



# HYDROXYUREA (Hydrea)

## **WHAT IS HYDROXYUREA?**

Hydroxyurea (Hydrea) is a drug that was tested as part of antiretroviral therapy (ART). It is manufactured by Bristol-Myers Squibb. Hydroxyurea is sometimes referred to as HU.

Hydroxyurea was approved for use against cancer. It also works against sickle cell anemia. Hydroxyurea has not been approved by the FDA for use against HIV.

Hydroxyurea blocks an enzyme produced by human cells. This enzyme makes building blocks used by cells that are multiplying. Cancer cells multiply very quickly, so when hydroxyurea blocks this enzyme, the cancer grows more slowly.

Hydroxyurea reduces the activation of the immune system. It was once studied as part of HIV treatment, and found to be ineffective and increased the risk of toxicity.

## **WHO SHOULD TAKE HYDROXYUREA?**

**Hydroxyurea is not recommended for HIV treatment.** Hydroxyurea has been studied in combination with the drugs ddI and d4T. HU reduces gains in CD4 cells, increases ddI's side effects, and can cause serious birth defects. It was studied due to its ability to intensify the effects of other medications. However, its side

effects appear to outweigh its benefits for people with HIV.

## **HOW IS HYDROXYUREA TAKEN?**

Hydroxyurea is available in 500 mg tablets. The most common doses studied in HIV were 1 gram taken once a day, or 500 mg taken twice a day.

## **WHAT ARE THE SIDE EFFECTS?**

The most serious side effects seen with hydroxyurea are pancreatitis and lactic acidosis that caused some deaths. Hydroxyurea may cause nausea, vomiting, and diarrhea. It can also lead to weight gain, hair loss, and changes in skin coloring. HU may cause birth defects, so pregnant women should not take hydroxyurea. It can also damage the bone marrow. This can result in anemia (a drop in the number of red blood cells) or neutropenia (a drop in the number of white blood cells).

Hydroxyurea increases the risk of peripheral neuropathy. See Fact Sheet 555 for more information on neuropathy.

## **HOW DOES HYDROXYUREA REACT WITH OTHER DRUGS?**

Hydroxyurea was sometimes prescribed with reverse transcriptase inhibitors such as

ddI or d4T. Hydroxyurea intensifies the side effects of ddI.

**Hydroxyurea's side effects may be worse** if taken with AZT, because both drugs can damage the bone marrow.

## **THE BOTTOM LINE**

Hydroxyurea is used to reduce the activation of the immune system. It slows the growth of some cancers. HU is not recommended for HIV treatment.

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