

Arthritis in the Hand and Wrist (Not Osteoarthritis)

Osteoarthritis is the most common type of arthritis in the hand and wrist. There are multiple other types which are important to diagnose because prevention and treatment in mild disease may differ.

Causes

- **Inflammatory arthritis is an autoimmune disease where your immune system is over-active** and causes degenerative changes in joints. Common examples include rheumatoid, psoriatic arthritis, lupus (SLE) and scleroderma.
- **Gout is a systemic disease characterised by the deposition of urate crystals**, commonly affecting joints of the upper limb.
- **Pseudogout**, or Calcium Pyrophosphate Disease (CPPD), is characterised by **deposition of calcium pyrophosphate crystals in joints.**
- **Haemochromatosis is an inherited disease**, with known gene mutations, characterised by progressive iron overload within the body.

Risk Factors

- **Other autoimmune diseases** increase your risk of having an inflammatory arthritis as does a family history.
- **Age** is a risk factor for almost all types of arthritis.
- Most types of arthritis are more common in women, but men are more likely to suffer from gout. This can be diet related.

- Haemochromatosis has a strong genetic link.

Symptoms

Inflammatory Arthritis:

- Stiffness that is worse in the mornings;
- Pain and inflammation of multiple joints, often affecting both sides symmetrically;
- Joints other than the hand and wrist can be involved including the neck, spine and lower limb;
- Skin and nail changes may be present;
- Dry eyes and mouth can be a feature.

Gout:

- Rapid onset of pain, usually at night, often in a single joint;
- Fever and chills mimicking an infection;
- Deposits may be visible under the skin in severe disease and are called tophi.

Pseudogout:

- Slow insidious onset of pain, similar to osteoarthritis;
- Commonly affects the wrist and basal thumb joints;
- It can also affect joints in the lower limb.

Haemochromatosis:

- Arthritis commonly involves the index and middle finger metacarpophalangeal (MCP) joints. It mimics osteoarthritis with enlarged, painful joints and limited flexion.

Diagnosis

These types of arthritis are diagnosed with a combination of history, examination, blood tests and x-rays. Occasionally MRI and tissue biopsy are required when the diagnosis is unclear.

Treatment

In mild disease simple nonoperative measures may be enough for symptom relief. They include:

- Nonsteroidal **anti-inflammatories** (NSAIDs: Ibuprofen or similar). A topical NSAID may have less side effects;
- **Activity modification** (Using devices such as jar openers to avoid loading the joint);
- **Splinting** (Fitted with a hand therapist);
- **Mobility and strengthening** exercises (Supervised by a hand therapist);
- A **cortisone injection**.

Inflammatory Arthritis:

- **You should see a rheumatologist** if these simple measures fail.
- **Disease modifying agents** may be trialled, which can control disease and prevent progression.

Gout:

- **Attacks are likely to resolve** with nonsteroidal anti-inflammatories, colchicine or prednisone.
- **Urate clearing medications may be needed** to reduce the chance of repeat attacks.
- Your GP or rheumatologist should manage this, as they can interact with other medications.

Pseudogout:

- **Unfortunately, there are no medications** that reduce the deposition of CPP crystals.
- Nonoperative measures may reduce symptoms.

Haemochromatosis:

- Systemic iron depletion may control disease and prevent progression.
- Unfortunately, improvement in arthritis is reported in $\leq 30\%$ of patients.

If nonoperative measures fail then surgery should be considered. The type of surgery depends on the joints affected.

- Arthroscopic debridement is considered when the cartilage is largely intact. Pain relief may only be temporary.
- Joint replacement or arthroplasty is suitable when cartilage damage is severe but the joint has a good range of motion. Complications are common including reoperation.
- Fusions are suitable when the joint is already stiff. Complications are less common.

Prevention

A good resource is the website of Arthritis Australia. A healthy lifestyle is the best way to prevent arthritis including a balanced diet and regular exercise. Fish oil seems to have some benefit in rheumatoid arthritis but other supplements such as glucosamine and turmeric are popular without much evidence to support them. **Your GP or rheumatologist may suggest medications** to help prevent and slow progression of inflammatory arthritis, gout and haemochromatosis.

Written with the help of: Lans J; Machol J; Deml C; Chen N, Jupiter J. Nonrheumatoid Arthritis of the Hand, Journal of Hand Surgery: Volume Bakr K; Moran S. Thumb Carpometacarpal Arthritis, Plastic and Reconstructive Surgery: Volume 43 - Issue 1

