

Busulfan (Busulfex®, Myleran®)

About This Drug

Busulfan is used to treat cancer. It is given orally (by mouth) or by the vein (IV).

Possible Side Effects

- Bone marrow suppression. This is a decrease in the number of white blood cells, red blood cells, and platelets. This may raise your risk of infection, make you tired and weak (fatigue), and raise your risk of bleeding.
- Nausea and vomiting (throwing up)
- Soreness of the mouth and throat. You may have red areas, white patches, or sores that hurt.
- Diarrhea (loose bowel movements)
- Decreased appetite (decreased hunger)
- Fever
- Pain in your abdomen
- Trouble sleeping (insomnia)
- Headache
- Blood sugar levels may change
- Electrolyte changes, especially potassium and magnesium
- Feeling nervous or worried (anxiety)

Note: Each of the side effects above was reported in 60% or greater of patients treated with busulfan. Not all possible side effects are included above.

Warnings and Precautions

- Severe bone marrow suppression, which can be life-threatening. Most often, a stem cell transplant is needed after therapy to prevent complications from severe bone marrow suppression.
- Seizure. Common symptoms of a seizure can include confusion, blacking out, passing out, loss of hearing or vision, blurred vision, unusual smells or tastes (such as burning rubber), trouble talking, tremors or shaking in parts or all of the body, repeated body movements, tense muscles that do not relax, and loss of control of urine and bowels. There are other less common symptoms of seizures. **If you or your family member suspects you are having a seizure, call 911 right away.** Medication may be given to decrease prevent and decrease your risk of seizures.

- Changes in your liver function and blockage of small veins in the liver, which can cause liver failure and be life-threatening.
- Fluid accumulating around your heart, which can be life-threatening.
- Changes and scarring of your lung tissues which may cause trouble breathing and be life-threatening. Sometimes these changes may not be seen for many years.
- Changes in your cells which may raise your risk of getting a second cancer.

Note: *Some of the side effects above are very rare. These side effects may be more severe if you are receiving high doses of this medication included in pre-transplant chemotherapy. If you have concerns and/or questions, please discuss them with your medical team.*

How to Take Your Medication

- **For oral busulfan:** Swallow the medicine as prescribed by your doctor.
- **Missed doses:** If you vomit or miss a dose of busulfan, contact your doctor for instructions. Do not take 2 doses at the same time and do not double up on the next dose.
- **Handling:** Wash your hands after handling your medicine, your caretakers should not handle your medicine with bare hands and should wear latex gloves.
- This drug may be present in the saliva, tears, sweat, urine, stool, vomit, semen, and vaginal secretions. Talk to your doctor and/or your nurse about the necessary precautions to take during this time.
- **Storage:** Store this medicine in the original container at room temperature in a dry place.
- **Disposal of unused medicine:** Do not flush any expired and/or unused medicine down the toilet or drain unless you are specifically instructed to do so on the medication label. Some facilities have take-back programs and/or other options. If you do not have a take-back program in your area, then please discuss with your nurse or your doctor how to dispose of unused medicine.

Treating Side Effects

- Manage tiredness by pacing your activities for the day.
- Be sure to include periods of rest between energy-draining activities.
- To decrease the risk of infection, wash your hands regularly.
- Avoid close contact with people who have a cold, the flu, or other infections.
- Take your temperature as your doctor or nurse tells you, and whenever you feel like you may have a fever.
- To help decrease the risk of bleeding, use a soft toothbrush. Check with your nurse before using dental floss.
- Be very careful when using knives or tools.
- Use an electric shaver instead of a razor.
- Drink plenty of fluids (a minimum of eight glasses per day is recommended).
- If you throw up or have loose bowel movements, you should drink more fluids so that you do not become dehydrated (lack of water in the body from losing too much fluid).
- If you have diarrhea, eat low-fiber foods that are high in protein and calories and avoid foods that can irritate your digestive tracts or lead to cramping.

- Ask your nurse or doctor about medicine that can lessen or stop your diarrhea.
- To help with nausea and vomiting, eat small, frequent meals instead of three large meals a day. Choose foods and drinks that are at room temperature. Ask your nurse or doctor about other helpful tips and medicine that is available to help stop or lessen these symptoms.
- Mouth care is very important. Your mouth care should consist of routine, gentle cleaning of your teeth or dentures and rinsing your mouth with a mixture of 1/2 teaspoon of salt in 8 ounces of water or 1/2 teaspoon of baking soda in 8 ounces of water. This should be done at least after each meal and at bedtime.
- If you have mouth sores, avoid mouthwash that has alcohol. Also avoid alcohol and smoking because they can bother your mouth and throat.
- To help with decreased appetite, eat small, frequent meals. Eat foods high in calories and protein, such as meat, poultry, fish, dry beans, tofu, eggs, nuts, milk, yogurt, cheese, ice cream, pudding, and nutritional supplements.
- Consider using sauces and spices to increase taste. Daily exercise, with your doctor's approval, may increase your appetite.
- If you have diabetes, keep good control of your blood sugar level. Tell your nurse or your doctor if your glucose levels are higher or lower than normal.
- If you are feeling anxious, talk to your nurse or doctor about it and they may be able to offer you some stress-relief techniques and/or support groups that may help relieve your anxiety.
- If you are having trouble sleeping, talk to your nurse or doctor on tips to help you sleep better.
- Keeping your pain under control is important to your well-being. Please tell your doctor or nurse if you are experiencing pain.

Food and Drug Interaction

- There are no known interactions of busulfan with food.
- This drug may interact with other medicines. Tell your doctor and pharmacist about all the prescription and over-the-counter medicines and dietary supplements (vitamins, minerals, herbs and others) that you are taking at this time. Also, check with your doctor or pharmacist before starting any new prescription or over-the-counter medicines, or dietary supplements to make sure that there are no interactions.

When to Call the Doctor

Call your doctor or nurse if you have any of these symptoms and/or any new or unusual symptoms:

- Fever of 100.4° F (38° C) or higher
- Chills
- Feeling dizzy or lightheaded
- Tiredness that interferes with your daily activities
- Headache that does not go away
- Symptoms of a seizure such as confusion, blacking out, passing out, loss of hearing or vision, blurred vision, unusual smells or tastes (such as burning rubber), trouble talking, tremors or shaking in parts or all of the body, repeated body movements, tense muscles that do not relax, and loss of

control of urine and bowels. **If you or your family member suspects you are having a seizure, call 911 right away.**

- Chest pain, especially when you lean forward or take deep breaths
- Cough
- Trouble breathing
- Easy bleeding or bruising
- Pain in your mouth or throat that makes it hard to eat or drink
- Nausea that stops you from eating or drinking and/or is not relieved by prescribed medicines
- Throwing up more than 3 times a day
- Diarrhea, 4 times in one day or diarrhea with lack of strength or a feeling of being dizzy
- Pain in your abdomen that does not go away
- Lasting loss of appetite or rapid weight loss of five pounds in a week
- Signs of possible liver problems: dark urine, pale bowel movements, bad stomach pain, feeling very tired and weak, unusual itching, or yellowing of the eyes or skin
- Pain that does not go away or is not relieved by prescribed medicine
- Abnormal blood sugar
- Unusual thirst, passing urine often, headache, sweating, shakiness, irritability
- Trouble falling or staying asleep
- If you think you may be pregnant or may have impregnated your partner

Reproduction Warnings

- **Pregnancy warning:** This drug can have harmful effects on the unborn baby. Women of childbearing potential should use effective methods of birth control during your cancer treatment and for 6 months after treatment. Men with female partners of childbearing potential should use effective methods of birth control during your cancer treatment and for 3 months after your cancer treatment. Let your doctor know right away if you think you may be pregnant or may have impregnated your partner.
- In women, menstrual bleeding may become irregular or stop while you are getting this drug. Do not assume that you cannot become pregnant if you do not have a menstrual period.
- **Breastfeeding warning:** It is not known if this drug passes into breast milk. Women should not breastfeed during treatment this drug could enter the breast milk and cause harm to a breastfeeding baby.
- **Fertility warning:** In men and women both, this drug may affect your ability to have children in the future. Talk with your doctor or nurse if you plan to have children. Ask for information on sperm or egg banking.

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