

Lenalidomide

Names	The generic drug name is lenalidomide (len a lid' oh mide). The brand name is Revlimid®. There may be other names for this medication.
How is Lenalidomide Administered?	This medication comes as a capsule to take by mouth. Swallow the capsules whole, with plenty of water. Do not open, crush, or chew on the capsules. You can take it with or without food. Try to take it at around the same time every day.
Why Am I Taking Lenalidomide?	Lenalidomide treats multiple myeloma (cancer of the bone marrow), certain types of MDS (myelodysplastic syndrome), and mantle cell lymphoma – conditions in which the bone marrow produces misshapen, unhealthy blood cells.
How Does it Work?	<p>Targeted therapy is about identifying features of cancer cells that make them different from healthy cells. This information is used to create a targeted therapy to attack the cancer cells without damaging the normal cells, which hopefully means fewer side effects. Each type of targeted therapy works a little bit differently but all interfere with the ability of the cancer cell to grow, divide, repair and/or communicate with other cells. Lenalidomide is both an immunomodulatory agent and an anti-angiogenic agent.</p> <p>Lenalidomide's exact mechanism of action on cancer cells is not clear. Clinical studies suggest that lenalidomide may work in multiple ways and at multiple sites within the bone marrow to stop or slow the growth of cancer cells. It may act by inhibiting the growth of new blood vessels (antiangiogenesis) in tumors, enhancing the status of the immune system, or decreasing cytokine and growth factor production.</p>
What Should I Tell My Doctor Before I Begin Lenalidomide?	<p>Tell your doctor if you:</p> <ul style="list-style-type: none">• have ever had an allergic reaction to lenalidomide or thalidomide• are taking, or are planning on taking, digoxin• have, or have ever had, kidney or liver disease• are pregnant, breastfeeding, or plan to do either

This drug may interact with other medications or cause harmful side effects. Tell your doctor and pharmacist about all prescription or over-the-counter medications, vitamins, herbal or diet supplements that you are taking.

What Are Some Possible Side Effects?

- Low levels of white blood cells, red blood cells, and platelets, which can increase your risk for infection, fatigue, and bleeding
- Fatigue, weakness
- Diarrhea
- Rash, itching, dry skin

Less Common

- Constipation
- Nausea
- Sore throat, runny or stuffy nose
- Fever
- Muscle cramps, back pain, and/or general aches and pains
- Swelling of ankles or feet
- Dizziness
- Headache
- Poor appetite, vomiting

Note: A blood clot in the deep veins (DVT) or in the lungs (PE or pulmonary embolus) is a rare, but serious, side effect of this medication. ***Seek emergency care immediately if you have sudden chest pain and/or find it hard to breath.*** It may be signs of a PE.

If you develop symptoms of a DVT – leg or arm swelling, local redness, pain, or skin that is very warm to the touch – call your doctor immediately.

How Can I Manage These Side Effects?

- **Drink 2-3 quarts of water every day unless your doctor tells you to limit your fluids.** This is even more important on the days before and after you take lenalidomide. This will help flush the medications out and help prevent dehydration and constipation. Try to drink a variety of fluids to help provide the calories, sodium (salt), and other electrolytes your body needs. (check the labels).
- **Low white blood cell count:** To help avoid infections, stay away from crowds indoors and people with colds or other infections. Wash your hands often. Talk to your doctor before you have any vaccinations, such as a flu shot. Be on the lookout for any signs of infection (see “When to Call the Doctor”). Upper respiratory infections such as bronchitis and

How Can I Manage
These Side Effects?
(cont.)

pneumonia may occur while taking this medication.

- **Low platelet count:** Be careful when handling sharp objects. Stay away from situations where you can be bruised, cut, or injured. Use an electric razor.
- **Low red blood cell count/Fatigue:** Take rests during the day, limit your activities, and do an activity at a time of day when you feel a bit more energetic. Learn to ask for or accept help with chores.
- **Diarrhea:** If you have diarrhea, try eating small meals or snacks 5-6 times a day instead of 3 large meals. Avoid spicy, greasy, fried, and high fiber foods. You may also want to avoid dairy products (milk and cheese) and raw fruits and vegetables. Moderate/severe diarrhea can put you at risk for dehydration. If not treated, serious problems can occur. Loperamide (Imodium®) is available over the counter. Talk with your doctor or pharmacist about whether you can take this or some other medication for your diarrhea.
- **Rash/Skin care:** You may be more sensitive to sunlight, avoid sun exposure (and tanning beds). Use a sunblock with SPF 30 or higher that protects against both UVA and UVB rays when you are outdoors. Keep your neck, chest, and back covered. Wear sunglasses and protective clothes (brimmed hat, long sleeves, etc.) when in the sun. If you develop a rash, keep the area clean and dry and check with your doctor before using any creams or ointments on the area.
- **Constipation:** To help prevent constipation, add high fiber foods such as fruits, vegetables, and whole grains to your diet and, if possible, keep moving throughout the day. If you do not move your bowels in 2-3 days, you will need to take a laxative. A suggested laxative is Senna-S (contains senna plus docusate), which is available over the counter. If this is ineffective after 2 days, please notify the clinic.
- **Nausea/vomiting:** To help prevent nausea, avoid fried, spicy, and/or fatty foods and take your dexamethasone with food or milk. Eating small, frequent meals may help. Take anti-nausea medication as soon as you feel nauseous. It may also help to alternate which medications you take, depending on what works best for you. If you feel nauseous, try foods and drinks that are 'easy on the stomach' or made you feel better when you were sick in the past. These generally include bland foods, ginger ale, dry crackers, and toast.
- **Fever/headache:** Check with your doctor before using any medication or herbal product for this or any other side effect.

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- **Mouth care** is very important. Rinse your mouth with a mixture of ½ teaspoon of baking soda in 8 ounces of water after every meal and at bedtime. Brush your teeth and gums often with a soft toothbrush. (Soften it further by running it under warm water before brushing.) Avoid smoking, alcohol, and mouthwashes that contain alcohol.

When Should I Call the Doctor?

Call 911 or go to the nearest hospital emergency department if you have:

- **signs of an allergic reaction:** Shortness of breath, wheezing, difficulty breathing, swelling in your throat (feeling your throat is closing up), swelling of facial features, or hives
- **signs of a blood clot in the lung:** Sudden chest pain, shortness of breath

Call your doctor immediately if you have

- any sign of infection: **Fever of 100.4°F (38°C)** or higher, chills, cough, sore throat, pain or burning upon urination; redness or tenderness at any wound or skin irritation site
- unusual bruising or bleeding: Bleeding lasts more than 10-15 minutes or that causes dizziness; black or bloody stools; vomit that is bloody or that looks like coffee grounds; blood in your urine or mucus, unusually heavy menstrual bleeding, bloody nose or gums, or superficial bleeding into the skin that appears as a rash of pinpoint-sized reddish-purple spots (petechiae)
- any signs of a blood clot in the leg/arm (DVT): Leg or arm swelling; local redness, pain, or skin that is very warm to the touch in one leg or arm but not the other

What Else Should I know about Lenalidomide

- There is a high risk that lenalidomide will cause severe birth defects or even fetal death. A special program has been set up to avoid these outcomes. All patients must register with this program to get lenalidomide. Your doctor, nurse, or pharmacist will discuss the program.
- Tell your doctor if you do not understand how to use the birth control methods discussed, or if you may not be able to keep your appointments.
- Men must wear a latex condom every time he has sexual contact with a female who is able to become pregnant, even if he has had a vasectomy.
- Men should not donate sperm during or for 4 weeks after treatment.
- Keep all appointments with your doctor and the laboratory.
- Do not breastfeed while on this medication.
- Do not donate blood during treatment or for 4 weeks afterwards.
- For more information on lenalidomide, talk to your doctor or pharmacist.