

## PHARMACY

### Drug Information

# Cyclophosphamide



### What Is Cyclophosphamide?

- Cyclophosphamide is an immunosuppressant (medication that keeps your immune system in check). It works by changing your immune response to various diseases.
- Cyclophosphamide is commonly used to treat cancer and autoimmune conditions (immune system attacks one's own body by mistake), such as:
  - Systemic vasculitis
  - Systemic lupus erythematosus
  - Myositis
  - Myasthenia gravis
- Cyclophosphamide treats cancer by stopping the growth of cancer cells.
- Cyclophosphamide treats autoimmune conditions by controlling the disease and slowing or stopping the disease progression.
- The dosage of Cyclophosphamide depends on your body weight, kidney function, condition treated, disease activity and response to medication.

### How Is Cyclophosphamide Taken?

- Cyclophosphamide can be taken through the mouth in tablet form or as an intravenous injection (into the veins).
- In the treatment of autoimmune conditions:
  - A daily dose of Cyclophosphamide tablet is typically 50mg to 150mg. The Cyclophosphamide tablet should be taken in the morning, with or after food and with a full glass of water.
  - An intravenous injection of Cyclophosphamide may be given at higher doses every few weeks.
- Drink plenty of water (about 8 glasses a day) while you are on Cyclophosphamide, unless advised otherwise by your doctor.

### What Should I Do If I Miss a Dose?

- If you miss a dose, 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 of medication to make up for the missed dose.

### How Long Does It Take for Cyclophosphamide to Be Effective?

- Cyclophosphamide takes time to work. It may be weeks to months before you notice any benefits. It is important that you take Cyclophosphamide regularly to fully benefit from the medication.

### Can Cyclophosphamide Be Taken with Other Medications?

- Depending on the disease type and severity, Cyclophosphamide may be taken with corticosteroids and other medications.
- It is important that you inform your doctor, pharmacist or rheumatology nurse clinician about other medications that you are currently taking, as they may affect the way you benefit from Cyclophosphamide. Such medications include over-the-counter medicines, supplements and traditional/herbal remedies.
- If you are taking Cyclophosphamide, discuss with your doctor before having any vaccinations as the medication may affect the effectiveness of the vaccination.
- Live vaccines such as MMR (measles, mumps and rubella), OPV (oral polio vaccine), yellow fever, typhoid or BCG (tuberculosis) should not be taken while on Cyclophosphamide.

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

- Many of these side effects appear at higher doses. Some side effects may show up only years after the medication is used. Always discuss with your doctor if you experience any side effects.

Side Effect	Management
<ul style="list-style-type: none"> <li>• Nausea</li> <li>• Vomiting</li> <li>• Loss of appetite</li> <li>• Diarrhoea</li> <li>• Stomach pain</li> </ul> (Common side effects)	Take the medication after food.  These side effects may improve as you get used to the medication. Otherwise, you might be given anti-nausea or anti-diarrhoea medications to manage these side effects.

Side Effect	Management
Mouth ulcers	They are usually resolved by reducing the dose or stopping the medication.  Discuss with your doctor if you have ulcers.
Hair loss (Common side effect)	This is harmless and usually stops by reducing the dose or stopping the medication.  Discuss with your doctor if you experience hair loss.
Female: Temporary or permanent stop in menstrual periods (amenorrhea)  Male: Low sperm count	For some individuals, this may be reversed within a few months after stopping treatment.
Infertility (More common in older individuals or those with long-term high dosage of medication)	If you have to be on long-term therapy and you want to have a baby in the future, speak with your doctor about storing your eggs or sperm before starting therapy.
Inflammation or scarring of the lungs (Rare side effect)	Consult your doctor <b>immediately</b> . It is advisable to stop smoking.
<b><u>Warning Signs</u></b> <ul style="list-style-type: none"> <li>• Persistent shortness of breath</li> <li>• Persistent cough</li> </ul>	

Side Effect	Management
Inflammation of bladder <b>Warning Signs</b> <ul style="list-style-type: none"> <li>Blood in the urine (urine may appear dark or pinkish)</li> <li>Painful urination</li> </ul>	Consult your doctor <b>immediately</b> . This usually stops after the medication is stopped.  Drink a good amount of water as advised by your doctor. Urinate frequently to prevent bladder toxicity.
Blood disorders <b>Warning Signs</b> <ul style="list-style-type: none"> <li>Unusual bleeding or bruising</li> <li>Lip or mouth ulcers with 'flu-like' symptoms</li> </ul> Do note that these symptoms may or may not appear.	Consult your doctor <b>immediately</b> .  Monitoring the effects of your new treatment is important for early detection of side effects.  For your safety, you need to do regular blood tests.
<ul style="list-style-type: none"> <li>Cancer               <ul style="list-style-type: none"> <li>Bladder cancer</li> <li>Blood cancer (higher risk with long-term use or higher continuous doses of Cyclophosphamide)</li> </ul> </li> </ul> <b>Warning Signs</b> <ul style="list-style-type: none"> <li>Blood in urine</li> <li>Weight loss</li> <li>Swollen lymph nodes</li> </ul>	Consult your doctor <b>immediately</b> .

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.

### What Check-Ups Do I Need While Taking Cyclophosphamide?

- You will require regular blood and urine tests for early detection of side effects.

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

- While on Cyclophosphamide, avoid:
  - Crowded places
  - Eating raw or undercooked food
  - Breastfeeding
- While on Cyclophosphamide, women must use reliable birth control measures and should NOT become pregnant. Similarly, men should also avoid fathering a child while on the medication.
- Women should avoid pregnancy and men should avoid fathering a child for at least 3 months after stopping Cyclophosphamide
- If you develop a fever, chills, persistent sore throat or other infections, **see a doctor immediately**. Cyclophosphamide may lower your immune response and cause some infections to become more severe. Inform all doctors whom you consult that you are on Cyclophosphamide.

### How Do I Store Cyclophosphamide?

- Cyclophosphamide should be stored in the original packaging and protected from light.
- Store it 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.

