

Hydroxyurea for Sickle Cell Disease Treatment

What is Hydroxyurea (hye-drox-ee-ure-EE-a) and how does it work?

Hydroxyurea is a medicine used to reduce the problems caused by sickle cell disease. Other names for this drug are Droxia and Hydrea. People with sickle cell disease have sickle-shaped red blood cells that can block blood flow. Hydroxyurea increases a type of hemoglobin, called fetal hemoglobin that makes the red blood cells bigger and helps them stay rounder and more flexible.

Hydroxyurea is also used to treat certain types of cancer. The dose of Hydroxyurea is different based on the health condition it is being used to treat.

Why is Hydroxyurea helpful in treating sickle cell disease?

- Research has shown that taking Hydroxyurea for sickle cell disease lowers the number of:
 - ▶ Acute chest syndrome events
 - ▶ Pain crises
 - ▶ Blood transfusions
 - ▶ Trips to the hospital
- Hydroxyurea may also help prevent or slow down damage to your organs.
- Hydroxyurea takes time to work. Do your best to take this medicine for at least one year.

This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.

What should I tell my doctor before taking this medicine?

Talk to your doctor about the following:

- All the medicines/pills you take, including:
 - ▶ Medicines ordered by any of your doctors
 - ▶ Herbal supplements
 - ▶ Vitamins
 - ▶ Over-the-counter medicines
- **If you are pregnant, planning to become pregnant, or breastfeeding.** This medicine can cause birth defects and should not be taken by women who are pregnant or planning to become pregnant.
- **This medicine should not be taken by men who are planning a pregnancy with their partner.** Hydroxyurea can also lower the sperm count in men. It is not known how long it takes the sperm to recover after stopping Hydroxyurea.
- Your doctor will talk with you about the importance of using birth control while you are taking this medicine and for a period of time after your treatment ends.

How do I take this medicine?

- This medicine is a capsule that you take by mouth. Your doctor will tell you how much and when you should take this medicine. This medicine needs to be taken as ordered by your doctor to work. **It is important to talk to your doctor before you stop taking this medicine.**
- Take this medicine at the same time each day. If you miss a dose, wait until it is time for your next dose. Skip the missed dose. **Do not double up on doses.**
- Swallow whole; do not break, chew, or open capsules.
- Keep this medicine away from children and **do not** share it with anyone.
- Wash your hands after touching medicine.
- Bring outdated medicine or extra medicine to your clinic or pharmacy for disposal. **Do not** flush the capsules down the toilet or throw them in the trash.

- While you are taking this medicine, your doctor will check your blood work. When you start this medicine, your doctor may change your dose a few times to make sure you are getting the dose that works best for you.
- It is important to have your blood drawn and keep all your doctor appointments while you are on this medicine. Always bring a list of your current medicines with you to your doctor appointments.

What are the side effects of this medicine?

Everyone responds differently to treatment. Most people with sickle cell disease who take Hydroxyurea have few or no side effects. Most side effects are mild.

Some of the more common side effects of this medicine are:

- Nausea (take this medicine with food or at bedtime to help reduce nausea)
- Thinning hair or mild hair loss
- Fingernails or toenails may turn darker in color

Why do I need to have my blood checked?

Hydroxyurea can lower the number of certain types of cells in your blood. It is important to have your blood cell counts checked regularly while taking Hydroxyurea. When you first start taking Hydroxyurea, you will need your blood counts checked every 2 to 4 weeks.

The blood test will check for the following:

- **Hemoglobin:** the protein that carries oxygen in the red blood cells. Hydroxyurea works to increase your hemoglobin level.
- **Mean cell volume:** the size of your red blood cells. Hydroxyurea works to make the size of the red blood cell bigger.
- **Anemia:** a lower than normal amount of red blood cells.
- **Thrombocytopenia:** a lower than normal amount of platelets in the blood.
- **Leukopenia:** a lower than normal amount of white blood cells, or leukocytes.
- **Neutropenia:** a lower than normal amount of a type of white blood cell, called neutrophils.

When should I call my doctor?

You should call your doctor **right away** if you have any of the following signs or symptoms:

- Fever of 100.4 degrees Fahrenheit (38 degrees Celsius) or higher
- Dark colored urine
- Blood in your urine
- Vomiting
- Bleeding
- Sores in your mouth
- Shortness of breath
- Cough
- Rash

Is there anything else I should know about this medicine?

- If you are thinking about starting a family, talk to your doctor about how to safely stop this medicine **before** you try to become pregnant.
- You should drink 8 to 10 cups of non-caffeinated fluid each day while taking this medicine to stay hydrated.