

Adenovirus Vaccine:

What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 Why get vaccinated?

Adenovirus vaccine can prevent **infection with some types of adenovirus**.

Adenoviruses can cause illness that is usually mild, but can be serious in some cases. People with weakened immune systems, or existing lung or heart disease, are at higher risk of developing severe illness from an adenovirus infection.

Adenovirus infection can cause:

- Common cold or flu-like symptoms
- Fever
- Sore throat
- Acute bronchitis (inflammation of the airways of the lungs, sometimes called a “chest cold”)
- Pneumonia (infection of the lungs)
- Diarrhea
- Conjunctivitis (pink eye)

Infection with adenovirus can also rarely lead to more serious problems, such as severe pneumonia or neurologic disease (conditions that affect the brain and spinal cord), and even death. Some people who are infected may have to be hospitalized.

Adenoviruses are usually spread from an infected person to others through close personal contact such as touching or shaking hands, through the air by coughing and sneezing, or through handling objects that an infected person has touched. Some adenoviruses can spread through an infected person’s stool, for example, during diaper changing. Adenovirus can also spread through the water, such as in swimming pools, but this is less common.

Certain adenovirus types (including Type 4 and Type 7) have caused severe outbreaks of respiratory illness among military recruits.

2 Adenovirus vaccine

Adenovirus vaccine is only available for United States military personnel. There is currently no adenovirus vaccine available to the general public.

Adenovirus vaccine contains live adenovirus Type 4 and Type 7. It will prevent most illness caused by these two virus types.

The vaccine comes as two tablets, taken orally (by mouth) at the same time. The tablets should be swallowed whole, not chewed or crushed.

The vaccine is approved for military personnel 17 through 50 years of age. It is recommended by the Department of Defense for military recruits entering basic training. It may also be recommended for other military personnel at high risk for adenovirus infection.

Adenovirus vaccine may be given at the same time as other vaccines.

3 Talk with your health care provider

Tell your vaccine provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of adenovirus vaccine**, or has any **severe, life-threatening allergies**.
- Has a **weakened immune system**.
- Is **younger than 17 or older than 50 years**.
- Is **pregnant or nursing**, or planning to become pregnant.
- Is **unable to swallow the vaccine tablets whole** without chewing them.
- Is **currently experiencing vomiting or diarrhea**.



In some cases, your health care provider may decide to postpone adenovirus vaccination to a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting adenovirus vaccine.

Virus from the vaccine can be shed in the stool for up to 28 days after vaccination. To minimize the risk of spreading vaccine virus to other people during this period, observe proper **personal hygiene**, such as frequent hand washing, especially following bowel movements. This is especially important if you have close contact with children 7 years of age and younger, with anyone having a weakened immune system, or with pregnant women.

Your health care provider can give you more information.

4 Risks of a vaccine reaction

- Headache, upper respiratory tract infection, stuffy nose, sore throat, abdominal pain, cough, nausea, diarrhea, fever or joint pain can happen after adenovirus vaccine.
- More serious problems including blood in the urine or stool, pneumonia, or inflammation of the stomach or intestines occur rarely after adenovirus vaccination.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5 What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff do not give medical advice.*

6 How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's adenovirus website at www.cdc.gov/adenovirus



Anthrax Vaccine:

What You Need to Know

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1 Why get vaccinated?

Anthrax vaccine can prevent **anthrax**.

People can get anthrax disease from contact with infected animals or contaminated animal products such as wool, meat, or hides. The anthrax bacteria could also be used as a biological weapon.

Anthrax is not spread from person to person. It is spread in one of four ways, and signs and symptoms can vary depending on how anthrax enters the body:

- Through breaks in the skin. Cutaneous anthrax causes blisters or bumps on the skin, swelling around the sore, and a painless skin sore (ulcer) with a black center. The sore is usually on the face, neck, arms, or hands.
- From eating infected meat. Ingestion anthrax can cause fever and chills. It can affect the upper part of the gastrointestinal (GI) tract, the lower part of the GI tract, or both. When it affects the upper part, there is swelling of the neck or neck glands, sore throat, and painful swallowing or difficulty breathing. When it affects the lower GI tract, nausea and vomiting, stomach pain and swelling, and diarrhea may be present. The patient may also look flushed (red), have red eyes, or faint.
- From inhaling spores of the bacteria that causes anthrax. Inhalation anthrax can cause shortness of breath, cough, chest discomfort, confusion, nausea or vomiting, stomachache, sweats, and dizziness.
- From injecting heroin. Injection anthrax can result in swelling at the injection site, nausea and vomiting, and sweats.

All types of anthrax can cause fever, chills, fatigue, and headache. Anthrax can spread throughout the body and cause severe illness, including brain infections and even death, if left untreated.

2 Anthrax vaccine

Anthrax vaccine is approved by the Food and Drug Administration (FDA) and recommended for adults 18 through 65 years of age **who are at risk of exposure to anthrax bacteria**, including:

- Certain laboratory workers who work with *Bacillus anthracis*
- People who handle potentially infected animals or their carcasses
- Some military personnel (determined by the Department of Defense)
- Some emergency and other responders whose response activities might lead to exposure

These people should get 3 doses of anthrax vaccine, followed by booster doses for ongoing protection.

Anthrax vaccine is also recommended for **unvaccinated people of all ages who have been exposed to anthrax**. These people should get 3 doses of anthrax vaccine together with recommended antibiotic drugs.

Anthrax vaccine has not been studied or used in children less than 18 years of age. Because its use in exposed children is not approved by FDA, it must be used under an expanded access Investigational New Drug (IND) program and requires informed consent from a parent or legal guardian.



3

Talk with your health care provider

Tell your vaccine provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of anthrax vaccine**, or has any **severe, life-threatening allergies**.
- Is **pregnant** or thinks she might be pregnant.
- Has a **weakened immune system**.
- Has a **history of anthrax disease**.

In some cases, your health care provider may decide to postpone anthrax vaccination to a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting anthrax vaccine.

If you are receiving the vaccine because you have been exposed to anthrax, tell your health care provider if you are not feeling well. You might need immediate medical care.

Your health care provider can give you more information.

4

Risks of a vaccine reaction

After getting a shot of anthrax vaccine, you may have:

- Tenderness, redness, itching, or a lump or bruise where the shot is given
- Muscle aches or short-term trouble moving your arm
- Headaches or fatigue

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5

What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff do not give medical advice.*

6

Countermeasures Injury Compensation Program

The Countermeasures Injury Compensation Program is a federal program that may help pay for costs of medical care and other specific expenses of certain people who have been seriously injured by certain medicines or vaccines. If you have been injured by the anthrax vaccine, you can learn more about this Program by visiting the program's website at www.hrsa.gov/cicp, or calling **1-855-266-2427**.

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How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's anthrax website at www.cdc.gov/anthrax



Cholera Vaccine:

What You Need to Know

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1 Why get vaccinated?

Cholera vaccine can prevent cholera.

Cholera is spread through contaminated food or water. It is not usually spread directly from person to person, but it can be spread through contact with the feces of an infected person. Cholera causes severe diarrhea and vomiting. If it isn't treated quickly, it can lead to dehydration and even death.

Cholera is a risk mostly to people traveling to countries where the disease is common (Haiti, and parts of Africa, Asia, and the Pacific). While it is rare in the United States, cholera has also occurred among people eating raw or undercooked seafood from the Gulf Coast.

Besides being vaccinated, it is important to be careful about what you eat and drink while traveling and practice good personal hygiene to help prevent waterborne and foodborne diseases, including cholera.

2 Cholera vaccine

The cholera vaccine used in the United States is an oral (swallowed) vaccine. Only one dose is needed. Booster doses are not recommended at this time.

Most travelers do not need cholera vaccine. If you are an adult 18 through 64 years old traveling to an area where people are getting infected with cholera, your health care provider might recommend the vaccine for you.

Cholera vaccine is not 100% effective against cholera and does not protect from other foodborne or waterborne diseases. Cholera vaccine is not a substitute for being careful about what you eat or drink.

3 Talk with your health care provider

Tell your vaccine provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of cholera vaccine**, or has any **severe, life-threatening allergies**.
- Is **pregnant or breastfeeding**, or thinks she might be pregnant.
- Has a **weakened immune system** or has close contacts (e.g., household contacts) with a weakened immune system.
- Has **recently taken antibiotics**.
- Is **taking anti-malaria drugs**, or plans to start taking them in the next 10 days.

In some cases, your health care provider may decide to postpone cholera vaccination to a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting cholera vaccine.

Your health care provider can give you more information.

Always wash your hands thoroughly after using the bathroom and before preparing or handling food. Cholera vaccine is a live, attenuated (weakened) vaccine which can be shed in stool for at least 7 days.



4 Risks of a vaccine reaction

- Tiredness, headache, abdominal pain, nausea, vomiting, lack of appetite, and diarrhea can happen after cholera vaccine.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5 What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff do not give medical advice.*

6 How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's cholera website at www.cdc.gov/cholera



Dengue Vaccine:

What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

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1. Why get vaccinated?

Dengue vaccine can help protect against dengue in people who have had dengue in the past.

Dengue is caused by one of four viruses spread through the bite of an infected mosquito. A person can get infected by any of the four dengue viruses. Infection with one dengue virus does not protect against infection with the other three viruses. Each year, up to 400 million people are infected with dengue. Almost half of the world's population lives in areas with a risk of dengue.

Most people infected with dengue have no symptoms or experience mild disease.

Some people who get sick with dengue have sudden onset of fever with nausea, vomiting, a rash, and eye, muscle, joint, or bone aches and pains.

A smaller number of people with dengue will have severe disease. Severe dengue is a medical emergency, requiring immediate medical attention at a hospital. Hospitalization with dengue is most common in older children and adolescents. Warning signs of severe dengue begin 12 to 24 hours after fever goes away and include stomach pain and tenderness, vomiting, bleeding from the nose or gums, blood in vomit or stool, and extreme tiredness or restlessness.

Rarely, dengue can have serious effects on the liver, heart, central nervous system, kidneys, eyes, muscles, or bone marrow. Severe dengue can also lead to death.

2. Dengue vaccine

Dengue vaccine is recommended for **children 9 through 16 years old** who

- Have a history of dengue infection in the past confirmed by a laboratory test
- Live in an area where dengue is common, including the U.S. territories of Puerto Rico, American Samoa, and the U.S. Virgin Islands, and freely associated states including the Federated States of Micronesia, the Republic of Marshall Islands, and the Republic of Palau

Dengue vaccine is **NOT** recommended for travelers.

To receive the vaccine, your child must have had dengue in the past, confirmed by blood testing.

The vaccine could increase the risk of severe dengue and hospitalization in children who have not had dengue before if they are infected with dengue after vaccination.

Children need 3 doses of the dengue vaccine. The second dose should be given 6 months after the first dose, the third dose 6 months after the second dose.

Dengue vaccine may be given at the same time as other vaccines.



3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of dengue vaccine**, or has any **severe, life-threatening allergies**
- Has a **weakened immune system**

If the person getting the vaccine is pregnant or breastfeeding, they should discuss benefits and potential risks of dengue vaccination with their health care provider.

In some cases, your health care provider may decide to postpone dengue vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting dengue vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Soreness, redness, or swelling where the shot is given, tiredness or weakness, fever, headache, fatigue, or muscle pain can happen after dengue vaccination.

If a person who has never had dengue in the past gets dengue vaccine, they are at increased risk of severe disease if they become infected with dengue in the future.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/dengue.



DTaP (Diphtheria, Tetanus, Pertussis) Vaccine: *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

DTaP vaccine can prevent **diphtheria, tetanus, and pertussis**.

Diphtheria and pertussis spread from person to person. Tetanus enters the body through cuts or wounds.

- **DIPHTHERIA (D)** can lead to difficulty breathing, heart failure, paralysis, or death.
- **TETANUS (T)** causes painful stiffening of the muscles. Tetanus can lead to serious health problems, including being unable to open the mouth, having trouble swallowing and breathing, or death.
- **PERTUSSIS (aP)**, also known as “whooping cough,” can cause uncontrollable, violent coughing that makes it hard to breathe, eat, or drink. Pertussis can be extremely serious especially in babies and young children, causing pneumonia, convulsions, brain damage, or death. In teens and adults, it can cause weight loss, loss of bladder control, passing out, and rib fractures from severe coughing.

2. DTaP vaccine

DTaP is only for children younger than 7 years old. Different vaccines against tetanus, diphtheria, and pertussis (Tdap and Td) are available for older children, adolescents, and adults.

It is recommended that children receive 5 doses of DTaP, usually at the following ages:

- 2 months
- 4 months
- 6 months
- 15–18 months
- 4–6 years

DTaP may be given as a stand-alone vaccine, or as part of a combination vaccine (a type of vaccine that combines more than one vaccine together into one shot).

DTaP may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of any vaccine that protects against tetanus, diphtheria, or pertussis**, or has any **severe, life-threatening allergies**
- Has had a **coma, decreased level of consciousness, or prolonged seizures within 7 days after a previous dose of any pertussis vaccine (DTP or DTaP)**
- Has **seizures or another nervous system problem**
- Has ever had **Guillain-Barré Syndrome** (also called “GBS”)
- Has had **severe pain or swelling after a previous dose of any vaccine that protects against tetanus or diphtheria**

In some cases, your child’s health care provider may decide to postpone DTaP vaccination until a future visit.

Children with minor illnesses, such as a cold, may be vaccinated. Children who are moderately or severely ill should usually wait until they recover before getting DTaP vaccine.

Your child’s health care provider can give you more information.



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Centers for Disease Control and Prevention

4. Risks of a vaccine reaction

- Soreness or swelling where the shot was given, fever, fussiness, feeling tired, loss of appetite, and vomiting sometimes happen after DTaP vaccination.
- More serious reactions, such as seizures, non-stop crying for 3 hours or more, or high fever (over 105°F) after DTaP vaccination happen much less often. Rarely, vaccination is followed by swelling of the entire arm or leg, especially in older children when they receive their fourth or fifth dose.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636** (**1-800-CDC-INFO**) or
 - Visit CDC's website at www.cdc.gov/vaccines.



Ebola Vaccine:

What You Need to Know

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1. Why get vaccinated?

Ebola vaccine can prevent **Ebola virus disease** (*Zaire ebolavirus*).

Ebola virus disease is a rare disease that most commonly affects people and nonhuman primates (such as monkeys, gorillas, and chimpanzees). Outbreaks of Ebola virus disease occur mostly on the African continent.

Ebola virus spreads through direct contact with the blood, body fluids, and tissues of people or animals who are infected with the virus or who have died of Ebola virus disease.

Health care workers and family and friends in close contact with people with Ebola virus disease are at the highest risk of infection. There is little risk of catching Ebola virus disease for travelers or the general public who have not cared for or been in close contact with someone infected with Ebola virus.

A person can only spread Ebola virus to other people after they develop symptoms. Symptoms of Ebola virus disease may appear between 2 to 21 days after contact with the virus. Early symptoms of Ebola virus disease often include fever, aches, pain, sore throat and fatigue and progress to symptoms such as diarrhea, vomiting, unexplained hemorrhaging, and bleeding. Later, an infected person might experience symptoms of red eyes, skin rash, and hiccups.

Ebola virus disease is often deadly. Recovery depends on good supportive clinical care and the patient's immune response. Treatments that have become available in recent years are also increasing overall survival.

People who survive Ebola virus disease may have health problems after they recover. The most common problems are tiredness, headaches, muscle and joint pain, eye and vision problems (such as blurry vision, pain, redness, and sensitivity to light), weight gain, stomach pain, or loss of appetite. Other health problems can also occur. In some survivors, the virus may be hiding in certain areas of the body after they recover from the disease and can cause symptoms again later.

2. Ebola vaccine

Ebola vaccine is a live virus vaccine that is administered as a single dose by injection into a muscle. The vaccine contains a weakened strain of the vesicular stomatitis virus that has been altered to contain a gene from the Ebola virus. Because the Ebola vaccine only contains a gene from the Ebola virus instead of the whole Ebola virus, it cannot cause Ebola virus disease in the person being vaccinated or in other people who have contact with the person being vaccinated.

Ebola vaccine is recommended by CDC for **adults 18 years and older** at high risk for potential exposure to Ebola virus because they are:

- Responding or planning to respond to an outbreak of Ebola virus disease
- Laboratorians or other staff working at biosafety-level 4 or laboratory response network facilities in the United States that might handle specimens that might contain live Ebola virus
- Health care personnel working at federally or state designated special pathogen treatment centers in the United States involved or expected to be involved in the care and transport of patients with suspected or confirmed Ebola virus disease

A booster dose of Ebola vaccine is available for people at least 6 months after the single dose under an expanded access Investigational New Drug (IND) program. Booster dose eligibility is assessed on an individual basis. Talk with your health care provider if you have questions.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of Ebola vaccine**, or has any **severe, life-threatening allergies**, including to rice protein
- Is or planning to be **pregnant or breastfeeding**
- Has a **weakened immune system** or has **close contact with someone who has a weakened immune system**



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In some cases, your health care provider may decide to postpone Ebola vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting Ebola vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Pain, swelling, and redness where the shot is given can happen after Ebola vaccination.
- Headache, fever, muscle pain, fatigue or tiredness, nausea, skin rash (including blisters), and abnormal sweating can happen after Ebola vaccination.
- Joint pain or swelling can occur after Ebola vaccination. Although rare, the joint pain or swelling can be severe and long lasting.
- Arthritis or worsening arthritis can occur after Ebola vaccine, most frequently in women and people with a medical history of arthritis.
- Certain white blood cell counts can become lower than normal after Ebola vaccination but are not associated with illness and go back to normal.

Ebola vaccine contains a live virus. It is possible that the vaccine virus might be transmitted to other people. Vaccinated people should take measures to prevent spreading the virus after Ebola vaccination:

- Do not donate blood for at least 6 weeks.
- Avoid sharing needles, razors, toothbrushes, and eating/drinking utensils and dishes and open-mouth kissing for 2 weeks.
- Use effective barrier methods to prevent pregnancy for 2 months.
- Consider avoiding close contact with high-risk people for up to 6 weeks. High-risk people include people with weakened immune systems, people who are pregnant or breastfeeding, and children younger than 1 year old.
- Try to avoid exposing livestock to blood or body fluids for at least 6 weeks.
- If you develop a rash after vaccination, cover the rash with a bandage until healed. Dispose of used bandages in a sealed plastic bag and wash hands with soap and water.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. Countermeasures Injury Compensation Program

The Countermeasures Injury Compensation Program is a federal program that may help pay for costs of medical care and other specific expenses of certain people who have been seriously injured by certain medicines or vaccines. If you have been injured by the Ebola vaccine, you can learn more about this Program by visiting the program's website at www.hrsa.gov/cicp, or calling **1-855-266-2427 (855-266-CICP)**.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vhf/Ebola/index.html.



Influenza (Flu) Vaccine (Inactivated or Recombinant): *What you need to know*

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1. Why get vaccinated?

Influenza vaccine can prevent **influenza (flu)**.

Flu is a contagious disease that spreads around the United States every year, usually between October and May. Anyone can get the flu, but it is more dangerous for some people. Infants and young children, people 65 years and older, pregnant people, and people with certain health conditions or a weakened immune system are at greatest risk of flu complications.

Pneumonia, bronchitis, sinus infections, and ear infections are examples of flu-related complications. If you have a medical condition, such as heart disease, cancer, or diabetes, flu can make it worse.

Flu can cause fever and chills, sore throat, muscle aches, fatigue, cough, headache, and runny or stuffy nose. Some people may have vomiting and diarrhea, though this is more common in children than adults.

In an average year, **thousands of people in the United States die from flu**, and many more are hospitalized. Flu vaccine prevents millions of illnesses and flu-related visits to the doctor each year.

2. Influenza vaccines

CDC recommends everyone 6 months and older get vaccinated every flu season. **Children 6 months through 8 years of age** may need 2 doses during a single flu season. **Everyone else** needs only 1 dose each flu season.

It takes about 2 weeks for protection to develop after vaccination.

There are many flu viruses, and they are always changing. Each year a new flu vaccine is made to protect against the influenza viruses believed to be likely to cause disease in the upcoming flu season.

Even when the vaccine doesn't exactly match these viruses, it may still provide some protection.

Influenza vaccine **does not cause flu**.

Influenza vaccine may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of influenza vaccine**, or has any **severe, life-threatening allergies**
- Has ever had **Guillain-Barré Syndrome** (also called "GBS")

In some cases, your health care provider may decide to postpone influenza vaccination until a future visit.

Influenza vaccine can be administered at any time during pregnancy. People who are or will be pregnant during influenza season should receive inactivated influenza vaccine.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting influenza vaccine.

Your health care provider can give you more information.



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4. Risks of a vaccine reaction

- Soreness, redness, and swelling where the shot is given, fever, muscle aches, and headache can happen after influenza vaccination.
- There may be a very small increased risk of Guillain-Barré Syndrome (GBS) after inactivated influenza vaccine (the flu shot).

Young children who get the flu shot along with pneumococcal vaccine (PCV13) and/or DTaP vaccine at the same time might be slightly more likely to have a seizure caused by fever. Tell your health care provider if a child who is getting flu vaccine has ever had a seizure.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636** (1-800-CDC-INFO) or
 - Visit CDC's website at www.cdc.gov/flu.



Influenza (Flu) Vaccine (Live, Intranasal): What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Influenza vaccine can prevent **influenza (flu)**.

Flu is a contagious disease that spreads around the United States every year, usually between October and May. Anyone can get the flu, but it is more dangerous for some people. Infants and young children, people 65 years of age and older, pregnant people, and people with certain health conditions or a weakened immune system are at greatest risk of flu complications.

Pneumonia, bronchitis, sinus infections, and ear infections are examples of flu-related complications. If you have a medical condition, such as heart disease, cancer, or diabetes, flu can make it worse.

Flu can cause fever and chills, sore throat, muscle aches, fatigue, cough, headache, and runny or stuffy nose. Some people may have vomiting and diarrhea, though this is more common in children than adults.

In an average year, **thousands of people in the United States die from flu**, and many more are hospitalized. Flu vaccine prevents millions of illnesses and flu-related visits to the doctor each year.

2. Live, attenuated influenza vaccine

CDC recommends everyone 6 months and older get vaccinated every flu season. **Children 6 months through 8 years of age** may need 2 doses during a single flu season. **Everyone else** needs only 1 dose each flu season.

Live, attenuated influenza vaccine (called “LAIV”) is a nasal spray vaccine that may be given to non-pregnant people **2 through 49 years of age**.

It takes about 2 weeks for protection to develop after vaccination.

There are many flu viruses, and they are always changing. Each year a new flu vaccine is made to protect against the influenza viruses believed to be likely to cause disease in the upcoming flu season. Even when the vaccine doesn’t exactly match these viruses, it may still provide some protection.

Influenza vaccine **does not cause flu**.

Influenza vaccine may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Is **younger than 2 years or older than 49 years** of age
- Is **pregnant**. Live, attenuated influenza vaccine is not recommended for pregnant people
- Has had an **allergic reaction after a previous dose of influenza vaccine**, or has any **severe, life-threatening allergies**
- Is a **child or adolescent 2 through 17 years of age who is receiving aspirin or aspirin- or salicylate-containing products**
- Has a **weakened immune system**
- Is a **child 2 through 4 years old who has asthma or a history of wheezing** in the past 12 months
- Is **5 years or older and has asthma**
- Has **taken influenza antiviral medication** in the last 3 weeks
- **Cares for severely immunocompromised people** who require a protected environment
- Has other **underlying medical conditions** that can put people at higher risk of serious flu complications (such as **lung disease, heart disease, kidney disease**)



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like diabetes, kidney or liver disorders, neurologic or neuromuscular or metabolic disorders)

- Does **not** have a spleen, or has a **non-functioning spleen**
- Has a **cochlear implant**
- Has a **cerebrospinal fluid leak** (a leak of the fluid that surrounds the brain to the nose, throat, ear, or some other location in the head)
- Has had **Guillain-Barré Syndrome** within 6 weeks after a previous dose of influenza vaccine

In some cases, your health care provider may decide to postpone influenza vaccination until a future visit.

For some patients, a different type of influenza vaccine (inactivated or recombinant influenza vaccine) might be more appropriate than live, attenuated influenza vaccine.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting influenza vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Runny nose or nasal congestion, wheezing, and headache can happen after LAIV vaccination.
- Vomiting, muscle aches, fever, sore throat, and cough are other possible side effects.

If these problems occur, they usually begin soon after vaccination and are mild and short-lived.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636** (1-800-CDC-INFO) or
 - Visit CDC's website at www.cdc.gov/flu.



Hepatitis A Vaccine:

What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Hepatitis A vaccine can prevent **hepatitis A**.

Hepatitis A is a serious liver disease. It is usually spread through close, personal contact with an infected person or when a person unknowingly ingests the virus from objects, food, or drinks that are contaminated by small amounts of stool (poop) from an infected person.

Most adults with hepatitis A have symptoms, including fatigue, low appetite, stomach pain, nausea, and jaundice (yellow skin or eyes, dark urine, light-colored bowel movements). Most children less than 6 years of age do not have symptoms.

A person infected with hepatitis A can transmit the disease to other people even if he or she does not have any symptoms of the disease.

Most people who get hepatitis A feel sick for several weeks, but they usually recover completely and do not have lasting liver damage. In rare cases, hepatitis A can cause liver failure and death; this is more common in people older than 50 years and in people with other liver diseases.

Hepatitis A vaccine has made this disease much less common in the United States. However, outbreaks of hepatitis A among unvaccinated people still happen.

2. Hepatitis A vaccine

Children need 2 doses of hepatitis A vaccine:

- First dose: 12 through 23 months of age
- Second dose: at least 6 months after the first dose

Infants 6 through 11 months old traveling outside the United States when protection against hepatitis A is recommended should receive 1 dose of hepatitis A vaccine. These children should still get 2 additional doses at the recommended ages for long-lasting protection.

Older children and adolescents 2 through 18 years of age who were not vaccinated previously should be vaccinated.

Adults who were not vaccinated previously and want to be protected against hepatitis A can also get the vaccine.

Hepatitis A vaccine is also recommended for the following people:

- International travelers
- Men who have sexual contact with other men
- People who use injection or non-injection drugs
- People who have occupational risk for infection
- People who anticipate close contact with an international adoptee
- People experiencing homelessness
- People with HIV
- People with chronic liver disease

In addition, a person who has not previously received hepatitis A vaccine and who has direct contact with someone with hepatitis A should get hepatitis A vaccine as soon as possible and within 2 weeks after exposure.

Hepatitis A vaccine may be given at the same time as other vaccines.



3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of hepatitis A vaccine**, or has any **severe, life-threatening allergies**

In some cases, your health care provider may decide to postpone hepatitis A vaccination until a future visit.

Pregnant or breastfeeding people should be vaccinated if they are at risk for getting hepatitis A. Pregnancy or breastfeeding are not reasons to avoid hepatitis A vaccination.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting hepatitis A vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Soreness or redness where the shot is given, fever, headache, tiredness, or loss of appetite can happen after hepatitis A vaccination.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

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7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Hepatitis B Vaccine:

What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Hepatitis B vaccine can prevent **hepatitis B**.

Hepatitis B is a liver disease that can cause mild illness lasting a few weeks, or it can lead to a serious, lifelong illness.

- **Acute hepatitis B** is a short-term illness that can lead to fever, fatigue, loss of appetite, nausea, vomiting, jaundice (yellow skin or eyes, dark urine, clay-colored bowel movements), and pain in the muscles, joints, and stomach.
- **Chronic hepatitis B** is a long-term illness that occurs when the hepatitis B virus remains in a person's body. Most people who go on to develop chronic hepatitis B do not have symptoms, but it is still very serious and can lead to liver damage (cirrhosis), liver cancer, and death. Chronically infected people can spread hepatitis B virus to others, even if they do not feel or look sick themselves.

Hepatitis B is spread when blood, semen, or other body fluid infected with the hepatitis B virus enters the body of a person who is not infected. People can become infected through:

- Birth (if a pregnant person has hepatitis B, their baby can become infected)
- Sharing items such as razors or toothbrushes with an infected person
- Contact with the blood or open sores of an infected person
- Sex with an infected partner
- Sharing needles, syringes, or other drug-injection equipment
- Exposure to blood from needlesticks or other sharp instruments

Most people who are vaccinated with hepatitis B vaccine are immune for life.

2. Hepatitis B vaccine

Hepatitis B vaccine is usually given as 2, 3, or 4 shots.

Infants should get their first dose of hepatitis B vaccine at birth and will usually complete the series at 6–18 months of age. **The birth dose of hepatitis B vaccine is an important part of preventing long-term illness in infants and the spread of hepatitis B in the United States.**

Anyone **59 years of age or younger** who has not yet gotten the vaccine should be vaccinated.

Hepatitis B vaccination is recommended for **adults 60 years or older** at increased risk of exposure to hepatitis B who were not vaccinated previously.

Adults 60 years or older who are not at increased risk and were not vaccinated in the past may also be vaccinated.

Hepatitis B vaccine may be given as a stand-alone vaccine, or as part of a combination vaccine (a type of vaccine that combines more than one vaccine together into one shot).

Hepatitis B vaccine may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of hepatitis B vaccine**, or has any **severe, life-threatening allergies**



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In some cases, your health care provider may decide to postpone hepatitis B vaccination until a future visit.

Pregnant or breastfeeding people who were not vaccinated previously should be vaccinated. Pregnancy or breastfeeding are not reasons to avoid hepatitis B vaccination.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting hepatitis B vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Soreness where the shot is given, fever, headache, and fatigue (feeling tired) can happen after hepatitis B vaccination.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Haemophilus influenzae type b (Hib) Vaccine: What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Hib vaccine can prevent *Haemophilus influenzae* type b (Hib) disease.

Haemophilus influenzae type b can cause many different kinds of infections. These infections usually affect children under 5 years of age but can also affect adults with certain medical conditions. Hib bacteria can cause mild illness, such as ear infections or bronchitis, or they can cause severe illness, such as infections of the blood. Severe Hib infection, also called “invasive Hib disease,” requires treatment in a hospital and can sometimes result in death.

Before Hib vaccine, Hib disease was the leading cause of bacterial meningitis among children under 5 years old in the United States. Meningitis is an infection of the lining of the brain and spinal cord. It can lead to brain damage and deafness.

Hib infection can also cause:

- Pneumonia
- Severe swelling in the throat, making it hard to breathe
- Infections of the blood, joints, bones, and covering of the heart
- Death

2. Hib vaccine

Hib vaccine is usually given in 3 or 4 doses (depending on brand).

Infants will usually get their first dose of Hib vaccine at 2 months of age and will usually complete the series at 12–15 months of age.

Children between 12 months and 5 years of age who have not previously been completely vaccinated against Hib may need 1 or more doses of Hib vaccine.

Children over 5 years old and adults usually do not receive Hib vaccine, but it might be recommended for older children or adults whose spleen is damaged or has been removed, including people with sickle cell disease, before surgery to remove the spleen, or following a bone marrow transplant. Hib vaccine may also be recommended for people 5 through 18 years old with HIV.

Hib vaccine may be given as a stand-alone vaccine, or as part of a combination vaccine (a type of vaccine that combines more than one vaccine together into one shot).

Hib vaccine may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of Hib vaccine**, or has any **severe, life-threatening allergies**

In some cases, your health care provider may decide to postpone Hib vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting Hib vaccine.

Your health care provider can give you more information.



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4. Risks of a vaccine reaction

- Redness, warmth, and swelling where the shot is given and fever can happen after Hib vaccination.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636** (1-800-CDC-INFO) or
 - Visit CDC's website at www.cdc.gov/vaccines.



HPV (Human Papillomavirus) Vaccine: *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

HPV (human papillomavirus) vaccine can prevent infection with some types of human papillomavirus.

HPV infections can cause certain types of cancers, including:

- cervical, vaginal, and vulvar cancers in women
- penile cancer in men
- anal cancers in both men and women
- cancers of tonsils, base of tongue, and back of throat (oropharyngeal cancer) in both men and women

HPV infections can also cause anogenital warts.

HPV vaccine can prevent over 90% of cancers caused by HPV.

HPV is spread through intimate skin-to-skin or sexual contact. HPV infections are so common that nearly all people will get at least one type of HPV at some time in their lives. Most HPV infections go away on their own within 2 years. But sometimes HPV infections will last longer and can cause cancers later in life.

2. HPV vaccine

HPV vaccine is routinely recommended for adolescents at 11 or 12 years of age to ensure they are protected before they are exposed to the virus. HPV vaccine may be given beginning at age 9 years and vaccination is recommended for everyone through 26 years of age.

HPV vaccine may be given to adults 27 through 45 years of age, based on discussions between the patient and health care provider.

Most children who get the first dose before 15 years of age need 2 doses of HPV vaccine. People who get the first dose at or after 15 years of age and younger people with certain immunocompromising conditions need 3 doses. Your health care provider can give you more information.

HPV vaccine may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of HPV vaccine**, or has any **severe, life-threatening allergies**
- Is **pregnant**—HPV vaccine is not recommended until after pregnancy

In some cases, your health care provider may decide to postpone HPV vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting HPV vaccine.

Your health care provider can give you more information.



4. Risks of a vaccine reaction

- Soreness, redness, or swelling where the shot is given can happen after HPV vaccination.
- Fever or headache can happen after HPV vaccination.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

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- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
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 - Call **1-800-232-4636** (**1-800-CDC-INFO**) or
 - Visit CDC's website at www.cdc.gov/vaccines.



Polio Vaccine:

What You Need to Know

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Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Polio vaccine can prevent **polio**.

Polio (or poliomyelitis) is a disabling and life-threatening disease caused by poliovirus, which can infect a person's spinal cord, leading to paralysis.

Most people infected with poliovirus have no symptoms, and many recover without complications. Some people will experience sore throat, fever, tiredness, nausea, headache, or stomach pain.

A smaller group of people will develop more serious symptoms that affect the brain and spinal cord:

- Paresthesia (feeling of pins and needles in the legs),
- Meningitis (infection of the covering of the spinal cord and/or brain), or
- Paralysis (can't move parts of the body) or weakness in the arms, legs, or both.

Paralysis is the most severe symptom associated with polio because it can lead to permanent disability and death.

Improvements in limb paralysis can occur, but in some people new muscle pain and weakness may develop 15 to 40 years later. This is called "post-polio syndrome."

Polio has been eliminated from the United States, but it still occurs in other parts of the world. The best way to protect yourself and keep the United States polio-free is to maintain high immunity (protection) in the population against polio through vaccination.

2. Polio vaccine

Children should usually get 4 doses of polio vaccine at ages 2 months, 4 months, 6–18 months, and 4–6 years.

Most **adults** do not need polio vaccine because they were already vaccinated against polio as children. Some adults are at higher risk and should consider polio vaccination, including:

- People traveling to certain parts of the world
- Laboratory workers who might handle poliovirus
- Health care workers treating patients who could have polio
- Unvaccinated people whose children will be receiving oral poliovirus vaccine (for example, international adoptees or refugees)

Polio vaccine may be given as a stand-alone vaccine, or as part of a combination vaccine (a type of vaccine that combines more than one vaccine together into one shot).

Polio vaccine may be given at the same time as other vaccines.



3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of polio vaccine**, or has any **severe, life-threatening allergies**

In some cases, your health care provider may decide to postpone polio vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting polio vaccine.

Not much is known about the risks of this vaccine for pregnant or breastfeeding people. However, polio vaccine can be given if a pregnant person is at increased risk for infection and requires immediate protection.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- A sore spot with redness, swelling, or pain where the shot is given can happen after polio vaccination.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Japanese Encephalitis Vaccine

What You Need to Know

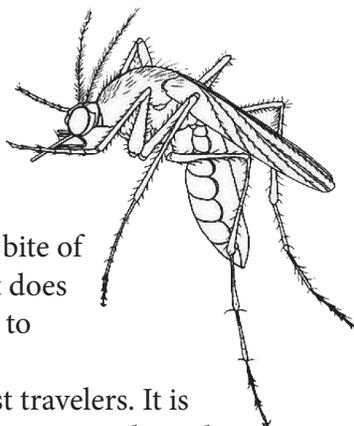
Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 Why get vaccinated?

Japanese encephalitis (JE) vaccine can prevent Japanese encephalitis.

- Japanese encephalitis occurs mainly in many parts of Asia and the Western Pacific, particularly in rural areas.
- It is spread through the bite of an infected mosquito. It does not spread from person to person.
- Risk is very low for most travelers. It is higher for people living in areas where the disease is common, or for people traveling there for long periods of time.
- Most people infected with JE virus don't have any symptoms. Others might have symptoms as mild as a fever and headache, or as serious as encephalitis (swelling of the brain).
- A person with encephalitis can experience fever, neck stiffness, seizures, and coma. About 1 person in 4 with encephalitis dies. Up to half of those who don't die have permanent disability (for example, brain damage).
- It is believed that infection in a pregnant woman could harm her unborn baby.



It should also be considered for travelers spending less than one month in a country where JE occurs, if they:

- Will visit rural areas and have an increased risk for mosquito bites,
- Are not sure of their travel plans.

Many laboratory workers at risk for exposure to JE virus will also require vaccination.

The vaccine is given as a 2-dose series. A booster dose is recommended after a year for people who remain at risk.

NOTE: *The best way to prevent JE is to avoid mosquito bites.* Your health care provider can advise you.

3 Talk with your health care provider

Tell your vaccine provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of JE vaccine**, or has any **severe, life-threatening allergies**.
- Is **pregnant**. Pregnant women should usually not get JE vaccine.
- Will be **traveling for fewer than 30 days and only traveling to urban areas**. You might not need the vaccine.

In some cases, your health care provider may decide to postpone JE vaccination to a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting JE vaccine.

Your health care provider can give you more information.

2 JE vaccine

Japanese encephalitis vaccine is approved for people 2 months of age and older.

It is recommended for people who:

- Plan to live in a country where JE occurs,
- Plan to visit a country where JE occurs for long periods (e.g., one month or more), or
- Frequently travel to countries where JE occurs.



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Control and Prevention

4 Risks of a vaccine reaction

- Pain, tenderness, redness, or swelling where the shot was given are common after JE vaccine.
- Fever sometimes happens (more often in children).
- Headache or muscle aches can occur (mainly in adults).

Studies have shown that severe reactions to JE vaccine are very rare.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5 What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff do not give medical advice.*

6 How can I learn more?

- Ask your healthcare provider.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's JE website at www.cdc.gov/japaneseencephalitis/



Meningococcal ACWY Vaccine:

What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Meningococcal ACWY vaccine can help protect against **meningococcal disease** caused by serogroups A, C, W, and Y. A different meningococcal vaccine is available that can help protect against serogroup B.

Meningococcal disease can cause meningitis (infection of the lining of the brain and spinal cord) and infections of the blood. Even when it is treated, meningococcal disease kills 10 to 15 infected people out of 100. And of those who survive, about 10 to 20 out of every 100 will suffer disabilities such as hearing loss, brain damage, kidney damage, loss of limbs, nervous system problems, or severe scars from skin grafts.

Meningococcal disease is rare and has declined in the United States since the 1990s. However, it is a severe disease with a significant risk of death or lasting disabilities in people who get it.

Anyone can get meningococcal disease. Certain people are at increased risk, including:

- Infants younger than one year old
- Adolescents and young adults 16 through 23 years old
- People with certain medical conditions that affect the immune system
- Microbiologists who routinely work with isolates of *N. meningitidis*, the bacteria that cause meningococcal disease
- People at risk because of an outbreak in their community

2. Meningococcal ACWY vaccine

Adolescents need 2 doses of a meningococcal ACWY vaccine:

- First dose: 11 or 12 year of age
- Second (booster) dose: 16 years of age

In addition to routine vaccination for adolescents, meningococcal ACWY vaccine is also recommended for **certain groups of people**:

- People at risk because of a serogroup A, C, W, or Y meningococcal disease outbreak
- People with HIV
- Anyone whose spleen is damaged or has been removed, including people with sickle cell disease
- Anyone with a rare immune system condition called “complement component deficiency”
- Anyone taking a type of drug called a “complement inhibitor,” such as eculizumab (also called “Soliris”®) or ravulizumab (also called “Ultomiris”®)
- Microbiologists who routinely work with isolates of *N. meningitidis*
- Anyone traveling to or living in a part of the world where meningococcal disease is common, such as parts of Africa
- College freshmen living in residence halls who have not been completely vaccinated with meningococcal ACWY vaccine
- U.S. military recruits



3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of meningococcal ACWY vaccine**, or has any **severe, life-threatening allergies**

In some cases, your health care provider may decide to postpone meningococcal ACWY vaccination until a future visit.

There is limited information on the risks of this vaccine for pregnant or breastfeeding people, but no safety concerns have been identified. A pregnant or breastfeeding person should be vaccinated if indicated.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting meningococcal ACWY vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Redness or soreness where the shot is given can happen after meningococcal ACWY vaccination.
- A small percentage of people who receive meningococcal ACWY vaccine experience muscle pain, headache, or tiredness.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Meningococcal B Vaccine:

What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Meningococcal B vaccine can help protect against **meningococcal disease** caused by serogroup B. A different meningococcal vaccine is available that can help protect against serogroups A, C, W, and Y.

Meningococcal disease can cause meningitis (infection of the lining of the brain and spinal cord) and infections of the blood. Even when it is treated, meningococcal disease kills 10 to 15 infected people out of 100. And of those who survive, about 10 to 20 out of every 100 will suffer disabilities such as hearing loss, brain damage, kidney damage, loss of limbs, nervous system problems, or severe scars from skin grafts.

Meningococcal disease is rare and has declined in the United States since the 1990s. However, it is a severe disease with a significant risk of death or lasting disabilities in people who get it.

Anyone can get meningococcal disease. Certain people are at increased risk, including:

- Infants younger than one year old
- Adolescents and young adults 16 through 23 years old
- People with certain medical conditions that affect the immune system
- Microbiologists who routinely work with isolates of *N. meningitidis*, the bacteria that cause meningococcal disease
- People at risk because of an outbreak in their community

2. Meningococcal B vaccine

For best protection, more than 1 dose of a meningococcal B vaccine is needed. There are two meningococcal B vaccines available. The same vaccine must be used for all doses.

Meningococcal B vaccines are recommended for people 10 years or older who are at increased risk for serogroup B meningococcal disease, including:

- People at risk because of a serogroup B meningococcal disease outbreak
- Anyone whose spleen is damaged or has been removed, including people with sickle cell disease
- Anyone with a rare immune system condition called “complement component deficiency”
- Anyone taking a type of drug called a “complement inhibitor,” such as eculizumab (also called “Soliris”®) or ravulizumab (also called “Ultomiris”®)
- Microbiologists who routinely work with isolates of *N. meningitidis*

These vaccines may also be given to anyone 16 through 23 years old to provide short-term protection against most strains of serogroup B meningococcal disease, based on discussions between the patient and health care provider. The preferred age for vaccination is 16 through 18 years.



3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of meningococcal B vaccine**, or has any **severe, life-threatening allergies**
- Is **pregnant or breastfeeding**

In some cases, your health care provider may decide to postpone meningococcal B vaccination until a future visit.

Meningococcal B vaccination should be postponed for pregnant people unless the person is at increased risk and, after consultation with their health care provider, the benefits of vaccination are considered to outweigh the potential risks.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting meningococcal B vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Soreness, redness, or swelling where the shot is given, tiredness, headache, muscle or joint pain, fever, or nausea can happen after meningococcal B vaccination. Some of these reactions occur in more than half of the people who receive the vaccine.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



MMR Vaccine (Measles, Mumps, and Rubella): *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

MMR vaccine can prevent **measles, mumps, and rubella**.

- **MEASLES (M)** causes fever, cough, runny nose, and red, watery eyes, commonly followed by a rash that covers the whole body. It can lead to seizures (often associated with fever), ear infections, diarrhea, and pneumonia. Rarely, measles can cause brain damage or death.
- **MUMPS (M)** causes fever, headache, muscle aches, tiredness, loss of appetite, and swollen and tender salivary glands under the ears. It can lead to deafness, swelling of the brain and/or spinal cord covering, painful swelling of the testicles or ovaries, and, very rarely, death.
- **RUBELLA (R)** causes fever, sore throat, rash, headache, and eye irritation. It can cause arthritis in up to half of teenage and adult women. If a person gets rubella while they are pregnant, they could have a miscarriage or the baby could be born with serious birth defects.

Most people who are vaccinated with MMR will be protected for life. Vaccines and high rates of vaccination have made these diseases much less common in the United States.

2. MMR vaccine

Children need 2 doses of MMR vaccine, usually:

- First dose at age 12 through 15 months
- Second dose at age 4 through 6 years

Infants who will be traveling outside the United States when they are between 6 and 11 months of age should get a dose of MMR vaccine before travel. These children should still get 2 additional doses at the recommended ages for long-lasting protection.

Older children, adolescents, and adults also need 1 or 2 doses of MMR vaccine if they are not already

immune to measles, mumps, and rubella. Your health care provider can help you determine how many doses you need.

A third dose of MMR might be recommended for certain people in mumps outbreak situations.

MMR vaccine may be given at the same time as other vaccines. Children 12 months through 12 years of age might receive MMR vaccine together with varicella vaccine in a single shot, known as MMRV. Your health care provider can give you more information.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of MMR or MMRV vaccine**, or has any **severe, life-threatening allergies**
- Is **pregnant** or thinks they might be pregnant—pregnant people should not get MMR vaccine
- Has a **weakened immune system**, or has a **parent, brother, or sister with a history of hereditary or congenital immune system problems**
- Has ever had a **condition that makes him or her bruise or bleed easily**
- Has recently had a **blood transfusion or received other blood products**
- Has **tuberculosis**
- Has **gotten any other vaccines in the past 4 weeks**

In some cases, your health care provider may decide to postpone MMR vaccination until a future visit.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting MMR vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Sore arm from the injection or redness where the shot is given, fever, and a mild rash can happen after MMR vaccination.
- Swelling of the glands in the cheeks or neck or temporary pain and stiffness in the joints (mostly in teenage or adult women) sometimes occur after MMR vaccination.
- More serious reactions happen rarely. These can include seizures (often associated with fever) or temporary low platelet count that can cause unusual bleeding or bruising.
- In people with serious immune system problems, this vaccine may cause an infection that may be life-threatening. People with serious immune system problems should not get MMR vaccine.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
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MMRV Vaccine (Measles, Mumps, Rubella, and Varicella): *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

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1. Why get vaccinated?

MMRV vaccine can prevent **measles, mumps, rubella, and varicella.**

- **MEASLES (M)** causes fever, cough, runny nose, and red, watery eyes, commonly followed by a rash that covers the whole body. It can lead to seizures (often associated with fever), ear infections, diarrhea, and pneumonia. Rarely, measles can cause brain damage or death.
- **MUMPS (M)** causes fever, headache, muscle aches, tiredness, loss of appetite, and swollen and tender salivary glands under the ears. It can lead to deafness, swelling of the brain and/or spinal cord covering, painful swelling of the testicles or ovaries, and, very rarely, death.
- **RUBELLA (R)** causes fever, sore throat, rash, headache, and eye irritation. It can cause arthritis in up to half of teenage and adult women. If a person gets rubella while they are pregnant, they could have a miscarriage or the baby could be born with serious birth defects.
- **VARICELLA (V)**, also called “chickenpox,” causes an itchy rash, in addition to fever, tiredness, loss of appetite, and headache. It can lead to skin infections, pneumonia, inflammation of the blood vessels, swelling of the brain and/or spinal cord covering, and infection of the blood, bones, or joints. Some people who get chickenpox get a painful rash called “shingles” (also known as herpes zoster) years later.

Most people who are vaccinated with MMRV will be protected for life. Vaccines and high rates of vaccination have made these diseases much less common in the United States.

2. MMRV vaccine

MMRV vaccine may be given to **children 12 months through 12 years of age**, usually:

- First dose at age 12 through 15 months
- Second dose at age 4 through 6 years

MMRV vaccine may be given at the same time as other vaccines. Instead of MMRV, some children might receive separate shots for MMR (measles, mumps, and rubella) and varicella. Your health care provider can give you more information.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of MMRV, MMR, or varicella vaccine**, or has any **severe, life-threatening allergies**
- Is **pregnant** or thinks they might be pregnant—pregnant people should not get MMRV vaccine
- Has a **weakened immune system**, or has a **parent, brother, or sister with a history of hereditary or congenital immune system problems**
- Has ever had a **condition that makes him or her bruise or bleed easily**
- Has a **history of seizures**, or has a **parent, brother, or sister with a history of seizures**
- Is **taking or plans to take salicylates** (such as aspirin)
- Has recently **had a blood transfusion or received other blood products**
- Has **tuberculosis**
- Has **gotten any other vaccines in the past 4 weeks**

In some cases, your health care provider may decide to postpone MMRV vaccination until a future visit or may recommend that the child receive separate MMR and varicella vaccines instead of MMRV.

People with minor illnesses, such as a cold, may be vaccinated. Children who are moderately or severely ill should usually wait until they recover before getting MMRV vaccine.

Your health care provider can give you more information.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

4. Risks of a vaccine reaction

- Sore arm from the injection, redness where the shot is given, fever, and a mild rash can happen after MMRV vaccination.
- Swelling of the glands in the cheeks or neck or temporary pain and stiffness in the joints sometimes occur after MMRV vaccination.
- Seizures, often associated with fever, can happen after MMRV vaccine. The risk of seizures is higher after MMRV than after separate MMR and varicella vaccines when given as the first dose of the two-dose series in younger children. Your health care provider can advise you about the appropriate vaccines for your child.
- More serious reactions happen rarely, including temporary low platelet count, which can cause unusual bleeding or bruising.
- In people with serious immune system problems, this vaccine may cause an infection that may be life-threatening. People with serious immune system problems should not get MMRV vaccine.

If a person develops a rash after MMRV vaccination, it could be related to either the measles or the varicella component of the vaccine. The varicella vaccine virus could be spread to an unprotected person. Anyone who gets a rash should stay away from infants and people with a weakened immune system until the rash goes away. Talk with your health care provider to learn more.

Some people who are vaccinated against chickenpox get shingles (herpes zoster) years later. This is much less common after vaccination than after chickenpox disease.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

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7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Your Child's First Vaccines:

What You Need to Know

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Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

The vaccines included on this statement are likely to be given at the same time during infancy and early childhood. There are separate Vaccine Information Statements for other vaccines that are also routinely recommended for young children (measles, mumps, rubella, varicella, rotavirus, influenza, and hepatitis A).

Your child is getting these vaccines today:

DTaP Hib Hepatitis B Polio PCV13

(Provider: Check appropriate boxes.)

1. Why get vaccinated?

Vaccines can prevent disease. Childhood vaccination is essential because it helps provide immunity before children are exposed to potentially life-threatening diseases.

Diphtheria, tetanus, and pertussis (DTaP)

- **Diphtheria (D)** can lead to difficulty breathing, heart failure, paralysis, or death.
- **Tetanus (T)** causes painful stiffening of the muscles. Tetanus can lead to serious health problems, including being unable to open the mouth, having trouble swallowing and breathing, or death.
- **Pertussis (aP)**, also known as “whooping cough,” can cause uncontrollable, violent coughing that makes it hard to breathe, eat, or drink. Pertussis can be extremely serious especially in babies and young children, causing pneumonia, convulsions, brain damage, or death. In teens and adults, it can cause weight loss, loss of bladder control, passing out, and rib fractures from severe coughing.

Hib (*Haemophilus influenzae* type b) disease

Haemophilus influenzae type b can cause many different kinds of infections. These infections usually affect children under 5 years of age but can also affect adults with certain medical conditions. Hib bacteria can cause mild illness, such as ear infections

or bronchitis, or they can cause severe illness, such as infections of the blood. Severe Hib infection, also called “invasive Hib disease,” requires treatment in a hospital and can sometimes result in death.

Hepatitis B

Hepatitis B is a liver disease that can cause mild illness lasting a few weeks, or it can lead to a serious, lifelong illness. Acute hepatitis B infection is a short-term illness that can lead to fever, fatigue, loss of appetite, nausea, vomiting, jaundice (yellow skin or eyes, dark urine, clay-colored bowel movements), and pain in the muscles, joints, and stomach. Chronic hepatitis B infection is a long-term illness that occurs when the hepatitis B virus remains in a person's body. Most people who go on to develop chronic hepatitis B do not have symptoms, but it is still very serious and can lead to liver damage (cirrhosis), liver cancer, and death.

Polio

Polio (or poliomyelitis) is a disabling and life-threatening disease caused by poliovirus, which can infect a person's spinal cord, leading to paralysis. Most people infected with poliovirus have no symptoms, and many recover without complications. Some people will experience sore throat, fever, tiredness, nausea, headache, or stomach pain.



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A smaller group of people will develop more serious symptoms: paresthesia (feeling of pins and needles in the legs), meningitis (infection of the covering of the spinal cord and/or brain), or paralysis (can't move parts of the body) or weakness in the arms, legs, or both. Paralysis can lead to permanent disability and death.

Pneumococcal disease

Pneumococcal disease refers to any illness caused by pneumococcal bacteria. These bacteria can cause many types of illnesses, including pneumonia, which is an infection of the lungs. Besides pneumonia, pneumococcal bacteria can also cause ear infections, sinus infections, meningitis (infection of the tissue covering the brain and spinal cord), and bacteremia (infection of the blood). Most pneumococcal infections are mild. However, some can result in long-term problems, such as brain damage or hearing loss. Meningitis, bacteremia, and pneumonia caused by pneumococcal disease can be fatal.

2. DTaP, Hib, hepatitis B, polio, and pneumococcal conjugate vaccines

Infants and children usually need:

- 5 doses of **diphtheria, tetanus, and acellular pertussis vaccine (DTaP)**
- 3 or 4 doses of **Hib vaccine**
- 3 doses of **hepatitis B vaccine**
- 4 doses of **polio vaccine**
- 4 doses of **pneumococcal conjugate vaccine (PCV13)**

Some children might need fewer or more than the usual number of doses of some vaccines to be fully protected because of their age at vaccination or other circumstances.

Older children, adolescents, and adults with certain health conditions or other risk factors might also be recommended to receive 1 or more doses of some of these vaccines.

These vaccines may be given as stand-alone vaccines, or as part of a combination vaccine (a type of vaccine that combines more than one vaccine together into one shot).

3. Talk with your health care provider

Tell your vaccination provider if the child getting the vaccine:

For all of these vaccines:

- Has had an **allergic reaction after a previous dose of the vaccine**, or has any **severe, life-threatening allergies**

For DTaP:

- Has had an **allergic reaction after a previous dose of any vaccine that protects against tetanus, diphtheria, or pertussis**
- Has had a **coma, decreased level of consciousness, or prolonged seizures within 7 days after a previous dose of any pertussis vaccine (DTP or DTaP)**
- Has **seizures or another nervous system problem**
- Has ever had **Guillain-Barré Syndrome** (also called “GBS”)
- Has had **severe pain or swelling after a previous dose of any vaccine that protects against tetanus or diphtheria**

For PCV13:

- Has had an **allergic reaction after a previous dose of PCV13, to an earlier pneumococcal conjugate vaccine known as PCV7, or to any vaccine containing diphtheria toxoid** (for example, DTaP)

In some cases, your child's health care provider may decide to postpone vaccination until a future visit.

Children with minor illnesses, such as a cold, may be vaccinated. Children who are moderately or severely ill should usually wait until they recover before being vaccinated.

Your child's health care provider can give you more information.

4. Risks of a vaccine reaction

For all of these vaccines:

- Soreness, redness, swelling, warmth, pain, or tenderness where the shot is given can happen after vaccination.

For DTaP vaccine, Hib vaccine, hepatitis B vaccine, and PCV13:

- Fever can happen after vaccination.

For DTaP vaccine:

- Fussiness, feeling tired, loss of appetite, and vomiting sometimes happen after DTaP vaccination.
- More serious reactions, such as seizures, non-stop crying for 3 hours or more, or high fever (over 105°F) after DTaP vaccination happen much less often. Rarely, vaccination is followed by swelling of the entire arm or leg, especially in older children when they receive their fourth or fifth dose.

For PCV13:

- Loss of appetite, fussiness (irritability), feeling tired, headache, and chills can happen after PCV13 vaccination.
- Young children may be at increased risk for seizures caused by fever after PCV13 if it is administered at the same time as inactivated influenza vaccine. Ask your health care provider for more information.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Pneumococcal Conjugate Vaccine: *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Pneumococcal conjugate vaccine can prevent pneumococcal disease.

Pneumococcal disease refers to any illness caused by pneumococcal bacteria. These bacteria can cause many types of illnesses, including pneumonia, which is an infection of the lungs. Pneumococcal bacteria are one of the most common causes of pneumonia.

Besides pneumonia, pneumococcal bacteria can also cause:

- Ear infections
- Sinus infections
- Meningitis (infection of the tissue covering the brain and spinal cord)
- Bacteremia (infection of the blood)

Anyone can get pneumococcal disease, but children under 2 years old, people with certain medical conditions or other risk factors, and adults 65 years or older are at the highest risk.

Most pneumococcal infections are mild. However, some can result in long-term problems, such as brain damage or hearing loss. Meningitis, bacteremia, and pneumonia caused by pneumococcal disease can be fatal.

2. Pneumococcal conjugate vaccine

Pneumococcal conjugate vaccine helps protect against bacteria that cause pneumococcal disease. There are three pneumococcal conjugate vaccines (PCV13, PCV15, and PCV20). The different vaccines are recommended for different people based on age and medical status. Your health care provider can help you determine which type of pneumococcal conjugate vaccine, and how many doses, you should receive.

Infants and young children usually need 4 doses of pneumococcal conjugate vaccine. These doses are recommended at 2, 4, 6, and 12–15 months of age.

Older children and adolescents might need pneumococcal conjugate vaccine depending on their age and medical conditions or other risk factors if they did not receive the recommended doses as infants or young children.

Adults 19 through 64 years old with certain medical conditions or other risk factors who have not already received pneumococcal conjugate vaccine should receive pneumococcal conjugate vaccine.

Adults 65 years or older who have not previously received pneumococcal conjugate vaccine should receive pneumococcal conjugate vaccine.

Some people with certain medical conditions are also recommended to receive pneumococcal polysaccharide vaccine (a different type of pneumococcal vaccine, known as PPSV23). Some adults who have previously received a pneumococcal conjugate vaccine may be recommended to receive another pneumococcal conjugate vaccine.



3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of any type of pneumococcal conjugate vaccine (PCV13, PCV15, PCV20, or an earlier pneumococcal conjugate vaccine known as PCV7), or to any vaccine containing diphtheria toxoid (for example, DTaP), or has any severe, life-threatening allergies**

In some cases, your health care provider may decide to postpone pneumococcal conjugate vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Redness, swelling, pain, or tenderness where the shot is given, and fever, loss of appetite, fussiness (irritability), feeling tired, headache, muscle aches, joint pain, and chills can happen after pneumococcal conjugate vaccination.

Young children may be at increased risk for seizures caused by fever after a pneumococcal conjugate vaccine if it is administered at the same time as inactivated influenza vaccine. Ask your health care provider for more information.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

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The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

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- Contact the Centers for Disease Control and Prevention (CDC):
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 - Visit CDC's website at www.cdc.gov/vaccines.



Pneumococcal Polysaccharide Vaccine (PPSV23): *What You Need to Know*

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 Why get vaccinated?

Pneumococcal polysaccharide vaccine (PPSV23) can prevent **pneumococcal disease**.

Pneumococcal disease refers to any illness caused by pneumococcal bacteria. These bacteria can cause many types of illnesses, including pneumonia, which is an infection of the lungs. Pneumococcal bacteria are one of the most common causes of pneumonia.

Besides pneumonia, pneumococcal bacteria can also cause:

- Ear infections
- Sinus infections
- Meningitis (infection of the tissue covering the brain and spinal cord)
- Bacteremia (bloodstream infection)

Anyone can get pneumococcal disease, but children under 2 years of age, people with certain medical conditions, adults 65 years or older, and cigarette smokers are at the highest risk.

Most pneumococcal infections are mild. However, some can result in long-term problems, such as brain damage or hearing loss. Meningitis, bacteremia, and pneumonia caused by pneumococcal disease can be fatal.

2 PPSV23

PPSV23 protects against 23 types of bacteria that cause pneumococcal disease.

PPSV23 is recommended for:

- All **adults 65 years or older**,
- Anyone **2 years or older with certain medical conditions that can lead to an increased risk for pneumococcal disease**.

Most people need only one dose of PPSV23. A second dose of PPSV23, and another type of pneumococcal vaccine called PCV13, are recommended for certain high-risk groups. Your health care provider can give you more information.

People 65 years or older should get a dose of PPSV23 even if they have already gotten one or more doses of the vaccine before they turned 65.

3 Talk with your health care provider

Tell your vaccine provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of PPSV23**, or has any **severe, life-threatening allergies**.

In some cases, your health care provider may decide to postpone PPSV23 vaccination to a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting PPSV23.

Your health care provider can give you more information.



4 Risks of a vaccine reaction

- Redness or pain where the shot is given, feeling tired, fever, or muscle aches can happen after PPSV23.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5 What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff do not give medical advice.*

6 How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines



Rabies Vaccine:

What You Need to Know

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1. Why get vaccinated?

Rabies vaccine can prevent **rabies**.

Rabies is a serious illness that almost always results in death.

Rabies virus infects the central nervous system. Symptoms may occur from days to years after exposure to the virus and include delirium (confusion), abnormal behavior, hallucinations, hydrophobia (fear of water), and insomnia (difficulty sleeping), which precede coma and death.

People can get rabies if they have contact with the saliva or neural tissue of an infected animal, for example through a bite or scratch, and do not receive appropriate medical care, including rabies vaccine.

2. Rabies vaccine

Certain **people with a higher risk for rabies exposures, such as those who work with potentially infected animals, are recommended to receive vaccine** to help prevent rabies if an exposure happens. If you are at higher risk of exposure to the rabies virus:

- You should receive 2 doses of rabies vaccine given on days 0 and 7.
- Depending on your level of risk, you may be advised to have one or more blood tests or receive a booster dose within 3 years after the first 2 doses. Your health care provider can give you more details.

Rabies vaccine can prevent rabies if given to a person after an exposure. After an exposure or potential exposure to rabies, the wound site should be thoroughly cleaned with soap and water. If your health care provider or local health department recommend vaccination, the vaccine should be given as soon as possible after an exposure but may be effective any time before symptoms begin. Once

symptoms begin, rabies vaccine is no longer helpful in preventing rabies.

- If you have not been vaccinated against rabies in the past, you need 4 doses of rabies vaccine over 2 weeks (given on days 0, 3, 7, and 14). You should also get another medication called rabies immunoglobulin on the day you receive the first dose of rabies vaccine or soon afterwards.
- If you have received rabies vaccination in the past, you typically need only 2 doses of rabies vaccine after an exposure.

Rabies vaccine may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of rabies vaccine**, or has any **severe, life-threatening allergies**
- Has a **weakened immune system**
- Is **taking or plans to take chloroquine or a drug related to chloroquine**
- Has **received rabies vaccine in the past** (your provider will need to know when you received any rabies vaccine doses in the past)

In some cases, your health care provider may decide to postpone routine (pre-exposure) rabies vaccination until a future visit. Or your health care provider may perform a blood test before or after rabies vaccines are given to determine your level of immunity against rabies.



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People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting a routine (pre-exposure) dose of rabies vaccine. **If you have been exposed to rabies virus, you should get vaccinated regardless of concurrent illnesses, pregnancy, breastfeeding, or weakened immune system.**

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Soreness, redness, swelling, or itching at the site of the injection, and headache, nausea, abdominal pain, muscle aches, or dizziness can happen after rabies vaccine.
- Hives, pain in the joints, or fever sometimes happen after booster doses.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

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- Ask your health care provider.
- Call your local or state health department.
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- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's rabies website at www.cdc.gov/rabies



Rotavirus Vaccine:

What You Need to Know

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Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Rotavirus vaccine can prevent rotavirus disease.

Rotavirus commonly causes severe, watery diarrhea, mostly in babies and young children. Vomiting and fever are also common in babies with rotavirus. Children may become dehydrated and need to be hospitalized and can even die.

2. Rotavirus vaccine

Rotavirus vaccine is administered by putting drops in the child's mouth. Babies should get 2 or 3 doses of rotavirus vaccine, depending on the brand of vaccine used.

- The first dose must be administered before 15 weeks of age.
- The last dose must be administered by 8 months of age.

Almost all babies who get rotavirus vaccine will be protected from severe rotavirus diarrhea.

Another virus called "porcine circovirus" can be found in one brand of rotavirus vaccine (Rotarix). This virus does not infect people, and there is no known safety risk.

Rotavirus vaccine may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of rotavirus vaccine**, or has any **severe, life-threatening allergies**
- Has a **weakened immune system**
- Has **severe combined immunodeficiency (SCID)**
- Has had a type of bowel blockage called "**intussusception**"

In some cases, your child's health care provider may decide to postpone rotavirus vaccination until a future visit.

Infants with minor illnesses, such as a cold, may be vaccinated. Infants who are moderately or severely ill should usually wait until they recover before getting rotavirus vaccine.

Your child's health care provider can give you more information.

4. Risks of a vaccine reaction

- Irritability or mild, temporary diarrhea or vomiting can happen after rotavirus vaccine.

Intussusception is a type of bowel blockage that is treated in a hospital and could require surgery. It happens naturally in some infants every year in the United States, and usually there is no known reason for it. There is also a small risk of intussusception from rotavirus vaccination, usually within a week after the first or second vaccine dose. This additional risk is estimated to range from about 1 in 20,000 U.S. infants to 1 in 100,000 U.S. infants who get rotavirus vaccine. Your health care provider can give you more information.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.



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5. What if there is a serious problem?

For intussusception, look for signs of stomach pain along with severe crying. Early on, these episodes could last just a few minutes and come and go several times in an hour. Babies might pull their legs up to their chest. Your baby might also vomit several times or have blood in the stool, or could appear weak or very irritable. These signs would usually happen during the first week after the first or second dose of rotavirus vaccine, but look for them any time after vaccination. If you think your baby has intussusception, contact a health care provider right away. If you can't reach your health care provider, take your baby to a hospital. Tell them when your baby got rotavirus vaccine.

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

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Recombinant Zoster (Shingles) Vaccine: *What You Need to Know*

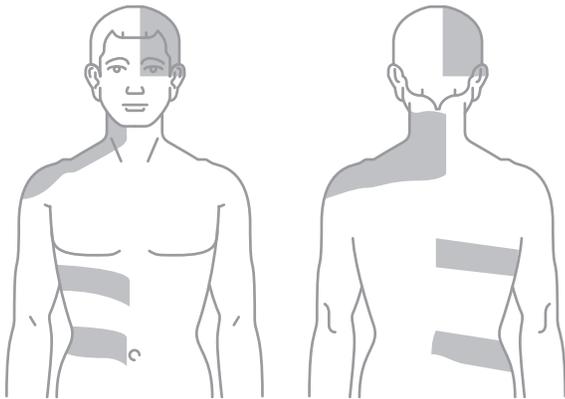
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1. Why get vaccinated?

Recombinant zoster (shingles) vaccine can prevent **shingles**.

Shingles (also called herpes zoster, or just zoster) is a painful skin rash, usually with blisters. In addition to the rash, shingles can cause fever, headache, chills, or upset stomach. Rarely, shingles can lead to complications such as pneumonia, hearing problems, blindness, brain inflammation (encephalitis), or death.



The risk of shingles increases with age. The most common complication of shingles is long-term nerve pain called postherpetic neuralgia (PHN). PHN occurs in the areas where the shingles rash was and can last for months or years after the rash goes away. The pain from PHN can be severe and debilitating.

The risk of PHN increases with age. An older adult with shingles is more likely to develop PHN and have longer lasting and more severe pain than a younger person.

People with weakened immune systems also have a higher risk of getting shingles and complications from the disease.

Shingles is caused by varicella-zoster virus, the same virus that causes chickenpox. After you have chickenpox, the virus stays in your body and can cause shingles later in life. Shingles cannot be passed from one person to another, but the virus that causes shingles can spread and cause chickenpox in someone who has never had chickenpox or has never received chickenpox vaccine.

2. Recombinant shingles vaccine

Recombinant shingles vaccine provides strong protection against shingles. By preventing shingles, recombinant shingles vaccine also protects against PHN and other complications.

Recombinant shingles vaccine is recommended for:

- **Adults 50 years and older**
- **Adults 19 years and older who have a weakened immune system** because of disease or treatments

Shingles vaccine is given as a two-dose series. For most people, the second dose should be given 2 to 6 months after the first dose. Some people who have or will have a weakened immune system can get the second dose 1 to 2 months after the first dose. Ask your health care provider for guidance.

People who have had shingles in the past and people who have received varicella (chickenpox) vaccine are recommended to get recombinant shingles vaccine. The vaccine is also recommended for people who have already gotten another type of shingles vaccine, the live shingles vaccine. There is no live virus in recombinant shingles vaccine.

Shingles vaccine may be given at the same time as other vaccines.



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Control and Prevention

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of recombinant shingles vaccine**, or has any **severe, life-threatening allergies**
- Is **currently experiencing an episode of shingles**
- Is **pregnant**

In some cases, your health care provider may decide to postpone shingles vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting recombinant shingles vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- A sore arm with mild or moderate pain is very common after recombinant shingles vaccine. Redness and swelling can also happen at the site of the injection.
- Tiredness, muscle pain, headache, shivering, fever, stomach pain, and nausea are common after recombinant shingles vaccine.

These side effects may temporarily prevent a vaccinated person from doing regular activities. Symptoms usually go away on their own in 2 to 3 days. You should still get the second dose of recombinant shingles vaccine even if you had one of these reactions after the first dose.

Guillain-Barré syndrome (GBS), a serious nervous system disorder, has been reported very rarely after recombinant zoster vaccine.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

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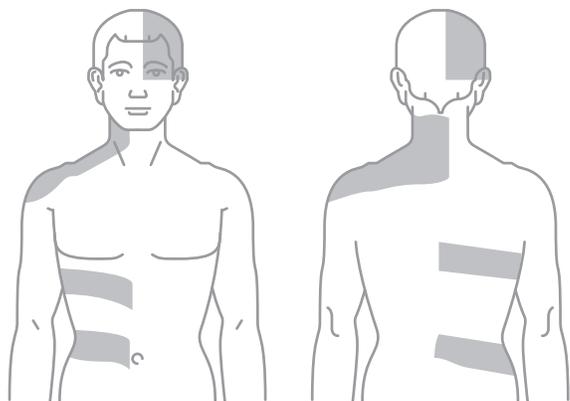
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1 Why get vaccinated?

Recombinant zoster (shingles) vaccine can prevent shingles.

Shingles (also called herpes zoster, or just zoster) is a painful skin rash, usually with blisters. In addition to the rash, shingles can cause fever, headache, chills, or upset stomach. More rarely, shingles can lead to pneumonia, hearing problems, blindness, brain inflammation (encephalitis), or death.

The most common complication of shingles is long-term nerve pain called postherpetic neuralgia (PHN). PHN occurs in the areas where the shingles rash was, even after the rash clears up. It can last for months or years after the rash goes away. The pain from PHN can be severe and debilitating.



About 10 to 18% of people who get shingles will experience PHN. The risk of PHN increases with age. An older adult with shingles is more likely to develop PHN and have longer lasting and more severe pain than a younger person with shingles.

Shingles is caused by the varicella zoster virus, the same virus that causes chickenpox. After you have chickenpox, the virus stays in your body and can cause shingles later in life. Shingles cannot be passed from one person to another, but the virus that causes shingles can spread and cause chickenpox in someone who had never had chickenpox or received chickenpox vaccine.

2 Recombinant shingles vaccine

Recombinant shingles vaccine provides strong protection against shingles. By preventing shingles, recombinant shingles vaccine also protects against PHN.

Recombinant shingles vaccine is the preferred vaccine for the prevention of shingles. However, a different vaccine, live shingles vaccine, may be used in some circumstances.

The recombinant shingles vaccine is recommended for **adults 50 years and older** without serious immune problems. It is given as a two-dose series.

This vaccine is also recommended for people who have already gotten another type of shingles vaccine, the live shingles vaccine. There is no live virus in this vaccine.

Shingles vaccine may be given at the same time as other vaccines.

3 Talk with your health care provider

Tell your vaccine provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of recombinant shingles vaccine**, or has any **severe, life-threatening allergies**.
- Is **pregnant or breastfeeding**.
- Is **currently experiencing an episode of shingles**.

In some cases, your health care provider may decide to postpone shingles vaccination to a future visit.



People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting recombinant shingles vaccine.

Your health care provider can give you more information.

4 Risks of a vaccine reaction

- A sore arm with mild or moderate pain is very common after recombinant shingles vaccine, affecting about 80% of vaccinated people. Redness and swelling can also happen at the site of the injection.
- Tiredness, muscle pain, headache, shivering, fever, stomach pain, and nausea happen after vaccination in more than half of people who receive recombinant shingles vaccine.

In clinical trials, about 1 out of 6 people who got recombinant zoster vaccine experienced side effects that prevented them from doing regular activities. Symptoms usually went away on their own in 2 to 3 days.

You should still get the second dose of recombinant zoster vaccine even if you had one of these reactions after the first dose.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5 What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff do not give medical advice.*

6 How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines

Vaccine Information Statement
**Recombinant Zoster
Vaccine**



Office use only

10/30/2019

Smallpox/Monkeypox Vaccine (JYNNEOS™): *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Smallpox/monkeypox vaccine (JYNNEOS™) can help protect against smallpox, monkeypox, and other diseases caused by orthopoxviruses, including vaccinia virus.

Smallpox is a very serious disease caused by variola virus. Some people continue to be at risk of exposure to the virus that causes smallpox, including people who work in emergency preparedness and some laboratory workers. The virus can spread from person to person, causing symptoms including fever and a skin rash. Many people who had smallpox in the past recovered, but about 3 out of every 10 people with the disease died.

Monkeypox is a rare disease with symptoms that are similar to but milder than the symptoms of smallpox. However, monkeypox can cause death. Monkeypox is an emerging infection in Africa and outbreaks of imported cases of monkeypox sometimes happen in other countries, including the United States.

Vaccinia virus can cause disease when people are exposed to infected people (such as exposure to someone who has recently been vaccinated with ACAM2000®, another type of smallpox vaccine) or animals. People who work with vaccinia virus in laboratories can be accidentally exposed to the virus, and if they become infected, they can get sick. However, most vaccinia virus infections resolve on their own without treatment.

2. Smallpox/monkeypox vaccine (JYNNEOS™)

Smallpox/monkeypox vaccine (JYNNEOS™) is made using weakened live vaccinia virus and cannot cause smallpox, monkeypox, or any other infectious disease.

JYNNEOS™ is approved by the Food and Drug Administration (FDA) for prevention of smallpox and monkeypox disease in **adults 18 years or older at high risk for smallpox or monkeypox infection.**

- CDC recommends JYNNEOS™ for certain laboratory workers and emergency response team members who might be exposed to the viruses that cause orthopoxvirus infections.
- CDC recommends consideration of the vaccine for people who administer ACAM2000®, or who care for patients infected with orthopoxviruses.

JYNNEOS™ is usually administered as a series of 2 injections, 4 weeks apart. People who have received smallpox vaccine in the past might only need 1 dose.

Booster doses are recommended every 2 or 10 years if a person remains at continued risk for exposure to smallpox, monkeypox, or other orthopoxviruses. Your health care provider can give you more information.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of smallpox vaccine**, or has any **severe, life-threatening allergies**
- Has a **weakened immune system**
- Is pregnant or thinks they might be **pregnant** or is **breastfeeding**

In some cases, your health care provider may decide to postpone routine (pre-exposure) smallpox/monkeypox vaccination with JYNNEOS™ until a future visit.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting a routine (pre-exposure) dose of JYNNEOS™. **If you have been recommended to receive JYNNEOS™ due to an exposure to monkeypox virus, you should be vaccinated regardless of concurrent illnesses, pregnancy, breastfeeding, or weakened immune system.**

JYNNEOS™ may typically be given without regard to timing of other vaccines. However, certain people at increased risk of a condition called myocarditis (swelling of the heart muscle), including adolescent or young adult males, might consider waiting 4 weeks after JYNNEOS™ vaccination before getting certain COVID-19 vaccines. **If you have been recommended to receive JYNNEOS™ due to an exposure to monkeypox virus, you should be vaccinated even if you have recently received a COVID-19 vaccine.**

4. Risks of a vaccine reaction

- Redness, soreness, swelling, and itching where the shot is given are the most common things that happen after vaccination with JYNNEOS™.
- Fatigue (tiredness), headache, and muscle pain can also sometimes happen after vaccination with JYNNEOS™.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

You can enroll in v-safe after receiving any dose of Jynneos vaccine by using your smartphone and going to vsafe.cdc.gov. V-safe is a safety monitoring system that lets you share with CDC how you, or your dependent, feel after getting a Jynneos vaccine. For more information visit www.cdc.gov/vsafe.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call 9-1-1 and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call 1-800-822-7967. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. Countermeasures Injury Compensation Program

The Countermeasures Injury Compensation Program is a federal program that may help pay for costs of medical care and other specific expenses of certain people who have been seriously injured by certain medicines or vaccines. If you have been injured by smallpox/monkeypox vaccine, you can learn more about this Program by visiting the program's website at www.hrsa.gov/cicp, or calling 1-855-266-2427 (855-266-CICP).

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call 1-800-232-4636 (1-800-CDC-INFO) or
 - Visit CDC's website at www.cdc.gov/poxvirus/monkeypox.



Td (Tetanus, Diphtheria) Vaccine: What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Td vaccine can prevent **tetanus** and **diphtheria**.

Tetanus enters the body through cuts or wounds.

Diphtheria spreads from person to person.

- **TETANUS (T)** causes painful stiffening of the muscles. Tetanus can lead to serious health problems, including being unable to open the mouth, having trouble swallowing and breathing, or death.
- **DIPHThERIA (D)** can lead to difficulty breathing, heart failure, paralysis, or death.

2. Td vaccine

Td is only for children 7 years and older, adolescents, and adults.

Td is usually given as a **booster dose every 10 years**, or after 5 years in the case of a severe or dirty wound or burn.

Another vaccine, called “Tdap,” may be used instead of Td. Tdap protects against pertussis, also known as “whooping cough,” in addition to tetanus and diphtheria.

Td may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of any vaccine that protects against tetanus or diphtheria**, or has any **severe, life-threatening allergies**
- Has ever had **Guillain-Barré Syndrome** (also called “GBS”)
- Has had **severe pain or swelling after a previous dose of any vaccine that protects against tetanus or diphtheria**

In some cases, your health care provider may decide to postpone Td vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting Td vaccine.

Your health care provider can give you more information.



4. Risks of a vaccine reaction

- Pain, redness, or swelling where the shot was given, mild fever, headache, feeling tired, and nausea, vomiting, diarrhea, or stomachache sometimes happen after Td vaccination.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Tdap (Tetanus, Diphtheria, Pertussis) Vaccine: *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Tdap vaccine can prevent **tetanus, diphtheria, and pertussis**.

Diphtheria and pertussis spread from person to person. Tetanus enters the body through cuts or wounds.

- **TETANUS (T)** causes painful stiffening of the muscles. Tetanus can lead to serious health problems, including being unable to open the mouth, having trouble swallowing and breathing, or death.
- **DIPHTHERIA (D)** can lead to difficulty breathing, heart failure, paralysis, or death.
- **PERTUSSIS (aP)**, also known as “whooping cough,” can cause uncontrollable, violent coughing that makes it hard to breathe, eat, or drink. Pertussis can be extremely serious especially in babies and young children, causing pneumonia, convulsions, brain damage, or death. In teens and adults, it can cause weight loss, loss of bladder control, passing out, and rib fractures from severe coughing.

2. Tdap vaccine

Tdap is only for children 7 years and older, adolescents, and adults.

Adolescents should receive a single dose of Tdap, preferably at age 11 or 12 years.

Pregnant people should get a dose of Tdap during every pregnancy, preferably during the early part of the third trimester, to help protect the newborn from pertussis. Infants are most at risk for severe, life-threatening complications from pertussis.

Adults who have never received Tdap should get a dose of Tdap.

Also, **adults should receive a booster dose of either Tdap or Td** (a different vaccine that protects against tetanus and diphtheria but not pertussis) **every 10 years**, or after 5 years in the case of a severe or dirty wound or burn.

Tdap may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of any vaccine that protects against tetanus, diphtheria, or pertussis**, or has any **severe, life-threatening allergies**
- Has had a **coma, decreased level of consciousness, or prolonged seizures within 7 days after a previous dose of any pertussis vaccine (DTP, DTaP, or Tdap)**
- Has **seizures or another nervous system problem**
- Has ever had **Guillain-Barré Syndrome** (also called “GBS”)
- Has had **severe pain or swelling after a previous dose of any vaccine that protects against tetanus or diphtheria**

In some cases, your health care provider may decide to postpone Tdap vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting Tdap vaccine.

Your health care provider can give you more information.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

4. Risks of a vaccine reaction

- Pain, redness, or swelling where the shot was given, mild fever, headache, feeling tired, and nausea, vomiting, diarrhea, or stomachache sometimes happen after Tdap vaccination.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636** (**1-800-CDC-INFO**) or
 - Visit CDC's website at www.cdc.gov/vaccines.



Typhoid Vaccine:

What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 Why get vaccinated?

Typhoid vaccine can prevent **typhoid fever**.

People who are actively ill with typhoid fever and people who are carriers of the bacteria that cause typhoid fever can both spread the bacteria to other people. When someone eats or drinks contaminated food or drink, the bacteria can multiply and spread into the bloodstream, causing typhoid fever.

Typhoid fever can be a life-threatening disease. Symptoms of infection include persistent high fever, weakness, stomach pain, headache, diarrhea or constipation, cough, and loss of appetite.

People who do not get treatment can continue to have fever for weeks or months. As many as 30% of people who do not get treatment die from complications of typhoid fever. There are fewer antibiotic treatment options as drug-resistant typhoid bacteria has become more common in many parts of the world.

Typhoid fever is common in many regions of the world, including parts of East and Southeast Asia, Africa, the Caribbean, and Central and South America. Typhoid fever is not common in the United States.

2 Typhoid vaccine

There are two vaccines to prevent typhoid fever. One is an inactivated (killed) vaccine and the other is a live, attenuated (weakened) vaccine. Your health care provider can help you decide which type of typhoid vaccine is best for you.

- **Inactivated typhoid vaccine** is administered as an injection (shot). It may be given to people 2 years and older. One dose is recommended at least 2 weeks before travel. Repeated doses are recommended every 2 years for people who remain at risk.

- **Live typhoid vaccine** is administered orally (by mouth). It may be given to people 6 years and older. One capsule is taken every other day, for a total of 4 capsules. The last dose should be taken at least 1 week before travel. Each capsule should be swallowed whole (not chewed) about an hour before meals with cold or lukewarm water. A booster vaccine is needed every 5 years for people who remain at risk. **Important: live typhoid vaccine capsules must be stored in a refrigerator** (not frozen).

Routine typhoid vaccination is not recommended in the United States, but typhoid vaccine is recommended for:

- Travelers to parts of the world where typhoid is common. (NOTE: typhoid vaccine is not 100% effective and is not a substitute for being careful about what you eat or drink.)
- People in close contact with a typhoid carrier.
- Laboratory workers who work with *Salmonella typhi* bacteria.

Typhoid vaccine may be given at the same time as other vaccines.

3 Talk with your health care provider

Tell your vaccine provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of typhoid vaccine**, or has any **severe, life-threatening allergies**.
- Has a **weakened immune system**.
- Is **pregnant or breastfeeding**, or thinks she might be pregnant.
- Is **taking or has recently taken antibiotics or anti-malarial drugs**.



In some cases, your health care provider may decide to postpone typhoid vaccination to a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting typhoid vaccine.

Your health care provider can give you more information.

4 Risks of a vaccine reaction

- Pain from the shot, redness, or swelling at the site of the injection, fever, and headache, and general discomfort can happen after inactivated typhoid vaccine.
- Fever, headache, abdominal pain, diarrhea, nausea, and vomiting can happen after live typhoid vaccine.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5 What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff do not give medical advice.*

6 How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's typhoid website at www.cdc.gov/typhoid-fever/typhoid-vaccination.html

Vaccine Information Statement
Typhoid Vaccine



Office use only

10/30/2019

Varicella (Chickenpox) Vaccine: What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Varicella vaccine can prevent varicella.

Varicella, also called “chickenpox,” causes an itchy rash that usually lasts about a week. It can also cause fever, tiredness, loss of appetite, and headache. It can lead to skin infections, pneumonia, inflammation of the blood vessels, swelling of the brain and/or spinal cord covering, and infections of the bloodstream, bone, or joints. Some people who get chickenpox get a painful rash called “shingles” (also known as herpes zoster) years later.

Chickenpox is usually mild, but it can be serious in infants under 12 months of age, adolescents, adults, pregnant people, and people with a weakened immune system. Some people get so sick that they need to be hospitalized. It doesn’t happen often, but people can die from chickenpox.

Most people who are vaccinated with 2 doses of varicella vaccine will be protected for life.

2. Varicella vaccine

Children need 2 doses of varicella vaccine, usually:

- First dose: age 12 through 15 months
- Second dose: age 4 through 6 years

Older children, adolescents, and adults also need 2 doses of varicella vaccine if they are not already immune to chickenpox.

Varicella vaccine may be given at the same time as other vaccines. Also, a child between 12 months and 12 years of age might receive varicella vaccine together with MMR (measles, mumps, and rubella) vaccine in a single shot, known as MMRV. Your health care provider can give you more information.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of varicella vaccine**, or has any **severe, life-threatening allergies**
- Is **pregnant** or thinks they might be pregnant—pregnant people should not get varicella vaccine
- Has a **weakened immune system**, or has a **parent, brother, or sister with a history of hereditary or congenital immune system problems**
- Is **taking salicylates** (such as aspirin)
- Has recently **had a blood transfusion or received other blood products**
- Has **tuberculosis**
- Has **gotten any other vaccines in the past 4 weeks**

In some cases, your health care provider may decide to postpone varicella vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting varicella vaccine.

Your health care provider can give you more information.



4. Risks of a vaccine reaction

- Sore arm from the injection, redness or rash where the shot is given, or fever can happen after varicella vaccination.
- More serious reactions happen very rarely. These can include pneumonia, infection of the brain and/or spinal cord covering, or seizures that are often associated with fever.
- In people with serious immune system problems, this vaccine may cause an infection that may be life-threatening. People with serious immune system problems should not get varicella vaccine.

It is possible for a vaccinated person to develop a rash. If this happens, the varicella vaccine virus could be spread to an unprotected person. Anyone who gets a rash should stay away from infants and people with a weakened immune system until the rash goes away. Talk with your health care provider to learn more.

Some people who are vaccinated against chickenpox get shingles (herpes zoster) years later. This is much less common after vaccination than after chickenpox disease.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Yellow Fever Vaccine:

What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 Why get vaccinated?

Yellow fever vaccine can prevent **yellow fever**. Yellow fever is a serious disease caused by the yellow fever virus. There is no medicine to treat or cure yellow fever.

Yellow fever virus is spread by the bite of an infected mosquito. It is found in parts of Africa and South America.

The majority of people with yellow fever virus infections will either not have symptoms, or have mild disease and completely recover. But some people will develop severe disease.

Symptoms and signs of yellow fever include:

- Sudden onset of fever and chills
- Headache, back pain, or general body aches
- Nausea or vomiting

More severe symptoms of yellow fever can include:

- Jaundice (yellow skin or eyes)
- Bleeding from multiple body sites
- Shock (life-threatening condition in which the body is not getting enough blood flow)
- Liver, kidney, or other organ failure

Severe yellow fever can cause death in 30% to 60% of affected people.

In addition to getting vaccinated, you can also protect yourself from yellow fever by avoiding mosquito bites:

- Use insect repellent
- Wear long-sleeved shirts and long pants
- Stay in well-screened or air-conditioned areas

2 Yellow fever vaccine

Yellow fever vaccine is a live vaccine containing weakened, live yellow fever virus. It is given as a single shot. One dose provides lifelong protection for most people.

Yellow fever vaccine is recommended for:

- **People 9 months through 59 years of age who are traveling to or living in areas at risk for yellow fever virus activity**, or traveling to a country with an entry requirement for vaccination. (People younger than 9 months or older than 59 years who are at increased risk might receive yellow fever vaccine in some situations. Ask your health care provider for more information.)
- **Laboratory personnel** who might be exposed to yellow fever virus or vaccine virus.

Yellow fever vaccine is given only at designated vaccination centers. After getting the vaccine, you will be given an “International Certificate of Vaccination or Prophylaxis” (ICVP, sometimes called the “yellow card”). You will need this card as proof of vaccination to enter certain countries. If you don’t have it, you might be required to get yellow fever vaccine upon entering the country, or be forced to wait for up to 6 days to make sure you are not infected.

Do not donate blood for 14 days after vaccination, because there is a risk of passing vaccine virus to others during that period.



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Talk with your health care provider

Discuss your itinerary with your health care provider before you get your yellow fever vaccination. You can visit CDC's Travelers' Health website at www.cdc.gov/travel to learn if yellow fever vaccination is recommended or required based on your travel location.

Tell your vaccine provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of yellow fever vaccine, or has any severe, life-threatening allergies.**
- Has a **weakened immune system.**
- Has had **their thymus removed** or been **diagnosed with a thymus disorder.**
- Is **pregnant or breastfeeding.**
- Has **gotten any other vaccines in the past 4 weeks.**

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting yellow fever vaccine.

In some cases, your health care provider may decide to postpone yellow fever vaccination to a future visit.

If you cannot get yellow fever vaccine for medical reasons and you are traveling to a country with a yellow fever vaccination entry requirement, your doctor will need to fill out the Medical Contraindications to Vaccination section of your yellow card. In addition, your doctor should give you a waiver letter. If you plan to use a waiver, you can contact the embassies of countries you plan to visit for more information.

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Risks of a vaccine reaction

- Soreness, redness, or swelling where the shot was given are common after yellow fever vaccine.
- Fever sometimes happens.
- Headache and muscle aches can occur.
- More serious reactions happen rarely after yellow fever vaccine. These can include:
 - Nervous system reactions such as inflammation of the brain (encephalitis) and/or spinal cord covering (meningitis), or Guillain-Barré Syndrome (GBS), among others.

- Life-threatening severe illness with organ dysfunction or failure.

People 60 years and older and people with weakened immune systems might be more likely to experience serious reactions to yellow fever vaccine.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

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What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff do not give medical advice.*

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How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)**, or
 - Visit CDC's Yellow Fever website at www.cdc.gov/yellowfever/vaccine/index.html

Vaccine Information Statement
Yellow Fever Vaccine



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