

Melphalan

Names The generic drug name is melphalan (MEL-fa-lan). The brand name is Alkeran®. There may be other brand names for this medication.

What is it Used For? It is used to treat multiple myeloma (cancer of the bone marrow), ovarian cancer, neuroblastoma, rhabdomyosarcoma, and breast cancer. It may be used to treat other types of cancer as well.

How is it Administered? Melphalan is available as a tablet to be taken by mouth. Take it on an empty stomach – either 1 hour before eating or 2 hours after eating. Take it around the same time every day. It may be injected or infused into a vein (intravenous or IV) if the tablets can't be used.

How Does it Work? Cancer is a group of diseases in which abnormal cells grow out of control. Melphalan belongs to the group of chemotherapy medicines called alkylating agents. It works by interfering with the enzymes the cancer cells need to grow and divide (reproduce). Without the enzyme, the cells die. Melphalan has more effect on cancer cells than normal cells because cancer cells reproduce faster – but you may have side effects from its effects on normal cells in the body that reproduce quickly. These normal cells will eventually grow back and be healthy.

What Should I Tell My Doctor Before I Begin Receiving Melphalan? Tell your doctor if you:

- have ever had an allergic reaction to melphalan or if you have any allergies
- have take melphalan before and it did not work
- have recently received radiation therapy or chemotherapy
- have ever had kidney disease.
- are pregnant or breastfeeding

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

What Are Some Possible Side Effects

- Bone marrow depression: Low white blood cell, red blood cell, and platelet counts cause an increased risk of infection, fatigue, and/or bleeding
- Mild nausea and vomiting (may be more severe if melphalan is given at high dose.), loss of appetite, weight loss
- Mouth sores or blistering
- Diarrhea
- Infertility
- Hair loss
- Skin problems – blistering, or acne
- Fatigue, weakness
- Joint, muscle, back pain

How Can I Manage These Side Effects?

- Drink at least 2-3 quarts of fluid (especially water) every 24 hours, unless your doctor tells you otherwise. NOTE: Drinking alcoholic beverages should be kept to a minimum or avoided completely. Discuss this with your doctor.
- **Low white blood cell count/Prevent infection:** Stay away from crowds or people with colds, flu, or other infections. Talk to your doctor before you have any vaccinations. Wash your hands often.
- **Low red blood cells/Fatigue:** Take rests during the day when needed and limit your activities to the time of day when you have the most energy. Learn to ask for and accept help with household/daily chores.
- **Low platelet count/Prevent bleeding problems:** Be careful when handling sharp objects. Stay away from rough sports or other situations where you could be bruised or injured. Use an electric razor. Be careful when using a toothbrush or dental floss (your doctor may suggest other ways to clean your teeth and gums).
- **Nausea and vomiting:** To help prevent nausea, avoid fried, spicy, and/or fatty foods on the days you receive chemo and for 2-3 days afterwards. Eating small, frequent meals may help. 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. Ask your doctor about medication to help prevent or lessen nausea and vomiting. Take prescribed medication as soon as you feel nauseous.

- **Mouth care** is very important. To minimize mouth problems, rinse your mouth with a mixture of ½ tsp of baking soda in 8 oz 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). Avoid smoking, alcohol, and mouthwashes that contain alcohol.
- **Diarrhea:** Loperamide (Imodium®) is available over the counter. Your doctor will tell you if and when to take this medication. Do not take more than 8 tablets (16mg) in a 24-hour period. Call the clinic if not better within 24 hours.
- **Hair loss:** Some people cut their hair for comfort. Hair will grow back when treatment ends, though it may be a different color or texture. You can get a free wig and head covering in the Resource Center for Patients and Families, located in the Sunflower Café (cafeteria) on the 1st floor of the hospital. Open 9-5, Monday – Friday. Call **716-845-1729**.
- **Skin care:** Use sunscreen with SPF 15 or higher when you are outdoors, even for a short time. Wear wide-brimmed hats, long-sleeved shirts, and pants. Keep your neck, chest, and back covered. If you develop a rash, do not put anything on it unless it is approved by your doctor.
- **Birth defects/Infertility:** Do not have children during treatment or for a while afterwards. Use a reliable method of birth control. Barrier methods, such as condoms and diaphragms, are recommended. This drug may harm a fetus. This medication may interfere with the normal menstrual cycle (period) in women and stop sperm production in men and affect your ability to have children in the future. Talk to your doctor for further details.
- **Aches and pains:** Acetaminophen and other over the counter pain relievers may help with discomfort from fever, headache, and/or aches and pains **but talk to your doctor before taking any of these medications.**

When Should I Call the Doctor?

Call 911 or go to the nearest hospital emergency room if you have life threatening symptoms such as signs of a severe allergic reaction (anaphylaxis) such as trouble breathing, shortness of breath, wheezing, swelling or tingling in your throat, face, or tongue, grey/blue skin color, heart palpitations, nausea and vomiting, dizziness

Call your doctor immediately if you have:

- signs of infection: **Fever of 100.4°F (38°C) or higher**, chills, cough, sore throat, pain or burning upon urination; redness or tenderness along a vein, at an IV site, or at any other wound or skin irritation
- signs of an allergic reaction: itching, rash
- 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, spontaneous bleeding from gums or nose, or superficial bleeding into the skin (petechiae)

Call Your doctor as soon as possible if you have:

- nausea that is not relieved by prescribed medication or that prevents you from eating or drinking
- more than 4 episodes of vomiting or diarrhea within 24-hours
- fatigue so severe you can't take care of your own personal care
- yellowing of your skin or eyes
- painful mouth or throat that makes it difficult to eat or drink
- persistent loss of appetite or weight loss

What Else Should I
Know About
Melphalan?

- Missed a dose? Take the missed dose as soon as you remember it. However, if it is almost time for the next dose, skip the missed dose and continue your regular dosing schedule. Do not take a double dose to make up for a missed one. If you vomit shortly after taking melphalan, check with your doctor.
- Store this medicine in its original container, away from heat, humidity, and direct light.
- Keep all appointments with your doctor and the lab.
- After you stop taking melphalan, it may still produce some side effects that need attention. During this period, check with your doctor if you notice: cough or hoarseness, lower back pain, or painful urination accompanied by fever or chills; pinpoint red spots on skin; unusual bleeding or bruising including black, tarry stools or blood in the urine.
- When used in high doses for bone marrow transplants, melphalan may cause kidney damage (nephrotoxicity) or heart rhythm changes (arrhythmia).
- If you would like more information about melphalan, talk to your doctor or pharmacist.