Patient Information Sheet

# Rheumatoid Arthritis at the wrist

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## What is Rheumatoid Arthritis at the wrist?

The most common joint affected in patients with rheumatoid arthritis is the wrist. The inflammatory process involves the tendons, joints and ligaments. The tendons usually glide within smooth sheaths lined by synovium and this material also provides the lubrication in joints.

The problem in rheumatoid arthritis is that the synovium proliferates and becomes invasive, eroding the smooth joint surfaces, destroying the ligaments and may lead to tendon rupture. The main symptoms are swelling, pain, reduced motion and grip, and in more advanced cases, an inability to straighten the fingers or thumb due to tendon rupture.

## Diagnosis

Examination involves the assessment of the entire upper limb, including the shoulder, elbow, wrist, fingers and thumb. At the wrist, the extent of tendon involvement is assessed, as is the range of motion. The ability to turn the palm up to the ceiling is often reduced and there may be associated pain. X-rays confirm the extent of the arthritis and degree of joint destruction.

## Treatment

In the initial stages of rheumatoid arthritis it may be possible to control the symptoms and deformities with a combination of drugs, splints and modification of activities to protect the joints. If there is persistent swelling, pain, reduced movement and progression of deformities despite adequate treatment with medication, then surgery should be considered. Tendon rupture indicates that surgery should be undertaken soon.

The operation is performed under general anaesthesia and usually involves an overnight stay. There will be a straight scar on the back of the wrist. The synovium around the tendons is removed to prevent rupture, and if this has already occurred, the tendon ends are attached to adjacent intact tendons. Direct repair of the ruptured tendons is not possible as the ends will have retracted. It is sometimes necessary to remove the end of the ulna, one of the forearm bones, if this has become displaced, is causing pain or limiting rotation of the forearm. Excision of this part of the bone does not lead to any instability. As much of the synovium from the wrist joint as possible is then taken out. If there is a tendency for the wrist to deviate abnormally, it may be necessary to transfer one of the tendons to overcome this. All of these procedures are aimed at preserving wrist motion, and indeed, improving forearm rotation. However, the process is sometimes so advanced that this is not possible and you may be advised that fusion or permanent stiffening of the wrist may be necessary. This involves placing a metal rod inside the wrist until the bones have joined together. At the end of the procedure, the wrist is placed in a plaster of Paris splint.

**After surgery**

You can usually go home the day after surgery. The stitches are left in for 2-3 weeks and the hand must be kept dry. You can bathe by placing a plastic bag over the hand. A long-acting anaesthetic isa lso used at the time of surgery to provide post-operative pain relief. The numbness lasts for several hours and simple pain killers are all that are necessary afterwards. It is very important that you keep your hand elevated as much as possible, at least during the first week. During the daytime you can wear a sling and at night the hand can be rested on a couple of pillows. This helps reduce the swelling and post-operative discomfort. It is essential that you keep your fingers moving during this period and come out of the sling every few hours to exercise your elbow and shoulder. You should begin rotation of the forearm soon after surgery, turning the palm up to the ceiling and then down to the floor. After 3 weeks the plaster splint is removed and you will begin bending the wrist. The hand therapist will fit you with a protective thermoplastic splint to be used at night and during heavy activities for another month. If you require a wrist fusion, you will remain in a splint all the time, except during bathing, until the bones have to united, which usually takes 2-3 months. It is very important to work with the hand therapist to avoid stiffness and prevent the tendons sticking down.

**Possible complications**

- Sometimes it is necessary to continue with dressings if the incision is slow to heal.
- Infection is uncommon and usually responds to antibiotics.