request blood or other lab tests to confirm the diagnosis.

Figure 3: Boutonniere and swan-neck finger deformities



### Treatment

Treatment is designed to relieve pain and restore function. If you have rheumatoid arthritis in your hands, medications can help decrease inflammation, relieve pain and slow the progression of the disease. Anti-inflammatory medications, oral steroids, and/or cortisone injections may be used. Several disease-modifying treatments are now available. Adaptive devices may help you cope with the activities of daily living. Rheumatoid arthritis often affects the tendons as well as the joints. The tendons that become inflamed may trigger (clickorruptur)18e. If this happens, you may be unable to bend or straighten your fingers or to grip properly. In certain cases, specific preventive surgery may be recommended. Preventive surgery may include removing nodules, releasing pressure on tendons by removing the inflamed tissue and degenerated, rough bone that may scrape the tendons, and reinforcing the tendons. If a tendon rupture has occurred, a hand surgeon may be able to repair it with a tendon transfer or graft, in addition to performing these other procedures. Surgery to treat the arthritic joints includes removal of inflamed joint linings, joint replacements, joint fusions, and in some cases, removal of damaged bone. The specific procedure (depends on a variety of factors, including the particular joints) involved, the degree of damage present, the condition of adjacent joints, and your own needs. Your hand surgeon can help you decide on the most appropriate treatment for you. Unfortunately, there is no cure for rheumatoid arthritis. However, surgical procedures can often help correct deformities, relieve pain, and improve function. Optimal care entails a team approach between the rheumatologist, hand surgeon, hand therapist, and patient. It is particularly important that surgical intervention be appropriately timed to rebalance the hand and preserve the joints for as long as possible, before the development of more severe deformities has occurred.

