



GENERIC NAME: Cyclosporine

BRAND NAME: Neoral

How it works:

- Cyclosporine is used to suppress the body's immune system in rheumatoid and psoriatic arthritis. It is also used to treat immune disorders of the eyes, lungs, muscles, nerves, and blood vessels.

Why take it?

- Your immune system, which normally helps to protect your body from infection and disease, is "out of order". Instead of protecting your body, your immune system is attacking it. Cyclosporine suppresses your immune system by reducing the inflammation process of your disease.

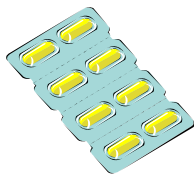
You are taking Cyclosporine:

- to reduce the signs and symptoms of inflammation
- to reduce or eliminate the amount of prednisone you are taking
- to improve the quality of your daily life

How quickly does it work?

- Cyclosporine should work within 2 - 3 months.

How do I take it?



- Cyclosporine is available in capsules of 25, 50, and 100 mg strength, and in a liquid suspension.
- The capsules are taken twice a day, 12 hours apart.
- It can be taken with or without food.
- There is some evidence to suggest that grapefruit juice may interfere with the absorption of Cyclosporine. Patients are advised **not to** drink grapefruit juice with the medication. No other juices cause this problem.



Monitoring:

- It is important to drink 1.5 liters of fluid a day (water, juice, milk) while on Cyclosporine. You may drink tea and coffee but, because of the caffeine content, tea and coffee do not count as part of the 1.5 liters.
- **If you forget to take your Cyclosporine**, wait until your next dose is due.
- Before starting Cyclosporine, you will be assessed by the doctors in the Cyclosporine Clinic. You are welcome to bring a family member or friend to that visit.
- Once you start on Cyclosporine, you will be seen either in the Cyclosporine Clinic or by your own specialist every 3 months.
- The clinic staff will monitor your blood pressure and blood tests each month, but your family doctor and specialists will continue to monitor your overall care.



Lab tests:



- Do blood tests (CBC, creatinine) every 4 weeks to monitor the benefit of taking Cyclosporin & for possible side effects.

Blood Pressure:



- Have your blood pressure checked monthly by your doctor or clinic nurse.
- Many extended health plans will re-imburse the cost of a home blood pressure machine with a doctor's prescription.

What about other medications?

Cyclosporine interacts with many drugs. Be sure to tell your doctor or clinic nurse about all the medications you are taking, including over-the-counter and natural remedies.

The following is a partial list of medications/supplements that may interfere with the effectiveness of cyclosporine:

- Heart & blood pressure medications
- Cholesterol lowering medications
- Antibiotics, antifungals and antivirals

- Anti-seizure medications
- Anti-depressants
- HIV protease inhibitors
- Gout medication
- Male or female hormones and anabolic steroids
- Echinacea
- St. John's Wort

Radiation and phototherapy:

- (UVP/UVA) should be avoided while taking Cyclosporine.

Over-the-counter medications:

- cold remedies, pain medication, cough syrup, and vitamins appear to be safe to take with Cyclosporine.

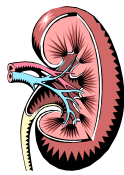
Side Effects:



Possible major side effects are:

Blood Pressure:

- Cyclosporine can increase your blood pressure. Your blood pressure will be checked each month. If there is a substantial increase in the reading, the dose of Cyclosporine may be adjusted or a blood pressure medication may be added.




Kidney Function:

- Cyclosporine can affect your kidney function. A simple blood test each month will check to ensure your kidney function is normal. If your kidney function is elevated, your Cyclosporine dose may be reduced or stopped until the test returns to normal.

Possible minor side effects are:

These side effects tend to last only a short period of time. These side effects require no treatment and are reversible when Cyclosporine is stopped.

- nausea, bloating, loose stools, abdominal cramps
- slight trembling of the hands
- tingling in the fingers, toes, mouth
- muscle or joint pain, cramping
- sensitivity to heat and cold

- mild headaches
- increased growth of fine hairs on the body
- tender or swollen gums 
- acne, oily skin
- fatigue
- edema in the legs or ankles
- mild depression or mood swings

Possible rare, serious side effects are:

Lymphoma:

- although very rare, cancers of the white blood cells (lymphomas) have occurred. These rare cases appear to be related to high doses of Cyclosporine. People taking Cyclosporine for autoimmune disease are on very low doses of the medication and if they follow the doctor's instructions, the risk of lymphoma appears to be virtually non-existent.



Liver Function:

- on rare occasions, Cyclosporine can affect the liver. Blood tests are performed each month to check liver function. If abnormalities occur, Cyclosporine is discontinued. Your liver function will return to normal once the medication has been stopped.

Managing side effects:



Contact your doctor or clinic staff:

- if you experience any of the above signs or symptoms.
- Side effects can occur anytime during treatment and are usually temporary. They are often related to the dosage of cyclosporin that you are taking.
- A decrease, or temporary withdrawal of cyclosporine and an increase in the frequency of blood testing may be required.
- You are welcome to call the clinic at any time with questions or concerns about your Cyclosporine therapy. It is important that clinic staff know if:
 - you are unable to drink 1.5 liters of fluid a day
 - you are having surgery
 - you have a change in medications
 - you have an infection, sore throat, fever, sores that

lasts more than a few days

- you are diagnosed with a new medical condition
- you become pregnant

Precautions:



Other conditions:

- You should not take cyclosporin if you have:
 - serious high blood pressure
 - kidney problems
 - cancer
 - gout

Pregnancy

- You may continue to take Cyclosporine during pregnancy. However, please advise your doctor if you are pregnant or planning a pregnancy.
- Males using Cyclosporine father normal children.



Breastfeeding

- Do not breastfeed your baby if you are taking Cyclosporine. The medication passes into the breast milk and could harm your baby.



Dental visits:

- Dental gum examinations are recommended every 6 months.

Vaccines

- The use of live vaccines should be avoided. Examples of live vaccines are measles, mumps, MMR vaccine, oral polio, chickenpox (varicella)
- Cyclosporine may make vaccines less effective. Consult the clinic before getting any vaccines or immunizations.
- Flu shots are generally safe with Cyclosporine.

Illness:

Active Infections

- The body maintains its ability to fight infections while on Cyclosporine.
- People with minor infections can continue to take the medication.
- People with serious infections are advised to stop Cyclosporine until the infection has cleared.



Surgery:



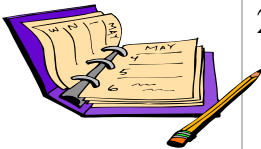
- Cyclosporine should be stopped 24 hours before surgery.
- Restart cyclosporine after surgery when you are able to eat and drink normally.
- Cyclosporine does not impact the healing process.

Storage:



- Store at temperatures between 15°- 25°C and should not be removed from the blister packs until taking a dose.

General medication considerations:



1. **Take your medication as instructed by your physician**
Medications are started at low dosages and increased slowly to decrease risk of side effects. Taking more than recommended increases this risk. Skipping doses will decrease the desired effect of the medication.



2. **Keep a diary.**
As a reminder, record when you take your medications & any reasons for changes or withdrawal of medications.
3. **Keep a medication list in your wallet.**
Record of all medications, vitamin/mineral & herbal supplements you are presently taking & any allergies you may have.

Disclaimer:

This information does not replace medical advice. Specific questions about medications should be discussed with your doctor, nurse or pharmacist.

Developed: November 2004

Last revised: August 2009 Renee Penway RN, Dr. A. Chalmers, Mary Pack Arthritis Program, VCH