



Hepatitis Vaccine

About Hepatitis

The word *hepatitis* simply means an inflammation of the liver without pinpointing a specific cause. Someone with hepatitis may:

- Have one of several disorders, including a viral or bacterial infection of the liver
- Have a liver injury caused by a toxin (poison)
- Have liver damage caused by interruption of the organ's normal blood supply
- Be experiencing an attack by his or her own immune system through an autoimmune disorder
- Have experienced abdominal trauma in the area of the liver

Hepatitis is most commonly caused by one of three viruses:

1. The **hepatitis A** virus
2. The **hepatitis B** virus
3. The **hepatitis C** virus

In some rare cases, the Epstein Barr virus (which causes mononucleosis) also can result in hepatitis because it can cause liver inflammation. Other viruses and bacteria can cause hepatitis, including hepatitis D and E, chickenpox, and cytomegalovirus (CMV).

Hepatitis A

The *hepatitis A virus (HAV)* causes fever, nausea, vomiting, and jaundice, and can lead to community-wide epidemics. Childcare centers are a common site of outbreaks.

Immunization Schedule

The vaccine is recommended for children 12-23 months old, followed by a second dose 6-18 months later. In the past, the vaccine was recommended for older kids and adults who were at high risk for the disease (such as those who lived in or traveled to locations with high rates of HAV). But now it's also recommended for everyone.

Why the Vaccine Is Recommended

Besides protecting the individual child, vaccination against HAV can help prevent epidemics from developing. Some infected kids do not have any symptoms, but can still spread the virus to others. Having many young kids vaccinated against HAV can limit the spread of the disease in a community.

Possible Risks

Side effects are usually mild fever, and tenderness, swelling, and redness at the site of the injection. Allergic reactions to the vaccine are rare.

When to Delay or Avoid Immunization

The vaccine is not recommended if your child:

- Is currently sick, although simple colds or other minor illnesses should **not** prevent immunization
- Had a severe allergic reaction to the first dose of hepatitis A vaccine or has a latex allergy

Caring for Your Child After Immunization

Your child may have fever, soreness, and some swelling and redness in the area where the shot was given. Pain and fever may be treated with acetaminophen or ibuprofen. Check with your doctor to see if you can give either medication and to find out the appropriate dose.

When to Call the Doctor

- Call if you are not sure if the vaccine should be postponed or avoided.
- Call if there are problems after the immunization.

Hepatitis B

The *hepatitis B virus* (HBV) affects the liver. Those who are infected can become lifelong carriers of the virus and may develop long-term problems such as cirrhosis (liver disease) or cancer of the liver.

Immunization Schedule

Hepatitis B vaccine usually is given as a series of three injections:

1. Shortly after birth
2. At 1-2 months of age
3. At 6-18 months of age

If the mother of a newborn carries the hepatitis B virus in her blood, her baby must receive the vaccine within 12 hours after birth, along with another shot—hepatitis B immune globulin (HBIG)—to immediately provide protection against the virus. If a newborn's mother shows no evidence of HBV in her blood, the baby can receive the hepatitis B vaccine any time prior to leaving the hospital.

Why the Vaccine Is Recommended

The hepatitis B vaccine usually creates long-term immunity. Infants who receive the HBV series should be protected from hepatitis B infection not only throughout their childhood but also into their adult years.

Eliminating the risk of infection also decreases risk for cirrhosis of the liver, chronic liver disease, and liver cancer. Young adults and adolescents also should receive the vaccine if they did not as infants.

Possible Risks

There is a very small chance of an allergic reaction with any vaccine. Serious problems associated with receiving the HBV vaccine are rare. Problems that do occur tend to be minor, such as mild fever and soreness or redness at the injection site.

When to Delay or Avoid Immunization

The vaccine is not recommended if your child:

- Is currently sick, although simple colds or other minor illnesses should **not** prevent immunization
- Had a severe allergic reaction (anaphylaxis) after a previous dose of the HBV vaccine or is allergic to baker's yeast

Caring for Your Child After Immunization

The vaccine may cause mild fever and soreness or redness in the area where the shot was given. Depending on your child's age, pain and fever may be treated with acetaminophen or ibuprofen. Very young infants should not be given either medication, but for older babies or kids, check with the doctor about the appropriate medication and dose.

When to Call the Doctor

- Call if you're not sure of the recommended schedule for the hepatitis B vaccine.
- Call if you have concerns about your own HBV carrier state.
- Call if moderate or serious side effects appear after your child has received an HBV injection.

Hepatitis C

The hepatitis C virus (HCV) is spread by direct contact with an infected person's blood. Symptoms can be very similar to those of hepatitis A and B. However, infection with HCV can lead to chronic liver disease and is a leading reason for liver transplantation in the United

States. Chronic HCV infection is also associated with liver cancer. HCV is more common in adults than in children. In kids, it's often acquired through transmission from a mother to her newborn.

Diagnosis

All of these viral hepatitis conditions can be diagnosed through blood tests.

For more information about this subject please check:

The Center for Disease Control at www.cdc.gov/

The American Academy of Pediatrics at www.aap.org

Healthy Children at healthychildren.org