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**KEEP ALL MEDICINE OUT OF THE SIGHT AND REACH OF CHILDREN**

## R-CHOP

### What is R-CHOP?

CHOP is the name of a chemotherapy treatment used to treat non Hodgkin lymphoma. R-CHOP is the CHOP chemotherapy regimen with the drug rituximab (Mabthera). Rituximab is a type of biological therapy called a monoclonal antibody. Monoclonal antibodies target proteins on the surface of cells. Rituximab targets a protein known as CD20. CD20 is found on white blood cells called B cells. It is the B cells that are cancerous in the most common type of non Hodgkin lymphoma. Rituximab attaches itself to the B cells and marks them. The cells of the immune system recognise the marked cells and kill them.

The CHOP regimen is

- C = Cyclophosphamide
- H = Doxorubicin hydrochloride
- = Vincristine (which used to be called Oncovin)
- P = Prednisolone (a steroid)

### Having R-CHOP

- You usually have R-CHOP in cycles of treatment over 3 weeks. A usual course of treatment consists of between 3 and 8 cycles so it can last from 9 to 24 weeks.
- Some people may have R-CHOP over 2 weeks. You have the drugs in exactly the same way, but with less of a break between treatments. Doctors call treatment over 2 weeks R-CHOP14. Treatment over 3 weeks is called R-CHOP21.
- On the first day of each cycle you have the following drugs
  - Rituximab
  - Cyclophosphamide
  - Vincristine
  - Doxorubicin
  - You have the drugs as injections into a vein or through a drip.
  - You have prednisolone (steroid) tablets to take at home for 5 days. Then you have a break with no treatment until the next treatment cycle starts.

### 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)



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- Some of these side effects can be life threatening, particularly infections. Contact your doctor or nurse if you have any of these effects. Your doctor will check your blood counts regularly to see how well your bone marrow is working.
- **Contact your treatment center straight away if you have any of these effects or if your temperature goes above 38°C**
- Tiredness (fatigue) during and after treatment – most people find their energy levels are back to normal after 6 months to a year
- 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
- 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
- Feeling or being sick is usually well controlled with anti sickness medicines
- Hair loss or thinning
- Nerve problems causing abdominal cramps, constipation, numbness or tingling of fingers and toes, jaw pain or double vision – tell your doctor or nurse if you have any of these effects
- Women may stop having periods (amenorrhoea) – this may only be temporary
- Loss of fertility – we don't know exactly how this drug affects fertility so do talk to your doctor before starting treatment if you plan to have a baby in the future
- Your urine may become pink or red for one or two days after treatment with doxorubicin but this won't harm you
- Mouth sores and mouth ulcers
- Appetite changes – you may lose your appetite or the steroids may boost your appetite and make you put on weight
- Skin changes – your skin may darken and you may have an itchy rash or become sensitive to sunlight. Use a high factor sun cream and cover up when you go out
- Indigestion, stomach pains or discomfort
- Change in blood sugar levels – tell your doctor if you get very thirsty or if you are passing more urine than usual
- A puffy face and ankles from fluid buildup
- Difficulty in sleeping and mood swings – taking the steroids early in the day can reduce this
- Inflammation around the drip site – if you notice any signs of redness, swelling or leaking at your drip site, tell your doctor or chemotherapy nurse straight away
- A runny nose (rhinitis) during the rituximab drip, which is usually mild

### **Occasional side effects**

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



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- Allergic reactions to doxorubicin affects 3 people in 100 (3%) – this causes a sudden rash of pink, itchy bumps on your skin and reddening of the skin along the vein. This should clear up within a few days
- Burning, stinging or pain on passing urine (cystitis) – if you see blood in your urine contact your doctor straight away
- Temporary taste changes
- Your nails may darken or become ridged or white lines may appear on them
- Changes to the muscles of your heart may occur with high doses of cyclophosphamide and doxorubicin
- Diarrhoea
- Areas of skin that have been treated with radiotherapy may get red or sore, or the skin over your drug injection site may become discoloured

### **Rare side effects**

Fewer than 1 in 100 people have these.

Changes in lung tissue – tell your doctor if you have a cough or feel breathless

### **Important points to remember**

The side effects above may be mild or more severe. A side effect may get better or worse through your course of treatment, or more side effects may develop as the course goes on. This depends on

- How many times you've had the drug before
- Your general health
- The amount 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.



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**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 and chemotherapy**

- 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.
- 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.