



Hepatitis B Virus Infections

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Hepatitis B virus is the second most common cause of chronic viral liver infection in the United States. The Center for Disease Control and Prevention (CDC) estimates that 1.25 million Americans are chronically infected with Hepatitis B virus, and that every year 2,000-4,000 of those individuals die of liver failure or liver cancer caused by their chronic infection. Overall, 15-25% of individuals chronically infected by Hepatitis B virus eventually die of liver-related disease. While those statistics are sobering, the good news is that Hepatitis B virus prevention efforts are effective and that medical therapies for treating chronic Hepatitis B infections are steadily improving.

Hepatitis B virus (HBV) is more contagious than the human immunodeficiency virus (HIV) or Hepatitis C virus (HCV). While the common modes of Hepatitis B virus infection include sex and intravenous drug use, individuals who have less intimate contact with Hepatitis B carriers, such as household contacts and daycare and early elementary school aged playmates, are also at risk of acquiring Hepatitis B virus infections. In addition to blood, semen and vaginal fluid, Hepatitis B virus is found in sweat, saliva, and breast milk. Exchange of these less intimate bodily fluids likely accounts for cases of new Hepatitis B infection not associated with sex or intravenous drug use. Diagnosis of an acute hepatitis B infection (fever, nausea/vomiting, jaundice) in outpatient clinics and emergency departments is becoming relatively rare in the United States, with fewer than 10,000 cases of acute HBV infection reported annually.

In 1991 a vaccine for preventing Hepatitis B infection was approved for use in the United States. Since that time the number of new infections has fallen from an annual level of roughly 200,000 new infections every year to its current level of about 40,000 new infections per year. Current recommendations are that all children 0-18 years of age be vaccinated with one of the two available Hepatitis B vaccines. Newborns are vaccinated prior to going home from the hospital. In addition to children, the vaccine is recommended for adults who would like to be vaccinated, are sexually active but not in a monogamous relationship, are household contacts of an individual with chronic Hepatitis B infection, have kidney problems requiring (or likely to require) dialysis, all healthcare providers and workers in chronic institutions (home for disabled, nursing homes, prisons), and travelers to countries with high rates of Hepatitis B infection.

Of all the strategies available for addressing the problems caused by Hepatitis B virus infections, vaccination has been demonstrated to be the safest and most cost effective intervention. To address scientifically-unfounded concerns about vaccine contributions to autism, both Hepatitis B vaccines available in the United States are manufactured free of preservatives.

Preventing Hepatitis B virus associated death and disability requires investing in efforts to identify individuals with chronic HBV infections. While individuals originating from Eastern Europe, Africa, Asia, the Middle East, and Pacific Islands are at increased risk of being chronically infected, all immigrants to the United States should be screened for chronic Hepatitis B infection with a Hepatitis B surface antigen and surface antibody. HIV patients are routinely screened for Hepatitis B virus infection as part of routine medical practice; all gay men should be screened and vaccinated if negative. All IV drug users should be screened and vaccinated, and any individual with an unexplained elevation in their liver enzymes (ALT or AST) should be screened for Hepatitis B virus infection. Individuals with persistent Hepatitis B surface antigen in their blood over a 6 month period of time are chronically infected.

Unlike a decade ago, today there are several good treatment options for chronic Hepatitis B virus infections. The medical staging of chronic Hepatitis B infections and subsequent decision making about how to treat an individual patient is fairly complex and best navigated with the help of a hepatologist or infectious disease physician experienced in the field. Liver biopsies provide important information for treatment decisions in some but not all patients; similarly levels of ALT and HBV viral loads may influence decision making. Treatment options include once-a-week interferon injections and oral medications that inhibit Hepatitis B viral replication (growth). The current FDA-approved list of drugs includes interferon alpha-2b, pegylated interferon alpha-2a, entecavir, adefovir, telbivudine, and lamivudine. Recently published clinical trial data will likely lead to FDA-approval of tenofovir for treatment of chronic HBV infections in the near future. Most individuals with chronic Hepatitis B virus infections meet criteria for initiating therapy. Screening individuals for chronic Hepatitis B virus infection is the critical first step in preventing future death and disability from HBV-associated liver disease.

For more information about Hepatitis B or liver diseases, contact the American Liver Foundation.



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