

THE IMPORTANCE OF ADULT IMMUNIZATIONS



EDUCATIONAL MANUAL FOR HEALTH PROMOTERS AND COMMUNITY HEALTH WORKERS

THE IMPORTANCE OF ADULT IMMUNIZATIONS



EDUCATIONAL MANUAL FOR HEALTH PROMOTERS AND COMMUNITY HEALTH WORKERS

THE IMPORTANCE OF ADULT IMMUNIZATIONS

General information about this educational manual:

This educational manual is designed to be printed and used as a flipbook. The pages with less text are for the client and the pages with more text are for the educator. The manual provides information for health promoters and community health workers to educate in groups or individually about the importance of adult immunizations and the diseases they prevent.

We hope this information is of your liking and helps you promote, educate, and answer the questions that your community has about the importance of adult immunizations and the diseases they prevent. If you want to know more about this topic or need additional educational materials on immunizations, do not forget to check the internet resources available at the end of this manual.

To obtain an electronic copy of this educational manual, please email Leigh.Wallis@doh.wa.gov.

INDEX

<u>Title</u>	<u>Page Number</u>
Health is the most important thing for the whole family!	7
How can you help?	9
What is a vaccine?	11
Why are vaccines important?	13
Immunity in our community	15
What can happen if we don't get immunized?	17
The advantages of vaccines	19
Diseases and their vaccines	21
Getting sick can be expensive	53
Cost of a flu vaccine	55
Appendix	57

INDEX

<u>Title</u>	<u>Page Number</u>
Health is the most important thing for the whole family!	7
How can you help?	9
What is a vaccine?	11
Why are vaccines important?	13
Immunity in our community	15
What can happen if we don't get immunized?	17
The advantages of vaccines	19
Diseases and their vaccines	21
Getting sick can be expensive	53
Cost of a flu vaccine	55
Appendix	57

HOW TO PRINT THIS FLIPBOOK:

Under the print settings the following should be selected: Print all pages, one page per sheet, letter size 8.5 x 11", print on both sides (flip sheets on long edge), composite RGB. Now go to *Printer Properties* and select the following: *2-Sided (Tablet)*, *N-Up Printing*, and *Landscape*.

Health is the most important thing for the whole family!



If we are in good health, the general wellbeing of our community improves.



Health is the most important thing for the whole family!

If we are in good health, the general wellbeing of our community improves.

- When we have good health we can feel better everywhere and that is why being up to date with all vaccines is very important.
- The vaccination rate among adults is the lowest in the entire country. The number of adults who die each year in the United States due to vaccine-preventable diseases could fill more than 900 school buses.

How can you help?



Keep up to date with all your immunizations and don't forget to get a flu shot every year.



How can you help?

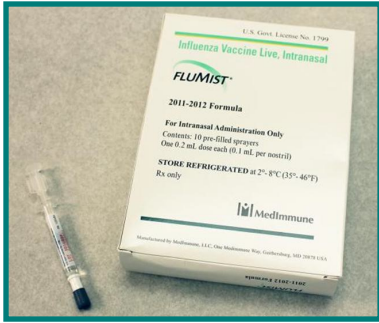
Keep up to date with all your immunizations and don't forget to get a flu shot every year.

- You can take a simple step to help protect your health, the health of your family, and the health of your community. Ask your doctor about the vaccines you and your family need to enjoy a healthier life.
- Being up to date on immunizations as an adult is important. The protection from some childhood vaccines can wear off over time and you need booster shots. You may also be at risk for other diseases due to your age, job, lifestyle, travel habits, or health conditions.
- Vaccines don't just protect you from illness and death, they also prevent you from missing work or school days.

What is a vaccine?



A vaccine is a medicine that makes our immune system stronger against one or more diseases.

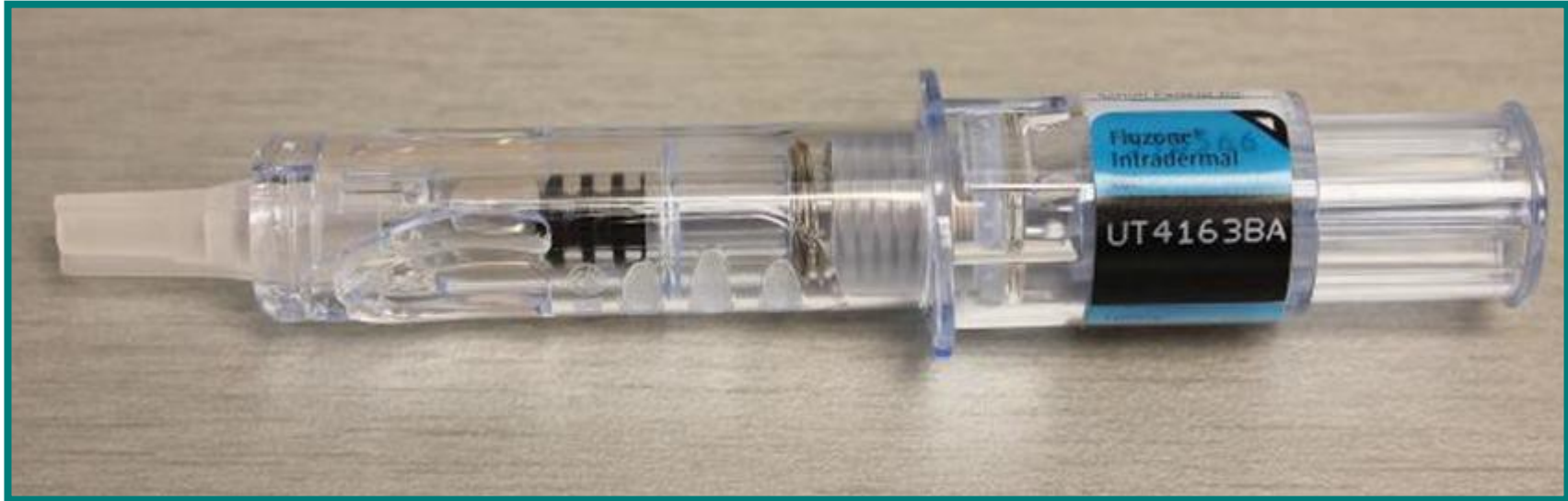


What is a vaccine?

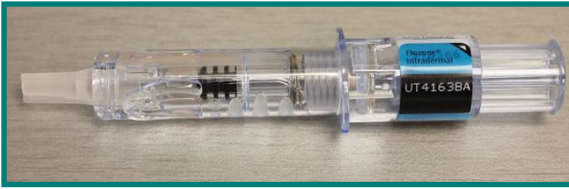
A vaccine is a medicine that makes our immune system stronger against one or more diseases.

- A vaccine is a medicine that helps our body create antibodies to one or more diseases. These antibodies help your body to recognize and fight the harmful viruses or bacteria that can cause diseases. Antibodies are your immune system's best protection against disease.
- By getting vaccinated, you don't have to get sick with the disease in order to get antibodies. Vaccines help our body get ready to attack the disease before we even come into contact with it. Vaccines prevent us from getting sick easily.
- Vaccines are effective, but sometimes we need extra doses of some vaccines to keep our body's immune system strong.

Why are vaccines important?



Because thanks to vaccines, fewer and fewer people suffer from serious infectious diseases.

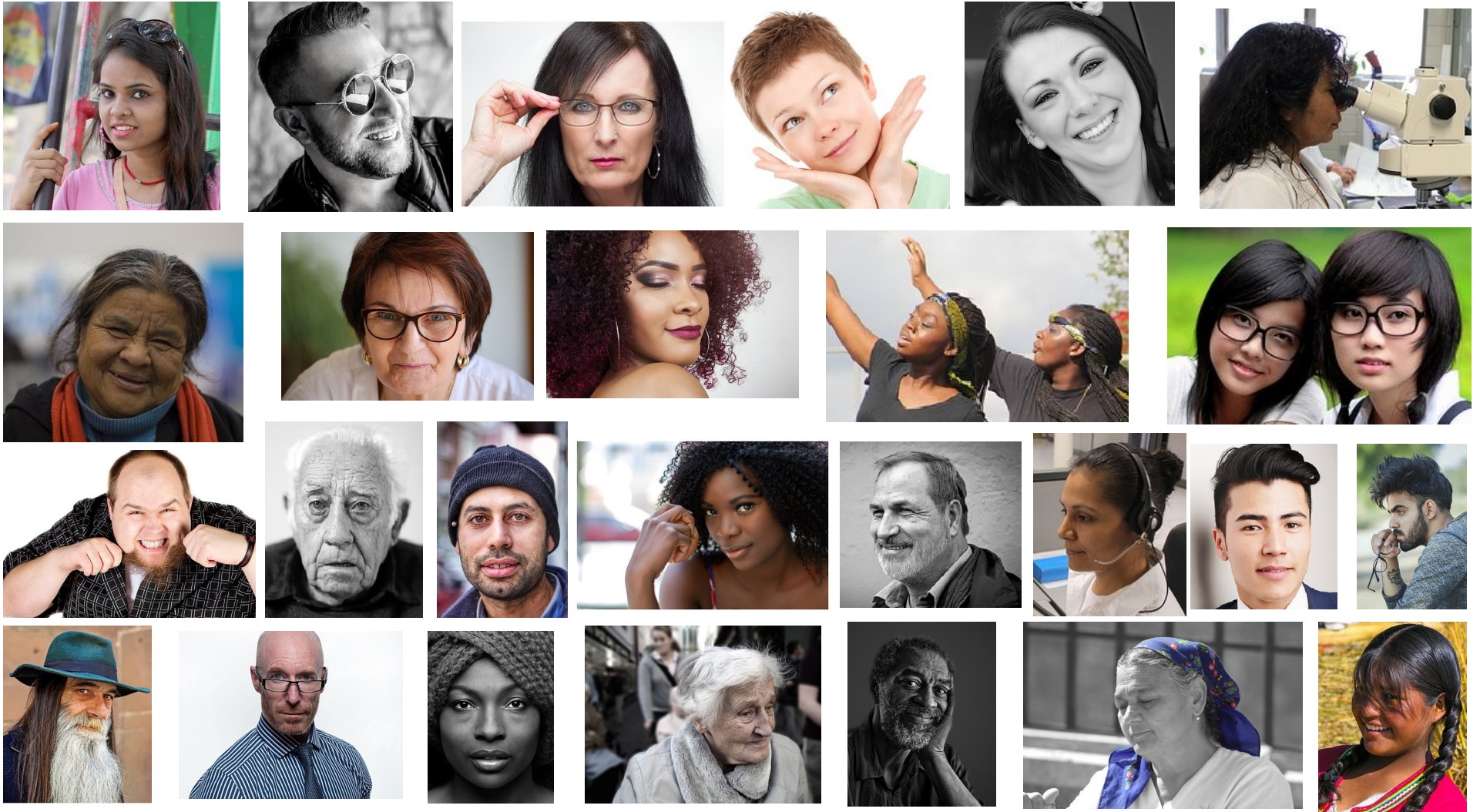


Why are vaccines important?

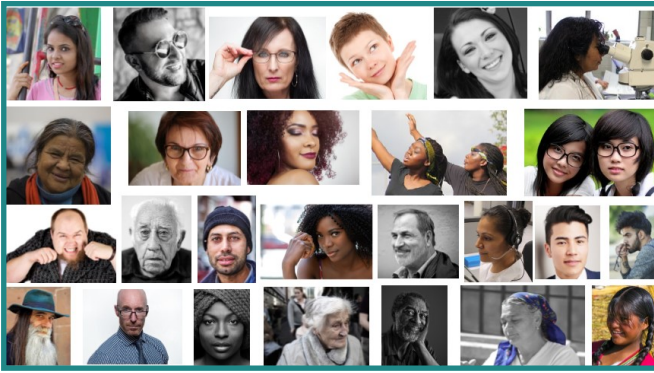
Because thanks to vaccines, fewer and fewer people suffer from serious infectious diseases.

- Thanks to vaccines, illness such as polio, diphtheria, and smallpox **are no longer seen** in the United States.
- For instance, before the introduction of vaccines, **16,316** cases of polio, **21,053** cases of diphtheria, and **29,005** cases of smallpox were seen annually in this country.
- **Other diseases have decreased by 99 percent.** For instance, before 1963, more than half a million cases of measles were reported annually and more than 500 people died. After the vaccine was introduced, an average of 61 cases per year are now seen.

Immunity in our community



**The health of our families and community is priceless.
Immunizations are key to our wellbeing.**



Immunity in our community.

The health of our families and community is priceless. Immunizations are key to our wellbeing.

- Vaccines are one of the most important medical successes in the history of humanity because they help prevent many serious diseases. But in order to maintain lasting protection against these diseases and prevent their transmission to the rest of the population that has not yet been protected, we need the majority of people in our community to be vaccinated. That type of protection is known as **Herd Immunity or Community Immunity**.
- When you and your family get vaccinated, you are helping to create and maintain immunity in your community.

What can happen if we don't get immunized?



We can get sick and infect other people who for some reason have not been able to get vaccinated.



What can happen if we don't get immunized?

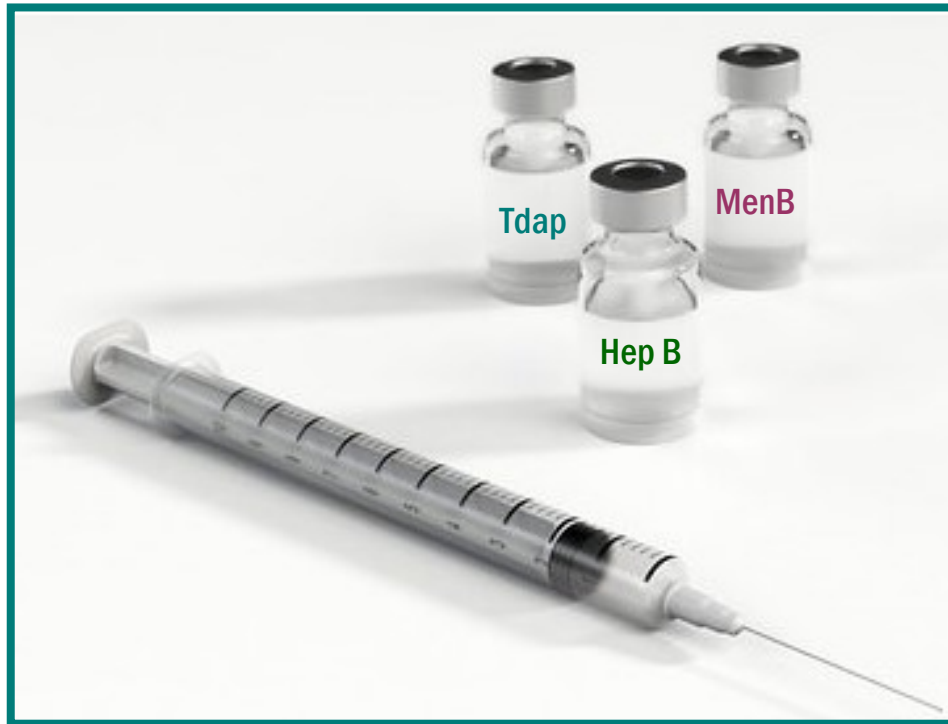
We can get sick and infect other people who for some reason have not been able to get vaccinated.

If we do not get immunized and have contact with germs, we can:

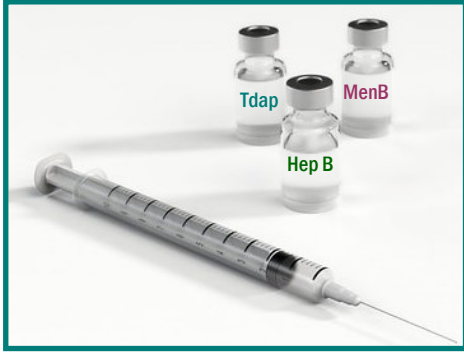
- Get sick and make other people sick.
- Cause disease outbreaks.
- Endanger the health of those who are not able to get vaccinated and those who have weak immune systems.

When we get immunized, we protect our health and the health of many people around us, as some diseases can cause serious complications and even death.

The advantages of vaccines



Vaccines are safe and effective against many infectious diseases.



The advantages of vaccines.

Vaccines are safe and effective against many infectious diseases.

- The United States has the safest and most effective vaccines in history. The law requires years of testing before a vaccine can be licensed.
- People who are up to date with all their vaccines have enough defenses to avoid catching the disease against which they were immunized.
- If the majority of the population is vaccinated, the spread of many diseases decreases. This saves a lot of money from medical expenses to families and communities.

Diseases and their vaccines

Chickenpox

*Pneumococcal
Disease*

Hib

Diphtheria

Flu

Hepatitis B

HPV

Hepatitis A

Rubella

MUMPS

Measles

Meningococcal disease

TETANUS

Shingles

Whooping Cough

There are 15 diseases adults can be protected against with 13 different vaccines.

Diseases and their vaccines

Chickenpox

*Pneumococcal
Disease*

Hib

Diphtheria

Flu

Hepatitis B

HPV

Hepatitis A

Rubella

MUMPS

Measles

Meningococcal disease

TETANUS

Shingles

Whooping Cough

There are 15 diseases adults can be protected against with 13 different vaccines.

Disease: Flu

Vaccine: Influenza

Flu (influenza) is a contagious respiratory illness caused by influenza viruses.

Special Note: All adults need the flu vaccine every year, especially pregnant ones.

Take 3 Actions to Fight Flu

- 1 Get a flu vaccine every year!
- 2 Practice good hygiene to stop the spread of germs.
- 3 Take flu antiviral drugs if your doctor prescribes them.



THE FLU IS NOTHING TO SNEEZE AT.

Each year the flu causes:

12,000 to 56,000 deaths

140,000 to 170,000 hospitalizations

9.2 million to 35.6 million cases of flu

Get vaccinated!

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Flu	1 dose every year				

 It is recommended.  It is not recommended.

Disease: Flu

Vaccine: Influenza

Special note about the vaccine: All adults need the flu vaccine every year, especially if you are pregnant.

About flu (influenza):

- Flu is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and sometimes lungs. It is spread through the air by coughing and sneezing, talking, or by touching a surface or object that has flu virus on it and then touching their own mouth, nose, or eyes.
- It can cause mild to severe illness, and at times can lead to death. Older people, young children, and people with certain health conditions (i.e. pregnancy, asthma, diabetes, and heart disease) are at the highest risk of serious flu complications.

Symptoms: Symptoms usually occur suddenly and include fever, cough, sore throat, runny nose, body aches, headache, and fatigue. People usually recover from flu within 5 to 7 days. Complications of flu can include bacterial pneumonia, ear infections, sinus infections, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes.

Adults need this vaccine if: All adults need this vaccine every year, especially if you are pregnant.

Take 3 Actions to Fight Flu

1. Get a flu vaccine every year!
2. Practice good hygiene to stop the spread of germs.
3. Take flu antiviral drugs if your doctor prescribes them.



Flu is serious and may result in death. Your best protection is to get a flu shot every year.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Flu	1 dose every year				

It is recommended. It is not recommended.

Disease: Whooping Cough

Vaccine: Tdap

Whooping cough (pertussis) bacteria is spread by coughing and sneezing.

Special Note: All adults should get a Tdap vaccine if they haven't had one before. Pregnant women should get a Tdap vaccine as early as possible in their third trimester, even if they have had it in a previous pregnancy.



The infographic is split into two sections. The left section features a pregnant woman in a red dress with her hands on her belly, with the text "WHOOPING COUGH IS MOST DEADLY FOR INFANTS." below. The right section has a red background with the title "WHO NEEDS WHOOPING COUGH VACCINES?" and lists "PREGNANT WOMEN", "INFANTS AND YOUNG CHILDREN", "PRETEENS AND TEENS", and "ADULTS OF ALL AGES". At the bottom, it says "GET VACCINATED. PROTECT YOURSELF. PROTECT BABIES."



Infant being treated for severe whooping cough infection. Photo: Courtesy of CDC

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Tdap	1 dose Tdap, then Td booster every 10 years				

 It is recommended.  It is not recommended.

Disease: Whooping Cough

Vaccine: Tdap

Special note about the vaccine: All adults should get a Tdap vaccine if they haven't had one before, then a Td booster every 10 years for tetanus and diphtheria. Pregnant women should also get a Tdap vaccine as early as possible in their third trimester, even if they have had it in a previous pregnancy.

About whooping cough (pertussis):

- Pertussis bacteria is spread very easily through coughing and sneezing.
- Pertussis is most dangerous for babies. Many babies who get pertussis are infected by older siblings, parents, or caregivers who might not even know they have the disease.

Symptoms: Early symptoms last for 1 to 2 weeks and may appear to be a common cold. After 1 to 2 weeks, more severe symptoms appear, which include coughing fits followed by vomiting and/or exhaustion. The coughing fits can go on for up to 10 weeks or more. It is important to know that not everyone with whooping cough makes the “whoop” sound when trying to breathe in after a coughing spell. Pertussis is generally milder in teens and adults, especially those who have gotten the pertussis vaccine.

Adults need this vaccine if: You are 19 years or older or if you are pregnant.



Whooping cough is most deadly for infants. Everyone needs a whooping cough vaccine to protect themselves and babies.



Infant being treated for severe whooping cough infection. Photo: Courtesy of CDC

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Tdap	1 dose Tdap, then Td booster every 10 years				

■ It is recommended. □ It is not recommended.

Disease: Tetanus

Vaccine: Tdap/Td

Tetanus bacteria is found in soil, dust, and manure. Unlike other diseases, tetanus does not spread from person to person. It enters the body via cuts or puncture wounds. It can cause serious health problems.

TETANUS BACTERIA ENTERS YOUR BODY VIA CUTS OR PUNCTURE WOUNDS.



Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Tdap/Td	1 dose every 10 years (or more, if pregnant)				

It is recommended. It is not recommended.

Disease: Tetanus

Vaccine: Tdap/Td

Special note about the vaccine: All adults should get a Tdap vaccine if they haven't had one before, then a Td booster every 10 years for tetanus and diphtheria. Pregnant women should also get a Tdap vaccine as early as possible in their third trimester, even if they have had it in a previous pregnancy.

About tetanus:

- Tetanus bacteria is found in soil, dust, and manure. They enter the body through broken skin, usually cuts or puncture wounds caused by contaminated objects.
- Tetanus infection can lead to serious health problems, including being unable to open the mouth and having trouble swallowing and breathing.

Symptoms: Symptoms of tetanus include jaw cramping, muscle spasms, painful muscle stiffness, jerking or staring, trouble swallowing, headache, fever, sweating, and fast heart rate. Serious health problems can happen because of tetanus and it can be deadly (1 to 2 of every 10 cases results in death).

Adults need Td vaccine if: It has been 10 years since the last time you received a Td vaccine. If you are pregnant, you need a Tdap vaccine, even if you had it in a previous pregnancy.



Unlike other diseases that vaccines can prevent, tetanus does not spread from person to person. It enters your body via cuts or puncture wounds.



Patient with severe tetanus disease, suffering back and neck muscle spasms.

Vaccination Schedule

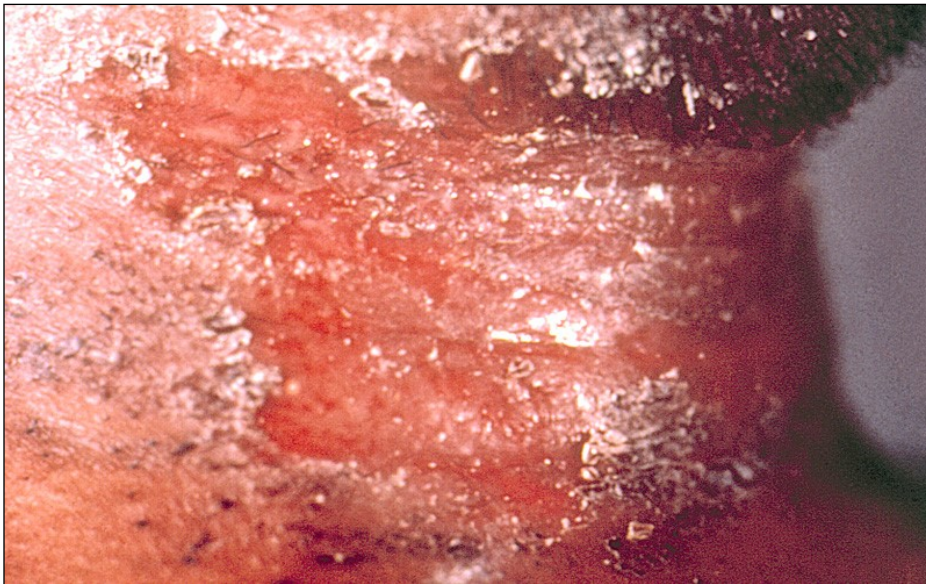
Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Tdap/Td	1 dose every 10 years (or more, if pregnant)				

■ It is recommended. □ It is not recommended.

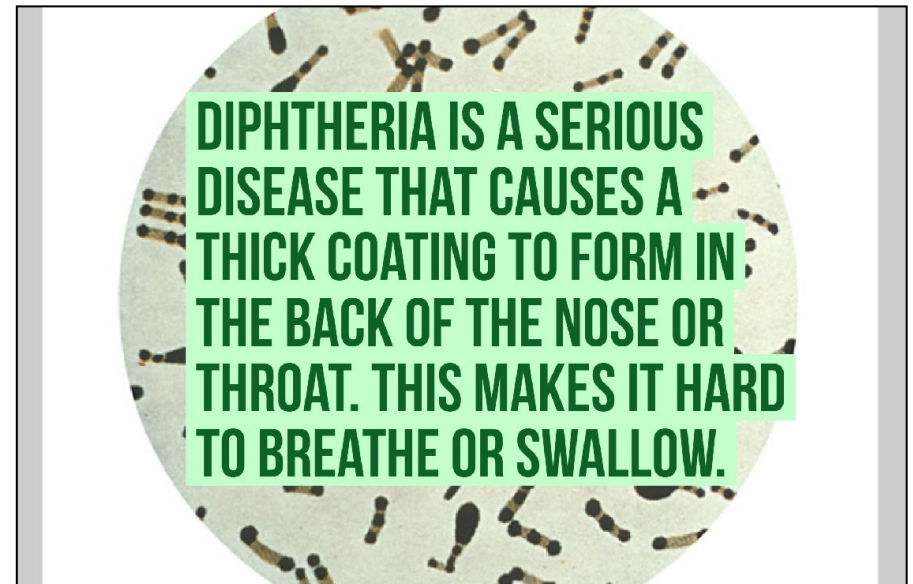
Disease: Diphtheria

Vaccine: Tdap/Td

Diphtheria bacteria is usually spread through coughing and sneezing. This bacteria produces a poison that destroys healthy tissues.



Diphtheria scaling rash on the skin of the neck.



Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Tdap/Td	1 dose every 10 years (or more, if pregnant)				

It is recommended. It is not recommended.

Disease: Diphtheria

Vaccine: Tdap/Td

Special note about the vaccine: All adults should get a Tdap vaccine if they haven't had one before, then a Td booster every 10 years for tetanus and diphtheria. Pregnant women should also get a Tdap vaccine as early as possible in their third trimester, even if they have had it in a previous pregnancy.

About diphtheria:

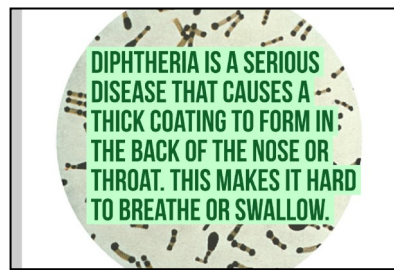
- Diphtheria bacteria is spread through coughing and sneezing. A person can get diphtheria by coming in contact with an object that has the bacteria on it.
- Diphtheria bacteria produce a poison that destroys healthy tissues in the respiratory system (includes parts of the body that help you breathe). The poison may also get into the bloodstream and cause damage to the heart, kidneys, and nerves.

Symptoms: Symptoms of diphtheria include weakness, sore throat, fever, and swollen glands in the neck. Within 2 to 3 days, the dead tissue forms a thick, gray coating that can build up in the throat or nose, making it very hard to breathe and swallow. Even with treatment, 1 in 10 people with diphtheria will die.

Adults need Td vaccine if: It has been 10 years since the last time you received a Td vaccine. If you are pregnant, you need a Tdap vaccine, even if you had it in a previous pregnancy.



Diphtheria scaling rash on the skin of the neck.



Diphtheria is a serious disease that causes a thick coating to form in the back of the nose or throat. This makes it hard to breathe or swallow.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Tdap/Td	1 dose every 10 years (or more, if pregnant)				

 It is recommended.  It is not recommended.

Disease: Shingles

Vaccine: Zoster

Shingles (herpes zoster) is caused by the same virus that causes chickenpox. Anyone who has ever had chickenpox can develop shingles.



Shingles rash on the neck.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Zoster					50 and older: 2 doses

It is recommended. It is not recommended.

Disease: Shingles

Vaccine: Zoster

About shingles (herpes zoster):

- Shingles is caused by the same virus that causes chickenpox. Shingles cannot be spread from one person to another, but the chickenpox virus that causes shingles can be spread from a person with shingles to cause chickenpox in someone who has never had chickenpox or received chickenpox vaccine.
- Anyone who has ever had chickenpox can develop shingles. Once a person has had chickenpox, the virus is inactivated and stays inside the body, but the virus can reactivate years later. This reactivation causes shingles.

Symptoms: Painful rash that develops on one side of the face or body. Pain, itching, or tingling in the area where the rash will develop may occur 1 to 5 days before the rash appears. Other symptoms include fever, headache, chills, and upset stomach. The rash usually clears up within 2 to 4 weeks. Some people may develop severe pain in the areas where they had the shingles rash called post-herpetic neuralgia. This pain may last anywhere from a few weeks or months to years.

Adults need this vaccine if: You are 50 years or older. A new vaccine is available at age 50 and includes 2 shots.



Shingles is a very common, but painful disease. 1 in 3 adults will get shingles in their lifetime.



Shingles rash on the neck.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Zoster				50 and older: 2 doses	

 It is recommended.  It is not recommended.

Disease: Pneumococcal

Vaccine: Pneumococcal

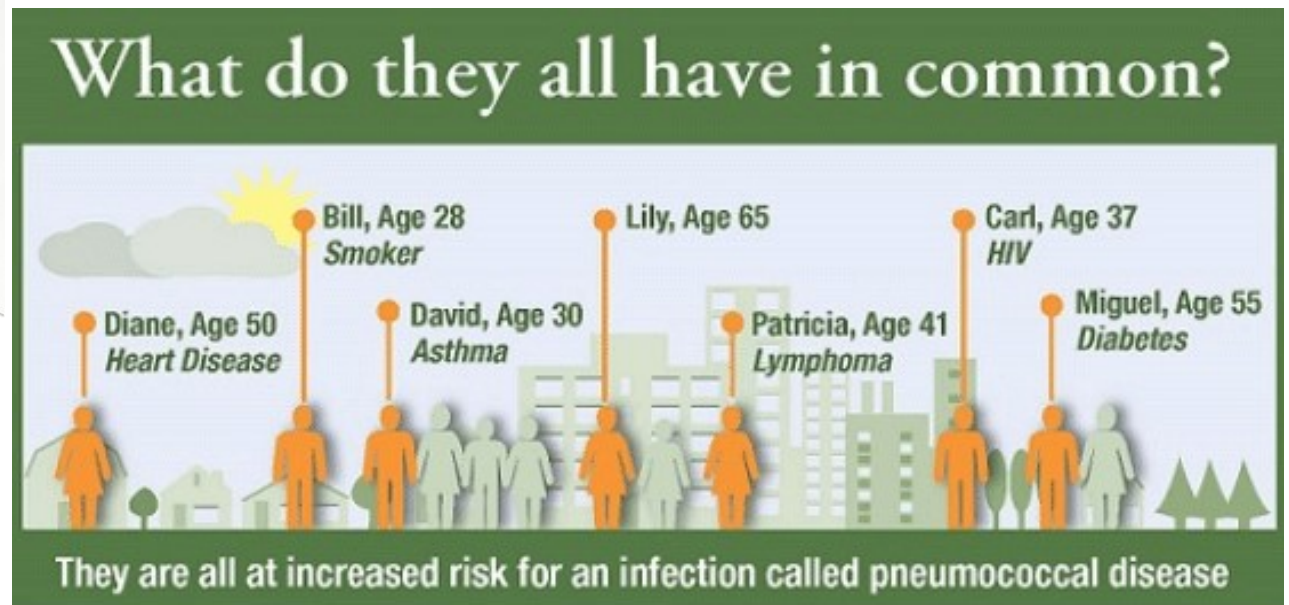
Pneumococcal disease is an infection caused by bacteria. There are two vaccines: PCV13 protects against 13 types of bacteria and PPSV23 protects against 23 types.



Pneumococcal Vaccines

Recommended For:

- All adults 65 years or older
- Adults 19 years or older with certain health conditions
- Adults who smoke cigarettes



Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
PCV13			1 dose		1 dose
PPSV23			1 or 2 doses		1 dose

■ It is recommended. ■ It is not recommended. ■ It may be recommended.

Disease: Pneumococcal

Vaccine: Pneumococcal

Special note about the vaccine: Pneumococcal vaccines may be recommended during pregnancy for adults with certain medical conditions. PCV13 protects against 13 types of bacteria and PPSV23 protects against 23 types.

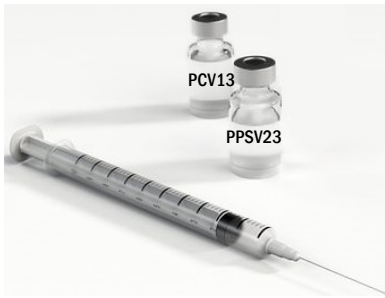
About pneumococcal disease:

- Pneumococcal disease is an infection caused by bacteria. It is spread through direct contact with respiratory secretions like mucus and saliva.
- It causes many kinds of infections, from ear and sinus infections to pneumonia, meningitis, and bloodstream infections. Children younger than 2 years old and adults 65 years or older are most at risk.

Symptoms: Symptoms depend on the body part that is infected. Pneumonia (lung infection) is the most common serious form of the disease. Symptoms include fever and chills, cough, difficulty breathing, and chest pain. Other forms of the disease are meningitis (swelling of the covering of the brain and spinal cord) and bacteremia (blood infection). Most infections are mild; however, some can be deadly or result in brain damage or hearing loss.

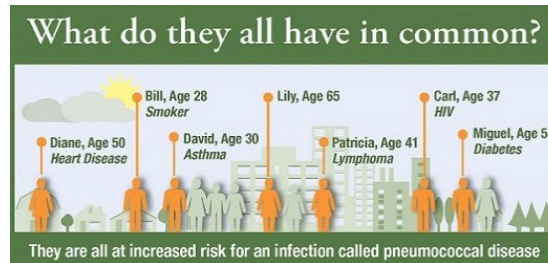
Adults need this vaccine if: PCV13: You have certain medical conditions or you are age 65 years or older.

PPSV23: You have certain medical conditions or smoke cigarettes, or you are age 65 years or older.



Pneumococcal Vaccines

Recommended For: All adults 65 years or older; Adults 19 years or older with certain health conditions; Adults who smoke cigarettes.



These people are all at increased risk for pneumococcal disease due to age, certain health conditions, and cigarette smoking.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
PCV13	1 dose				1 dose
PPSV23	1 or 2 doses				1 dose

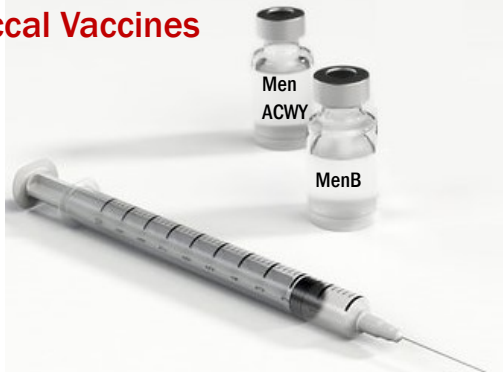
It is recommended.
 It is not recommended.
 It may be recommended.

Disease: Meningococcal

Vaccine: Meningococcal

Meningococcal disease is an infection caused by bacteria. There are two vaccines: MenACWY and MenB protect against five types of bacteria.

Meningococcal Vaccines



- **MenACWY (conjugate):** Protects against 4 bacteria serogroups A, C, W, and Y; recommended for age 2 months to age 55
- **MenB:** Protects against serogroup B; recommended for age 10 years or older



Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
MenACWY			1 or 2 doses		
MenB			2 or 3 doses		

■ It is recommended. ■ It is not recommended. ■ It may be recommended.

Disease: Meningococcal

Vaccine: Meningococcal

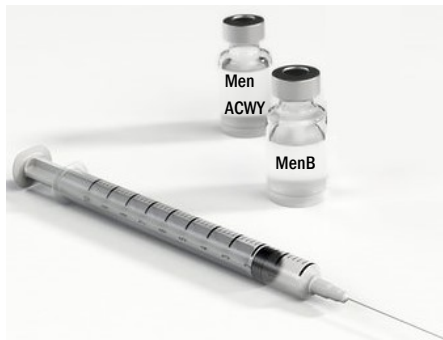
Special note about the vaccine: Meningococcal vaccines may be recommended during pregnancy for adults with certain medical conditions. MenACWY and MenB vaccines protect against five types of bacteria.

About meningococcal disease:

- Meningococcal disease is an infection caused by bacteria. It is spread through direct contact with respiratory secretions like mucus and saliva. It takes close (i.e. coughing or kissing) or lengthy contact to spread these bacteria.
- Doctors treat meningococcal disease with antibiotics, but quick medical attention is extremely important. Babies, teens, and young adults are most at risk for the disease.

Symptoms: Symptoms first appear as a flu-like illness and rapidly worsen. The two common types of meningococcal infections are meningitis (swelling of the covering of the brain and spinal cord) and septicemia (a bloodstream infection). Both can be serious and deadly in a matter of hours. Common symptoms of meningitis are fever, headache, and stiff neck. Symptoms of septicemia include fever, vomiting, cold chills, severe aches and pains, and a dark purple rash.

Adults need this vaccine if: You are at increased risk for meningococcal disease, or are in an outbreak area. Talk to your healthcare provider to find out if you are in a high-risk group.



The conjugate vaccine MenACWY protects against 4 bacteria serogroups A, C, W, and Y. The MenB vaccine protects against serogroup B.



Common symptoms of meningococcal disease.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
MenACWY			1 or 2 doses		
MenB			2 or 3 doses		

■ It is recommended. ■ It is not recommended. ■ It may be recommended.

Disease: Measles

Vaccine: MMR

Measles is a very contagious! Measles virus is spread from an infected person through breathing, coughing, and sneezing.

Special Note: MMR vaccine is not recommended during pregnancy.

Measles

Measles is very contagious. If **one** person has it, **9 out of 10** people around him or her will also become infected if they are not protected.



Skin with measles rash.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
MMR	1 or 2 doses				

 It is recommended.  It is not recommended.

Disease: Measles

Vaccine: MMR

Special note about the vaccine: MMR vaccine is not recommended during pregnancy.


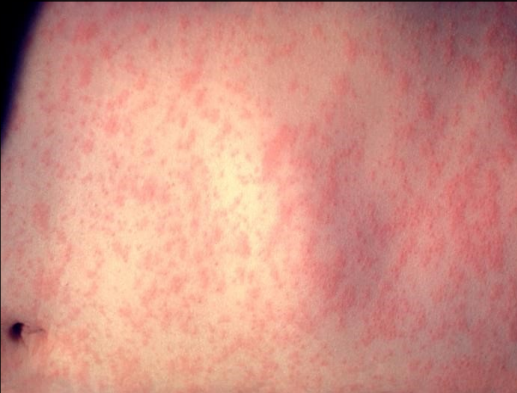
About measles:

- Measles spreads very easily to others when an infected person breathes, coughs, or sneezes.
- Measles is a very serious disease. Complications from measles are very common among children younger than five and adults older than 20.
- Almost everyone who has not had the vaccine will get measles if they are exposed to the measles virus.

Symptoms: Measles causes fever, runny nose, cough, and a rash all over the body. Symptoms usually last 7 to 10 days, but people can spread measles before they show symptoms.

Adults need this vaccine if:

You were born in 1957 or later and you haven't had measles, or you didn't get the MMR vaccine.

<p>Measles Measles is very contagious. If one person has it, 9 out of 10 people around him or her will also become infected if they are not protected.</p> 	<p>Measles is very contagious. If one person has it, 9 out of 10 people around him or her will also become infected if they are not protected.</p>		<p>This is a photo that shows the characteristic measles rash.</p>
--	--	--	--

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
MMR	1 or 2 doses				

 It is recommended.  It is not recommended.

Disease: Mumps

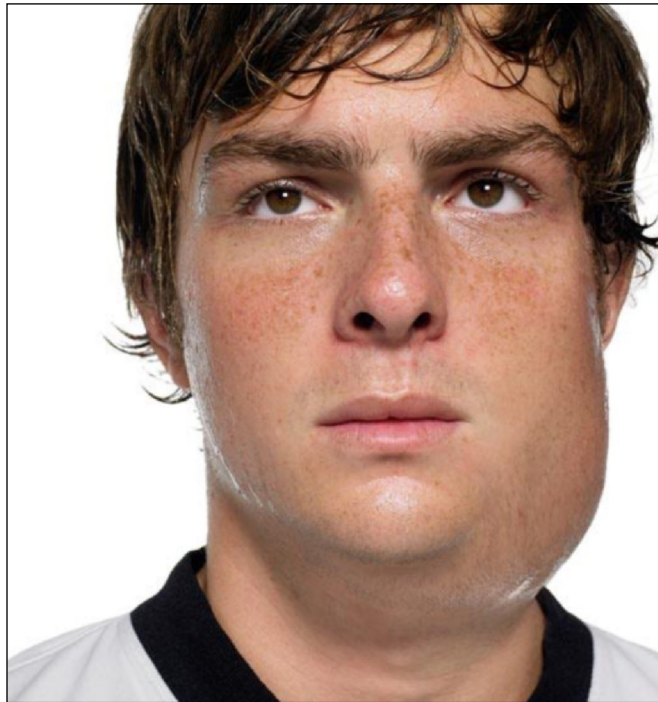
Vaccine: MMR

Mumps virus is mostly spread by coughing, sneezing or other contact with saliva from someone who is infected.

Special Note: MMR vaccine is not recommended during pregnancy.

Common Symptoms of Mumps:

- Fever
- Swollen glands in front of the ears or jaw
- Headache
- Muscle aches
- Tiredness
- Loss of appetite (not wanting to eat).



MUMPS IS NOT
JUST FOR
KIDS.

FEVER AND
SWOLLEN JAW?

CONSIDER MUMPS.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
MMR	1 or 2 doses				

 It is recommended.  It is not recommended.

Disease: Mumps

Vaccine: MMR

Special note about the vaccine: MMR vaccine is not recommended during pregnancy.

About mumps:

- Mumps virus is mostly spread by coughing, sneezing or other contact with saliva from someone who is infected. It can also be spread by sharing things like eating utensils and lip balm.
- Mumps can affect all ages. However, most outbreaks occur in settings where people have long-term close contact, like schools, colleges, sports teams, and camps.

Symptoms: Mumps causes fever, headache, muscle aches, tiredness, and loss of appetite. It may also cause swelling of the cheeks, neck or jaw, and other glands. In adolescents and adults, the ovaries or testicles also may swell. Some people get no symptoms at all. Adults are more likely than children to become very sick with mumps. Potential complications of mumps include hearing loss, meningitis (swelling of the covering of the brain and spinal cord), and brain damage. Symptoms usually last 7 to 10 days, but people can spread mumps before they show symptoms.

Adults need this vaccine if: You were born in 1957 or later and you haven't had mumps, or you didn't get the MMR vaccine.

Common Symptoms of Mumps: fever, swollen glands in front of the ears or jaw, headache, muscle aches, tiredness, loss of appetite (not wanting to eat).



Young adult with swollen jaw from mumps.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
MMR	1 or 2 doses				

■ It is recommended. ■ It is not recommended.

Disease: Rubella

Vaccine: MMR

Rubella virus spreads when an infected person coughs or sneezes.

Special Note: MMR vaccine is not recommended during pregnancy.



Rubella is a dangerous disease that can cause miscarriages and birth defects.

If you are planning to get pregnant, make sure you are up to date on your MMR vaccines.

Children born with congenital rubella syndrome may suffer from hearing, eye, and heart defects.

Three illustrations: a human ear, a human eye, and a human heart.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
MMR	1 or 2 doses				

■ It is recommended. ■ It is not recommended.

Disease: Rubella

Vaccine: MMR


Special note about the vaccine: MMR vaccine is not recommended during pregnancy.

About rubella:

- Rubella virus spreads when an infected person coughs or sneezes. A pregnant woman infected with rubella, can pass it to her baby and cause serious harm.
- Rubella has been eliminated in the U.S., but because it remains a problem in other parts of the world, it can still be brought here by people who get infected in other countries.

Symptoms: Most adults who get rubella usually have a mild illness, low-grade fever, sore throat, and a rash that starts on the face and spreads to the rest of the body. Some adults may also have a headache, pink eye (conjunctivitis), and general discomfort before the rash. Symptoms may last 5 to 8 days, but people can spread rubella before they show symptoms. Up to half of people infected with rubella do not have any symptoms.

Adults need this vaccine if: You were born in 1957 or later and you haven't had measles, or you didn't get the MMR vaccine.



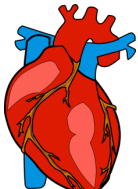


Rubella is a dangerous disease that can cause miscarriages and birth defects.

If you are planning to get pregnant, make sure you are up to date on your MMR vaccines.

Rubella, if contracted during pregnancy, is a dangerous disease that can cause miscarriage and birth defects.

Children born with congenital rubella syndrome may suffer from hearing, eye, and heart defects.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
MMR	1 or 2 doses				

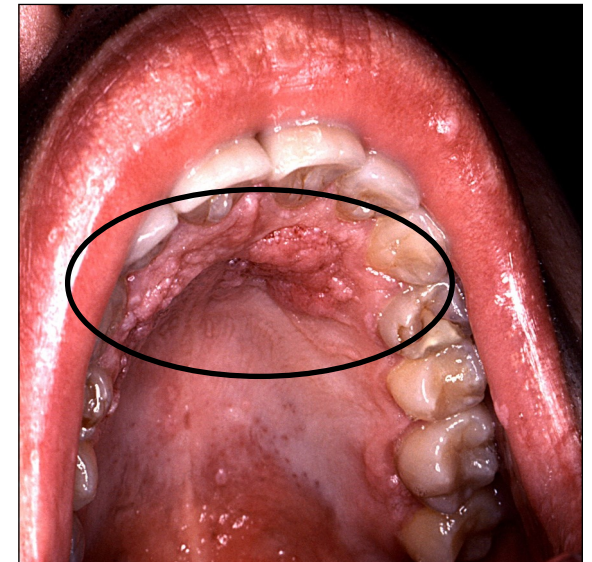
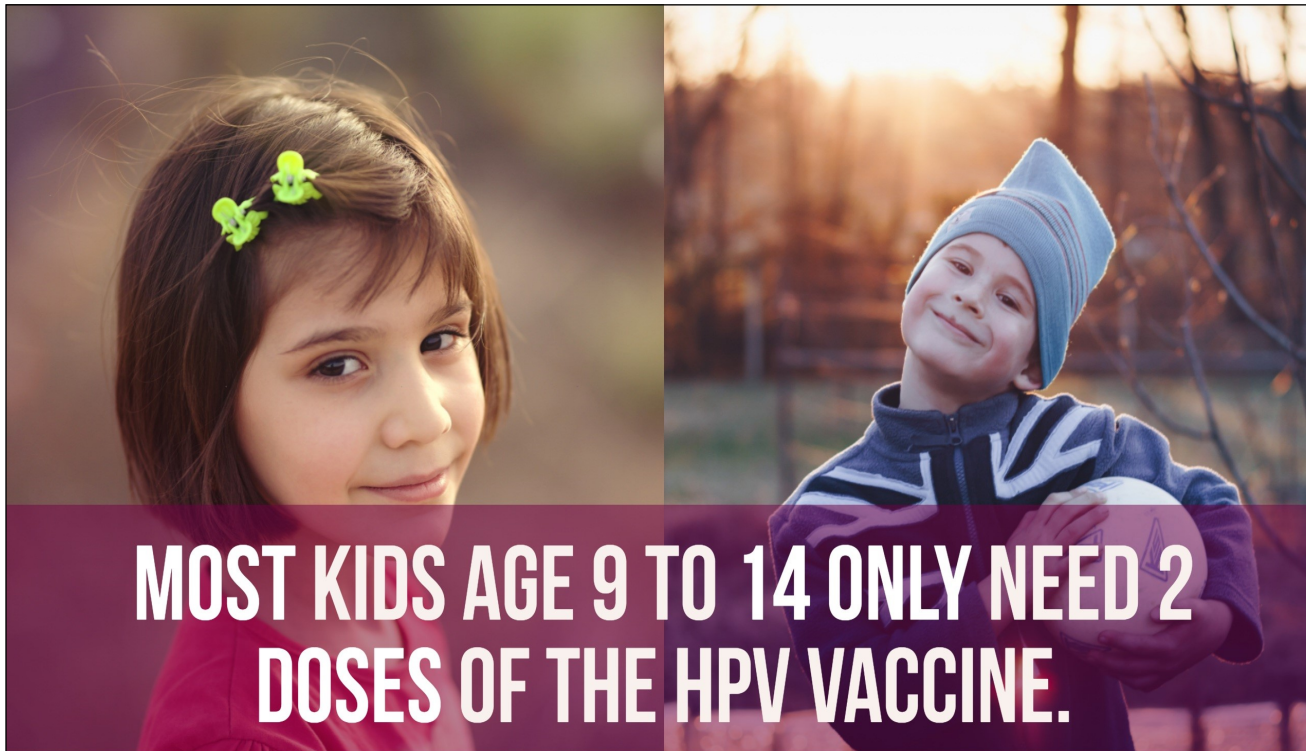
It is recommended. It is not recommended.

Disease: Human Papillomavirus (HPV)

Vaccine: HPV

HPV causes cancer and warts in various parts of the body.

Special Note: HPV vaccine is not recommended during pregnancy.



Warts in the mouth caused by HPV.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
HPV	3 doses				

■ It is recommended. ■ It is not recommended.

Disease: Human Papillomavirus (HPV)

Vaccine: HPV

Special note about the vaccine: HPV vaccine is not recommended during pregnancy.

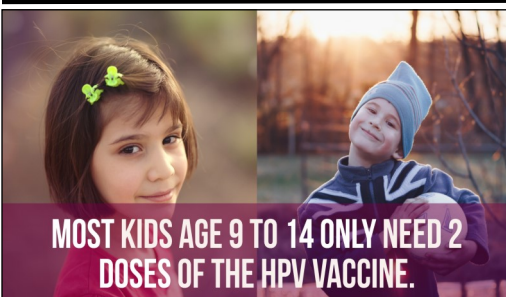
About HPV (human papillomavirus):

- HPV is a group of more than 150 related viruses. These viruses are spread easily by skin-to-skin contact. You can get HPV by having vaginal, anal, or oral sex with someone who has the virus.
- HPV is so common that nearly all men and women get it at some point in their lives. In most cases, HPV goes away on its own and does not cause any health problems, but when it doesn't, it can cause health problems.

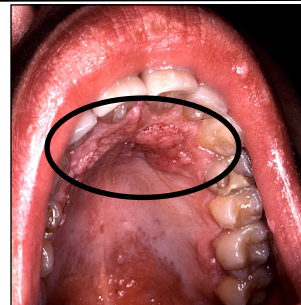
Symptoms:

- HPV may cause genital warts or cancer of the cervix, vulva, vagina, penis, anus, or back of the throat. HPV can be passed even when an infected person has no signs or symptoms. You can develop symptoms years after being infected with HPV, making it hard to know when you first became infected.

Adults need this vaccine if: You did not receive HPV vaccine between ages 9 and 18 years. HPV vaccine is recommended through age 26 years for women and certain men. If you didn't get your first dose until age 15 or later, you need 3 doses.



Most kids who start the series before age 15 get 2 doses. If started after age 15, 3 doses are needed.



Warts in the mouth caused by HPV.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
HPV	3 doses				

■ It is recommended. □ It is not recommended.

Disease: Chickenpox

Vaccine: Varicella

Chickenpox (varicella) virus is spread through coughing and sneezing, or touching the fluid from the blisters caused by the disease.

Special Note: Varicella vaccine is not recommended during pregnancy.

Chickenpox can be serious in healthy babies, adults, and people with weakened immune systems. Don't take a chance, get vaccinated.



About 9 out of 10 people who get 2 doses of the vaccine will be completely protected from chickenpox.



Elderly man with chickenpox on his shoulder.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Varicella	2 doses				

 It is recommended.  It is not recommended.

Disease: Chickenpox

Vaccine: Varicella

Special note about the vaccine: Varicella vaccine is not recommended during pregnancy.


About chickenpox (varicella):

- Chickenpox virus is spread through coughing and sneezing, or touching the fluid from the blisters caused by the disease. Chickenpox can be serious in babies, adults, and people with weakened immune systems.

Symptoms: The classic symptom of chickenpox is a rash that turns into itchy, fluid-filled blisters that eventually turn into scabs. The rash usually starts on the face, chest, and back and spreads to the rest of the body. Other symptoms that appear 1 to 2 days before the rash are fever, tiredness, loss of appetite, and headache. Symptoms may last 5 to 7 days. People can spread chickenpox from 1 to 2 days before they get the rash and until all their blisters have formed scabs.

Adults need this vaccine if: You haven't had chickenpox disease or you haven't received the chickenpox vaccine. Healthy adults born before 1980 are considered immune to chickenpox. Talk more with your healthcare provider.

Chickenpox can be serious in healthy babies, adults, and people with weakened immune systems. Don't take a chance, get vaccinated.



About 9 out of 10 people who get 2 doses of the vaccine will be completely protected from chickenpox.

Chickenpox can be very serious, but vaccination is very effective. Don't take a chance, get vaccinated.



Elderly man with chickenpox on his shoulder.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Varicella	2 doses				

■ It is recommended. □ It is not recommended.

Disease: Hepatitis A

Vaccine: Hepatitis A

Hepatitis A is a very contagious disease caused by a virus that causes liver inflammation. When the liver is inflamed or damaged, it doesn't function well.



PROTECT YOURSELF FROM
HEPATITIS A.

**1. GET
VACCINATED.**

**2. WASH YOUR HANDS
AFTER USING THE RESTROOM
AND BEFORE EATING.**



Yellowing of the eyes and skin (jaundice) because of hepatitis A.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Hepatitis A	2 or 3 doses				

 It is recommended.  It is not recommended.  It may be recommended.

Disease: Hepatitis A

Vaccine: Hepatitis A

Special note about the vaccine: Hepatitis A vaccine may be recommended during pregnancy.

About hepatitis A:

- Hepatitis A is a very contagious disease caused by a virus that causes liver inflammation. The virus is found in the stool of infected people, which often gets on objects and into food and water. A person becomes infected when they ingest the virus or have close contact with an infected person through sex or a caregiver role.
- Most people recover completely and do not have lasting liver damage. In rare cases, hepatitis A can cause liver failure and death in people older than 50 and in people with other liver diseases.

Symptoms: Symptoms of hepatitis A are fever, fatigue, nausea, loss of appetite, yellowing of the skin or eyes (jaundice), stomach pain, vomiting, or dark urine, pale stools, and diarrhea. Symptoms usually begin to appear 4 weeks after exposure to the virus. Many people, especially children, have no symptoms. A person can spread the virus to others up to 2 weeks before symptoms appear.

Adults need this vaccine if: You did not receive it as a child, wish to be protected against this disease, or are at increased risk for hepatitis A infection. Talk to your healthcare provider to find out if you are in a high-risk group.



Protect yourself from hepatitis A by doing these two things:

1. Get vaccinated.
2. Wash your hands after using the restroom and before eating.



Yellowing of the eyes and skin (jaundice) because of hepatitis A.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Hepatitis A	2 or 3 doses				

It is recommended. It is not recommended. It may be recommended.

Disease: Hepatitis B

Vaccine: Hepatitis B

Hepatitis B is a liver infection caused by the hepatitis B virus. It may cause liver cancer.

Hepatitis B infection can happen through:

- Sexual contact
- Sharing needles, syringes, or other drug-injection equipment
- From mother to baby at birth



HEPATITIS B CAN CAUSE LIVER DAMAGE AND CANCER. MOTHERS CAN UNKNOWINGLY PASS THE DISEASE TO THEIR BABIES AT BIRTH.

9 OUT OF 10 INFANTS WHO GET HEPATITIS B FROM THEIR MOTHERS DEVELOP LONG-TERM INFECTIONS.

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Hepatitis B	2 or 3 doses				

■ It is recommended. ■ It is not recommended. ■ It may be recommended.

Disease: Hepatitis B

Vaccine: Hepatitis B

Special note about the vaccine: Hepatitis B vaccine may be recommended during pregnancy.

About hepatitis B:

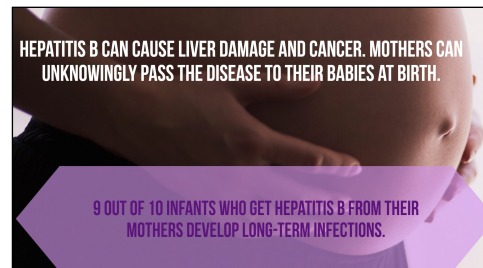
- Hepatitis B is a liver infection caused by the hepatitis B virus. Hepatitis B is spread by touching infected blood or other body fluids. Infection can happen through sexual contact; sharing needles, syringes, or other drug-injection equipment; or from mother to baby at birth.
- For most adults, infection is acute and short-term. Chronic infection can lead to serious health issues, like cirrhosis or liver cancer, and premature death later in life. Infection in infants is usually chronic and long-term.

Symptoms: Symptoms of hepatitis B are fever, fatigue, nausea, loss of appetite, yellowing of the skin or eyes (jaundice), stomach pain, vomiting, or dark urine, pale stools, and diarrhea. Symptoms usually begin to appear 3 months after exposure to the virus. Adults and children over the age of 5 years are more likely to have symptoms of acute infection. Most people with chronic infection have no symptoms, but they develop serious liver problems.

Adults need this vaccine if: You did not receive it as a child and are at increased risk for hepatitis B infection. Talk to your healthcare provider to find out if you are in a high-risk group.



Hepatitis B infection can happen through sexual contact, sharing needles, syringes, or other drug-injection equipment, or from mother to baby at birth.



Hepatitis B can cause liver damage and cancer. Mothers can pass the disease to their babies at birth. 9 out of 10 infants who get hepatitis B from their mothers develop long-term infections.

Vaccination Schedule

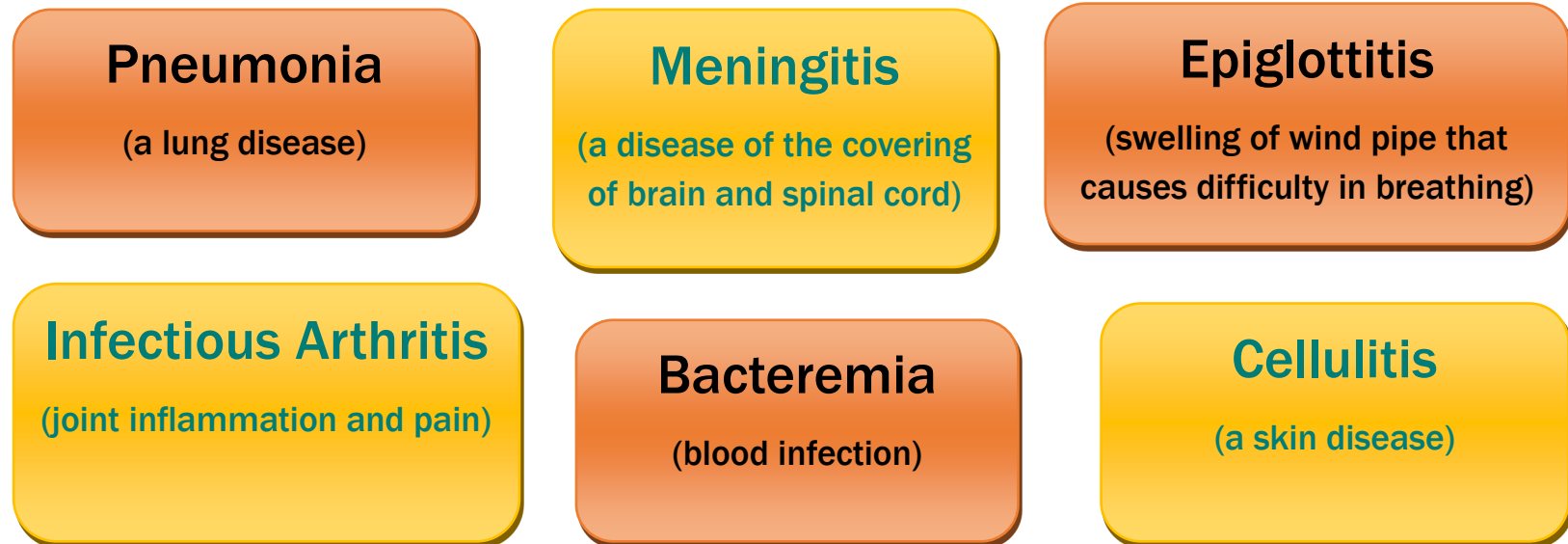
Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Hepatitis B	2 or 3 doses				

■ It is recommended. ■ It is not recommended. ■ It may be recommended.

Disease: *Haemophilus influenzae* type b (Hib) Vaccine: Hib

Hib disease is caused by bacteria. It causes a variety of infections in all age groups.

The most common types of infections caused by the Hib bacteria are:



Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Hib	1 or 3 doses				

■ It is recommended. ■ It is not recommended. ■ It may be recommended.

Disease: *Haemophilus influenzae* type b (Hib) Vaccine: Hib

Special note about the vaccine: Hib vaccine may be recommended during pregnancy for adults with certain medical conditions.

About Hib (*Haemophilus influenzae* type b):

- Hib disease is caused by bacteria that can cause infections in people of all ages ranging from mild, such as an ear infection, to severe, such as a bloodstream infection. It is spread through the air by coughing and sneezing or by direct contact with someone.
- The disease occurs mostly in babies and children younger than five years old. Adults age 65 years or older and adults with certain medical conditions are at increased risk for Hib disease.

Symptoms: Symptoms depend on which part of the body is infected. Common severe types of Hib disease are pneumonia (lung infection), bacteremia (bloodstream infection), and meningitis (swelling of the covering of the brain and spinal cord). Other types of Hib disease that can occur include epiglottitis (swelling of the windpipe that can cause breathing trouble), cellulitis (skin infection), and infectious arthritis (inflammation of the joint).

Adults need this vaccine if: You have certain medical conditions or are at increased risk for Hib disease. Talk to your healthcare provider to find out if you are in a high-risk group.

The diagram consists of six rounded rectangular boxes arranged in two rows. The top row contains three boxes: 'Pneumonia (a lung disease)' in an orange box, 'Meningitis (a disease of the covering of brain and spinal cord)' in a yellow box, and 'Epiglottitis (swelling of wind pipe that causes difficulty in breathing)' in an orange box. The bottom row contains three boxes: 'Infectious Arthritis (joint inflammation and pain)' in a yellow box, 'Bacteremia (blood infection)' in an orange box, and 'Cellulitis (a skin disease)' in a yellow box. To the right of these boxes is the text: 'These are the six most common types of infections caused by the Hib bacteria.'

Vaccination Schedule

Vaccine	19-21 years	22-26 years	27-59 years	60-64 years	65 years and older
Hib	1 or 3 doses				

It is recommended.
 It is not recommended.
 It may be recommended.

Getting sick can be expensive



How much does it cost to get sick from the flu?

Approximate cost if there are no complications:

\$400 or more

Total cost if there are complications:

More than \$1,000

Getting sick can be expensive



How much does it cost to get sick from the flu?

Approximate cost if there are no complications:

- Visit to the doctor (price may vary): \$55 or more
- Medicines (price may vary): from \$5 to \$80
- Antivirals (price may vary): from \$52 to \$150
- Three days out of work (minimum salary—\$11): \$264

Approximate total cost: **\$400 or more**

Total cost if there are complications: **more than \$1,000**

Cost of a flu vaccine



No more than \$40 or it could be free!

Being healthy is priceless. But in order to be healthy, we need to get immunized.

Cost of a flu vaccine



- It depends on the type of flu shot, but it can usually cost \$15 to \$40.
- If you go to a health fair or a free clinic, you may be able to get the vaccine for free.
- Being healthy is priceless. But in order to be healthy, we need to get immunized.

— Appendix —

Adult Immunization Schedule

Vaccine	19 – 21 years	22 – 26 years	27 – 59 years	60 – 64 years	65 years & older
Influenza	1 dose every year				
Tdap/Td	1 dose Tdap, then Td booster every 10 years				
Zoster			50 and older: 2 doses		
PCV13	1 dose				1 dose
PPSV23	1 or 2 doses				1 dose
MenACWY	1 or 2 doses				
MenB	2 or 3 doses				
MMR	1 or 2 doses				
HPV	3 doses				
Varicella	2 doses				
Hepatitis A	2 or 3 doses				
Hepatitis B	2 or 3 doses				
Hib	1 or 3 doses				

It is recommended.
 It is not recommended.
 It may be recommended.

Adult Immunization Resources

Check out these online resources to find out more about adult immunizations.

Organization Name	Web Address
Washington State Department of Health	www.doh.wa.gov/Immunization/Adult
Centers for Disease Control and Prevention	www.cdc.gov/vaccines/adults
Vaccines.gov	www.vaccines.gov/who_and_when/adults/index.html
Adultvaccination.org	www.adultvaccination.org
Medline Plus	www.medlineplus.gov/immunization.html
Immunization Action Coalition	www.immunize.org www.vaccineinformation.org/adults
Immunization Action Coalition of Washington	www.immunitycommunitywa.org
Vaccine Education Center	www.chop.edu/centers-programs/vaccine-education-center/age-groups-and-vaccines/adults

Maternal Immunization

Vaccines are important before, during, and after pregnancy.

Vaccine	Before Pregnancy	During Pregnancy	After Pregnancy	Type of Vaccine
Influenza	Yes	Yes, during flu season	Yes	Inactivated
Tdap	May be recommended; it is better to vaccinate during pregnancy when possible	Yes, during each pregnancy	Yes, immediately postpartum, if Tdap never received in lifetime; it is better to vaccinate during pregnancy	Toxoid/Inactivated
Td	May be recommended	May be recommended, but Tdap is preferred	May be recommended	Toxoid
Hepatitis A	May be recommended	May be recommended	May be recommended	Inactivated
Hepatitis B	May be recommended	May be recommended	May be recommended	Inactivated
Meningococcal	May be recommended	Base decision on risk vs. benefit, inadequate data for specific recommendation	May be recommended	Inactivated
Pneumococcal	May be recommended	Base decision on risk vs. benefit, inadequate data for specific recommendation	May be recommended	Inactivated
HPV	May be recommended (through 26 years of age)	No	May be recommended (through 26 years of age)	Inactivated
MMR	May be recommended; once received, avoid conception for 4 weeks	No	May be recommended	Live
Varicella	May be recommended; once received, avoid conception for 4 weeks	No	May be recommended	Live

Source: CDC

For more information, visit: <https://www.cdc.gov/vaccines/pregnancy>

Do you wonder about **adult** vaccine effectiveness?

How effective are vaccines against the diseases they prevent?	
Disease	All recommended doses, minimum effectiveness (protection can be higher than listed)
Chickenpox, adults	99%
Diphtheria	95%
Flu	Varies every season
Hepatitis A	100%
Hepatitis B, adults	90%
HPV	97%
Measles	98%
Meningococcal types A, C*	85%
Mumps	88%
Pneumococcal, PCV13, invasive disease	75%
Pneumococcal, PCV13, pneumonia	45%
Pneumococcal, PPSV23, invasive disease	60%
Rubella	95%
Shingles, live vaccine	51%
Shingles, recombinant vaccine	97%
Shingles, PHN, live	67%
Shingles, PHN, recombinant	91%
Tetanus**	100%
Whooping cough	80%

Data source: Centers for Disease Control and Prevention

*Vaccines also protect against meningococcal disease types W, Y, and B, but their effectiveness has not been calculated separately.

**Tetanus protection wears off and you must get a booster every 10 years to maintain this level of protection.

What does this chart show?

- This chart shows the vaccine effectiveness for 14 diseases that **adults** can be protected from with vaccines.

What is vaccine effectiveness?

- Vaccine effectiveness refers to the ability of a vaccine to prevent the disease in the real world.

Why monitor vaccine effectiveness?

- Showing the burden of disease and proving vaccine effectiveness is necessary to:
 - ⇒ promote immunization
 - ⇒ strengthen immunization uptake
 - ⇒ encourage the development of better vaccines.

Do you wonder about **child** vaccine effectiveness?

How effective are vaccines against the diseases they prevent?	
Disease	All recommended doses, minimum effectiveness (protection can be higher than listed)
Chickenpox, children	97%
Chickenpox, adolescents	99%
Diphtheria	95%
Flu	Varies every season
Hepatitis A	100%
Hepatitis B, children/adolescents	95%
Hib	95%
HPV	97%
Measles	98%
Meningococcal types A, C*	85%
Mumps	88%
Pneumococcal, PCV13	90%
Pneumococcal, PPSV23	60%
Polio	99%
Rotavirus, all disease	74%
Rotavirus, severe disease	92%
Rubella	95%
Tetanus**	100%
Whooping cough	80%

Data source: Centers for Disease Control and Prevention

*Vaccines also protect against meningococcal disease types W, Y, and B, but their effectiveness has not been calculated separately.

**Tetanus protection wears off and you must get a booster every 10 years to maintain this level of protection.

What does this chart show?

- This chart shows the vaccine effectiveness for 16 diseases that **infants, children, and teens** can be protected from with vaccines.

What is vaccine effectiveness?

- Vaccine effectiveness refers to the ability of a vaccine to prevent the disease in the real world.

Why monitor vaccine effectiveness?

- Showing the burden of disease and proving vaccine effectiveness is necessary to:
 - ⇒ promote immunization
 - ⇒ strengthen immunization uptake
 - ⇒ encourage the development of better vaccines.

About this educational material:

This document was supported by the Cooperative Agreement of the Centers for Disease Control and Prevention (CDC). Its content is the exclusive responsibility of the author and does not necessarily represent the official opinion of the CDC.

Co-created and designed by:

The Washington Association for Community Health and the Washington State Department of Health.

In collaboration with:

The health promoters/community health workers of Sea Mar Community Health Center of Skagit County, and the health promoters/community health workers of Family Health Centers of Okanogan County.

First edition (Spanish only): July, 2012.

Second edition (English and Spanish): December, 2018.