PATIENT & CAREGIVER EDUCATION

Cyclophosphamide

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

Frindovyx

Brand Names: Canada

Procytox

What is this drug used for?

- It is used to treat cancer.
- It is used to treat nephrotic syndrome.
- 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 has any of these health problems: Certain bone marrow problems (low white blood cell, platelet, or red blood cell count) or trouble passing urine (like urinary tract blockage).

If your child is breast-feeding a baby:

- Be sure your child does not breast-feed a baby while taking this drug and for 1 week after the last dose.

This is not a list of all drugs or health problems that interact with this drug.

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 avoid tasks or actions that call for alertness or clear eyesight until you see how this drug affects your child. These are things like riding a bike, playing sports, or using items such as scissors, lawnmowers, electric scooters, toy cars, or motorized vehicles.
- 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.
- 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. Some infections have been severe and even deadly. If you have questions, talk with the doctor.
- 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.
- New types of cancer have happened in people taking this drug. If you have questions, talk with the doctor.
- This drug may affect fertility. Fertility problems may lead to your child not being able to get pregnant or father a child later in life. This may go back to normal but sometimes it may not. Talk with your child's doctor.
- If your child is of childbearing age, a pregnancy test will need to be done before starting this drug to make sure your child is not pregnant.

If your child has menstrual periods:

- Menstrual periods may stop during treatment with this drug. This may not go back to normal. People treated with this drug may go through menopause at a younger age than normal. If you have questions, talk with the doctor.

If your child is or may be sexually active:

- This drug may cause harm to the unborn baby or loss of the unborn baby if your child takes it during pregnancy.
- If your child may become pregnant, birth control must be used while taking this drug and for 12 months after your child's last dose. If your child gets pregnant, call the doctor right away.
- If your child's sex partner may become pregnant, birth control must be used while taking this drug and for several months after the last dose. Be sure your child knows how long to use birth control. If your child's partner gets pregnant, call the doctor right away.

Injection:

- Some products have alcohol in them. Talk with the doctor.

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:

- 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. Rarely, some allergic reactions have been deadly.
- 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.
- Signs of kidney problems like unable to pass urine, change in how much urine is passed, blood in the urine, or a big weight gain.
- Feeling very tired or weak.
- Dizziness or passing out.
- A wound that does not heal.
- Change in eyesight.
- Heart problems like heart failure have happened in people taking this drug. Sometimes, this has been deadly. Call your child's doctor right away if your child has chest pain or pressure, an abnormal heartbeat, shortness of breath, a big weight gain, or swelling in the arms or legs.
- Severe and sometimes deadly urinary tract problems like hemorrhagic cystitis have happened with this drug. Call the doctor right away if there is blood in the urine or pain when passing urine.

- 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.
- 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.
- Low sodium levels and a health problem called syndrome of inappropriate antidiuretic hormone (SIADH) secretion have happened with this drug. Tell the doctor right away if your child has headache, trouble focusing, memory problems, feeling confused, weakness, muscle spasms or cramps, seizures, or change in balance. Very low sodium levels can be life-threatening, leading to seizures, passing out, trouble breathing, or death.

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:

- Hair loss.
- Change in color of skin.
- Change in nails.
- Stomach pain.
- Diarrhea, throwing up, upset stomach, and decreased appetite are common with this drug. If these happen, talk with your child's doctor about ways to lower these side effects. Call your child's 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.

All oral products:

- Give this drug with or without food.
- Wear gloves when touching this drug.
- Have your child swallow whole. Do not let your child chew, break, or crush.
- Have your child pass urine often. Your child needs to empty the bladder often. Having your child drink lots of liquids will help.
- Have your child drink lots of noncaffeine liquids every day unless told to drink less liquid by your child's doctor.
- Give in the morning if giving once a day. Do not give it at night unless told to do so by the doctor.

Capsules:

- Do not open the capsules.
- If the capsule is opened or broken, do not touch the contents. If the contents are touched or they get in the eyes, wash hands or eyes right away.

Tablets:

- If the tablet is crushed or broken, do not touch the contents. If you do touch the contents or get it in your eyes, wash hands or eyes right away.

Injection:

- It is given as an infusion into a vein over a period of time.
- Have your child pass urine often. Your child needs to empty the bladder often. Having your child drink lots of liquids will help.

- Have your child drink lots of noncaffeine liquids every day unless told to drink less liquid by your child's doctor.

What do I do if my child misses a dose?

All oral products:

- 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?

All oral products:

- 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.

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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.

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