



# Biologic drugs for rheumatoid arthritis

## Real-life story

“I was diagnosed with rheumatoid arthritis 15 years ago. Starting on infliximab and methotrexate made a big difference to me within a week. Because my liver was being damaged by methotrexate, I was able to continue with infliximab by itself, but it stopped working after a few months. My consultant then put me on rituximab, which took a couple of months to take effect. I was almost fed up waiting when suddenly my hands felt much better.

I still wear splints to protect my joints when doing the gardening. I feel a bit achy sometimes, but I hardly notice. I am so pleased to be able to use my hands, and so relieved that the drug works.”

Biologics drugs (or ‘biologics’) are a type of disease-modifying anti-rheumatic drug (DMARD). They work by treating the underlying condition, rather than a person’s symptoms. They can be expensive, so are used sparingly. The National Institute for Health and Care Excellence (NICE) and equivalent organisations rule on availability, which varies across the UK. Biologics are usually given by injection or infusion, but can be taken in tablet form. Like most medication, biologics have potential side effects, which you should discuss with a health professional before starting treatment.

## What are biologics?

There are many types of biologics available. These include anti-TNFs, which reduce the action of tumour necrosis factor. This protein is produced mainly by white blood cells, and triggers inflammation. Examples of anti-TNFs include etanercept (Enbrel), adalimumab (Humira), infliximab (Remicade), certolizumab pegol (Cimzia) and golimumab (Simponi). Anti-TNFs are not covered in this factsheet. For more information on these, see Arthritis Care’s Medication for your Arthritis booklet.

**This factsheet covers the three main biologics, apart from anti-TNFs currently available in the UK — rituximab (MabThera), abatacept (Orencia) and tocilizumab (RoActemra).**

## Where are biologics available?

Biologics are not suitable for everyone and availability varies. The Medicines and Healthcare products Regulatory Agency (MHRA) approves what drug is safe to be used within the UK. Rituximab, abatacept and tocilizumab are all licensed drugs in the UK.

NICE has set clear guidelines for which treatment should be available through the NHS in England and Wales. Health trusts are legally required to make approved treatments available when recommended by medical practitioners. It can be very difficult for medical practitioners to get treatments if they are not approved by NICE. Decisions in Northern Ireland are usually based on those of NICE. The equivalent body in Scotland is called the Scottish Medicines Consortium (SMC).

## How are biologics prescribed?

### Rituximab, Tocilizumab and Abatacept

Rituximab can be used for the treatment of adults with severe active rheumatoid arthritis who have had an inadequate response to, or are intolerant of, other DMARDs, including at least one TNF inhibitor. However, in England and Wales, you might be eligible for tocilizumab without having to first try rituximab.

You will usually have assessments at a rheumatology clinic to see if you could be eligible for treatment. These will usually be four weeks apart and use a disease activity score (DAS) to calculate how severe your arthritis is. You will then be checked for underlying infections (or risk of infection), and your general health. You may have blood and urine tests, and a chest X-ray and tuberculosis (TB) risk assessment.

You should be able to have abatacept if:

- methotrexate and another conventional DMARD have been effective
- your rheumatoid arthritis is assessed as being 'highly active'.

If you have had active TB in the past, repeated infections, cancer or a serious heart condition, you may not be able to have anti-TNFs, but this will depend on your individual circumstances. Treatment may need to be postponed if you are pregnant or have an infection.

## What is rituximab (MabThera) and how does it work?

Rituximab (MabThera) destroys a type of white blood cell called a B-cell. B-cells are thought to play an important role in inflammatory arthritis, when the body's immune system attacks the body's joints.

Rituximab is used to treat severe active rheumatoid arthritis, usually in combination with methotrexate.

### How is it given?

Rituximab is administered in two sessions at a hospital, through an intravenous infusion (drip). The first session can take five hours, but it is painless and you can get up and move around while it is being carried out. You will be monitored closely during the administration and asked if you feel any side effects. The second session is given 14 days later and is usually shorter than the first session.

The timing of the next treatment will depend on how you respond to the initial treatment — it will be at least six months after the previous treatment.

### Side effects

You may be slightly more susceptible to infection after treatment. The most important thing you can do to manage a cold or flu is to rest and drink fluids. Be alert for signs that you are developing a chest infection, such as a severe cough, high fever, breathing problems and pain when you take a breath — see your doctor if you experience these symptoms. Your doctor will be monitoring your condition closely through regular checkups while you are taking rituximab (MabThera). If you think you may have an infection before starting treatment, even a mild one like a cold, you should let your doctor know.

Rituximab can sometimes cause a temporary reaction during an infusion, so you will always be monitored and given antihistamines to reduce any reaction.

The most common side effects for rituximab are headaches, dizziness, and a rash. These can be treated with a steroid injection. Other side effects can include

- rhinitis
- muscle spasm
- itchiness
- abdominal pain

A few people can experience a chest or urinary tract infection.

If you experience more serious side effects such as chest pain, blood in urine or stools, or you start to bruise easily, contact your doctor.

## What is abatacept (Orencia) and how does it work?

Abatacept is a drug that works by blocking the activity of T-cells, which are a type of white blood cell. It makes them inactive and stops a chain of events linked to the immune system targeting the joints.

Abatacept is used to treat severe active rheumatoid arthritis, usually in combination with methotrexate. It is available throughout the UK in limited circumstances.

### How is it given?

Abatacept can be administered at a hospital through an intravenous infusion (drip) and it is now available as a subcutaneous self-injection. You will be monitored closely as it is administered, which should take about 20 minutes, every four weeks.

### Side effects

You may be slightly more susceptible to infection after treatment. Be alert for signs that you are developing an infection, such as a severe cough, high fever, breathing problems and pain when you take a breath. Your doctor will be monitoring your condition closely through regular checkups while you are taking abatacept. If you think you may have an infection before you start treatment, even a mild one like a cold, you should tell your doctor.

Abatacept can sometimes cause a temporary reaction during an infusion, so you will always be monitored and given antihistamines to reduce any reaction.

Some common side effects of abatacept include: abdominal pain, conjunctivitis, cough, infection, nausea and vomiting.

## What are the long-term side effects of biologic drugs?

Once you are prescribed a biologic drug, you will have regular checkups with your doctor to monitor your progress. People on biologic drugs should be offered the chance to be put on a registry, so that if there are new or unexpected side effects, doctors can be alerted immediately.

Remember that the risk of joint damage without treatment can be much greater than the risk of side effects or infections. There is a possible risk of heart attack and stroke from uncontrolled inflammation. Discuss any concerns with your consultant and rheumatology nurse or call Arthritis Care's free Helpline on 0808 800 4050.

## What is tocilizumab (RoActemra) and how does it work?

Tocilizumab blocks interleukin-6 (a signalling substance) which helps to sustain inflammation in cases of rheumatoid arthritis.

Tocilizumab is used to treat moderate to severe rheumatoid arthritis, usually in combination with methotrexate.

### How is it given?

Tocilizumab is administered at a hospital through an intravenous infusion (drip) every four weeks. You will be monitored closely while the tocilizumab is administered. Tocilizumab is now available as a subcutaneous (under the skin) self-injection.

### Side effects

You may be slightly more susceptible to infection after treatment with tocilizumab. Be alert for signs that you are developing an infection, such as severe cough, high fever, breathing problems and pain when you take a breath. See your doctor if you experience these symptoms. Your doctor will be monitoring your condition closely through regular checkups while you are taking tocilizumab. If you think you may have an infection before treatment, even a mild one like a cold, you should tell your doctor.

Tocilizumab can sometimes cause a temporary reaction during an infusion, so you will always be monitored and given antihistamines to reduce any reaction. The most common side effects include: abdominal pain, dizziness, headaches, itching and rash.



## ARTHRITIS CARE

### How Arthritis Care can help you

Want to talk to someone about your arthritis?  
Or read more about the condition?

Call our free, confidential Helpline on 0808 800 4050 for information and support. We're open weekdays from 09:30 to 17:00 – we'd really like to hear from you.

We have over 40 free booklets and factsheets on various aspects of arthritis, from diet and surgery, to managing pain and fatigue.

These can be sent to you in the post – just ask our Helpline staff for details.

### Go online

You can download all our booklets and factsheets as PDFs from [arthritiscare.org.uk/information](http://arthritiscare.org.uk/information)

We also have an Online Community, where you can chat to others with arthritis, and can be reached at [arthritiscareforum.org.uk](http://arthritiscareforum.org.uk)



Arthritis Care and Arthritis Research UK have joined together to help more people live well with arthritis. Read how at [arthritisresearchuk.org/merger](http://arthritisresearchuk.org/merger). All donations will now go to Arthritis Research UK and be used to help people with arthritis live full and active lives in communities across England and Wales, Scotland, and Northern Ireland.

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# Thank you

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### Contact us

**Our Helpline:**  
0808 800 4050

**Our website:**  
[arthritiscare.org.uk](http://arthritiscare.org.uk)

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Arthritis Care, Floor 4, Linen Court, London N1 6AD Registered Charity Nos. 207711 and SC041156.

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