

Information for patients

Rituximab for Myasthenia Gravis (MG)



What is rituximab?

This is a type of medicine known as a monoclonal antibody (sometimes called “biologic therapy”). It targets and damages a type of white blood cell called B-cells. These cells are important for your immune system and help you to fight infection. However, these are also the cells that produce the antibodies that cause the weakness seen in Myasthenia Gravis (MG). Rituximab targets both types of B cells – the ones that protect you from infection and the ones that cause the antibodies responsible for MG.

Why is rituximab being prescribed?

The decision to prescribe rituximab is based on the fact that your MG is not responding to the usual treatments as quickly, or in the manner, that we would expect. Or, your consultant might prescribe rituximab because they feel that the usual medications (prednisolone, azathioprine etc.) may not be suitable for you and, or may interfere with your other health conditions. We use Rituximab to treat other conditions such as, rheumatoid arthritis, lupus, dermatomyositis, vasculitis and certain cancers.

Rituximab is not licensed to treat neurological conditions, but this does not mean that it is ineffective or unsafe.

What tests will I need done before I receive rituximab?

Your doctor will organise various blood tests before you receive treatment.

- You will have a chest X-ray to make sure there are no underlying infections.
- You will have a baseline scan of the heart (echocardiogram).
- If you are female, and of childbearing age, your doctor will make sure you are not pregnant on the day of your treatment, and they will carry out a pregnancy test before your treatment.

Before you receive rituximab, you must tell your doctor:

- If you have had an allergic reaction to rituximab in the past
- If you have a weak immune system
- If you have severe heart disease or high blood pressure
- If you have ever had viral hepatitis (e.g. hepatitis B or C)
- If you think you may have an infection at the moment
- If you think may be pregnant

How is rituximab given?

We will give you Rituximab through a drip into one of your veins (we call this an intravenous infusion) in hospital. Usually you will get an infusion followed by another infusion 2 weeks later (i.e. 2 infusions in total). Your doctors will check your B-cell count and decide if, and when you receive a further course of treatment. Occasionally a single course of treatment is sufficient to induce remission of your MG or can significantly improve your MG symptoms. You need to have these infusions in hospital as we need to monitor you.

Possible side effects

The reaction to rituximab is variable and every person will react differently. The most common side effects are mentioned below and can happen immediately during the infusion or weeks after the infusion. Remember that we will closely monitor you during the infusion and that you should let the nurses or doctor know if you experience any issues during or after the infusion.

Flu-like symptoms

During or shortly after the infusion, you may develop “flu-like symptoms” such as: headache, fever, chills, weakness, muscle aches, tiredness, dizziness, and shivering.

Low blood pressure

Rituximab may cause blood pressure to drop during the infusion. If you take any medicines for high blood pressure then please discuss with your doctor before starting the infusion. The nurse will check your blood pressure during your infusion.

Sickness

Rituximab may make you feel sick or cause vomiting, so we can give you anti-sickness medicines to prevent this.

Allergic reactions

You may also develop allergic reactions such as: skin rashes, itching, tongue or throat swelling, headache, wheezing, and breathlessness. If these issues occur the nurse can slow down, or temporarily stop the infusion, until these reactions are over. You will have some medicines before the infusion to try and prevent any allergic reactions from developing.

Infection risk

Rituximab can reduce the production of white blood cells in your body, which makes you more prone to infection. It is very important to tell your doctor if you feel unwell in any way before your infusion as we may delay treatment. After the treatment, we would ask you to take sensible precautions and avoid contact with people who are ill with fever, coughs, colds, and diarrhoeal illness, to reduce the risk of you contracting any infection.

Progressive Multifocal Leukoencephalopathy (PML)

Very rarely rituximab can cause a condition called Progressive Multifocal Leukoencephalopathy (PML). This is a very rare brain infection. It occurs during or after treatment with rituximab and can be fatal. Symptoms include: memory problems, confusion, sight loss, speech difficulties and difficulty walking. If you have developed any of these symptoms, please tell your doctor immediately.

Vaccines

If you are due for your annual flu vaccine or pneumococcal vaccines within two months of receiving the Rituximab infusion, we would advise you to arrange to receive your vaccines one month before receiving the Rituximab treatment.

It is **not safe** for you to have **live vaccines** whilst on rituximab. Examples of live vaccines to avoid are: rubella (German measles), MMR, yellow fever, typhoid, chickenpox, shingles, BCG, polio [Note: this list is not exhaustive].

If you require **any** vaccines then discuss this with your doctor first. You should **always** tell any doctors or nurses who are administering a vaccine that you are being treated with rituximab or any other immunosuppressant medicines.

How long will it take to have an effect?

Rituximab usually takes about 2-3 months to have an effect on your MG. Your consultant will assess this effect and discuss with you if any changes need to be made to your medicines. It is anticipated that if there is an effect, then there is the possibility of reducing the dose or frequency of your other MG medicines (e.g. prednisolone, immunoglobulin, plasma exchange). Thereafter, the myasthenia team will continue to monitor your.

Does rituximab affect pregnancy or fertility?

It is unknown if rituximab would harm an unborn baby. You should avoid Rituximab during pregnancy. We recommend that you wait at least 12 months after the last infusion before planning a pregnancy. Please discuss with your doctor if you are not using contraception and, or planning a family. If you are male and planning to father a child – please discuss with your consultant.

Breastfeeding

Rituximab may be passed on in breastmilk. You should not breastfeed during, or for 12 months after rituximab treatment.

Where can I get more information?

The myasthenia team and the neurosciences pharmacists are happy to answer any of your questions.

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