

## PHARMACY

### Drug Information

## BEP Regimen [Bleomycin, Etoposide, Cisplatin]



### What is BEP Regimen?

- BEP, a chemotherapy regimen consisting of three drugs (Bleomycin, Etoposide and Cisplatin) is used to treat testicular cancer.

### How is BEP Regimen Administered?

- On the first day of treatment, Cisplatin, Etoposide and Bleomycin are given as separate injections into the vein (intravenous).
- Cisplatin and Etoposide are given for 5 days (Day 1 to Day 5) while Bleomycin is given on Day 1, Day 8 and Day 15 of the 21-day cycle.
- You may receive up to 4 cycles depending on your doctor.

### Can BEP Regimen be Administered 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 BEP?

- If you are using Bleomycin for the first time, a test dose will usually be required.
- Allergic reaction  
BEP may rarely cause an allergic reaction while it's being given. Signs of a reaction can include a rash, flushing or shortness of breath, swelling of your face or lips, feeling dizzy, having abdominal, back or chest pain or feeling unwell.
- Pain along the vein  
BEP may cause pain along the vein. If you feel pain, tell your nurse straight away so that the infusion site can be checked. They may give the drug more slowly or flush it through with more fluids to reduce pain.
- Dizziness or feeling faint  
Etoposide may cause dizziness or feeling faint during the infusion as your blood pressure may be low. Lie down or sit with your legs elevated.

- Medications prescribed by your doctor should be beneficial for your condition even though they may result in some inevitable side effects.

Side Effect	Management
Bleomycin induced lung toxicity	<ul style="list-style-type: none"> <li>• Your doctor will check your lung function prior to initiation of Bleomycin.</li> <li>• Stop smoking if you have not quit smoking.</li> <li>• If you experience breathlessness, cough, fever and chills or chest pain, please proceed to the A&amp;E department.</li> </ul>
Risk of infection can occur as BEP 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>
Bruising or bleeding can occur as BEP 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 or persistent bleeding (eg, passing a large amount of fresh blood in urine or stools, or passing black sticky stools) or significant bruising.</li> </ul>

Side Effect	Management
Nausea or vomiting	<ul style="list-style-type: none"> <li>• Take small, frequent meals.</li> <li>• Avoid smells that precipitate nausea.</li> <li>• Take medicines for nausea or vomiting prescribed by your doctor.</li> <li>• Avoid tight-fitting clothes around the waist.</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 while you are having diarrhoea.</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>
Taste changes including bitter or metallic taste in your mouth or find that food taste different	<ul style="list-style-type: none"> <li>• This should go away once your treatment ends. Adding herbs and spices or strong-flavoured sauces can give your food more flavour. Sucking hard, sugar-free mint or ice may help to get rid of the metallic or bitter taste.</li> </ul>

Side Effect	Management
Kidney problems	<ul style="list-style-type: none"> <li>• Cisplatin may affect the way your kidneys work and frequent blood test will be required to monitor your kidney function.</li> <li>• You may be given fluids into the vein before chemotherapy to protect your kidneys and ensure that you drink at least two to three litres (8 to 12 cups) of fluids when you get home.</li> <li>• Please check with your doctor regarding fluid intake if you have heart problems. Please proceed to the A&amp;E department immediately if you experience any lower back pain or side pain, swelling of feet or lower legs.</li> </ul>
Nail may become brittle and break easily, get darker or discoloured; rarely, nails may come off	<ul style="list-style-type: none"> <li>• Wearing gloves when washing dishes or using detergents will help protect your nails during treatment.</li> <li>• If you get pain, redness or swelling around your nails, inform your doctor.</li> </ul>
Skin rashes, skin tenderness, skin darkening	<ul style="list-style-type: none"> <li>• These usually occur two to three weeks after initiation of Bleomycin.</li> <li>• Your skin may darken in some areas such as your elbows, knees and hands.</li> <li>• This will slowly return to normal when you stop Bleomycin. Inform your doctor if the rash is very irritating.</li> </ul>
Hair Loss	<ul style="list-style-type: none"> <li>• Wear a wig or hat or use a gentle shampoo.</li> </ul>

Side Effect	Management
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>
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>
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>
Slow or abnormal heart rhythm rarely occurs	<ul style="list-style-type: none"> <li>• Please proceed to the A&amp;E department immediately if your heart is beating irregularly or fast, or if you feel faint, lightheaded, or dizzy.</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>
Fever and chills	<ul style="list-style-type: none"> <li>• These may occur shortly after treatment with Bleomycin, and should not last longer than 24 hours. These can be relieved by taking Paracetamol (Panadol ®).</li> <li>• If fever persists for more than 24 hours, it could be a sign of infection and would require medical attention.</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?**

- You must not become pregnant during treatment with BEP and must use an effective method of contraception. You should take appropriate contraceptive measures during and up to 14 months after stopping treatment. If pregnancy occurs during your treatment, you must inform your doctor immediately.
- BEP 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 two to three 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 receiving anti-cancer treatment.  
Talk to your cancer doctor if you think you need dental treatment. Always inform your dentist that you are receiving anti-cancer treatment.

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

**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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