CONDITION

Hepatitis B - children

Hepatitis B in children is a viral liver infection that may be short-lived or remain lifelong.

WHAT IT IS
Viral infection causing liver inflammation

BODY SYSTEM
Liver and digestive system

MAIN SYMPTOMS
Often none, tiredness, poor appetite, yellow skin

WHAT CAUSES IT
Hepatitis B virus infection

HOW IT IS DIAGNOSED
Hepatitis B blood tests

MAIN TREATMENT
Monitoring and antiviral medicine when indicated

CAN IT BE CURED?
Sometimes - acute infection often clears naturally

IS IT AN EMERGENCY?
Sometimes - confusion or being hard to wake

LONG-TERM OUTLOOK
Most children remain well with regular monitoring

Overview

Hepatitis B is an infection caused by the hepatitis B virus, or HBV. It affects the liver, which helps process nutrients, remove waste, fight infection, and make proteins needed for blood clotting.

The infection can be acute , meaning short-term, or chronic , meaning it lasts longer than six months. Acute hepatitis B often clears without specific treatment. Chronic hepatitis B may remain for many years, even when a child feels completely well.

Children who acquire HBV around birth are more likely to develop chronic infection than people infected later in life. This is why testing during pregnancy, vaccination after birth, and follow-up testing for exposed babies are important.

Many children with chronic hepatitis B have no symptoms and take part in normal activities.

However, ongoing infection can slowly damage the liver in some people. Regular follow-up can identify changes before symptoms appear and determine whether treatment is needed.

Symptoms

Most babies and young children with hepatitis B have no clear symptoms. A child may appear healthy even when blood tests show an active infection.

When symptoms occur, they may include:

Symptoms of acute hepatitis B may appear weeks or months after exposure. They can resemble other childhood infections, so symptoms alone cannot confirm hepatitis B.

Chronic hepatitis B usually causes few or no symptoms during childhood. Symptoms such as abdominal swelling, easy bleeding, confusion, or severe weakness can suggest significant liver problems and need prompt medical assessment.

- Tiredness or reduced energy
- Poor appetite, nausea, or vomiting
- Pain or discomfort in the upper right abdomen
- Fever or aching joints
- Dark urine and unusually pale stools
- Yellow skin or eyes, called jaundice

Causes and risk factors

Hepatitis B spreads through infected blood and certain body fluids. A child may acquire it:

HBV can survive outside the body and may spread when infected blood reaches broken skin, the eyes, or the mouth. Sharing toothbrushes, razors, or nail clippers can create a small risk because these items may carry traces of blood.

Hepatitis B does not spread through coughing, sneezing, hugging, sharing food, or ordinary play. It is not spread through breast milk alone. A baby can usually be breastfed after receiving the recommended protection following birth.

A child has a higher chance of infection if their birth parent has HBV, they live with someone who has it, or they were born or lived in a place where chronic hepatitis B is common. Children who have not completed hepatitis B vaccination are also less protected.

The infection is not caused by anything a child or parent did wrong. Because it often causes no

symptoms, someone may have HBV without knowing it.

- During birth from a parent with hepatitis B
- Through contact with infected blood
- By sharing needles or equipment that can pierce the skin
- Through unsterile tattooing, piercing, or medical equipment
- Through sexual contact, which is more relevant for adolescents

Diagnosis

Blood tests are needed to diagnose hepatitis B. Different tests show whether a child currently has the virus, had it in the past, or has immunity from vaccination or a previous infection.

Important markers include:

If HBsAg remains present for at least six months, the infection is considered chronic. A single positive result does not show how active the infection is or how much it is affecting the liver.

Further tests may include HBV DNA, which measures the amount of viral genetic material in the blood, and liver enzyme tests such as ALT. ALT can rise when liver cells are irritated or injured.

Some children need an ultrasound or another non-invasive test to look for liver scarring. A liver biopsy, in which a small tissue sample is removed, is now needed only in selected situations.

Babies born to someone with hepatitis B require follow-up blood testing after completing their vaccine series. Tests are timed carefully because antibodies passed from the birth parent can affect early results.

- Hepatitis B surface antigen, or HBsAg: usually means the virus is currently present
- Hepatitis B surface antibody, or anti-HBs: usually shows immunity
- Hepatitis B core antibody, or anti-HBc: shows previous or current exposure to the virus
- IgM anti-HBc: can support a diagnosis of recent acute infection

Treatment and management

Acute hepatitis B is usually managed with rest, fluids, appropriate nutrition, and medical follow-up. Antiviral treatment is not routinely needed for an uncomplicated acute infection. Severe acute liver inflammation is uncommon but may require hospital care.

For chronic hepatitis B, treatment decisions are based on several factors, including:

Not every child with chronic hepatitis B needs antiviral medicine straight away. Some have an inactive phase in which the virus remains present but causes little measurable liver injury. Monitoring is still important because viral activity can change over time.

When treatment is appropriate, specialists may use oral antiviral medicines that suppress HBV or, less often, a form of interferon that stimulates the immune response. These treatments can reduce liver inflammation and the risk of future damage. They do not usually remove all HBV from the body, and some children need treatment for a long time.

Regular appointments may include blood tests, growth checks, and questions about medicines and symptoms. Some children also need liver imaging. A paediatric liver or infectious diseases specialist usually guides this care.

Before giving a child any prescription, over-the-counter, or herbal product, families should check that it is safe for the liver. "Natural" products can still cause liver injury or interact with medicines.

- HBV DNA levels
- Liver enzyme results
- Evidence of liver inflammation or scarring
- The child's age and overall health
- Family history of serious liver complications

Complications

Most children with hepatitis B do not develop serious liver problems during childhood. However, chronic infection can gradually lead to liver scarring.

Advanced scarring is called cirrhosis . It can interfere with blood flow through the liver and reduce the liver's ability to work. Chronic hepatitis B also increases the lifetime risk of liver cancer, including in some people who have not developed cirrhosis.

Other possible complications include inflammation affecting the kidneys or blood vessels. These are uncommon.

Acute liver failure is a rare complication of acute hepatitis B. Warning signs can include unusual sleepiness, confusion, repeated vomiting, worsening jaundice, or unexpected bleeding.

Prevention

Hepatitis B can often be prevented through vaccination. Routine childhood vaccination provides strong protection when the full series is completed.

Pregnant people are tested for hepatitis B so that an exposed baby can receive protection promptly after birth. A newborn whose birth parent has HBV should receive hepatitis B vaccine and hepatitis B immune globulin, or HBIG. HBIG contains ready-made antibodies that provide immediate short-term protection while the vaccine response develops.

The baby must complete the vaccine series and have follow-up blood tests to check for infection and confirm protection. Keeping these appointments is important even if the baby appears healthy.

Other practical steps include:

Children with hepatitis B can usually attend school, childcare, sports, and social activities without restrictions. Ordinary contact does not spread the virus. Schools generally do not need to know unless a specific health plan is required.

- Vaccinating unprotected household members
- Covering cuts and cleaning blood spills safely
- Not sharing toothbrushes, razors, nail clippers, or needles
- Using regulated services for tattoos and piercings
- Teaching adolescents about safer sex and avoiding shared drug equipment

Living with it and what to expect

Many children with chronic hepatitis B grow, learn, exercise, and participate in family life in the usual way. The infection does not normally require a special diet. A balanced diet and regular physical activity support general and liver health.

The level of viral activity may change over months or years. Blood tests can move between active and less active phases without the child feeling different. This is why routine follow-up remains important even when there are no symptoms.

Some children eventually lose HBsAg, meaning the ongoing infection has largely resolved, but this cannot be predicted or promised. Others continue to carry HBV into adulthood. Treatment may control the virus without fully curing the infection.

As children become older, they can gradually learn what hepatitis B is, how it spreads, and why appointments matter. Adolescents should understand that they must not share items that may

carry blood and should use protection to reduce sexual transmission.

Hepatitis B can carry unfair stigma. Clear information may help: the infection is not spread by friendship, shared meals, hugging, or normal classroom contact.

When to get medical help

Arrange routine medical advice if a child may have been exposed to infected blood, has missed hepatitis B vaccinations, or lives with someone who has recently been diagnosed. Protection after a recent exposure may be time-sensitive, so do not wait for symptoms.

Contact the child's usual healthcare team promptly for:

Seek emergency medical care if the child is confused, extremely sleepy, difficult to wake, has a seizure, vomits blood, or has heavy unexplained bleeding. These symptoms can indicate severe liver dysfunction or another serious condition.

Routine monitoring appointments are not emergencies, but they should not be skipped. A child can have changing liver inflammation without obvious symptoms.

- New jaundice or dark urine
- Persistent vomiting or poor fluid intake
- Increasing abdominal pain or swelling
- Unusual bruising or bleeding
- A marked change in energy, appetite, or behaviour

Common questions

Can my child spread hepatitis B at school?

Not through ordinary contact. Hepatitis B does not spread through hugging, coughing, shared food, toilets, or playing together. Standard handling of cuts and blood protects everyone.

Can hepatitis B in a child go away?

Acute infection can clear naturally. Chronic infection is less likely to disappear, although some children eventually lose the main marker of infection. Current treatment usually controls chronic HBV rather than removing every trace of it.

Can my child play sports?

Usually, yes. Children with hepatitis B can generally take part in sports. Cuts should be covered,

blood spills should be handled using standard precautions, and personal items such as mouthguards should not be shared.

Does my child need a special diet?

Usually not. A balanced diet suitable for the child's age is appropriate. Avoid giving supplements, herbal remedies, or unnecessary medicines without checking that they are safe for the liver.

Can a vaccinated child still get hepatitis B?

Vaccination provides strong protection, but no vaccine works in every person. Babies exposed during birth need both the recommended preventive care and follow-up blood testing to confirm that they are protected and not infected.

Will hepatitis B affect my child's future?

Many children remain well and have few limits on daily life. Chronic infection may continue into adulthood, so long-term monitoring is often needed. Education, employment, relationships, and having a family are still possible with appropriate care and steps to prevent transmission.

Sources

- World Health Organization. Hepatitis B fact sheet
- US Centers for Disease Control and Prevention. Clinical Care of Hepatitis B
- US Centers for Disease Control and Prevention. Clinical Overview of Perinatal Hepatitis B
- US Centers for Disease Control and Prevention. Pink Book: Hepatitis B
- Terrault NA, Lok ASF, McMahon BJ, et al. Update on prevention, diagnosis, and treatment of chronic hepatitis B: AASLD 2018 hepatitis B guidance . Hepatology. 2018;67(4):1560-1599
- Sokal EM, Paganelli M, Wirth S, et al. Management of chronic hepatitis B in childhood: ESPGHAN clinical practice guidelines . Journal of Hepatology. 2013;59(4):814-829