What is Rheumatoid Arthritis?

Arthritis means inflammation of the joint. Rheumatoid arthritis, often shortened to RA, is a long-term (chronic) inflammatory disease that causes significant pain, swelling, stiffness and damage to joints. Over time with continuing inflammation, the disease gets worse, leading to joint deformity and disability and sometimes, joint replacement.

RA affects the whole body, often starting in the small joints of the hands and feet, but over time it affects the larger joints like knees and shoulders. Some people with more severe disease can develop inflammation in their organs like eyes, skin and heart.

People with RA often feel very tired and lack energy. Daily activities like turning door knobs, opening jars, and walking are very painful and difficult because of joint stiffness. The continual pain and inability to do simple activities can also lead to depression.

What causes RA?

RA is an autoimmune disease. Normally our immune system fights foreign invaders like bacteria and viruses, which may cause infections. Once an infection is stopped, the inflammation goes away. In RA, a person’s immune system over-reacts and attacks healthy joint tissue. The inflammation continues even without the foreign invader, causing ongoing destruction and potentially leading to deformity of the joint.

White blood cells are the cells in the body that fight infection. The white blood cells involved in RA are B and T cells. These and other immune cells produce chemical messengers, called cytokines, which recruit more immune cells into the joint. Common cytokines found in high levels in people with RA are Tumour Necrosis Factor alfa (TNF-alfa), interleukin-1 (IL-1) and interleukin-6 (IL-6).

B cells also produce antibodies. An antibody is a molecule that seeks, targets the invader and with the aid of cells in the immune system, destroys the invader. In RA, the body produces antibodies like Rheumatoid Factor (RF) and anti-cyclic citrullinated peptide (anti-CCP) that attack healthy joint tissue.
This “soup” of infection fighting cells and messenger molecules causes ongoing inflammation, seen as redness, pain and swelling in the joint. Over time, destruction of the bone and cartilage and changes in the tendons and muscles around the joint, leads to a deformed joint that can’t function normally.

Unfortunately, what triggers the body to attack its own healthy joints is unknown. Genes, hormones and environmental factors are known to be involved.

**Who does RA affect?**

- RA affects between 40,000 to 80,000 (1-2%) New Zealanders
- It is the second most common arthritis in New Zealand, after osteoarthritis (joint damage caused by wear and tear)
- RA is three times more common in women than men
- RA can occur at any age, usually affecting people aged between 25 and 60 years of age.
- People who smoke have higher rates of RA

**What are the signs and symptoms of RA?**

RA may affect people in many different ways. Not everybody will experience the same pattern of disease. Usually RA starts slowly with tenderness and stiffness in the joints of the hands and feet. Some people with more severe RA can experience a sudden onset of symptoms that affects many joints. Other people experience a disease that comes and goes; the arthritis flares-up and is painful for a period and then dies down again.

**Symptoms that are commonly looked for in RA are:**

- Ongoing joint pain and swelling
- A symmetrical disease; pain and swelling that affects both sides of the body at the same time
- Joint pain usually in the hands and feet and more than one joint is affected
- Morning stiffness that lasts longer than 30 minutes.

**Often, other symptoms can affect the whole body:**

- Fatigue or tiredness
- A low grade or intermittent fever
- Difficulty performing daily activities which affects the quality of life
- Depression or sadness.

You should talk to your doctor if you have ongoing pain and stiffness in your joints. The earlier that treatment begins, the earlier you can control your RA and limit joint damage, deformity and other diseases that occur as a consequence of RA.
How is RA diagnosed?

Your doctor will:

- Ask about recent and current joint pain and swelling
- Physically examine your body and the joints, for tenderness, swelling and movement and take your temperature
- Complete blood tests that look at the white blood cell levels, inflammatory markers and antibody levels
- Ask for imaging tests to be able to see a picture of the joint damage

Your doctor may also refer you to a rheumatologist, a doctor with expertise in diseases that affect the joints.


How is RA treated?

The goals of RA treatment are to:

- Stop the inflammation and symptoms – called “being in remission”
- Prevent or slow joint and organ damage
- Reduce long-term effects like joint replacement and heart disease
- Improve a patient’s well-being and quality of life

There is no cure for RA. Treatment of RA usually involves a combined approach of medicines and supportive therapies.

Medicines

There are many different medicines used to treat RA but the important thing is to get treatment early. The medicine you receive will depend on how severe your disease is, how your disease responds to treatment, or how you tolerate the medicine.

You may have to try a number of different medicines before you find the one that works best for you. If you find a medicine isn’t controlling your symptoms and keeping your disease in “remission”, or you’re experiencing side effects that impact on your well-being, talk to your doctor.
The key groups of medicines used to treat RA are:

**Analgesics**
Simple, oral medication used for pain relief, e.g. paracetamol.

**NSAIDs**
Non-steroidal anti-inflammatory drugs help treat symptoms like pain and swelling. They don’t treat the underlying cause of RA. Examples include ibuprofen, diclofenac and naproxen.

**Steroids**
Steroids help reduce inflammation and reduce the amount of joint damage caused by RA. Steroids are commonly taken as tablets or may be injected directly into a joint. Because of their side effects, doctors tend to use them at high doses for short periods to get inflammation under control. Some people may also be on a low dose, long term. Prednisone is a steroid commonly used here in New Zealand.

**DMARDs**
Disease Modifying Anti-Rheumatic Drugs (DMARDs) reduce inflammation and can prevent joint damage. They do this by working on parts of the immune system. DMARDs are commonly used in combination with other medicines. DMARDs can be taken as pills or by injection. The most common is methotrexate. Others examples include sulfasalazine, leflunomide and azathioprine.

**Methotrexate**
Methotrexate (MTX) is a traditional DMARD that is often used together with biologic medicines. However, some people may not be able to tolerate the side-effects of MTX. In this situation, ask your doctor about treatments, like Actemra® (tocilizumab), that are effective at managing the signs and symptoms of RA without the need for MTX.

**Biological DMARDs**
Biologic DMARDs target a specific cell or a cytokine in the immune response to stop inflammation and symptoms. Biologics tend to work quickly (within 2-4 weeks) and are very good at limiting the joint damage caused by RA. They are commonly combined with a non-biological DMARD. Examples include:

**TNF-inhibitors**
These medicines target the cytokine, TNF-alfa, to reduce inflammation e.g. adalimumab, etanercept, infliximab, and golimumab. These are a common treatment in RA and often the first therapy tried after non-biological DMARDs. However, they may not suit everyone.

**B-cell therapy**
Mabthera® (rituximab) destroys B cells that produce the antibodies like rheumatoid factor, a key cause of inflammation in some people with RA. Mabthera may be used as an alternative to a TNF-inhibitor if side-effects are a concern or a TNF-inhibitor does not control RA.

**IL-6 inhibitor**
Actemra® (tocilizumab) is a treatment that targets and blocks the action of IL-6, a key inflammatory cytokine that is found in the joint and the body. Actemra is an effective treatment option if methotrexate can’t be tolerated.
Supportive therapies and lifestyle management

A person with RA needs to take care of their joints and themselves to manage the stresses of day-to-day life. The following activities are important:

- Physiotherapy; used to help improve joint strength and mobility.
- Occupational therapy; education to maximise daily living with damaged and painful joints
- Hydrotherapy; exercise in warm water to keep the body moving.

More information on lifestyle management can be found on ra.org.nz/manage_your_ra.

Surgery

Surgery, such as joint replacement, may be an option to improve severe pain and joint damage. You will be referred to an orthopaedic surgeon if you and your doctor decide that surgery is an option for you.

What next?

Knowledge is power. Learn about your disease and ask lots of questions. You may like to download the “10 Questions to Ask” sheet on ra.org.nz to take with you to your doctor.

Use a self-assessment tool. Monitor your symptoms and record these in a diary to take to your next appointment. This will give your doctor a clear picture of how RA affects you and whether your treatments are working. A self-assessment tool is available on ra.org.nz.

Further information is available at:

Ra.org.nz
Arthritis.org.nz
Actemra® (tocilizumab), 80 mg in 4 mL, 200 mg in 10 mL and 400 mg in 20 mL concentrate for solution for infusion, is a Prescription Medicine used to treat moderate to severe rheumatoid arthritis (RA) in adults. Actemra is also used to treat active systemic juvenile idiopathic arthritis (sJIA) and active polyarticular juvenile idiopathic arthritis (pJIA) in children over 2 years old.

Do not use Actemra if: you have an active, severe infection; or if you have had an allergic reaction to Actemra, or other recombinant antibodies, or proteins of tumour origin or any of the ingredients.

Tell your doctor if: you have a current infection or history of infections; you plan to have or have recently had a vaccination; you are on a controlled sodium diet; you are pregnant or breastfeeding; you have any other health problems, including liver disease, tuberculosis (TB), diverticulitis, intestinal ulcers, low white cell or platelet count, diabetes, high blood pressure, high cholesterol or triglycerides, kidney disease, or cancer; you have had macrophage activation syndrome (MAS); or you are taking any other medicines, including any that you have bought from a pharmacy, supermarket or health food shop.

Tell your doctor immediately or go to your nearest Accident and Emergency Centre if you notice any of the following: difficulty breathing, chest tightness or wheezing; severe light-headedness; severe skin rash, itching or hives; swelling of the face, lips or mouth; signs of serious infection such as severe fever and chills, stomach ache or persistent headaches; signs of bleeding from the stomach or intestines such as severe stomach pain, vomiting blood or material that looks like coffee grounds, bleeding from your rectum, black sticky bowel motions, bloody diarrhoea; severe blisters and bleeding in the lips, eyes, mouth, nose and genitals. Possible common side effects may also include: mild fever and chills; high blood pressure (felt as headache, dizziness, ringing in the ears); rashes or itching; headache; cough; blocked or runny nose; sore throat; dizziness; nausea or indigestion; stomach pain; constipation; diarrhoea; cold sores; mouth or skin blisters; mouth ulcers; skin infection (redness, pain and/or swelling); pain in your joints.

Actemra has risks and benefits. Ask your doctor if Actemra is right for you. Use strictly as directed. If symptoms continue or you have side effects, see your healthcare professional. For further information on Actemra, please talk to your health professional or visit www.medsafe.govt.nz for Actemra Consumer Medicine Information.

Actemra is funded by PHARMAC for patients with RA and sJIA who meet pre-defined criteria. A prescription charge and normal doctor fees may apply.

MabThera® (rituximab), 100 mg in 10 mL and 500 mg in 50 mL concentrate for solution for infusion, is a Prescription Medicine used to treat rheumatoid arthritis (RA), granulomatosis with polyangiitis (GPA) and microscopic polyangiitis (MPA).

Do not use MabThera if: you have had an allergic reaction to MabThera or any of the ingredients, or to proteins of mouse origin.

Tell your doctor if: you are pregnant or breastfeeding or plan to become pregnant or breast-feed; you are taking medication to control blood pressure; you have any disorders or conditions affecting your lungs; you have a history of heart disease, or hepatitis B; you have an infection, or a history of a recurring or long-term infection; you intend to have or recently had immunisation with any vaccine; you are allergic to any other medicines, foods, dyes or preservatives.

Tell your doctor immediately or go to your nearest Accident and Emergency Centre if you notice any of the following: infections with fever, severe chills, sore throat or mouth ulcers; severe skin rash, itching or hives; swelling of the face, lips, mouth or throat which may cause difficulty in swallowing or breathing, swelling of the hands, feet or ankles; severe shortness of breath, severe difficulty breathing, severe wheezing, severe coughing; numbness of the face; severe vision or hearing loss; vision loss associated with headaches, confusion and seizures; severe stomach pain, nausea or vomiting; confusion, disorientation or memory loss, changes in the way you move, walk or talk, decreased strength or progressive weakness in your body, blurr or loss of vision; yellowing of skin and eyes, light coloured bowel motions or dark coloured urine. Possible common side effects may also include: pain in stomach area; aching or painful muscles; painful or swollen joints; indigestion, heartburn; severe headache; high cholesterol; tingling, numbness of feet and hands or decreased sensitivity; infection; mouth ulcers; athlete’s foot; hair loss; anxiety; depression; diarrhoea; feeling faint; insomnia (inability to sleep).

MabThera has risks and benefits. Ask your doctor if MabThera is right for you. Use strictly as directed. If symptoms continue or you have side effects, see your healthcare professional. For further information on MabThera, please talk to your health professional or visit www.medsafe.govt.nz for MabThera Consumer Medicine Information.

MabThera is a funded medicine for patients with RA who meet pre-defined criteria. A prescription charge and normal doctor’s fees may apply.

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