

## Pharmacy

### DRUG INFORMATION

# RCEOP Regimen [Rituximab, Cyclophosphamide, Etoposide, Vincristine, Prednisolone]



### What Is RCEOP Regimen?

- RCEOP is a chemotherapy regimen consisting of five drugs (Rituximab, Cyclophosphamide, Etoposide, Vincristine and oral Prednisolone) given mainly for the treatment of non-Hodgkin lymphoma.

### How Is RCEOP Administered?

- On the first day of each cycle, you will have Rituximab, Etoposide, Vincristine and Cyclophosphamide given into your veins (intravenous). You will also start taking a five day course of Prednisolone tablets orally on the first day. On the second and third day, you will receive Etoposide intravenously or orally.
- RCEOP is given as a 21-day cycle for up to 6 cycles.
- If you miss a dose of the Prednisolone, take the missed dose as soon as you remember. If it is almost time for your next dose, take only the usual dose. Do not double the dosage.

### Can RCEOP Be Administered / Taken with Other Medications?

- Please inform your doctor or pharmacist if you are taking other medications, including Traditional Chinese Medicines, Jamu medicines or supplements.

### What Are the Important Side Effects of RCEOP?

- Infusion related reaction
  - These are usually mild or moderate, but rarely, they can be more severe. You may be given drugs before the infusion to reduce the chance of a reaction happening.
  - If you do have a reaction, this can usually be treated by slowing or stopping the drip until the reaction is over. Any future infusions will be given at a slower rate.
  - *Inform the nurses immediately during infusion of Rituximab, Cyclophosphamide, Etoposide or Vincristine if you experience the following:*
    - Flu-like symptoms, such as headache, feeling flushed, having a fever, chills or dizziness

- Red, warm and itchy bumps on the skin
  - Swelling in the lips, tongue or throat
  - Breathlessness, wheezing, a cough or sudden difficulty in breathing
  - Chest tightness or chest pain
- Low blood pressure  
Blood pressure of some patients may drop during the infusion and you may experience dizziness. If this happens, inform the nurse-in-charge. Your blood pressure will be checked regularly throughout the infusion. If you normally take medications to lower your blood pressure, please inform the doctor or nurses prior to starting the infusion.
  - Drug leakage  
RCEOP may leak out of the veins and damage the tissues around the vein. This is called extravasation. Inform the nurse immediately if you have any stinging, pain, redness or swelling around the vein. Extravasation is not common but if it happens, it is important that it is managed quickly.
  - Medications prescribed by your doctor should be beneficial for your condition even though they may result in some inevitable side effects.

Side Effect	Management
Risk of infection can occur as RCEOP can reduce the number of white blood cells in your blood	<ul style="list-style-type: none"> <li>• To reduce risk of infection:               <ul style="list-style-type: none"> <li>- Wash your hands after toileting.</li> <li>- Avoid crowds and people who are sick.</li> <li>- Avoid raw food.</li> </ul> </li> <li>• Please proceed to the A&amp;E department immediately if you experience signs of infection such as fever with a temperature of 38°C and above, chills and shivering. Avoid taking Paracetamol (Panadol®) to relieve fever. Be aware that taking Paracetamol may mask fever and hence delay treatment of infection.</li> </ul>

Side Effect	Management
Bruising or bleeding can occur as RCEOP can reduce the number of platelets in your blood	<ul style="list-style-type: none"> <li>• To reduce risk of bleeding problems:               <ul style="list-style-type: none"> <li>– Do not pick your nose.</li> <li>– Brush your teeth gently with a soft toothbrush.</li> <li>– Be aware that bleeding may take a longer time to stop.</li> </ul> </li> <li>• Please proceed to the A&amp;E department immediately if you experience any severe bleeding (e.g. passing a large amount of fresh blood in urine or stools, or passing black sticky stools) or significant bruising.</li> </ul>
Nausea or vomiting	<ul style="list-style-type: none"> <li>• Take small, frequent meals.</li> <li>• Avoid smells that make you feel nauseous.</li> <li>• Take medications for nausea or vomiting prescribed by your doctor.</li> <li>• Avoid tight-fitting clothes around the waist.</li> </ul>
Constipation	<ul style="list-style-type: none"> <li>• Maintain adequate hydration (at least 2 litres) of fluids per day unless informed otherwise by your doctor. Your doctor may prescribe you stool softeners to prevent constipation.</li> <li>• Inform your doctor immediately if you experience severe abdominal pains.</li> </ul>
Diarrhoea	<ul style="list-style-type: none"> <li>• Inform your doctor if this is severe and/or does not improve with medicine use.</li> <li>• Drink at least two litres (8 cups) of fluids every day when you are having diarrhoea.</li> <li>• Avoid milk, dairy products, high fibre food or spicy food whilst you are having diarrhoea.</li> </ul>

Side Effect	Management
Stomach irritation	<ul style="list-style-type: none"> <li>• Prednisolone may cause gastric irritation. Taking Prednisolone after meals may reduce this side effect</li> </ul>
Mouth ulcers can occur on the tongue, the sides of the mouth or in the throat and this can lead to an infection	<ul style="list-style-type: none"> <li>• Brush your teeth gently after eating and at bedtime with a soft toothbrush.</li> <li>• Rinse and brush your dentures after eating and soak them in denture solution overnight.</li> <li>• Rinsing your mouth regularly with an alcohol-free mouth gargle or salt water may help reduce chances of infection.</li> </ul>
Bladder inflammation resulting in discomfort when passing urine or blood in the urine	<ul style="list-style-type: none"> <li>• Maintain adequate hydration with 2 to 3 litres (8 to 12 cups) of fluids per day unless informed by your doctor to restrict fluids.</li> </ul>
Difficulty in passing urine	<ul style="list-style-type: none"> <li>• Inform your doctor immediately if you have decrease in urination or painful urination.</li> </ul>
Hair Loss	<ul style="list-style-type: none"> <li>• Wear a wig or hat or use a gentle shampoo.</li> </ul>
Numbness and tingling sensation in the hands or feet	<ul style="list-style-type: none"> <li>• Inform your doctor if you have this symptom or trouble buttoning up shirts or if you are unable to pick up objects</li> </ul>
Muscle ache, headache and joint pain	<ul style="list-style-type: none"> <li>• Mild pain can be relieved by taking Paracetamol (Panadol ®). Inform your doctor if pain is not controlled by Paracetamol (Panadol ®). Avoid Paracetamol (Panadol ®) when you are having fever.</li> <li>• Taking regular warm baths may also help.</li> </ul>

Side Effect	Management
Fatigue or Tiredness	<ul style="list-style-type: none"> <li>• Do not drive or operate machinery if you are feeling tired. Inform your doctor if fatigue is persistent or worsens.</li> </ul>
Dizziness, seizures	<ul style="list-style-type: none"> <li>• Inform your doctor immediately if you experience mood changes, dizziness or seizures.</li> </ul>
Hearing loss or hearing difficulty	<ul style="list-style-type: none"> <li>• Inform your doctor immediately if you experience hearing difficulty or hearing loss.</li> </ul>
Raised blood sugar levels	<ul style="list-style-type: none"> <li>• Prednisolone may cause raised blood sugar levels. Blood sugar levels often return to baseline upon stopping Prednisolone.</li> </ul>
Changes in the way the liver works	<ul style="list-style-type: none"> <li>• Please proceed to the A &amp; E department immediately if you experience any yellowing of eye white and skin or tea-coloured urine, pale stools or severe abdominal pain.</li> </ul>
Heart problems	<ul style="list-style-type: none"> <li>• Rituximab and Etoposide may worsen heart problems for people who already have them.</li> <li>• Please proceed to the A &amp; E department immediately if you experience signs of heart problems such as shortness of breath, difficulty breathing, chest pain, fast heart beat or sudden swelling of legs.</li> </ul>
Risk of blood disorders/leukemia and secondary cancers	<ul style="list-style-type: none"> <li>• This occurs very rarely. Please discuss with your physician if you have concerns.</li> </ul>

If you develop rashes, facial swelling or shortness of breath after taking the medication, you could be allergic to the medication. Please seek medical attention immediately.

## Are There Any Special Precautions That I Need to Take?

- It is important to inform your doctor if you intend to conceive or breastfeed while taking this medication.
- You must not become pregnant during treatment with RCEOP and must use an effective method of contraception. You should take appropriate contraceptive measures during and up to 12 months after stopping treatment. If pregnancy occurs during your treatment, you must inform your doctor immediately.
- RCEOP may have an anti-fertility effect, which could be irreversible. You should discuss with your doctor regarding fertility preservation prior to starting treatment.
- You should not breast-feed during treatment.

## What Else Can I Do to Help My Condition?

- Exercise  
Light exercise is recommended as it helps to improve mobility, balance and even emotional well-being. Avoid strenuous exercise, and rest when you are feeling tired.
- Stay positive  
Understand your condition and take an active role in managing it. Do not be afraid to talk about it with your doctor/ pharmacist/ family members. Repressed feelings can be harmful to your immediate well-being and long-term health.
- Adequate hydration  
Maintain adequate hydration with 2 to 3 litres (8 to 12 cups) of fluids per day unless informed by your doctor to restrict fluids. This will decrease your chances of getting constipation and also prevent dehydration.
- Medical and dental treatment  
If you need to go into hospital for any reason other than cancer, always inform the doctors and nurses that you are having chemotherapy. Talk to your cancer doctor if you think you need dental treatment. Always inform your dentist that you are having chemotherapy.

## How Do I Store Prednisolone and Etoposide?

- Store your medication in a cool, dry place away from heat, moisture and direct sunlight.

If you have any problem with your treatment, please contact your doctor, pharmacist or nurse clinician.

Please keep all medications out of reach of children.

You can also find useful information with regards to your medication on this website:

<https://www.macmillan.org.uk/information-and-support>



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