RHEUMATOID ARTHRITIS

Rheumatoid arthritis (RA) is a common disease that exists throughout the world. It affects about 5 in 1000 people in Malaysia.

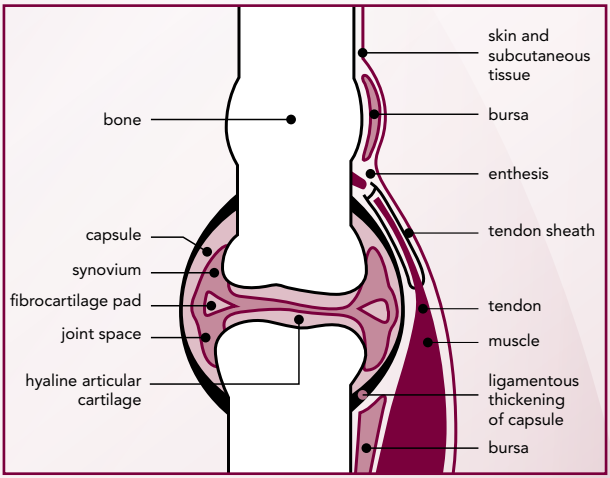
RA is a complicated disease that can vary a great deal from person to person. This booklet is only a guide. Please use it to understand your disease better but remember that everything that is written here may not apply to you.

ARTHRITIS FOUNDATION MALAYSIA

MSR MALAYSIAN SOCIETY OF RHEUMATOLOGY

What is RA?

RA is a disease which makes the joints in our body inflamed. To understand how RA develops, you need to understand how a joint works. A joint is where 2 bones meet. Joints are designed to allow the bones to move in certain directions. However, joints also have other functions, for example, the knee joint must be also strong enough to take our weight and lock into position to enable us to stand upright.



This diagram shows a normal joint. The end of each bone is covered with cartilage, which has a smooth slippery surface and allows the bones to move against each other with very little friction. It also acts as a shock absorber. The joint is surrounded by a membrane called the synovium, which produces a small amount of thick fluid (synovial fluid). This fluid acts as a lubricant and helps the joint move smoothly. The synovium has a tough outer layer called the capsule that holds the joint in place and stops it from moving too much.

In RA, the synovium becomes inflamed. The result is similar to when other parts of the body become inflamed: it goes red, it swells up and it hurts. The redness is caused by the increased flow of blood. As a result, the inflamed joint may feel warm. The swelling is caused by increased synovial fluid production by the inflamed synovium. Pain in the joint is caused by both the nerve endings that are irritated by the chemicals produced by the inflammation and the capsule stretched by the swelling in the joint.

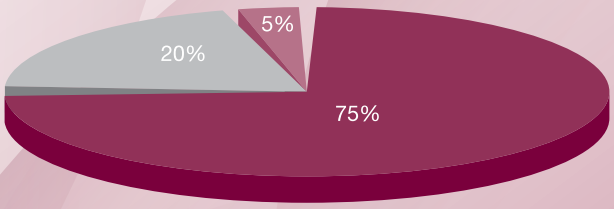
What is inflammation?

Our bodies normally produce inflammation to destroy things, such as bacteria, which cause illness. We do not know what sets off the inflammation in the joints of someone with RA, but the result is the same - something is attacked and perhaps destroyed. Unfortunately in RA, our own tissues in the joints are attacked and can cause damage to the cartilage, bones or ligaments around the joints.

Once joints have been damaged by inflammation, they are not very good at healing. Because of this, modern treatment tries to suppress inflammation as much as possible and as early as possible to reduce the amount of damage it causes to the joint. Suppression of inflammation is one of the important ways in which treatment of RA has advanced. It is one of the reasons why RA is more effectively treated now compared to previously.

How does RA affect different people?

The extent to which RA affects different people varies from person to person. Some people suffer a lot of damage to their joints, whereas some suffer only a little. Most people with RA have some damage in a number of joints.



Pie chart of outcome in 100 people with RA.
Out of 100 people:

- 75 continue to have some joint swelling and flare-ups
- 20 always have very mild RA
- 5 develop severe disease with extensive disability

Inflammation in the joints can also make people feel generally ill or tired. The symptoms may also come and go with no particular pattern. You may have "flare-up" periods when the joints become more inflamed and painful. Sometimes there may be an obvious precipitating cause for this, such as unaccustomed exertion or other illness or emotional stress, but very often there is no obvious trigger.

RA can be a serious disease with a lot of symptoms. But for most people, especially, if treated appropriately, there may be few symptoms, and people with RA are able to live full, normal lives.

Who gets RA?

RA exists all over the world. There is a slight tendency for the disease to be worse in cold, damp climates such as in Europe compared to the warmer countries such as Malaysia. The local experience has been that the disease is more likely to be milder and less likely to affect other parts of the body apart from the joints.

In Malaysia, RA affects about 5 in 1000 people. It can start at any age from childhood to those in the nineties. The most common age for the disease to start is between 30 to 50 and women are more commonly affected than men.

Does RA run in families?

Most people with RA have no near relatives with the disease. There are a few families with a few members affected, but they are quite rare. You do not pass on RA on to your children.

Why me? What have I done to get RA?

You have done nothing to bring on your disease. It is just random chance that you have got RA. It is not due to anything that you have or have not done, or due to anything that you have or have not eaten. Do not waste your energy trying to fight the disease and learn to do as much as possible to minimize the effects it has on you.

How will it progress?

This is the most important question that most people want answered. For each individual, the answer is 'we don't know'. However, from studies of a large number of RA patients, we can give the following guidelines (see pie chart)

Some people, maybe 1 in 5, always have very mild disease which causes very little problems.

Most people follow a pattern of flare-ups of the disease with periods of months or even years between each flare-up when there is little inflammation. This does not mean that there are no problems between the flare-ups, as some damage is caused to the joint each time the joint is inflamed. These people will have some problems and pains in their joints and may have to modify their life-styles a little, but overall can lead fairly normal lives.

A few people with RA, no more than 1 in 20, will have RA that becomes progressively worse, despite treatment. These are the people that will also have other problems with inflammation in the other parts of the body apart from their joints.

One of the problems with RA is that you will tend to notice those who are more badly affected as they are more likely to be seen in doctor's offices or in the hospitals, or be disabled and in wheelchairs. However, always remember that they are the small minority and that you are more likely to be among those who do well than those who do badly.

How do doctors diagnose RA?

The sooner RA is treated the better. If you have any symptoms of arthritis, such as pain and swelling in your joints, you should see your doctor as soon as possible. It may not be RA as there are many other forms of arthritis. But it is important to diagnose the arthritis as soon as possible.

There is no test that can make a certain diagnosis of early RA. Doctors have to make a 'clinical diagnosis', where they put together all the information from listening to you and examining you and coming to a diagnosis based on this information.

There are 2 kinds of tests which may help to confirm the diagnosis: blood test and x-rays.

Blood tests

Blood tests may show that you are anaemic (not enough red blood cells), which can affect 80% of people with RA. They may also detect changes in the blood produces by the inflammation. There are several tests that can detect this: erythrocyte sedimentation rate (ESR), plasma viscosity (PV) or C-reactive protein (CRP). Each of these may show high value when inflammation is present. Which test is done by your doctor depends on the laboratory performing the test.

The 'rheumatoid factor' is another blood protein produced by a reaction in the immune system. About 70% of people with RA have this factor, but its presence does not make the diagnosis certain. About 30% of patients with RA do not have this factor, 50% of patients with early RA will not have this factor and about 5% of normal, healthy people have a positive rheumatoid factor. So, although it is sometimes called the 'test for RA', it is not really a definite test on its own.

X-rays

X-rays can reveal any damage caused to your joints by inflammations in RA. They can also appear in the feet before the hands, which may be why your doctor sometimes will ask for your feet to be x-rayed although there are no symptoms there. However, x-rays can sometimes be normal in early disease.

Can RA be treated?

We have not yet found a cure for RA, but treatment is improving all the time. You are also an important person in the treatment process and can help in the treatment of your arthritis.

There are 3 main ways of treating RA:

- **Taking care of your joints**
  You can do this by following some practical tips in the next part of this booklet. More detailed information will be in the booklet 'Exercise'.
- **Treatment with drugs**
  Many people are worried about taking drugs, so this will be discussed in detail later in this booklet.
- **Surgery**
  This is occasionally needed when the other treatment methods are not successful. You may receive advice on this from both the surgeon with an interest in joint surgery for arthritis and your rheumatologist.

Taking care of your joints

Balancing rest and exercise

One of the most important balancing acts that you will need to achieve between rest and exercise. We know that resting inflamed joints makes them more comfortable. However, without movement, the joints will stiffen and muscles will waste away. So what should you do? The most important thing is to use your muscles and joints as much as possible without harming them. This helps retain movement and stops muscles from wasting away. We also know that exercise, in general, is a good thing and helps you feel better.

How do you know whether you are doing harm? It is not necessarily true that it is best to stop as soon as something hurts. The signs to stop are if a particular activity causes one or more joints to become swollen or if there is severe pain. If neither of these things happen, keep going.

What about sports?

If you have RA, you should avoid contact sports such as football and violent exercise such as squash. Do continue with less strenuous activity such as walking and tai chi. However, make sure that you wear good shoes with shock absorbing soles and have a good warm-up routine to avoid excessive strain. Swimming is probably the best kind of exercise of all. It will exercise the muscles with very little strain on the joints and you can vary the level of exertion.

Protecting your joints

Protect your joints from unnecessary strain. There are different ways of carrying out many everyday activities, so use methods that put the least strain on your joints. You can take advice for this from your occupational therapist or see the booklet on 'Exercise'.

Treatment with drugs

Many people are worried about taking drugs because of the risks of side effects. We accept that all drugs have side effects, including common everyday 'drugs' such as alcohol, nicotine (in cigarettes) and caffeine (in tea and coffee). For most people with RA, the beneficial effects of the drugs far outweigh the possible side effects. Before any drug is licensed for treatment these days, it is very carefully tested out both in healthy volunteers and people with the disease.

Before we look at drugs used specifically in RA, there are 3 things worth thinking about:

- First, if there was a drug-free, side-effect-free wonder cure for RA available, we would know about it and your doctor would tell you about it. At the moment, it does not exist.
- Secondly, many people, friends, relatives may view drug taking as bad or wrong. However, they do not have RA like you do and they do not need treatment for RA like you do. By all means, do discuss your treatment with them, but remember, ultimately, it is you that is affected and your body that needs the (best possible) treatment.
- Thirdly, remember that the earlier the treatment is started, the more effective it will be. Think carefully about your treatment, but do not delay until your joints are badly damaged.

Which drugs are used?

Four kinds of drugs are used to treat RA: analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), disease modifying anti-rheumatic drugs (DMARDs) and corticosteroids.

Analgesics

These drugs are painkillers. They vary from simple, everyday drugs such as paracetamol, to more powerful analgesics such as tramadol and dihydrocodeine. They are rarely useful by themselves as treatment for RA, but are very useful in controlling pain in the joints.

Side effects are not normally a problem, although some people may get constipated or feel dizzy after taking some of the drugs.

Non-steroidal anti-inflammatory drugs (NSAIDs)

The first drug in this group was aspirin, which used to be taken in large amounts for arthritis (10-20 tablets daily). There are now many drugs of this kind available, such as diclofenac (Voltaren), piroxicam (Feldene) and ketoprofen (Oruvail). They reduce pain and swelling and start working within a few hours. Some people will find one drug more effective than another and you need to work out which drug suits you best in consultation with your doctor.

Side effects are usually indigestion/stomach pains, with a very small risk of bleeding from the stomach (see the booklet on Medications for RA).

Newer NSAIDS such as etoricoxib (Arcoxia) and celecoxib (Celebrex) have less gastrointestinal side effects.

Disease modifying anti-rheumatic drugs (DMARDs)

As their name suggests, these drugs do not treat the symptoms of RA but reduce the effects of the disease itself. They do improve symptoms over time, but they are not painkillers. They only reduce pain and stiffness by reducing the underlying rheumatoid process in the joints. They also slow down the destructive effects of RA on the joints, especially if taken early in the course of the disease.

These drugs are the most important weapons in fighting RA. They do not act quickly, taking weeks or sometimes months to become effective. It is important that you continue taking them, even if they do not seem to be working at first. They are taken for long periods, usually many years. They all can cause side effects, which are only rarely dangerous if picked up early. Because of this, it is therefore essential that these drugs are only prescribed by doctors experienced in their use and regular check-ups are required. These check-ups often include regular blood and urine tests. These are important as they ensure your safety. With careful, knowledgeable and regular supervision, these drugs are not only safe, but very effective in treating RA.

A few of the more common drugs are listed below: (see the booklet on Medications for RA)

Methotrexate (Emtexate)

This drug has an effect on the immune system. It is taken by mouth in weekly doses. It should not be used in men and women who are starting a family. It can rarely cause problems with the blood count or liver function, both of which need regular monitoring.

Sulphasalazine (Salazopyrin-EN)

This is a commonly used drug. It is taken by mouth in a dose that is slowly increased. Side effects such as a feeling of sickness are usually short lasting. It can rarely cause problems with the blood count or liver function, both of which need regular monitoring.

Leflunomide (Arava)

It suppresses the immune system. It is taken by mouth daily. It can rarely cause problems with the blood count or liver function, both of which need regular monitoring. If you plan to start a family (both men and women) after taking leflunomide, you need to consult your doctor to start a drug-elimination procedure if the drug has been stopped for less than 2 years.

Biologics

Biologic drugs are man-made through genetic engineering techniques and closely related to a protein that occurs naturally in the body. They are used to suppress the immune system in autoimmune disease. These group of drugs have significantly altered the disease profile. Many patients have shown great improvement and attained very good control of the disease.

Etanercept (Enbrel)

This drug works by reducing the level of tumor necrosis factor (TNF) alpha, a key inflammatory mediator in RA. Thus, it reduces the signs and symptoms of RA. Etanercept is given once weekly in the form of an injection. It should not be given to patients with infection or with known allergy to Etanercept or any of its components.

Infliximab (Remicade)

This drug like Etanercept works against TNFa in the body. Infliximab in combination with methotrexate,is indicated for the reduction in signs and symptoms of RA patients who have had an inadequate response to other DMARDs. Infliximab is given as an intravenous infusion (slow injection into the veins). It should not be given to patients with infection or with known allergy to Infliximab or any of its components.

Adalimumab (Humira)

This is also a TNFa blocking medicine and works in a similar manner to etanercept and infliximab. It is given by injection usually once every two weeks. It too works best when combined with methotrexate.

Rituximab (Mabthera)

This medicine blocks a molecule, found on certain white blood cells, called CD20. Through certain immunological processes, including reduction in auto-antibody production, blocking CD20 with rituximab can control the activity and progression of RA. It is given as an intravenous infusion.

Tocilizumab (Actemra)

Tocilizumab is a biologic drug that inhibits a major cytokine responsible for inflammation in Rheumatoid Arthritis. There are many pathways that can be blocked to stop the inflammation from harming the joints. Tocilizumab blocks the interleukin (IL)-6 receptor to stop the production of inflammation in the body. It has been used in patients who do not respond to conventional DMARDs and anti TNF biologics.

Tocilizumab can be used alone for those who cannot tolerate the side-effects of methotrexate or in combination with methotrexate and/or other DMARDs.

Corticosteroids

Corticosteroids are often called 'steroids' for short. They are NOT the same steroids taken by athletes to build up their muscles (which are more properly called 'anabolic steroids').

Cortisone, a natural hormone produced by the body, was first used in the 1950s to treat RA. It was found to have a very powerful effect in reducing inflammation, reducing it by much more than any other drug that we use. However, it was found that there were quite a lot of side-effects if steroids were given for any length of time in high doses, such as weight gain, thin skin, diabetes and osteoporosis (see booklet on Osteoporosis). Since then, a lot of research has been done on how to minimize the side effects of the steroids while maintaining their anti-inflammatory effect.

Corticosteroids are now given in 3 ways in RA patients. Injections into an inflamed joint are an effective way of reducing the inflammation in that joint. Provided the injection is given skilfully and carefully, it is very safe. They may be given by intramuscular injection or intravenous injections over several days to quickly dampen down a severe 'flare-up' of arthritis. This form of treatment maximizes benefit and minimizes the side effects. Finally, corticosteroids may be given by mouth. If used in low doses, side effects are less of a problem. In general, rheumatologists like to use only small doses, 7.5 mg of Prednisolone daily or less, although some of the rare and serious complications of RA such as vasculities require much higher doses. Used properly, steroids can be very valuable treatment for RA and can help to control the symptoms of the disease.

Other questions about RA

Is there a diet which will help my arthritis?

There is a lot of publicity for diets which claim to cure RA. None do. There is some scientific evidence that some diets may help some people. If you find that certain foods make your joints worse, then avoid them. However, do not give up anything because it makes someone else's joints flare-up. Remember, we are all different.

The diets that are most likely to help are those low in saturated fats and those high in unsaturated fats, especially fish oils. Supplements of fish oils or evening primrose oil have been found to help some individuals. One good advantage of dieting is that your weight is kept down. We put the equivalent of 4 times our body weight through our joints when we walk, so keeping one's weight down will reduce that stress.

Can I take herbal medicine and other dietary supplements?

The answer is generally yes, BUT only if you can be sure that the herbal medicines or other dietary supplements do not interfere with your normal rheumatological medicines. Do not stop your usual medication to take the herbal remedies or dietary supplements, and remember that some herbal remedies may have unpleasant side effects. Remember, if there were any herbal medicines or other dietary supplements that have been shown to be helpful, your doctor would have recommended it.

Work and RA

The aim of treatment is to keep you doing as many activities as you did before the arthritis started. This includes work and hobbies. You should be able to keep up with your work, once the disease is controlled, unless you are doing a lot of manual work. Some work environments can be adapted for people with arthritis and this can be discussed with your employer and supported by your rheumatologist.

Arthritis Foundation, Malaysia

Aims & Objectives

The aims and objectives of the Foundation shall be as follows:

1. To further the welfare of people living with rheumatic, arthritic and related disorders;

2. To promote research, education and other activities relating to the prevention, diagnosis, causes and treatment of arthritic and rheumatic disorders;

3. To ensure the dissemination of existing knowledge about those disorders both to the lay public and to the medical profession by all means, including but not limited to publications, public lectures, forums and exhibitions, subject to the prior approval of the authority concerned;

4. To establish and operate projects rendering service to persons living with arthritis and rheumatism;

5. To recommend, promote and assist in the formulation of such legislation as may be required to promote and otherwise assist in the attainment of the objectives of the Foundation, including but not limited to the provision and improvement of service and facilities for people living with rheumatic, arthritic and related disease;

6. To arrange for the carrying out of activities related to or connected with the raising of funds for the Foundation, subject to the prior approval of the Registrar of Societies.

Send your ideas, articles, materials or medical questions to:
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