

Diabetes and Hepatitis B Vaccination

Information for Diabetes Educators



What is hepatitis B?

Hepatitis B is a contagious liver disease that results from infection with the hepatitis B virus.

When first infected, a person can develop an “acute” infection, which can range in severity from a very mild illness with few or no symptoms to a serious condition requiring hospitalization. **Acute** hepatitis B refers to the first 6 months after someone is infected with the hepatitis B virus. Some people are able to fight the virus and clear the infection. For others, the infection remains and leads to a “chronic,” or lifelong, illness. **Chronic** hepatitis B refers to the illness that occurs when the hepatitis B virus remains in a person’s body. Over time, the infection can cause serious damage to the liver and lead to complications such as liver failure or liver cancer.

How is hepatitis B spread?

The hepatitis B virus is usually spread when blood or other body fluids from a person infected with the hepatitis B virus enters the body of someone who is not infected. Hepatitis B can be spread through sharing needles, syringes, or other injection equipment. In addition, the hepatitis B virus can spread through sexual contact and from an infected mother to her baby during childbirth.

Why is hepatitis B relevant to people with diabetes?

Among people living with diabetes, the hepatitis B virus has been spread through contact with infectious blood. People living with diabetes are at increased risk for hepatitis B if they share blood glucose meters, fingerstick devices or other diabetes-care equipment such as syringes or insulin pens.

How infectious is the hepatitis B virus?

The hepatitis B virus is 50 – 100 times more infectious than HIV which makes it easily transmitted.

The hepatitis B virus can survive outside the body at least a week. During that time, the virus can still cause infection if it enters the body of a person who is not infected.

How has transmission occurred in healthcare facilities?

CDC has investigated numerous hepatitis B outbreaks in people with diabetes in assisted living, long-term care facilities and nursing homes. Modes of transmission are believed to have occurred from:

- Use of blood glucose meter for more than one resident without cleaning and disinfection between uses
- Failure to consistently wear gloves and perform hand hygiene between fingerstick procedures
- Use of the same fingerstick devices for more than one resident
- Cross-contamination of clean supplies with contaminated blood glucose monitoring equipment used by home health agencies
- Use of the same injection equipment such as a syringe or insulin pen for more than one person
- Failure to maintain separation of clean and contaminated podiatry equipment
- Improper sterilization of contaminated podiatry equipment
- Failure to perform environmental cleaning and disinfection between podiatry patients



Why should people with diabetes be vaccinated?

People living with type 1 or type 2 diabetes mellitus have higher rates of hepatitis B than the general population. Some of the cases of hepatitis B have occurred in individuals with diabetes whose equipment came in contact with infected blood, or who had contact with the virus through breaks in the skin. This has happened through improper reuse and sharing of glucose monitoring equipment or other diabetes care equipment. Transmission has occurred among people with diabetes who reside in assisted living facilities when several people received glucose monitoring in close succession.

CDC now recommends the hepatitis B vaccine for adults with diabetes.

What is the recommendation for vaccinating adults younger than 60 years of age?

In 2011, the Centers for Disease Control and Prevention and the Advisory Committee on Immunization Practices (ACIP) released new guidelines that recommend hepatitis B vaccination for all unvaccinated adults with diabetes who are younger than 60 years of age. Vaccination should occur as soon as possible after diagnosis of diabetes; vaccination should also be given to adults diagnosed with diabetes in the past.

What is the recommendation for vaccinating adults 60 years and older?

For unvaccinated adults with diabetes who are 60 years and older, the ACIP recommends hepatitis B vaccination at the discretion of their health care provider. As with other vaccines, the effectiveness of the hepatitis B vaccine decreases with age. Decisions to vaccinate should include the patient's likelihood of acquiring hepatitis B, including the need for assisted blood-glucose monitoring, and overall health status. Hepatitis B vaccination may provide partial, if not full protection for many older adults with diabetes.

What is the recommendation for vaccinating children living with diabetes?

In the United States, the hepatitis B vaccine is now part of the routine childhood vaccination schedule. In 1991, CDC and the ACIP recommended that all children and adolescents be vaccinated for hepatitis B. Estimates of vaccine coverage among infants and children are now over 90%.

What should diabetes educators tell their patients about hepatitis B?

Diabetes educators should provide their clients or patients with the following information on how to protect themselves from getting the hepatitis B virus:

- Prevent exposure to hepatitis B and other blood borne pathogens by not sharing equipment such as blood glucose monitors or other diabetes care equipment.
- The best way to prevent hepatitis B is by getting vaccinated. CDC recommends hepatitis B vaccination for all unvaccinated adults with diabetes younger than 60 years of age.
- If you think you have already been vaccinated, confirm with your doctor.
- The hepatitis B vaccine is given as a series of 3 shots over a period of 6 months (0, 1, 6 month schedule). The entire series is needed for long-term protection.
- If you have not received the hepatitis B vaccine series talk to your doctor about getting vaccinated.

For more information visit:

- **Diabetes:** <http://www.cdc.gov/diabetes/>
- **Viral Hepatitis:** <http://www.cdc.gov/hepatitis/>
- **CDC's hepatitis B vaccination recommendation for adults with diabetes mellitus is available at** <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6050a4.htm>