PROCEDURE

Immunizations

Immunizations use vaccines to help your immune system prevent specific infections.

PURPOSE
Build protection against specific infectious diseases

PROCEDURE TYPE
Therapeutic preventive care: injection, oral liquid, or nasal spray

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

ANAESTHESIA
None

HOW LONG IT TAKES
Usually one to five minutes

PREPARATION
Review vaccine records, health conditions, allergies, and previous reactions

RECOVERY
Same day, usually without driving restrictions

MAIN RISKS
Soreness, fever, fainting, severe allergic reaction

RESULTS
Protection develops over days to weeks

Overview

Immunization helps protect you from infectious diseases. It usually involves receiving a vaccine by injection. Some vaccines are given as an oral liquid or nasal spray.

Vaccines expose your immune system to a harmless form, part, or set of instructions from a germ. This teaches your body to recognize that germ and respond more quickly if you encounter it later.

Vaccination and immunization are often used to mean the same thing. More precisely, vaccination is the act of receiving a vaccine. Immunization is the process of developing protection.

No vaccine provides perfect protection. However, vaccination can lower your chance of becoming infected or seriously ill. It can also reduce the spread of some infections to other

people.

Why the procedure is performed

Immunizations are given to prevent specific viral or bacterial infections. The vaccines offered to you may be based on:

Some vaccines require more than one dose to build initial protection. Others need later booster doses to maintain protection. A booster reminds the immune system how to respond.

Vaccination may be especially important when an infection could cause severe illness or when you could pass the infection to a vulnerable person. Your healthcare team should explain what each proposed vaccine prevents and why it is being offered now.

- Your age and previous vaccine doses
- Your health conditions and immune system
- Pregnancy or plans for pregnancy
- Your work, school, living situation, or military service
- International travel
- A recent injury, animal bite, outbreak, or known exposure
- Seasonal or local infection patterns

Who should and should not have it

Immunization is not the same for everyone. The right vaccines and timing depend on your age, medical history, previous doses, and risk of exposure.

A vaccine may be avoided if you had a severe allergic reaction to a previous dose or to one of its ingredients. A different vaccine or specialist assessment may sometimes be possible.

Certain live vaccines contain a weakened form of a virus or bacterium. They may not be suitable during pregnancy or for people whose immune systems are severely weakened. This does not apply to every vaccine.

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

Tell the healthcare professional giving the vaccine if you:

These issues do not automatically mean you cannot be vaccinated. They help the healthcare

professional choose the vaccine, timing, and safest way to give it.

- Have had a serious reaction after any vaccine
- Have allergies to medicines, latex, or vaccine ingredients
- Are pregnant or could be pregnant
- Have a weakened immune system or take immune-suppressing treatment
- Have a bleeding disorder or take a blood thinner like warfarin or apixaban
- Recently received blood products, antibodies, or another vaccine
- Have previously fainted during injections

How to prepare

Follow the treating facility's own instructions first, because they take priority over general advice.

Bring your vaccination record if you have one. Also bring or provide an up-to-date list of your medicines and allergies. Tell the healthcare team about previous vaccine reactions and any recent changes in your health.

You can usually eat and drink normally. Wearing clothing that allows easy access to your upper arm may help. Young children may receive an injection in the thigh.

If needles make you anxious or you have fainted before, say so before the procedure. The vaccine can often be given while you are sitting or lying down. Looking away, taking slow breaths, and distracting yourself may help.

Do not stop a blood thinner or other prescribed medicine unless the clinician responsible for that medicine specifically tells you to do so.

Before vaccination, you should be told which vaccine you are receiving, what it protects against, and its main risks. This is also the time to ask questions.

What happens during the procedure

The healthcare professional confirms your identity, reviews relevant health information, and checks the vaccine, dose, and route.

Most vaccines are injected into a muscle. In adults and older children, this is usually the upper arm. Babies and younger children commonly receive injections in the thigh. Some vaccines are injected just beneath the skin.

Other vaccines are swallowed as a liquid or sprayed into the nose. The route is specific to the vaccine and cannot be chosen simply for convenience.

An injection takes only a few seconds. You may feel a brief pinch, pressure, or burning sensation. A small bandage may be placed over the site.

You may be asked to remain seated nearby for a short observation period. This allows staff to help if you faint or have an immediate allergic reaction. Your vaccine name, date, and other identifying details should be added to your record.

Recovery and what to expect afterward

Pain: Your arm may feel sore, tender, or heavy. Mild redness or swelling can occur around the injection site. Moving the arm gently and using a cool compress may help. Ask your healthcare team or pharmacist before taking pain medicine if you are unsure what is safe for you.

Eating: You can usually eat and drink normally after vaccination. Fluids may help if you feel tired or feverish.

Activity: Most people can continue their normal activities. If you feel unwell, light-headed, or unusually tired, rest until you feel better. Avoid strenuous activity if it makes your symptoms worse.

Driving: Vaccination itself does not usually restrict driving. Do not drive if you feel faint, dizzy, or otherwise unable to control a vehicle safely.

Work or school: Most people can return immediately. You may choose to rest if you develop fever, headache, muscle aches, or fatigue. These effects commonly begin within the first few days and usually settle without treatment.

Risks and possible complications

Vaccines can cause side effects, although not everyone has them. Expected effects can include injection-site pain, redness, swelling, tiredness, headache, muscle aches, chills, or fever. The exact effects differ by vaccine.

Some people faint around the time of an injection. Fainting is often related to the injection process rather than the vaccine itself. Falling during a faint can cause injury, which is why sitting during and shortly after vaccination may be advised.

A severe allergic reaction can occur after any vaccine, but it is uncommon. Vaccination sites keep equipment and medicines available to treat this reaction.

Other complications are specific to individual vaccines. Your healthcare professional should discuss any important vaccine-specific risks. Written vaccine information can help you understand what is expected and what requires medical attention.

Rarely, an injection can cause infection, nerve irritation, or a shoulder injury. Correct injection technique reduces these risks.

Results and follow up

There is usually no immediate test result. Your immune system needs time to build protection, often over days or weeks. If the vaccine is part of a series, full protection may not develop until later doses have been received.

Keep your updated vaccination record. It may be needed for healthcare, work, school, travel, or future doses.

Routine blood tests are not needed to confirm protection after most vaccines. Testing may be used in specific situations, such as for certain healthcare workers, people with particular immune conditions, or after selected exposures.

Ask when your next dose is due and whether you need a booster. Routine follow-up is mainly about completing the recommended series and recording each dose.

Vaccination lowers risk but does not guarantee that you will not become infected. Continue to follow any infection-control advice relevant to your health, work, travel, or local situation.

Alternatives

For many vaccine-preventable infections, there is no alternative that provides the same planned, longer-term protection without exposing you to the disease.

Choosing not to receive a vaccine avoids vaccine side effects, but leaves you without that vaccine's protection. Delaying a dose may postpone side effects, but it also extends the time when you may be vulnerable.

Masks, handwashing, ventilation, safer food and water practices, and avoiding exposure can reduce the spread of certain infections. They do not replace vaccination and may not protect against every route of transmission.

Antibody products, sometimes called immune globulin, can provide short-term protection against specific infections after an exposure or in special medical situations. They are not available for every infection, and their protection usually does not last as long as vaccination.

Developing immunity through infection requires getting the disease itself. This carries the risk of complications and of passing the infection to others.

When to call your healthcare team

Contact your healthcare team for routine advice if side effects are worsening, are not settling as expected, or are interfering with eating, drinking, sleep, or normal activity. Also call if you develop an unexpected rash, significant swelling, persistent fever, or symptoms that concern you.

Seek urgent medical advice if you have signs of a serious vaccine-specific complication described in the information you were given.

Call emergency services immediately for possible severe allergy, including:

Do not wait for routine follow-up if these symptoms occur.

- Trouble breathing or noisy breathing
- Swelling of the face, lips, tongue, or throat
- Widespread hives with dizziness, weakness, or collapse
- Sudden confusion or loss of consciousness

Common questions

Will I be asleep?

No. Immunizations do not normally require sedation or anaesthesia. The injection itself usually takes only a few seconds.

Can I drive home?

Usually, yes. Wait until any light-headedness has passed. Do not drive if you feel faint, dizzy, or unwell.

How painful is it?

Most people feel a quick pinch or brief stinging sensation. Soreness may last for a few days, but the experience differs between people and vaccines.

When will I know it worked?

There is usually no immediate sign. Protection develops over time, and some vaccines require several doses. Routine antibody testing is not recommended after most vaccinations.

Can I receive more than one vaccine at the same visit?

Many vaccines can be given during the same visit at different injection sites. Some vaccine combinations or timing intervals require special planning, so the healthcare professional will check which products you are receiving.

Can I be vaccinated when I have a cold?

A mild illness does not always require postponement. A moderate or severe illness may lead to a delay. Tell the vaccination provider how you feel before receiving the vaccine.

Sources

- Centers for Disease Control and Prevention. General Best Practice Guidelines for Immunization
- Centers for Disease Control and Prevention. Contraindications and Precautions
- Centers for Disease Control and Prevention. Possible Side Effects from Vaccines
- U.S. Food and Drug Administration. Vaccine Development 101
- World Health Organization. Vaccines and Immunization: Vaccine Safety