PROCEDURE

Hepatitis B vaccine - what you need to know

The hepatitis B vaccine is an injection that helps prevent hepatitis B infection and related liver damage.

PURPOSE
Prevent hepatitis B infection and long-term liver damage

PROCEDURE TYPE
Therapeutic: minimally invasive intramuscular injection

WHERE IT IS DONE
Outpatient clinic, pharmacy, hospital, or bedside

ANAESTHESIA
None

HOW LONG IT TAKES
About 1 to 2 minutes per injection

PREPARATION
Bring vaccine records and report allergies or current illness

RECOVERY
Same day, with no routine driving restriction

MAIN RISKS
Injection-site pain, fever, fainting, severe allergic reaction

RESULTS
Protection develops after completing the recommended vaccine series

Overview

The hepatitis B vaccine protects you against hepatitis B, a virus that infects the liver. Long-term infection can cause liver scarring, liver failure, or liver cancer.

The vaccine does not contain live hepatitis B virus and cannot give you hepatitis B. It trains your immune system to recognize a protein from the virus and produce protective antibodies.

The vaccine is given into a muscle. Adults and older children usually receive it in the upper arm. Babies and young children usually receive it in the thigh.

A complete series may contain two, three, or sometimes four doses. The number and timing depend on your age, the vaccine product, and whether a combination vaccine is used. Some people need blood tests after vaccination, but most do not.

Why the procedure is performed

Vaccination reduces your chance of becoming infected with hepatitis B. It also helps prevent the serious liver problems that can follow long-term infection.

Hepatitis B can spread through blood and certain body fluids. Exposure can occur during birth, sex, shared injection equipment, needlestick injuries, or contact with infected blood through broken skin or mucous membranes.

Vaccination is routinely recommended beginning in infancy. It is also recommended for children and adults who have not previously completed an appropriate series. Current US recommendations include vaccination for adults aged 19 through 59. Adults aged 60 and older may be vaccinated because of risk factors or simply because they want protection.

The vaccine may also be part of urgent care after a possible exposure. Depending on the situation, treatment may include both the vaccine and hepatitis B immune globulin, which provides temporary ready-made antibodies.

Who should and should not have it

You may be offered vaccination because you have no record of a completed series, because routine vaccination is recommended for your age, or because your work, health, travel, household, or sexual circumstances could expose you to hepatitis B.

Protection is particularly important for people who may have contact with blood, receive haemodialysis, share injection equipment, live with hepatitis B, have a sexual partner with hepatitis B, or travel to places where infection is common.

You should not receive another dose of the same vaccine if you had a severe allergic reaction, called anaphylaxis, after a previous dose. A known severe allergy to one of the product's ingredients may also rule out that product. Ingredients differ, so the healthcare professional giving the vaccine should check the specific product information.

Vaccination may be delayed if you have a moderate or severe short-term illness, especially with fever. A minor illness, such as a mild cold, does not usually require a delay.

Pregnancy and breastfeeding are not, by themselves, reasons to avoid hepatitis B vaccination when it is indicated. The facility will select an appropriate licensed product based on current guidance and your circumstances.

How to prepare

Follow the treating facility's own instructions first, because its preparation and check-in process takes priority.

Fasting is not required. You can usually eat, drink, and take your regular medicines as normal. Blood thinners like warfarin or apixaban do not always prevent vaccination, but tell the person giving the injection because firm pressure may be needed afterward.

Before the appointment:

Wear clothing that allows easy access to your upper arm. Eating beforehand and sitting or lying down for the injection may help if you have fainted during injections before.

- Bring any vaccine records you have
- Report a serious reaction to a previous vaccine
- Mention known allergies, including allergies to vaccine ingredients
- Tell the team if you are unwell, pregnant, or could be pregnant
- Explain if this follows a recent exposure to blood or body fluids

What happens during the procedure

A healthcare professional checks which vaccine and dose are appropriate for your age and medical circumstances. They may ask about previous doses, allergies, current illness, pregnancy, and any recent hepatitis B exposure.

The skin may be cleaned. A small needle is then used to inject the vaccine into a muscle. The injection itself takes only a few seconds.

You may feel a quick sting or pressure. A small dressing can be applied if there is minor bleeding.

You will usually remain nearby for observation afterward, commonly for about 15 minutes. This allows staff to help if you feel faint or develop an immediate allergic reaction. Longer observation may be used for some people with a history of allergic reactions.

Before leaving, you should be told whether another dose is needed and when to receive it.

Recovery and what to expect afterward

Pain or tenderness in the injected arm is common. A cool compress may help. Ask your healthcare team or pharmacist before taking pain medicine if you are unsure what is safe for

you.

You can eat and drink normally after vaccination. Drinking fluids may help if you feel light-headed.

Normal daily activity is usually safe. If your arm is sore, you may prefer to avoid heavy lifting with that arm for the rest of the day.

The vaccine itself does not normally prevent driving. Do not drive if you feel faint, dizzy, or unwell after the injection.

Most people can return to work or school immediately. If you develop fever, tiredness, or a headache, you may need to rest until you feel better.

Risks and possible complications

The most common effects are pain, redness, or swelling where the injection was given. Some people develop tiredness, headache, or fever. These effects usually settle without treatment.

Fainting can occur around injections, particularly in adolescents and young adults. Sitting or lying down during vaccination and remaining for observation reduces the chance of injury from a fall.

A severe allergic reaction is possible with any vaccine. Signs may include difficulty breathing, swelling of the face or throat, widespread hives, a rapid heartbeat, or sudden weakness. Vaccination sites keep treatment available for this reaction.

Unusual persistent shoulder pain or restricted movement can occur if an injection is placed incorrectly. Infection at the injection site is also possible but is not an expected reaction.

The vaccine cannot cause hepatitis B.

Results and follow up

There is no immediate result to read after the injection. Your immune system builds protection over time, and completing the recommended series gives the best chance of a protective response.

Keep a record of the vaccine product and date. If you are late for a later dose, the series usually does not need to be restarted. Contact the vaccination service so it can arrange the remaining dose or doses.

Most healthy people do not need a blood test after vaccination. Testing for protective hepatitis B surface antibodies may be recommended when knowing the response would change care.

This can include some healthcare workers, people receiving haemodialysis, certain people with weakened immune systems, babies born to mothers with hepatitis B, and sexual partners of people with hepatitis B.

When testing is needed, it is generally arranged after the final dose according to the schedule for your situation. Most healthy people with documented protection do not need routine booster doses.

Alternatives

There is no non-vaccine option that provides the same planned, long-term protection.

Reducing contact with blood and using barriers during sex can lower exposure risk, but these steps cannot prevent every exposure. They also require continued action and do not produce immunity.

Hepatitis B immune globulin can provide rapid, temporary protection after certain exposures. It is not a substitute for routine vaccination and is often given with the vaccine when indicated.

Blood testing can show whether you have hepatitis B, had a past infection, or may already be immune. Testing detects status; it does not prevent a future infection. In some settings, vaccination can begin without waiting for test results.

Antiviral medicines can control chronic hepatitis B in some people, but they do not replace prevention and may require long-term monitoring. Delaying vaccination means remaining unprotected while waiting.

When to call your healthcare team

Contact your healthcare team during routine hours if injection-site pain or swelling is getting worse rather than improving, fever persists, or side effects interfere with normal activity. Also contact them if you miss a later dose or are unsure whether your series is complete.

Seek prompt medical advice after contact with blood or body fluids if you may not be fully protected. Post-exposure treatment works best when assessed quickly.

Call emergency services for difficulty breathing, swelling of the face or throat, widespread hives, collapse, severe weakness, or other signs of a serious allergic reaction.

Common questions

Will I be asleep for the hepatitis B vaccine?

No. Anaesthesia and sedation are not needed. The injection takes a few seconds.

Can I drive home afterward?

Usually, yes. Do not drive if you feel faint, dizzy, or unwell. If injections have made you faint before, consider arranging support or alternative transport.

How painful is it?

Most people feel a brief sting. The arm may be sore for a day or two, but the discomfort is usually manageable.

When will I know if it worked?

Protection develops over the vaccine series. Most people do not need testing. If your circumstances require confirmation, your healthcare team will arrange an antibody blood test after the final dose.

What if I miss my next dose?

Arrange it when you can. A delayed series usually continues from where it stopped rather than starting again.

Can the vaccine give me hepatitis B?

No. It does not contain live hepatitis B virus and cannot cause the infection.

Sources

- Centers for Disease Control and Prevention. Hepatitis B Vaccine Administration
- Centers for Disease Control and Prevention. Hepatitis B Vaccine Recommendations
- Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases: Hepatitis B
- Centers for Disease Control and Prevention. Contraindications and Precautions: General Best Practice Guidelines for Immunization
- Advisory Committee on Immunization Practices. Universal Hepatitis B Vaccination in Adults Aged 19-59 Years: Updated Recommendations, 2022
- Centers for Disease Control and Prevention. Management of Infants Born to Women with Hepatitis B Virus Infection