

## What is Rheumatoid Arthritis?

Rheumatoid Arthritis (RA) is a disorder of the immune system that affects multiple joints in the body, causing pain, stiffness and swelling in the affected joints.

Due to yet unknown reasons, the body's immune system which normally takes care of combating foreign bacteria, viruses and diseased cells in the body begins to engage in "friendly fire", attacking the joints and their surrounding tissues which become inflamed. Lacking an "off switch", the continual attack by the immune system eventually causes damage to the joints. As the condition progresses, the inflammation, pain and stiffness of the joints tend to increase in severity, ultimately leading to deformity of joints and a loss of overall mobility.

## What happens to the joints in Rheumatoid Arthritis?

Scientific research shows that either a disorder in the body's immune system or an overreaction to an unknown trigger like a virus infection can set off the condition. Once mobilised, the immune system targets the body's own cells – hence the term "autoimmune disease".

In the case of rheumatoid arthritis, the synovial membrane that covers the joints becomes the target of the immune system's attack leading eventually to the destruction of the bone and cartilage of the joint. The visible swelling and tenderness of the joints is due to increased fluid in the joint cavity and the thickening of the lining of the joint capsule.

Rheumatoid Arthritis is a systemic disorder that can affect other organs in the body like the eye, the skin, the heart and the lungs. The commonly affected joints are the small joints of the hands, wrists, elbows, shoulders, knees, ankles and the toes.

## Who gets affected?

As rheumatoid arthritis is a disorder of the immune system and not due to "wear and tear", it is not linked to the age of a person. Patients can acquire rheumatoid arthritis at any age, though it occurs most commonly between the age of 25 and 40.

It can and does occur in children. It affects both men and women, although women are 3 times more likely than men to develop the condition.

## What are the risk factors?

A family history with rheumatoid arthritis and environmental factors such as smoking and hormonal changes during pregnancy are the risk factors.

## What are the symptoms?

The first symptoms of rheumatoid arthritis are pain and swelling in the joints of the fingers and wrists accompanied by joint stiffness, especially in the mornings. The pain and stiffness last for hours and usually involve joints on both sides of the body.

As the disorder progresses, the joints will become warm, tender and painful throughout the day, accompanied by body stiffness.

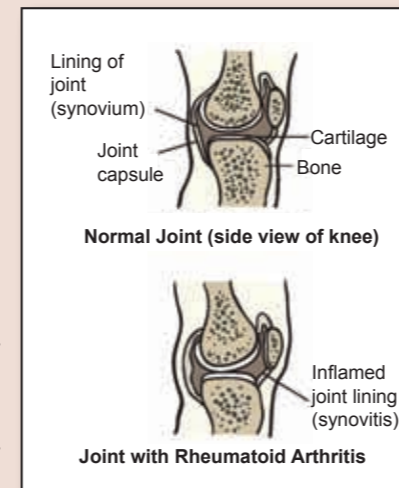
Other symptoms include a low-grade fever, fatigue, malaise, and loss of weight and appetite, all related to the amount of inflammation present.

In advanced rheumatoid arthritis, much of the joint surface is destroyed leading to deformed joints.

## How is Rheumatoid Arthritis diagnosed?

Diagnosis is made from a detailed history and physical examination for signs of joint inflammation, and blood tests and X-rays are used to confirm the diagnosis. Blood tests include detection of the rheumatoid factor (RF) and anti-CCP antibody.

If the joints are swollen especially at the knee, joint aspiration may be carried out and the fluid will be sent for special examination. This will help the doctor to differentiate between infective, degenerative or inflammatory joint disease.



## What is the treatment for Rheumatoid Arthritis?

There is currently no cure for rheumatoid arthritis. Specialised and dedicated RA clinics may result in better outcome. Nevertheless, there are various treatment strategies focused on alleviating the symptoms, preventing further joint destruction, and regaining lost muscle strength and mobility.

### a. Medication

NSAIDs (non-steroidal anti-inflammatory drugs) like diclofenac acid, or COX-2 inhibitors, are often prescribed to reduce pain, swelling and stiffness that result from rheumatoid arthritis. However, these drugs will only reduce the symptoms and will have no effect on the progression of the disorder. Reducing pain and swelling are important as they make you more comfortable.

Depending on the severity and progression of the disorder, DMARDs (or disease-modifying antirheumatic drugs) are often prescribed. These include hydroxychloroquine (Plaquenil), methotrexate, sulphasalazine and leflunomide (Arava). Low dose steroids may be used. Steroids can also be injected directly into a joint to relieve pain and swelling. However, steroids cannot be used in the long term, especially in high doses because they have significant side-effects.

There is now a new group of drugs called biologic agents which can control the disease quickly and effectively. They are given as injections and are very expensive. Not all rheumatoid arthritis patients are suitable for or need such drugs. Your doctor is the best judge on which drugs to use.

### b. Exercise

Once the inflammation is under control, it is necessary to rebuild the muscles and ligaments weakened by the arthritis. Exercise helps to rebuild muscle strength which can aid to stabilise the joint. While some sports which stress the joints excessively are not suitable, recovering patients should aim to keep fit as much as possible. It is important not to exercise the acutely swollen and painful joints. Your physiotherapist is the best person to ask for advice.

### c. Surgery

Sometimes surgery is necessary to correct joint deformity or to replace a completely destroyed joint.

## What are the complications of Rheumatoid Arthritis?

Rheumatoid Arthritis is not only a disorder of the joints, it can in fact affect many organs in the body. Therefore untreated or under-treated rheumatoid arthritis can result in anaemia, fibrosis of the lung, a higher risk of heart attacks and strokes and even some cancers.

## Are Osteoarthritis and Rheumatoid Arthritis similar?

Both conditions are similar in the sense that they are both arthritis, but the causes are different. Rheumatoid Arthritis arises from the body's immune system attacking its own tissues, while primary osteoarthritis is caused by "wear and tear" of the joints. Their symptoms, long term effects and treatment are also very different.

## Can I prevent Rheumatoid Arthritis?

Although scientists are not certain about the exact cause of rheumatoid arthritis, one can prevent the disabilities caused by rheumatoid arthritis through early diagnosis and treatment. A healthy balanced diet and moderate regular exercise is also helpful. Rheumatoid Arthritis will only cripple patients if the diagnosis is delayed or if patients do not take their medications as instructed or quit smoking.

**EARLY DIAGNOSIS AND COMPLIANCE TO MEDICATION ARE VERY IMPORTANT IN THE FIGHT AGAINST RHEUMATOID ARTHRITIS. IT IS POSSIBLE THAT WITHIN THE NEXT DECADE DOCTORS MAY BE ABLE TO FIND A CURE FOR THE DISEASE.**

*Information modified from National Arthritis Foundation, Singapore*



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