

## PHARMACY

### Drug Information

# Cyclosporine

(Also Known as Ciclosporin)



### What is Cyclosporine?

- Cyclosporine (Ciclosporin) is an immunosuppressant which works by modifying the body's immune response. It is commonly used to treat autoimmune diseases such as Systemic Lupus Erythematosus (SLE) and psoriasis, as well as to prevent or treat organ rejection.

### How is Cyclosporine Taken?

- Consume the capsule immediately after removing it from the blister pack. Swallow the capsules whole with water. Do not break or chew the capsules.
- Take Cyclosporine with or after food, in 2 divided doses (12 hours apart from each dosage). Take it at the same time each day to keep the Cyclosporine level in your body consistent.
- Cyclosporine does not work immediately. Depending on the condition being treated, it may take weeks to months before you notice any benefit. It is therefore important that you take your medication regularly, or you may not receive any benefit at all.
- Do not stop taking Cyclosporine or change the dose unless advised by your doctor.
- Do not switch between the different brands of Cyclosporine as they are not interchangeable.

### 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. Never take a double dosage to make up for the missed dose.

### Are There any Dietary Restrictions That I Need to Follow?

- Do not take Cyclosporine with grapefruit or grapefruit juice because they can increase or change the medication level in the body.

## Can Cyclosporine be Taken with Other Medications?

- Cyclosporine can interact with many medications. The medications listed below (non-exhaustive) can increase or decrease the blood level of Cyclosporine in your body:
  - Antibiotics (e.g. Clarithromycin, Erythromycin, Rifampicin)
  - Anti-fungals (e.g. Fluconazole, Voriconazole, Itraconazole)
  - Anti-virals (e.g. Ritonavir, Telaprevir, Boceprevir)
  - Heart or blood pressure medications (e.g. Diltiazem, Verapamil)
  - Medications used to treat fits (e.g. Carbamazepine, Phenytoin)
  - Painkiller medications (e.g. Diclofenac, Naproxen, Mefenamic acid)
- It is important that you inform the doctor, pharmacist, nurse clinician or transplant coordinator about other medications – including over-the-counter medications, supplements and traditional/herbal remedies – that you are currently taking, as they may affect the blood level of Cyclosporine in your body.
- Check with your doctor before having any immunizations while taking Cyclosporine as they may not be as effective. Live vaccines such as MMR (Measles, Mumps and Rubella), OPV (Oral Polio Vaccine), yellow fever or BCG (Tuberculosis) should be avoided.

## What are the Important Side Effects of Cyclosporine?

- Cyclosporine can cause some side effects. Inform your doctor, pharmacist, nurse clinician or transplant coordinator if you experience the side effects below.
- Your doctor may order blood tests to check the Cyclosporine levels in your body and adjust the dose to minimise some of these side effects.

Side Effect	Management
Trembling, numbness and tingling sensation of hands and feet. Headache, tiredness, sensation of heat (or even burning) in the hands or feet	<ul style="list-style-type: none"> <li>• Improves as you get used to the medication.</li> <li>• Your doctor will order blood test to check the Cyclosporine level in your body and adjust the dose of the medication accordingly.</li> </ul>
Excessive growth of body and facial hair (hirsutism)	<ul style="list-style-type: none"> <li>• Discuss with your doctor if troublesome.</li> </ul>

Side Effect	Management
Nausea, vomiting, stomach pain, difficulty in passing motion, loose stools	<ul style="list-style-type: none"> <li>• Take the medication after food, at the same time every day (12 hours apart from each dosage).</li> </ul>
Gum tissue overgrowing and covering your teeth, inflammation and bleeding of the gums	<ul style="list-style-type: none"> <li>• Brush and floss your teeth regularly (paying particular attention to the base of the teeth) to avoid these gum problems.</li> <li>• Visit your dentist regularly to have your teeth checked and cleaned.</li> </ul>
High blood pressure, high blood sugar, high cholesterol	<ul style="list-style-type: none"> <li>• Check your blood pressure and blood sugar level regularly at home as instructed by your doctor.</li> <li>• Your doctor may prescribe or adjust your medication doses to manage these side effects.</li> </ul>
Skin reactions, photosensitivity (increased sensitivity to sunlight)  (These side effects are more common for those with psoriasis or atopic dermatitis)	<ul style="list-style-type: none"> <li>• Consult your doctor. These usually resolve readily on stopping treatment.</li> <li>• Stay out of direct sunlight between 10am and 3pm if possible. Wear long sleeve clothes or sunglasses. Apply sunblock to protect your skin. Do not use a sunlamp.</li> </ul>
Reduced kidney function or high potassium (one of the salt in your body) level	<ul style="list-style-type: none"> <li>• Limit intake of food that are high in potassium (e.g. dried or preserved fruits and vegetables, bananas, oranges, salt substitutes) unless instructed by your doctor.</li> <li>• Your doctor will check your kidney function and blood potassium level regularly.</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?**

- Cyclosporine reduces your body's ability to fight against infection, hence avoid crowded places and direct contact with any sick person while on Cyclosporine. Avoid consumption of raw or undercooked food. See a doctor immediately if you develop a fever or feel unwell. The doctor whom you consult should be informed that you are on Cyclosporine.
- It is important to inform your doctor if you intend to get pregnant or breastfeed while taking this medication.
- Cyclosporine may be used during pregnancy if the benefits outweigh risk, especially if there are no other better alternatives to control the underlying disease.

### **What Preparations Must be Taken Before Checking Cyclosporine Levels Ordered By Your Doctor?**

- Your doctor may order Cyclosporine Co (before dose is due) or C2 (2 hours after dose) level for monitoring.
- On the day your doctor has ordered to check your Cyclosporine Co level, withhold the morning dose of Cyclosporine. Cyclosporine Co level should be drawn within 15 minutes before or after the dose is due.
- For example, if you take Cyclosporine at 9am and 9pm, Cyclosporine Co level should be drawn between 8.45am – 9.15am for it to be accurate. You should omit the 9am Cyclosporine dose while awaiting the blood draw.
- Take your morning dose right after the blood test is done. Do not skip the dose completely.
- If your doctor ordered to check your Cyclosporine C2 level, then take the morning dose of Cyclosporine regularly at 9am and draw your blood 2 hours after the morning dose has been taken (e.g 11am). You may continue with the regular evening dose (9pm) of Cyclosporine after the blood level has been drawn.

### **How do I Store Cyclosporine?**

- 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.



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