



Rituximab should effectively treat your condition, and stop it causing damage to your joints. It has been tested and has helped many people. However, as with all drugs some people will have side-effects. This leaflet sets out what you need to know.

What is rituximab and how is it used?

Rituximab is a type of drug called a biological therapy. In some conditions, B-cells in the body produce harmful autoantibodies which attack the body's own tissues. Rituximab (trade name: MabThera) works by depleting the B-cells to reduce inflammation and improve your symptoms. If you respond well to rituximab, you'll probably feel better within 2–16 weeks.

Rituximab can be prescribed by a consultant rheumatologist for:

- rheumatoid arthritis
- lupus
- vasculitis
- · dermatomyositis.

Rituximab won't be started if:

- · your arthritis isn't active
- you've not tried other treatments appropriate for your condition first
- you have an infection.

Your doctor may decide not to prescribe rituximab if you're pregnant or breastfeeding, or if:

- you have severe heart problems
- you get short of breath very easily
- your B-cell or antibody levels are low
- you have seronegative rheumatoid arthritis (with no rheumatoid factor and no anti-CCP antibodies).

You'll have blood tests to check your antibody and possibly your B-cell levels before treatment and every few months afterwards. Your doctor may also check for previous hepatitis infection as rituximab may increase the risk of hepatitis being reactivated.

When and how do I take rituximab?

Rituximab is given through a drip into a vein (intravenous infusion) in hospital. The first infusion takes around six hours, although following infusions will be a bit shorter.



Usually two infusions are given two weeks apart. This process is then repeated when the improvement is wearing off (from around six months to three years later). Many people have rituximab about once a year.

You may have a steroid injection or infusion first together with paracetamol and an antihistamine to reduce the chance of a reaction.

Possible risks and side-effects

A few people experience a fever, wheeziness, a rash or fall in blood pressure during or shortly after the infusion, or you may feel unwell during infusions. If this happens, tell the person giving you the infusion so they can slow it down. If your symptoms are severe you may need to stop treatment, but this is rare.

Rituximab affects your immune system, so you may be more likely to pick up infections. Tell your doctor or rheumatology nurse straight away if you develop a sore throat, fever or other signs of infection, or any other new symptoms that concern you.

You should also see your doctor if you develop chickenpox or shingles or come into contact with someone who has chickenpox or shingles. These illnesses can be more severe in people on rituximab, and you may need anti-viral treatment.



After three or four courses of rituximab, the levels of useful antibodies in your blood (the ones that protect you against infection) may go down. This may not be a major problem, but rarely it might mean that repeated courses increase your risk of infection. Your clinical team will discuss this with you before considering further treatment.

Very rarely severe skin reactions have been reported with rituximab up to four months after the infusion. You should tell your doctor or rheumatology nurse straight away if you develop a rash after starting rituximab.

In very rare cases patients treated with rituximab have developed a serious condition called progressive multifocal leukoencephalopathy (PML), which can damage the brain and spinal cord. You must see your doctor immediately if you notice any of the following:

- · pins and needles
- weakness, shaky movements or unsteadiness
- · loss of vision
- speech problems
- · changes in behaviour or mood
- difficulty with movements (face, arms or legs).

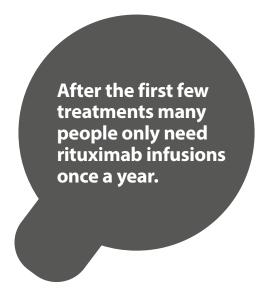
Reducing the risk of infection

- Try to avoid close contact with people with severe active infections.
- For advice on avoiding infection from food, visit: www.nhs.uk/ Conditions/Food-poisoning/ Pages/Prevention.aspx

Taking other medicines

Rituximab may be prescribed alongside other drugs, including methotrexate. You should discuss any new medications with your doctor before starting them, and always tell any other doctor treating you that you've been treated with rituximab.

 You can carry on taking nonsteroidal anti-inflammatory drugs (NSAIDs) or painkillers if needed, unless your doctor advises otherwise.



 Don't take over-the-counter preparations or herbal remedies without discussing this first with your healthcare team.

It's recommended that you carry a biological therapy alert card. Then anyone treating you will know that you've had rituximab and that your antibody levels may be low. You can get a card from your rheumatology team.

Vaccinations

It's usually recommended that people on rituximab avoid live vaccines such as yellow fever. However, in certain situations a live vaccine may be necessary (for example rubella immunisation in women of childbearing age).

If you're offered shingles vaccination (Zostavax) it's best if you can have this before starting rituximab.
Otherwise, you may be able to have this between courses when your B-cells have returned, so check with your rheumatology team.

Pneumococcal vaccine (which gives protection against the most common cause of pneumonia) and yearly flu vaccines should be given at least one month before a course of rituximab.

Having an operation

Planned operations are usually scheduled at least a month after your last infusion, so make sure your surgeon knows you're on rituximab.

Alcohol

You can drink alcohol while on rituximab but keep within the recommended limits for adults of no more than 14 units per week. Have alcohol free days, without 'saving up' units to drink in one go. If you're also taking methotrexate, you should try to keep well within these limits because methotrexate and alcohol can interact and damage your liver.

Fertility, pregnancy and breastfeeding

We don't yet know how rituximab might affect an unborn baby. Current guidelines advise that you take care to avoid becoming pregnant for at least six months after treatment. If however, you do have a rituximab treatment in early pregnancy (for example, before your pregnancy is confirmed) then it is unlikely to be harmful. The guidelines also now state that men who are trying to father a child can take rituximab.

Rituximab is an antibody that can be passed on in breast milk and the effects on the baby aren't yet known, so you shouldn't have rituximab treatments if you're breastfeeding.

Ask your rheumatology team for a biological therapy alert card.

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0300 790 0400 www.arthritisresearchuk.org We would like to thank the team of people who contributed to the development of this booklet. It was written by Prof John Isaacs and updated by Dr Ian Giles. An **Arthritis Research UK** medical advisor, Dr Luke Gompels, is responsible for the content overall.

Please note: we have made every effort to ensure that this content is correct at time of publication, but remember that information about drugs may change. This information sheet is for general education only and does not list all the uses and side-effects associated with this drug.





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