



KEEP ALL MEDICINE OUT OF THE SIGHT AND REACH OF CHILDREN

R-ESHAP

What is R-ESHAP?

R-ESHAP is the name of a combination of cancer drugs used to treat non Hodgkin's lymphoma (NHL). R-ESHAP is ESHAP chemotherapy with the drug rituximab. Rituximab is a type of biological therapy called a monoclonal antibody. R-ESHAP is made up of the drugs

- R = Rituximab (Mabthera)
- E = Etoposide - a chemotherapy drug
- SH = Methylprednisolone, which is a steroid
- A = Cytarabine (also known as Ara C) – a chemotherapy drug
- P = Cisplatin – a chemotherapy drug

How you have R-ESHAP

- All the R-ESHAP drugs are clear colourless fluids. You have them into your bloodstream (intravenously). You can have them through a central line, a portacath. These are long, plastic tubes that give the drugs directly into a large vein in your chest. You have the tube put in just before your course of treatment starts and it stays in place as long as you need it.
- You usually have R-ESHAP as cycles of treatment. Each cycle lasts 4 weeks. You usually have between 2 and 8 cycles.
- Each cycle of treatment is given in the following way.
 - On the first day you have
 - Rituximab as a slow drip (infusion) before all the other drugs – see details below
 - Etoposide as a drip for 1 hour
 - Methylprednisolone (steroid) as a drip for 15 to 30 minutes
 - Cytarabine as a drip for 2 hours – this may be on the fifth day instead
 - Cisplatin as a drip that lasts for 96 hours (4 days)
 - On the second, third and fourth days you
 - Continue with your cisplatin
 - Repeat the etoposide and methylprednisolone drips
 - On the fifth day the cisplatin finishes and you have
 - Another dose of methylprednisolone
 - Another dose of cytarabine
- You have no treatment for just over 3 weeks. Then you start the next cycle.
- Some people can have an allergic reaction to rituximab so your first dose is given slowly over a few hours (about 4 hours). To help prevent a reaction your doctor or nurse will give you paracetamol and an anti-histamine. If you don't have a reaction you should be able to have further doses of rituximab at a faster rate (over 2 hours).
- A reaction to rituximab while the drug is being given –
 - this causes flu like symptoms such as a fever
 - chills and shivering (rigors)
 - headache and feeling sick



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- About 1 in 20 people (5%) have a more severe reaction, with wheezing, an itchy rash and a drop in blood pressure. Your doctor will give you medicines beforehand to try to prevent a reaction. If you do have a reaction, your nurse will slow your drip down or stop it for a while
- You will need to stay in hospital for the 5 days of treatment. But you will be able to move around the ward even while the drips are going through. You will also have drips of fluids (hydration). Cisplatin can cause kidney damage and the extra fluids keep your kidneys working properly. You may also have a drug called mannitol as a drip alongside your cisplatin. Mannitol helps your kidneys produce more urine.
- You can go home once the treatment is finished. Your doctor or nurse will give you anti sickness medicines to take home and some steroid eye drops. You will need to use these as prescribed by your doctor for the next 5 to 7 days. You may also need to take them before going into hospital to have your treatment but your doctor or nurse will discuss this with you.
- The side effects of a combination of drugs are usually a mixture of those of each drug. The combination may increase or decrease your chance of getting each side effect or it may change the severity.

Common side effects

More than 10 in every 100 people have one or more of the side effects listed below.

- A temporary drop in the number of blood cells made by the bone marrow, causing
- An increased risk of getting an infection from a drop in white blood cells – it is harder to fight infections and you can become very ill. You may have headaches, aching muscles, a cough, sore throat, pain passing urine or feel cold and shivery
- Tiredness and breathlessness due to a drop in red blood cells (anaemia) – you may need a blood transfusion
- Bruising more easily due to a drop in platelets – you may have nosebleeds, bleeding gums after brushing your teeth, or lots of tiny red spots or bruises on your arms or legs (known as petechia)
- Some of these side effects can be life threatening, particularly infections. Contact your doctor or nurse if you have any of these effects. You will have regular blood tests to check how well your bone marrow is working.
- **Contact your treatment centre straight away if you have any of these effects or if your temperature goes above 38°C**
- Fatigue (tiredness) that may continue after treatment has finished – most people find their energy levels are back to normal within 6 months to a year
- Feeling or being sick – this is usually well controlled with anti sickness medicines
- Hair loss
- Kidney changes – you will have regular blood tests to check how well your kidneys are working and will have fluids to flush the drugs through
- Hearing changes – you may have ringing in the ears (tinnitus) or have problems hearing. These effects usually get better on their own



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- Loss of taste or a metallic taste in your mouth
- Changes to your blood sugar levels due to steroids – you will have regular blood tests and may also need to check your urine for sugar
- Sore, red eyes can occur because cytarabine is removed from your body (excreted) in your tears – you will have steroid eye drops to prevent this
- Women may stop having periods (amenorrhoea) – this may be temporary
- Loss of fertility – we don't know exactly how these drugs affect fertility so talk with your doctor before starting treatment if you plan to have a baby in the future
- Skin changes – your skin may become red and sore or you may have an itchy rash
- Night sweats in about 3 in 20 people (15%)
- Stomach pains
- Feeling weak in about 1 in 4 people (25%)
- A runny nose (rhinitis) during the rituximab drip – this is usually mild
- Flu like symptoms including fever and chills happen in half the people treated (50%) with rituximab – taking paracetamol can help
- Low blood pressure in about 1 in 10 people (10%)

Occasional side effects

Between 1 and 10 in every 100 people have one or more of these.

- Numbness or tingling in hands or feet that usually improves a few months after the treatment ends – occasionally there may be some permanent numbness
- Allergic reactions can happen while any of the drugs are going into your bloodstream – while you are having the treatment your nurse will monitor you for signs of an allergic reaction. Tell your nurse if you have skin rashes or itching, feel hot, shivery, go red in the face, feel dizzy, have a headache, feel breathless, anxious, or suddenly need to pass urine
- A sore mouth
- Mood changes
- Indigestion
- Diarrhoea or constipation
- A cough and breathlessness – rituximab can cause irritation of the lungs so tell your doctor or nurse if this continues
- Liver changes that are very mild and unlikely to cause symptoms – the liver will almost certainly go back to normal when treatment is finished, but you will have regular blood tests to check how well your liver is working
- Loss of appetite
- Dizziness
- Flushing of the face in about 1 in 20 people (5%) – during the rituximab drip you may have a sudden feeling of warmth and your face may go red



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Rare side effects

A very small number of people get a second cancer some years after R-ESHAP treatment.

Important points to remember

You may not have many side effects and those you have may be mild. A side effect may get worse through your course of treatment. Or you may have more side effects as the course goes on. This depends on

- How many times you've had a drug before
- Your general health
- How much of the drug you have (the dose)
- Other drugs you are having

Coping with side effects

Talk to your doctor, pharmacist or nurse about all your side effects so that they can help you manage them. They can give you advice or reassure you. Your nurse will give you a contact number to ring if you have any questions or problems. If in doubt, call them.

Other medicines

Tell your doctor about any other medicines you are taking, including vitamins, herbal supplements, and over the counter remedies – some drugs can react together.

Pregnancy and contraception

These drugs may have a harmful effect on a developing baby and it is not advisable to become pregnant or father a child if you are having this treatment. Talk about contraception with your doctor or nurse before treatment starts.

Breastfeeding

Breastfeeding is not advisable during this treatment because the drug may come through in the breast milk.

Medical and dental treatment

If you need to go into hospital for any reason other than cancer, always tell the doctors and nurses that you are having chemotherapy. Give them contact details for your cancer doctor.

Talk to your cancer doctor or nurse if you think you need dental treatment. Always tell your dentist you are having chemotherapy.

Immunisations

- You should not have immunisations with live vaccines while you are having chemotherapy or for at least 6 months afterwards. These include rubella, mumps, measles (usually given together as MMR), BCG, yellow fever and Zostavax (shingles vaccine).
- You can have other vaccines, but they may not give you as much protection as usual until your immune system has fully recovered from your chemotherapy. It is safe to have the flu vaccine.



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R-ESHAP PATIENT INFORMATION LEAFLET

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- It is safe for you to be in contact with other people who've had live vaccines as injections. There can be problems with vaccines you take by mouth (oral vaccines), but not many people have these now.
- So there is usually no problem in being with any baby or child who has recently had any vaccination. You might need to make sure that you aren't in contact with anyone who has had oral polio, cholera or typhoid vaccination recently, particularly if you live abroad.