

Opinion Article

## Effect of Hepatitis B Virus Infections and its Renal Safety of Adefovir Dipivoxil

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## ABOUT THE STUDY

Adefovir is a prescription drug used to treat (chronic) "hepatitis B virus infections". It is a nucleotide analog reverse transcriptase inhibitor that is orally administered. It can be prescribed as the pivotal prodrug adefovir dipivoxil. Adefovir Dipivoxil drug is used to treat chronic viral infection of the liver (hepatitis B) in people over the age of 12. It works by slowing the growth of the virus and helping to reduce the amount of virus in your body. This is no cure for hepatitis B but can prevent the transmission of hepatitis B to others. This drug is a nucleotide analog.

Stopping adefovir can exacerbate hepatitis. This is most likely to occur within the first 3 months of stopping adefovir. Be careful not to miss doses or run out of adefovir. If you experience any of the following symptoms like extreme tiredness, weakness, nausea, vomiting, loss of appetite, yellowing of the skin or eyes, dark coloreds urine, light-colored bowel movements, and muscle or joint pain, after stopping to take adefovir immediately consult the health care professionals for better and fast recovery. Adefovir may cause kidney damage and also if HIV or AIDS is not being treated with medications and start using adefovir, HIV infection may become difficult to treat. Adefovir, when used alone or in combination with other antiviral medications, can cause serious or life-threatening damage to the liver and a condition called lactic acidosis (a build-up of acid in the blood). The risk will develop lactic acidosis may be higher in a woman if they are overweight, or if you have been treated with medications for Hepatitis B Virus (HBV) infection for a long time. There are some side effects of Adefovir like confusion, unusual bleeding or bruising, yellowing of the skin or eyes, dark-colored urine, lightcolored bowel movements, difficulty breathing, stomach pain or swelling, nausea, vomiting, unusual muscle pain, loss of appetite for at least a few days, lack of energy, flu-like symptoms, itching, feeling cold, especially in the arms or legs, dizziness or light headedness, fast or irregular heartbeat, or extreme weakness or tiredness.

Adefovir dipivoxil is a prodrug of adefovir. Adefovir is an acyclic nucleotide analog of adenosine monophosphate that is phosphorylated to the active metabolite adefovir diphosphate by cellular kinases. Adefovir diphosphate competes with the natural substrate deoxyadenosine triphosphate and, after being incorporated into viral DNA, inhibits HBV DNA polymerase (reverse transcriptase) by terminating the DNA strand. The usual Pediatric dose of chronic hepatitis B for 12 years and older is 10 mg orally once a day, and Treatment duration is optimal duration has not been established. HEPSERA is available as a tablet. Each tablet contains 10 mg of adefovir dipivoxil. The tablets are white, with "10" and "GILEAD" on one side and a stylized figure of the liver on the other side debossed. They are packaged as follows: A bottle of 30 tablets (NDC 6195805011) containing a desiccant (silica gel) closed in a child resistance closure. Do not use if the bottle opening seal is broken or missing. In patients with HBeAg-positive chronic hepatitis B, daily administration of 10 mg or 30 mg of adefovir dipivoxil for 48 weeks improves liver histology, lowers serum HBV-DNA and alanine aminotransferase levels, and increases HBeAg antibody seroconversion was seen. The 10 mg dose has a profile of risks and benefits suitable for long-term treatment. No adenovirusrelated resistance mutations have been identified in the HBV-DNA polymerase gene.

Adefovir comes as a tablet to take through the mouth. It is usually taken once a day with or without taking food. Take adefovir at around the same time every day. Do not take it more or less, or take it more often than instructed by the doctor. If you remember the day you missed a dose, take the missed dose immediately. However, if you have not forgotten by the next day, do not take the forgotten dose, skip the dose, and take the missed dose during normal dosing time. Do not take Adefovir multiple times on the same day. Do not take two doses to make up for the missed dose. Do not let anyone else take your medication.

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