PROCEDURE

hepatitis B surface antigen vaccine

An injection that trains your immune system to prevent hepatitis B infection.

PURPOSE
Prevent hepatitis B infection and long-term liver complications

PROCEDURE TYPE
Therapeutic (preventive) - intramuscular injection

WHERE IT IS DONE
Outpatient clinic, pharmacy, hospital, or community vaccination site

ANAESTHESIA
None

HOW LONG IT TAKES
1 to 5 minutes

PREPARATION
Review allergies, prior doses, current illness, and pregnancy

RECOVERY
Same day; no routine driving restriction

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

RESULTS
Protection develops after series; testing only for selected people

Overview

The hepatitis B surface antigen vaccine protects against hepatitis B, a virus that can damage the liver. It is commonly called the hepatitis B vaccine.

The vaccine contains a laboratory-made version of a protein from the virus's surface. This protein is called hepatitis B surface antigen. It cannot cause hepatitis B because it does not contain the whole infectious virus.

After the injection, your immune system learns to recognize the surface protein. It then produces antibodies that can help protect you if you are exposed to hepatitis B later.

The vaccine is given into a muscle, usually in the upper arm for adults and older children. Infants usually receive it in the thigh. Depending on the vaccine product, your age, and your health, the full course may involve two, three, or four doses.

Why the procedure is performed

Vaccination is performed to prevent hepatitis B infection and complications such as long-term liver inflammation, cirrhosis, and liver cancer.

Hepatitis B can spread through infected blood and certain body fluids. Transmission can occur during childbirth, sex, shared injection equipment, needlestick injuries, or contact with contaminated blood.

Vaccination is routinely offered in infancy. It is also recommended for children and teenagers who were not vaccinated earlier. Adult recommendations consider age, previous vaccination, exposure risk, health conditions, and whether you want protection.

You may be offered vaccination because you:

After a recent exposure, the vaccine may be given promptly. Some people also need hepatitis B immune globulin, or HBIG. HBIG provides short-term antibodies while the vaccine begins building longer-term protection.

- Have not completed a hepatitis B vaccine series
- Work where contact with blood or body fluids may occur
- Live with or have sex with someone who has hepatitis B
- Use shared equipment to inject drugs
- Receive dialysis or have certain liver, kidney, or immune conditions
- Are travelling to an area where hepatitis B is more common

Who should and should not have it

Most people who need hepatitis B protection can receive the vaccine. Pregnancy and breastfeeding are not, by themselves, reasons to avoid vaccination when protection is needed. The specific vaccine product must still be suitable for your age and situation.

You should not receive another dose of the same vaccine if you had a severe allergic reaction, such as anaphylaxis, after a previous dose. It should also be avoided if you have a known severe allergy to one of its ingredients. Some hepatitis B vaccines are made using yeast, so tell the vaccination team about a severe yeast allergy.

Vaccination may be delayed if you have a moderate or severe short-term illness, with or without fever. A mild illness, such as a minor cold, is not usually a reason to delay it.

The vaccine prevents infection; it does not treat an existing hepatitis B infection. If testing

shows that you are already infected or already immune, vaccination may provide no additional benefit. However, receiving a dose before your status is known is not generally considered harmful.

Tell the vaccination team if you have a bleeding disorder, take a blood thinner like warfarin or apixaban , receive dialysis, or have a weakened immune system. These issues do not always prevent vaccination, but they may affect how the injection is given, which product is used, or whether follow-up blood testing is needed.

How to prepare

The treating facility's own instructions take priority over general information in this article.

You do not usually need to fast. Take your usual medicines unless the facility has specifically told you otherwise. Do not stop a blood thinner on your own.

Bring any vaccination records you have. Tell the team about previous hepatitis B doses, allergies, reactions to vaccines, pregnancy, current illness, immune system problems, dialysis, and medicines that affect blood clotting.

Wear clothing that allows easy access to your upper arm. Eating and drinking normally beforehand may help if you tend to feel faint around needles.

If you have fainted during injections before, tell the person giving the vaccine. You can receive it while seated or lying down.

What happens during the procedure

Before the injection, a healthcare professional checks that the vaccine is appropriate for your age, health, and previous vaccination history. You may be asked about allergies and reactions to earlier doses.

You sit or lie down with the injection area exposed. The vaccine is normally injected into the deltoid muscle of the upper arm. In infants and some young children, it is injected into the outer thigh.

The needle is in place for only a few seconds. You may feel a quick pinch or pressure. A small bandage may be applied afterward.

You will usually be asked to remain at the vaccination site for about 15 minutes. This allows the team to help if you faint or develop an immediate allergic reaction.

Recovery and what to expect afterward

Pain or tenderness in the injected arm is common. Redness or mild swelling may also occur. A cool compress can help with discomfort. Some people develop tiredness, headache, or a mild fever.

You can eat and drink normally after vaccination.

Most people can return to normal activity immediately. If your arm is sore, you may prefer to avoid heavy lifting with that arm until it feels better.

The vaccine does not involve sedation, so there is no routine driving restriction. Do not drive if you feel faint, dizzy, or otherwise unwell after the injection.

Most people can return to work or school the same day. If you develop fever or feel unwell, rest until you feel able to resume your usual activities.

Risks and possible complications

Most vaccine reactions are mild and settle without treatment. Possible effects include pain, redness, or swelling at the injection site, as well as headache, fatigue, or fever.

Some people faint during or shortly after an injection. Fainting is usually related to the injection process rather than the vaccine itself. Sitting or lying down during vaccination and remaining for observation can reduce the risk of injury from a fall.

A severe allergic reaction can occur after any vaccine. Signs may include difficulty breathing, swelling of the face or throat, widespread hives, weakness, or collapse. Vaccination sites keep medicines and equipment available to treat this reaction.

Bleeding or bruising at the injection site may be more noticeable if you have a bleeding disorder or take medicine that reduces blood clotting.

The vaccine cannot give you hepatitis B. It contains surface protein rather than infectious hepatitis B virus.

Results and follow up

There is no immediate test result. Protection develops as your immune system responds to the vaccine, usually over the course of the recommended series.

Make sure each dose is recorded. The timing and number of doses are based on the vaccine product, your age, and factors such as dialysis or reduced immune function. If a dose is late, the

series usually does not need to be restarted. Your healthcare team can arrange the remaining doses using an appropriate catch-up schedule.

Most healthy people do not need a blood test after completing the series. Testing for hepatitis B surface antibody may be recommended for selected people, including some healthcare workers, people receiving dialysis, people with weakened immune systems, babies born to mothers with hepatitis B, and sex partners of people with hepatitis B.

When needed, antibody testing is generally performed after the final dose, with timing chosen for the person's situation. If the test does not show adequate protection, additional vaccination or further testing may be offered.

Alternatives

Choosing not to receive the vaccine avoids the injection and its short-term side effects, but leaves you without vaccine-based protection against hepatitis B.

Reducing exposure can lower risk. This includes using condoms, not sharing needles or other injection equipment, and not sharing razors or toothbrushes that may contain blood. These steps are useful but cannot prevent every unexpected exposure.

Screening blood tests can show whether you have current infection, past infection, or immunity. Testing does not itself protect you. It may help determine whether vaccination is still needed.

HBIG can provide rapid, short-term protection after certain exposures or around the time of birth. It does not replace the longer-term protection expected from completing a vaccine series.

Combination vaccines can protect against hepatitis B and another infection in the same injection. They may reduce the number of separate injections, but they have specific age limits and schedules.

When to call your healthcare team

Contact your healthcare team during routine hours if injection-site pain, swelling, fever, or other symptoms are getting worse rather than improving. Also contact them if you missed a dose, lost your vaccination record, or are unsure when the next dose is due.

Seek urgent medical advice if you develop extensive swelling, persistent high fever, or symptoms that concern you after leaving the vaccination site.

Call emergency services immediately 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?

No. This is a brief injection and does not require anaesthesia or sedation.

Can I drive home?

Usually, yes. Wait until any dizziness or faint feeling has passed before driving.

How painful is it?

Most people feel a brief pinch during the injection. Arm soreness may last for a short time afterward.

When will I know whether it worked?

Most people are not routinely tested. If blood testing is appropriate for you, your healthcare team will arrange it after the vaccine series at the recommended time.

What if I am late for my next dose?

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

Can the vaccine cause hepatitis B?

No. It contains a surface protein that trains the immune system, not infectious hepatitis B virus.

Sources

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- US Food and Drug Administration. Engerix-B prescribing information
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