

What is Cyclophosphamide?

Cyclophosphamide is an anti-cancer agent used to treat different types of leukaemia's and solid tumours.

How does it work?

Cyclophosphamide is an alkylating agent that prevents cell division by cross-linking DNA strands and decreasing DNA synthesis. Before cyclophosphamide can work, it needs to be metabolized by the liver (pro-drug).

How is it given?

Cyclophosphamide is usually administered as an intravenous (IV) infusion and can be given over 30 minutes to 6 hours. IV fluids may be required before, during and after the infusion. Cyclophosphamide can also be given by mouth as a tablet or as a liquid.

Special instructions:

- It is important to be well hydrated and to urinate frequently prior to and after receiving IV cyclophosphamide to prevent blood in your urine. You may be given IV fluids while you are in hospital and your urinary output will be monitored by the nurses and doctors.
- High doses of cyclophosphamide may be given with another medication called mesna to prevent bladder damage which can cause blood in your urine.
- Cyclophosphamide tablets should ideally be taken in the morning on an empty stomach with a glass of water. Cyclophosphamide may be taken with food if the medicine irritates your stomach.
- Cyclophosphamide oral liquid can be added to a small amount of juice (approx. 30mL) to disguise the taste.
- If you are receiving oral cyclophosphamide as a liquid, the pharmacy will place each dose in an individual oral syringe (each syringe is one dose)
- Cyclophosphamide can cause nausea and vomiting. Your doctor can prescribe you medicines to prevent you from feeling sick and throwing up. If you vomit within 30 minutes after taking your cyclophosphamide by mouth, inform your doctor or nurse right away.

Safe Handling:

All chemotherapy taken by mouth can pose a health hazard to caregivers and patients. Take care when handling this medicine and try to prevent the medication from touching your skin. Taking precautions will protect both the patient and the caregiver.

- We suggest that the caregiver wears gloves while handling this medicine. If your skin comes into contact with the medicine, wash your hands or the area of contact right away.
- Prepare a clean area where the drug can be handled safely (away from areas where food is prepared, out of reach of children and away from any fans or air vents). Clean up spills in the area where the medicine is prepared.
- If using tablet cutters, wash with warm soapy water and allow to dry after each use.
- For oral liquids, each syringe is to be used once. Discard each syringe after use. Do not wash and reuse the syringes.

Cyclophosphamide

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Patient/Caregiver Information

Possible Side Effects:

Listed below, but not limited to, are the more commonly experienced side effects that you may see. The side effects your child might experience may be temporary and some may be permanent.

	Likely Happens to 21-100 children out of every 100	Less Likely Happens to 5-20 children out of every 100	Rare but serious Happens to <5 children out of every 100
Immediate Within 1-2 days of receiving the medicine	<ul style="list-style-type: none"> ▪ Loss of appetite[^] ▪ Nausea[^] ▪ Vomiting[^] 	<ul style="list-style-type: none"> ▪ Abnormal hormone function which may lower the level of salt in the blood and urine, causing too much or too little urine[*] 	<ul style="list-style-type: none"> ▪ Temporary blurred vision[*] ▪ Nasal stuffiness with the IV infusions[*] ▪ Skin rash ▪ Abnormal heart rhythms[*] ▪ Severe allergic reaction which can be life threatening with shortness of breath, low blood pressure, rapid heart rate, chills and fever
Prompt Within 2-3 weeks, prior to the next course	<ul style="list-style-type: none"> ▪ Fewer white and red blood cells and platelets in the blood. A lower number of white blood cells may make it easier to get infections. Fewer red blood cells may make you feel tired and weak. Fewer platelets may cause you to bruise and bleed more easily[^] ▪ Hair loss[^] 	<ul style="list-style-type: none"> ▪ Bleeding and inflammation of the urinary bladder[^] ▪ Infections 	<ul style="list-style-type: none"> ▪ Heart muscle damage which may occur with very high doses and which may be fatal[#] ▪ Darkening of areas of the skin and finger nails ▪ Slow healing of wounds
Delayed Anytime later during therapy, excluding the above conditions	<ul style="list-style-type: none"> ▪ Decreased ability of the body to fight infection ▪ Absence or decrease in the number of sperm or monthly periods. This may be temporary or permanent and may decrease the ability to have children[*] ▪ A risk of infertility which is the inability to have children[^] (see below) 		<ul style="list-style-type: none"> ▪ Damage and scarring of lung tissue which may make you short of breath^{*,^}
Late Anytime later after completion of therapy			<ul style="list-style-type: none"> ▪ A new cancer or leukemia resulting from this treatment[*] ▪ Damage or scarring of urinary bladder tissue
<p>*Less common with low doses #Only with very high doses ^Toxicity may occur later</p>			

Cyclophosphamide can significantly increase the risk of premature menopause in females and infertility in males and females. The likelihood increases with exposure to high doses or a high cumulative dose.

This information sheet is a brief overview. Each individual can respond differently to the medication, it is vital that you communicate all signs and symptoms you observe to your doctor or nurse.

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Patient/Caregiver Information

If you have any questions about the information provided please discuss them with your oncologist or haematologist.

Further information can be obtained from your doctor, nurse or pharmacist or at the following website:
<http://medsafe.govt.nz/consumers/medicine/where.asp>