PATIENT & CAREGIVER EDUCATION

Busulfan

This information from UpToDate® Lexidrug™ explains what you need to know about this medication, including what it's used for, how to take it, its side effects, and when to call your healthcare provider.

Brand Names: US

Busulfex; Myleran

Brand Names: Canada

Myleran; PMS-Busulfan

Warning

All products:

- This drug may lower the ability of the bone marrow to make blood cells that the body needs. If blood cell counts get very low, this can lead to bleeding problems, infections, or anemia. If you have questions, talk with the doctor.

Injection:

- This drug is used as part of a treatment plan that includes a stem cell transplant. The stem cell transplant will help to prevent possible deadly health problems. Talk with your child's doctor.

What is this drug used for?

- It is used before bone marrow or stem cell transplant.
- It is used to treat a type of leukemia.
- It may be given to your child for other reasons. Talk with the doctor.

What do I need to tell the doctor BEFORE my child takes this drug?

- If your child is allergic to this drug; any part of this drug; or any other drugs, foods, or substances. Tell the doctor about the allergy and what signs your child had.

If your child is breast-feeding a baby:

- Be sure your child does not breast-feed a baby while taking this drug.

This drug may interact with other drugs or health problems.

Tell the doctor and pharmacist about all of your child's drugs (prescription or OTC, natural products, vitamins) and health problems. You must check to make sure that it is safe to give this drug with all of your child's other drugs and health problems. Do not start, stop, or change the dose of any drug your child takes without checking with the doctor.

What are some things I need to know or do while my child takes this drug?

All products:

- Tell all of your child's health care providers that your child is taking this drug. This includes your child's doctors, nurses, pharmacists, and dentists.
- Have your child's blood work and other lab tests checked as you have been told by the doctor.
- Talk with the doctor before your child gets any vaccines. Use of some vaccines with this drug may either raise the chance of very bad infection or

make the vaccine not work as well.

- Your child may bleed more easily. Make sure your child is careful and avoids injury. Be sure your child has a soft toothbrush.
- Your child may have more chance of getting infections. Have your child wash hands often. Avoid crowds and people with infections, colds, or flu.
- Other types of cancer may rarely happen later in life.
- This drug may raise the chance of seizures in some people, including people who have had seizures in the past. Talk to the doctor to see if your child has a greater chance of seizures while taking this drug.
- A very bad and sometimes deadly heart problem has happened with some people taking this drug. Most of the time, stomach pain and throwing up happened before the heart problem. Talk with the doctor.
- People treated with this drug may go through menopause at a younger age than normal. Talk with the doctor.
- This drug may affect fertility. Fertility problems may lead to not being able to get pregnant or father a child. This may go back to normal but sometimes it may not. If you have questions, talk with your doctor.

If your child is or may be sexually active:

- This drug may cause harm to the unborn baby if your child takes it during pregnancy.

Injection:

- If your child may become pregnant, have your child use birth control while taking this drug and for 6 months after the last dose. If your child gets pregnant, call the doctor right away.
- If your child's sex partner may become pregnant, have them use birth control while taking this drug. They will also need to use birth control for 3 months after the last dose unless you have been told otherwise. Be sure you know how long they need to use birth control. If your child's partner gets pregnant, call the doctor right away.

Tablets:

- If your child may become pregnant, have your child use birth control while taking this drug. If your child gets pregnant, call the doctor right away.
- If your child's sex partner may become pregnant, they may need to use birth control while your child takes this drug. Talk with the doctor to see if your child needs to use birth control. If your child's partner gets pregnant, call the doctor right away.

What are some side effects that I need to call my child's doctor about right away?

WARNING/CAUTION: Even though it may be rare, some people may have very bad and sometimes deadly side effects when taking a drug. Tell your child's doctor or get medical help right away if your child has any of the following signs or symptoms that may be related to a very bad side effect:

All products:

- Signs of an allergic reaction, like rash; hives; itching; red, swollen, blistered, or peeling skin with or without fever; wheezing; tightness in the chest or throat; trouble breathing, swallowing, or talking; unusual hoarseness; or swelling of the mouth, face, lips, tongue, or throat.
- Signs of infection like fever, chills, very bad sore throat, ear or sinus pain, cough, more sputum or change in color of sputum, pain with passing urine, mouth sores, or wound that will not heal.
- Signs of bleeding like throwing up or coughing up blood; vomit that looks like coffee grounds; blood in the urine; black, red, or tarry stools; bleeding from the gums; abnormal vaginal bleeding; bruises without a cause or that get bigger; or bleeding you cannot stop.
- Feeling very tired or weak.
- Severe stomach pain.
- Severe upset stomach or throwing up.
- Chest pain.

- Seizures.
- Change in eyesight.
- Some people have had lung problems with this drug. Sometimes, this has been deadly. Call your child's doctor right away if your child has signs of lung problems like shortness of breath or other trouble breathing, cough that is new or worse, or fever.
- Liver problems have happened with this drug. Sometimes, these have been deadly. Call the doctor right away if your child has signs of liver problems like dark urine, tiredness, decreased appetite, upset stomach or stomach pain, light-colored stools, throwing up, or yellow skin or eyes.

If your child has menstrual periods:

- No menstrual period.

Injection:

- Signs of high blood sugar like confusion, feeling sleepy, unusual thirst or hunger, passing urine more often, flushing, fast breathing, or breath that smells like fruit.
- Signs of electrolyte problems like mood changes; confusion; muscle pain, cramps, or spasms; weakness; shakiness; change in balance; an abnormal heartbeat; seizures; loss of appetite; or severe upset stomach or throwing up.
- Signs of high blood pressure like very bad headache or dizziness, passing out, or change in eyesight.
- Depression.
- A fast heartbeat.
- Swelling.
- Call the doctor right away if your child has signs of a blood clot like chest pain or pressure; coughing up blood; shortness of breath; swelling, warmth, numbness, change of color, or pain in a leg or arm; or trouble speaking or swallowing.

Tablets:

- Signs of a weak adrenal gland like a severe upset stomach or throwing up, severe dizziness or passing out, muscle weakness, feeling very tired, mood changes, decreased appetite, or weight loss.
- Enlarged breasts.
- Muscle weakness.

What are some other side effects of this drug?

All drugs may cause side effects. However, many people have no side effects or only have minor side effects. Call your child's doctor or get medical help if any of these side effects or any other side effects bother your child or do not go away:

Tablets:

- Dry mouth, eyes, skin, or lips.
- Change in color of skin.
- Hair loss.

Injection:

- Dry mouth.
- Feeling dizzy, tired, or weak.
- Trouble sleeping.
- Headache.
- Anxiety.
- Back pain.
- Runny nose.
- Mouth irritation or mouth sores.
- Irritation or swelling where the shot was given.
- Stomach pain or heartburn.

- Constipation, diarrhea, upset stomach, throwing up, and decreased appetite are common with this drug. If these happen, talk with the doctor about ways to lower these side effects. Call the doctor right away if any of these effects bother your child, do not get better, or are severe.

These are not all of the side effects that may occur. If you have questions about side effects, call your child's doctor. Call your child's doctor for medical advice about side effects.

You may report side effects to your national health agency.

How is this drug best given?

Give this drug as ordered by your child's doctor. Read all information given to you. Follow all instructions closely.

Tablets:

- Give this drug at the same time of day.
- Keep giving this drug to your child as you have been told by your child's doctor or other health care provider, even if your child feels well.
- Have your child drink lots of noncaffeine liquids every day unless told to drink less liquid by your child's doctor.

Injection:

- It is given as an infusion into a vein over a period of time.
- Other drugs may be given before this drug to help avoid side effects.

What do I do if my child misses a dose?

Tablets:

- Give a missed dose as soon as you think about it.
- If it is close to the time for your child's next dose, skip the missed dose and go back to your child's normal time.
- Do not give 2 doses at the same time or extra doses.

Injection:

- Call your child's doctor to find out what to do.

How do I store and/or throw out this drug?

Tablets:

- Store at room temperature in a dry place. Do not store in a bathroom.

Injection:

- If you need to store this drug at home, talk with your child's doctor, nurse, or pharmacist about how to store it.

All products:

- Keep all drugs in a safe place. Keep all drugs out of the reach of children and pets.
- Throw away unused or expired drugs. Do not flush down a toilet or pour down a drain unless you are told to do so. Check with your pharmacist if you have questions about the best way to throw out drugs. There may be drug take-back programs in your area.

General drug facts

- If your child's symptoms or health problems do not get better or if they become worse, call your child's doctor.
- Do not share your child's drug with others and do not give anyone else's drug to your child.
- Some drugs may have another patient information leaflet. If you have any questions about this drug, please talk with your child's doctor, nurse, pharmacist, or other health care provider.
- If you think there has been an overdose, call your poison control center or get medical care right away. Be ready to tell or show what was taken, how much, and when it happened.

Consumer Information Use and Disclaimer

This generalized information is a limited summary of diagnosis, treatment, and/or medication information. It is not meant to be comprehensive and should be used as a tool to help the user understand and/or assess potential diagnostic and treatment options. It does NOT include all information about conditions, treatments, medications, side effects, or risks that may apply to a specific patient. It is not intended to be medical advice or a substitute for the medical advice, diagnosis, or treatment of a health care provider based on the health care provider's examination and assessment of a patient's specific and unique circumstances. Patients must speak with a health care provider for complete information about their health, medical questions, and treatment options, including any risks or benefits regarding use of medications. This information does not endorse any treatments or medications as safe, effective, or approved for treating a specific patient. UpToDate, Inc. and its affiliates disclaim any warranty or liability relating to this information or the use thereof. The use of this information is governed by the Terms of Use, available at https://www.wolterskluwer.com/en/know/clinical-effectiveness-terms.

Last Reviewed Date

2026-01-27

Copyright

© 2026 UpToDate, Inc. and its affiliates and/or licensors. All rights reserved.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

Busulfan - Last updated on December 12, 2022
All rights owned and reserved by Memorial Sloan Kettering Cancer Center