The first biologic treatments became available about 15 years ago and are seen as a significant advance in managing RA. Typically, they are used in people with moderate to severe RA who don’t respond, or lose response to, traditional disease modifying anti-rheumatic drugs (tDMARDs).

Biologic medicines are proteins that target a specific cell or a cytokine (messenger molecule) involved in the inflammatory response that causes RA (for information on the immune system, see ra.org.nz). The biologic treatment stops the cytokine message or it destroys the immune cells, reducing the signs and symptoms of RA. Compared to most other medicines which are made by a chemical process, biologics are made by living cells.

Because they are effective at stopping or limiting the immune response, they slow disease progression and joint damage. Quality of life is also generally improved for people on biologic medicines. Most of them work best in combination with a non-biologic (traditional) DMARD. All biologic medicines must be given either by subcutaneous injection (into the skin) or intravenous infusion (into the vein).

There are a number of different medicines available; some belong in the same group of medicine while others have different cell or cytokine targets. The key targets and the medicines available are discussed below.

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Biologic Treatment Options for Rheumatoid Arthritis (RA)

Remember that each person is different and you should talk to your doctor about your disease and the best treatment options for you. If you would like more information on RA, please visit ra.org.nz.
TNF-inhibitors

Some people with RA have too much of the cytokine, TNF-alfa. These medicines stop the actions of TNF-alfa and reduce signs and symptoms of RA. They are a common treatment in RA and often the first therapy that is tried after traditional DMARDs have failed.

Examples of TNF-inhibitors available in New Zealand include:

**Humira® (adalimumab)**
Humira can be used alone or in combination with traditional DMARDs. It is given as an injection via a syringe or an auto-injector pen device into the skin, usually every two weeks.

**Enbrel® (etanercept)**
Enbrel is used to treat moderate to severe RA, either alone or in combination with traditional DMARDs. It is administered as an injection under the skin or via an auto-injector pen once or twice a week.

**Remicade® (infliximab)**
Remicade should be given in combination with methotrexate. It is administered as an infusion that takes about 2-3 hours, every 4 to 8 weeks.

**Simponi® (golimumab)**
Simponi is given in combination with methotrexate in patients who have failed to respond to a DMARD. Simponi is given as an injection (syringe or autoinjector) into the skin once a month.

However, some people may not respond to TNF-inhibitors. Switching from one TNF-inhibitor to another TNF-inhibitor may not give any further symptom relief in some people. If you are having side-effects with a TNF-inhibitor, a treatment with a different mode of action may not have the same side-effects.

Use the [self assessment tool](#) on this site to understand if your current treatment is working well for you. It could provide you and your medical team with information about how well your current treatment is controlling your RA.

If you feel that your current treatment isn’t working well for you – or you are experiencing side-effects that you are finding difficult to tolerate - ask your doctor about medicines with a different mode of action.

**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.
B-cell therapy

MabThera® (rituximab)

MabThera targets and destroys B cells. B cells are white blood cells that produce antibodies like rheumatoid factor, a key cause of inflammation in some people with RA.

- Because it has a different mode of action, MabThera is used when TNF-inhibitors stop working, when TNF-inhibitors are no longer tolerated or can’t be used.
- In fact, switching to MabThera instead of another TNF-inhibitor may provide better control of RA in some people.

MabThera combined with methotrexate is used in adults with severe RA. It is given as two infusions, two weeks apart. Treatment effect can last between 6 and 12 months in most people.

MabThera is a Roche medicine. For further information on Mabthera, please talk to your health professional or [click here](#).

IL-6 inhibitor

Actemra® (tocilizumab)

Actemra acts to block the action of interleukin-6 (IL-6), a key inflammatory cytokine that is found in high levels in the joint and the body of people with RA. Actemra is used in adults with moderate to severe RA.

- Actemra can be used in patients who aren’t able to tolerate the side-effects of methotrexate, TNF-inhibitors or MabThera.
- Actemra can effectively treat the signs and symptoms of RA without the need for methotrexate. If you are having side effects with methotrexate that you can’t tolerate, ask your doctor about whether Actemra is suitable for you.
- Patients who no longer respond to traditional DMARDs or TNF-inhibitors can be treated effectively with Actemra.

Actemra is usually given as a one-hour infusion each month. It can be given as a subcutaneous injection but this route of administration is not currently funded here in New Zealand.

Actemra is a Roche medicine. For further information on Actemra, please talk to your health professional or [click here](#).

Other biologic medicines

Other medicines including Orencia® (abatacept) marketed by BMS and Cimzia® (certolizumab pegol) marketed by UCB, are available overseas but not available or funded in New Zealand.
Biologic Treatment Side effects

Biologic medicines are generally well tolerated and can be used in most people. The most common side effects of these medicines are pain, redness and swelling at the injection site, headaches, and upper respiratory tract infections like colds and sinus infections.

All biologic medicines can interfere with the body’s response to an infection. So your doctor will ask about your infection history (e.g. tuberculosis, hepatitis B) and educate you to be aware of signs and symptoms of infection.

There are other common side effects with each medicine and reasons for not using the treatments e.g. pregnancy, breast-feeding, heart failure. You can find more information about the medicines mentioned above by reading the consumer medicines information – click here to go to the Medsafe website.

Cost and funding

Biologic medicines are more expensive than traditional DMARDs so their use tends to be limited to people with moderate to severe RA. Most are funded by Pharmac, although certain criteria apply.
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 hamster 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 or plan to become pregnant or breast-feed; 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 click here for Actemra Consumer Medicine Information.

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, blurred 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 click here for MabThera Consumer Medicine Information.

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