



**For the Patient: Cyclosporine injection**  
Other names: SANDIMMUNE I.V.®

- **Cyclosporine** (syeh' kloe spor een) is a drug that may be used to treat certain types of cancer. It may also be used to suppress your immune system. It is a clear liquid that is injected into a vein.
- Tell your doctor if you have ever had an unusual or **allergic reaction** to cyclosporine or polyoxyethylated castor oil before receiving cyclosporine.
- A **blood test** may be taken before your treatment. The dose and timing of your treatment may be changed based on the test results and/or other side effects.
- Your doctor may tell you to **drink** extra fluids so that you will pass more urine. This will help prevent kidney problems.
- Many other drugs and natural health products such as lovastatin (MEVACOR®), digoxin (LANOXIN®), azithromycin (ZITHROMAX®), and St. John's Wort may **interact** with cyclosporine. Tell your doctor if you are taking these or any other drugs or natural health products as you may need extra blood tests or your dose may need to be changed. **Check** with your doctor or pharmacist before you start or stop taking any other drugs.
- The **drinking of alcohol** (in small amounts) does not appear to affect the safety or usefulness of cyclosporine.
- Cyclosporine may harm the baby if used during pregnancy. It is best to use **birth control** while being treated with cyclosporine. Tell your doctor right away if you or your partner becomes pregnant. Do not breast feed during treatment.
- **Tell** doctors, dentists, and other health professionals that you are being treated with cyclosporine before you receive any treatment from them.

#### Changes in blood counts

Cyclosporine may cause temporary changes in your blood counts. Your doctor will be following these changes carefully by performing blood tests. Adjustment of your treatment may be needed in certain circumstances.

BLOOD COUNTS	MANAGEMENT
<p>Normal white blood cells protect your body by fighting bacteria (germs) that cause infection. <b>When they are low, you are at greater risk of having an infection.</b></p>	<p>To help prevent infection:</p> <ul style="list-style-type: none"> <li>• Wash your hands often and always after using the bathroom.</li> <li>• Avoid crowds and people who are sick.</li> <li>• Call your doctor <b>immediately</b> at the first sign of an infection such as fever (over 100°F or 38°C by an oral thermometer), chills, cough, or burning when you pass urine.</li> </ul>
<p>Normal platelets help your blood to clot normally after an injury (e.g., cut). <b>When the platelet count is low, you may be more likely to bruise or bleed.</b></p>	<p>To help prevent bleeding problems:</p> <ul style="list-style-type: none"> <li>• Try not to bruise, cut, or burn yourself.</li> <li>• Clean your nose by blowing gently. Do not pick your nose.</li> <li>• Avoid constipation.</li> <li>• Brush your teeth gently with a soft toothbrush as your gums may bleed more easily.</li> </ul> <p>Some medications such as ASA (e.g., ASPIRIN®) or ibuprofen (e.g., ADVIL®) may increase your risk of bleeding.</p> <ul style="list-style-type: none"> <li>• Do not stop taking any medication that has been prescribed by your doctor (e.g., <b>ASA for your heart</b>).</li> <li>• For minor pain, try acetaminophen (e.g., TYLENOL®) first, but occasional use of ibuprofen may be acceptable.</li> </ul>

Side effects are listed in the following table in the order in which they may occur. Tips to help manage the side effects are included.

SIDE EFFECTS	MANAGEMENT
<p><b>Allergic reactions</b> may rarely occur. Signs of an allergic reaction may include flushing of the face and chest, fast heart beat, or breathing problems.</p> <p>This can occur immediately or several hours after receiving cyclosporine.</p>	<p>Tell your nurse if this happens while you are receiving cyclosporine or contact your oncologist <b>immediately</b> if this happens after you leave the clinic.</p>

SIDE EFFECTS	MANAGEMENT
<b>Pain or tenderness</b> may occur where the needle was placed.	Apply cool compresses or soak in cool water for 15-20 minutes several times a day.
<b>Skin rashes</b> may sometimes occur.	If itching is very irritating, call your doctor. Otherwise, be sure to mention it at your next visit.
<b>Diarrhea</b> may sometimes occur.	If diarrhea is a problem: <ul style="list-style-type: none"> <li>• Drink plenty of fluids.</li> <li>• Eat and drink often in small amounts.</li> <li>• Avoid high fibre foods as outlined in <i>Food Ideas to Help with Diarrhea During Chemotherapy</i>.*</li> </ul>
<b>Gums</b> sometimes become tender, swollen, or bleed.	Use good oral hygiene (brush and floss regularly) to help prevent problems with your gums. Contact your doctor if this problem occurs.
<b>Headache</b> may sometimes occur.	Take acetaminophen (e.g., TYLENOL®) every 4-6 hours if needed, to a maximum of 4 g (4000 mg) per day.
<b>Muscle or joint pain</b> may sometimes occur.	You may take acetaminophen (e.g., TYLENOL®) every 4-6 hours to a maximum of 4 g (4000 mg) per day for mild to moderate pain. Tell your doctor if the pain interferes with your activity.
<b>Hair loss</b> is rare with cyclosporine. If you lose hair, it will grow back once you stop treatment with cyclosporine. Colour and texture may change.	If hair loss is a problem, refer to <i>For the Patient: Hair Loss Due to Chemotherapy</i> .*
<b>Excessive or unwanted hair growth</b> may occur.	If hair growth is a problem, discuss with your doctor at your next appointment.
Increase in risk of <b>skin cancer</b> or other cancer.	<ul style="list-style-type: none"> <li>• Avoid excessive sun exposure. Refer to <i>Your Medication Sun Sensitivity and Sunscreens</i>* or the <i>BC Health Guide</i> for more information.</li> <li>• Report the following symptoms to your doctor: obvious change in wart or mole, sore that doesn't heal, unusual bleeding or discharge, unexplained lump, or unexpected change in bowel or bladder habits.</li> </ul>

SIDE EFFECTS	MANAGEMENT
<p><b>Increase in cholesterol or triglycerides</b> may sometimes occur.</p>	<p>Discuss this with your doctor if you have:</p> <ul style="list-style-type: none"> <li>• A history of heart disease.</li> <li>• High blood pressure.</li> <li>• High cholesterol or triglycerides.</li> </ul> <p>You may need to have your cholesterol level checked a few months after starting cyclosporine.</p>

**\*Please ask your chemotherapy nurse or pharmacist for a copy.**

**STOP TAKING CYCLOSPORINE AND SEE YOUR DOCTOR OR GET EMERGENCY HELP IMMEDIATELY IF YOU HAVE:**

- Signs of an **allergic reaction** (rare) soon after a treatment including dizziness, fast heart beat, face swelling, or breathing problems.
- Signs of an **infection** such as fever (over 100°F or 38°C by an oral thermometer), shaking chills; severe sore throat, productive cough (coughing up thick or green sputum); cloudy or foul smelling urine; painful, tender, or swollen red skin wounds or sores.
- Signs of **bleeding problems** such as black, tarry stools; blood in urine; pinpoint red spots on skin; extensive bruising.
- Signs of **heart problems** such as fast or uneven heartbeat, chest pain, chest pressure.
- **Seizures or loss of consciousness.**

**SEE YOUR DOCTOR AS SOON AS POSSIBLE (DURING OFFICE HOURS) IF YOU HAVE:**

- Signs of **anemia** such as unusual tiredness or weakness.
- Signs of **liver problems** such as yellow eyes or skin, white or clay-coloured stools.
- Signs of **kidney problems** such as lower back or side pain, swelling of feet or lower legs.
- Signs of **gout** such as joint pain and swelling.
- **Changes in eyesight.**
- Ringing in your ears or **hearing problems.**
- Increased **sore throat or mouth** that makes it difficult to swallow comfortably.
- Signs of **blood sugar changes** such as increased thirst or frequent urination.

**CHECK WITH YOUR DOCTOR IF ANY OF THE FOLLOWING CONTINUE OR BOTHER YOU:**

- Uncontrolled nausea, vomiting, abdominal discomfort, diarrhea, or changes in appetite.
- Headache or other pain not controlled with acetaminophen (e.g., TYLENOL®).
- Tremor or tingling in fingers or toes.
- Feelings of anxiety, confusion, depression or impaired concentration.
- Excessive breast swelling or soreness.
- Easy bruising or minor bleeding.

