

# Top 10 Tips for HPV Vaccination Success

Attain and Maintain High HPV Vaccination Rates



## HPV VACCINE IS CANCER PREVENTION

- 1** Appreciate the significance of achieving high HPV vaccination rates.  
By boosting HPV vaccination rates among your patients, you will be preventing cancer.
- 2** Acknowledge the importance your recommendation has when it comes to parents choosing to get their children vaccinated.  
Clinician recommendation is the number one reason parents decide to vaccinate. This is especially important for HPV vaccination.
- 3** Use an effective approach by bundling your vaccine recommendation.  
Recommend the HPV vaccine the same day and the same way you recommend all other vaccines. For example, “Now that Danny is 11, he is due for vaccinations to help protect against meningitis, HPV cancers, and whooping cough. We’ll give those shots during today’s visit. Do you have any questions about these vaccines?”
- 4** Motivate your team and encourage their immunization conversations with parents.  
Starting with your front office, ensure each team member is aware of HPV vaccine’s importance and is educated on proper vaccination practices and recommendations, ready to answer parents’ questions, and/or regularly remind and recall parents. Be sure staff regularly check immunization records, place calls to remind families about getting vaccines, and let you know if parents have additional questions.
- 5** Implement systems to ensure you never miss an opportunity to vaccinate.  
Establish a policy to vaccinate at every visit. Create a system to check immunization status ahead of all visits. Before seeing the patient, staff should indicate if the patient is due for immunization, with special consideration to HPV vaccination. Use standing orders.
- 6** Use your local health department’s resources.  
Use the resources of the local health department to achieve your goals of protecting your patients.
- 7** Know your rates of vaccination and refusal.  
Deputize your staff to assist you with knowing your actual vaccination rates and learning more about why some patients are behind on their vaccines. They can also help you facilitate solutions on how to bring these patients in and get or keep immunization rates up.
- 8** Maintain strong doctor-patient relationships to help with challenging immunization conversations.  
It is extremely gratifying when parents who initially questioned immunization agree to get their child vaccinated on time. It’s always nice to hear: “Okay, that makes sense and I trust you!”
- 9** Learn how to answer some of parents’ most common questions about HPV vaccine.  
Be prepared to answer parents’ questions succinctly, accurately, and empathetically by using terms that they understand. A parent will often accept your explanations if presented with their children’s best interests in mind.
- 10** Use personal examples of how you choose to vaccinate children in your family.  
Providing personal examples shows you believe in the importance of immunizations, especially HPV vaccine. These examples—combined with an effective recommendation—can help parents better understand the benefits of HPV vaccination for cancer prevention.

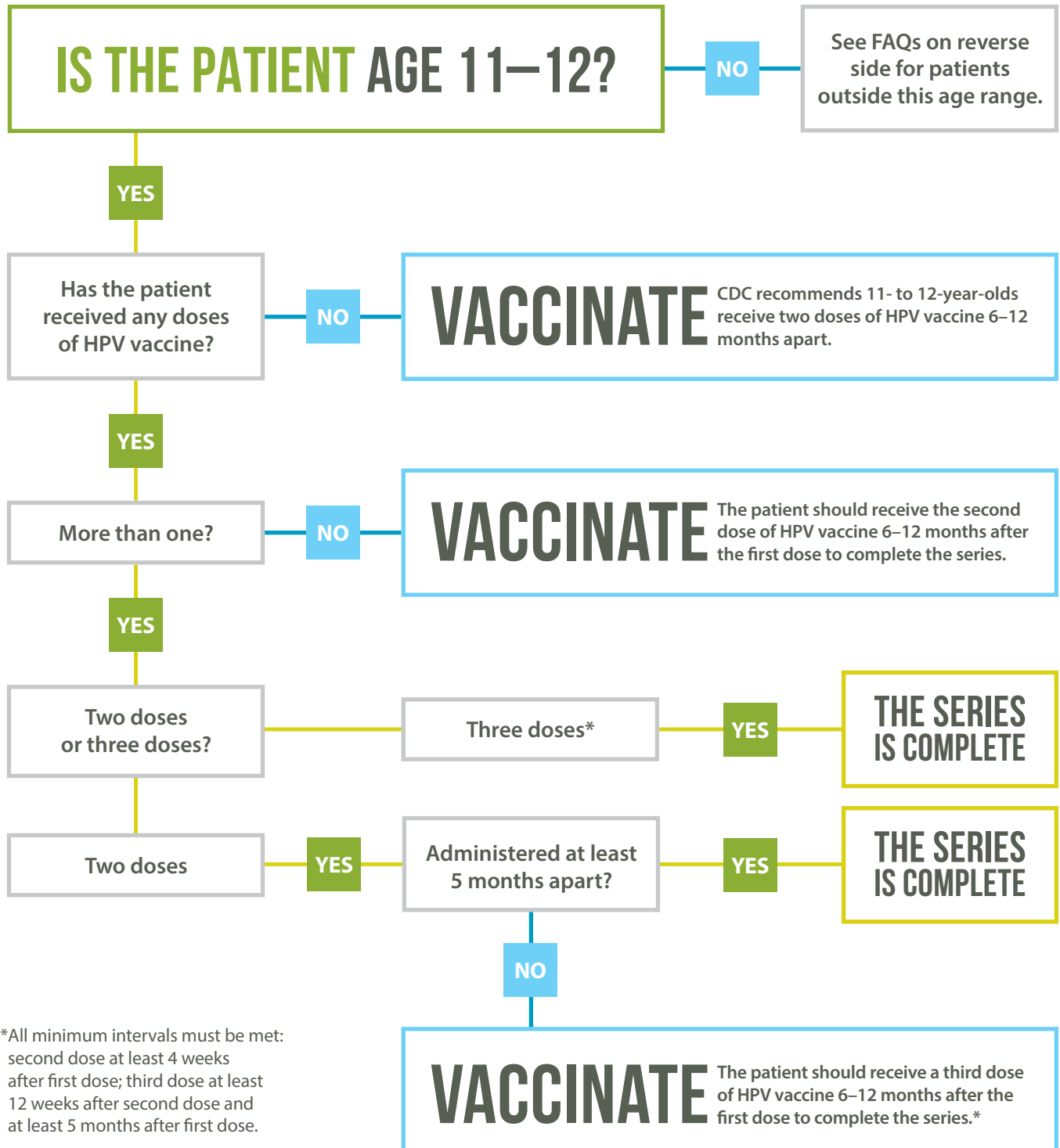
For more info visit: [www.cdc.gov/hpv](http://www.cdc.gov/hpv)

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# PREVENTING CANCER JUST GOT EASIER

HPV vaccine protects against cancers and other diseases caused by human papillomavirus (HPV). Follow the chart below to determine whether your patient needs two or three doses of HPV vaccine.



\*All minimum intervals must be met: second dose at least 4 weeks after first dose; third dose at least 12 weeks after second dose and at least 5 months after first dose.

## CDC RECOMMENDS TWO HPV DOSES FOR YOUNGER ADOLESCENTS

The Centers for Disease Control and Prevention (CDC) now routinely recommends two doses of HPV vaccine for 11- or 12-year-olds to prevent HPV cancers. This recommendation makes it easier for parents to protect their children by reducing the number of doses and trips to the doctor. HPV vaccination is an important cancer prevention tool and two doses of HPV vaccine will provide safe, effective, and long-lasting protection. Some specifics of the recommendation include:

- A two-dose schedule is recommended for adolescents starting the schedule at ages 9 through 14 years. For this age group, follow the decision tree on the reverse side.
- Adolescents aged 9 through 14 years who have already received two doses of HPV vaccine less

than 5 months apart will require a third dose. The third dose should be given 6–12 months after the first dose to complete the series.

- A three-dose schedule is recommended for teens and young adults who start the series at ages 15 through 26 years. Under this schedule, the second dose of HPV vaccine should be given 1–2 months after the first dose, and the third dose should be given 6 months after the first dose.
- Three doses are recommended for people aged 9–26 years with certain immunocompromising conditions.

Read the full policy note:

[www.cdc.gov/mmwr/volumes/65/wr/mm6549a5.htm](http://www.cdc.gov/mmwr/volumes/65/wr/mm6549a5.htm)

## TALKING TO PATIENTS AND THEIR PARENTS ABOUT 2-DOSE SCHEDULES FOR HPV VACCINATION

With patients aged 11–12 years, start the vaccine discussion with their parents by making the following recommendation: ***"Now that your child is 11 (or 12) years old, they are due for three vaccines today to help protect them from the infections that cause meningitis, HPV cancers, and pertussis—or whooping cough."***

Many parents are accepting of this bundled recommendation because it demonstrates that HPV vaccination is a normal part of adolescent vaccination. Parents may be interested in vaccinating, yet still have questions. Some parents might just need additional information from you, the clinician they trust. Clarify the parent's question or what additional information they need.

For parents who have a question or need more information about ***"why now/why 11–12?"***

"As with all vaccine-preventable diseases, we want to protect your child early. If we start now, it's one less thing for you to worry about. Also, your child will only need two doses of HPV vaccine at this age. If you wait, your child may need three doses in order to get complete protection. We'll give the first dose today and then you'll need to bring your child back in 6 to 12 months from now for the second dose."

If a parent asks, or needs more information about ***"How long can we wait and still give just two doses?"***

"The two-dose schedule is recommended if the series is started before the 15th birthday. However, I don't recommend waiting to give this cancer-preventing vaccine. As children get older and have busier schedules, it becomes more difficult to get them back in. I'd feel best if we started the series today to get your child protected as soon as possible."

For patients aged 9–14 who have already had two doses given less than 5 months apart

"The recommended schedule is two doses given 6 to 12 months apart. The minimum amount of time between those doses is 5 months. Because your child received two doses less than 5 months apart, we'll need to give your child a third dose."

For parents asking about the duration of protection or how well the vaccine will work with just two doses

"Studies have shown that two doses of HPV vaccine work very well in younger adolescents and we expect the same long-lasting protection with two doses that we expect with three doses." You can also access guidance on answering parents' questions about HPV vaccine by using our tip sheet, *Talking to Parents about HPV Vaccine*, at [www.cdc.gov/HPV](http://www.cdc.gov/HPV).



**HPV VACCINE**  
**IS CANCER PREVENTION**

# Clinician FAQ: CDC Recommendations for HPV Vaccine 2-Dose Schedules

After the October 2016 ACIP meeting, CDC now recommends that 11 or 12 year olds receive 2 doses of HPV vaccine instead of 3. Parents may have questions about this change. This resource helps explain the reasons for changing the HPV vaccine recommendation, and provides tips for talking with the parents of your patients about the change.

## What has changed in the new HPV vaccine recommendations?

In October 2016, CDC updated HPV vaccination recommendations regarding dosing schedules. CDC now recommends 2 doses of HPV vaccine for people starting the vaccination series before the 15th birthday. Three doses of HPV vaccine are recommended for people starting the vaccination series on or after the 15th birthday and for people with certain immunocompromising conditions.

CDC continues to recommend routine vaccination for girls and boys at age 11 or 12 years. The vaccination series can be started at age 9 years. CDC also recommends vaccination through age 26 years for females and through age 21 years for males. Males age 22–26 years may be vaccinated.

## What is the recommended 2-dose HPV vaccination schedule?

For girls and boys starting the vaccination series before the 15th birthday, the recommended schedule is 2 doses of HPV vaccine. The second dose should be given 6–12 months after the first dose (0, 6–12 month schedule).

**Answering parents' questions:** *We now recommend 2 doses of HPV vaccine for your son or daughter, instead of 3, if your child starts the series before their 15th birthday. I still recommend your child start the vaccination series by age 11 or 12 years for best protection against HPV. He or she will need a second dose 6-12 months after the first dose.*

## Who should still receive a 3-dose schedule?

CDC continues to recommend a 3-dose schedule for persons starting the HPV vaccination series on or after the 15th birthday, and for persons with certain immunocompromising conditions. The second dose should be given 1–2 months after the first dose, and the third dose should be given 6 months after the first dose (0, 1–2, 6 month schedule).

**Answering parents' questions:** *If your child starts the series after his or her 15th birthday or has certain health problems that weaken his or her immune system, he or she will still need the 3-dose series. We will give the second dose 1–2 months after the first, and the last dose 6 months after the first dose.*

## Why did CDC make the recommendation change to a 2-dose schedule?

Over the past year, CDC and the Advisory Committee on Immunization Practices (ACIP) have been reviewing data on 2-dose schedules, including results from studies of HPV vaccines that compared the antibody responses after 2 doses and 3 doses. These studies showed that the antibody response after 2 doses given at least 6 months apart to 9–14 year-olds was as good or better than the antibody response after 3 doses given to older adolescents and young adults, the age group in which efficacy was demonstrated in clinical trials.

**Answering parents' questions:** *CDC and ACIP (a group of experts that make vaccine recommendations) have been reviewing data on 2-dose HPV vaccination schedules for several months. The evidence showed that 2 doses of HPV vaccine given at least 6 months apart in younger adolescents were as good or better than 3 doses. These updated recommendations are an example of using the latest available evidence to provide your child with the best possible protection against serious diseases.*

**Answering parents' questions:** *Since your child received his/her first dose of the HPV vaccine before he/she was 15 years old, we'll only need to give 1 more dose.*

### **Why is the 2-dose schedule change recommended only for girls and boys age 9–14 years?**

ACIP makes recommendations based on the best available scientific evidence. Immunogenicity studies have shown that 2 doses of HPV vaccine given to 9–14 year-olds at least 6 months apart were as good, or better, than 3 doses given to older adolescents and young adults. Studies have not been done to show this in adolescents age 15 years or older.

**Answering parents' questions:** *The data we currently have from scientific studies (clinical trials) showed that 2 doses of HPV vaccine given at least 6 months apart were as good or better than 3 doses in children 9–14 years of age. Older adolescents haven't been studied in the same way, so we don't have information available for that age group. For that reason, the recommendation for number of doses has not been changed for older adolescents.*

### **What is the recommendation for persons with immunocompromising conditions?**

CDC recommends 3 doses of HPV vaccine (0, 1–2, 6 months) for immunocompromised people age 9 through 26 years. People whose immune responses might be lower, for example due to HIV infection, cancer, autoimmune disease, or taking immunosuppressant medications, should receive 3 doses to make sure they get the most benefit. However, children with asthma, diabetes, and other conditions that would not suppress immune response to HPV vaccination can receive a 2-dose schedule.

**Answering parents' questions:** *Even though CDC has recommended just 2 doses of HPV for kids under 15 years, we'll need to give your child 3 doses because he/she has a health problem that weakens his or her immune system.*

### **If a HPV vaccine series was started with quadrivalent HPV vaccine or bivalent HPV vaccine and will be completed with 9-valent HPV vaccine, what are the intervals for the remaining doses in a 3-dose or 2-dose series?**

If the first dose of any vaccine was given before the 15th birthday, vaccination should be completed according to a 2-dose schedule. In a 2-dose series, the second dose is recommended 6–12 months after the first dose (0, 6–12 month schedule).

If the first dose of any vaccine was given on or after the 15th birthday, vaccination should be completed according to a 3-dose schedule. In a 3-dose series, the second dose is recommended 1–2 months after the first dose, and the third dose is recommended 6 months after the first dose (0, 1–2, 6 month schedule).

If a vaccination schedule is interrupted, vaccine doses do not need to be repeated.

### **If a girl or boy received 2 doses of HPV vaccine less than 5 months apart, do they need a third HPV vaccine dose?**

Yes. In a 2-dose schedule of HPV vaccine, the recommended interval is 6–12 months, and the minimum interval is 5 months between the first and second dose. If the second dose is given earlier than 5 months, a third dose should be administered.

**Answering parents' questions:** *The recommended schedule is 2 doses given 6 to 12 months apart. The minimum amount of time between those doses is 5 months. Because your child received 2 doses less than 5 months apart, we'll need to give your child a third dose.*

### **If someone is age 15 years or older and started the vaccination series at age 11 but only received 1 dose, how many more doses do they need?**

This person needs 1 more dose to complete a 2-dose series, which is recommended because the vaccination was started before turning 15 years old. In a 2-dose series, the second dose is recommended 6–12 months after the first dose. In this case, the first dose was given several years ago, so the second dose can be given right away.

### **Is the 9-valent HPV vaccine approved by FDA for use as a 2-dose schedule?**

Yes, in October 2016, FDA approved a 2-dose schedule (0, 6–12 months) of 9-valent HPV vaccine for use in girls and boys age 9–14 years in the United States.

### **What HPV vaccines are currently available in the United States?**

Three HPV vaccines are licensed for use in the United States: 9-valent HPV vaccine, quadrivalent HPV vaccine, and bivalent HPV vaccine. However, after the end of 2016, only 9-valent HPV vaccine will be sold in the United States.

Talk to your child's doctor or nurse about the vaccines recommended for their age.

	Flu <i>Influenza</i>	Tdap Tetanus, diphtheria, pertussis	HPV Human papillomavirus	Meningococcal		Pneumococcal	Hepatitis B	Hepatitis A		Inactivated Polio	MMR Measles, mumps, rubella	Chickenpox <i>Varicella</i>
				MenACWY	MenB							
7-8 Years	Green	Orange		Purple		Purple	Orange	Purple	Orange	Orange	Orange	Orange
9-10 Years	Green	Orange	HPV (Purple and Blue)	Purple		Purple	Orange	Purple	Orange	Orange	Orange	Orange
11-12 Years	Green	Green/Orange	HPV (Green)	Green/Orange		Purple	Orange	Purple	Orange	Orange	Orange	Orange
13-15 Years	Green	Orange	Orange	Orange		Purple	Orange	Purple	Orange	Orange	Orange	Orange
16-18 Years	Green	Orange	Orange	Green/Orange	Blue	Purple	Orange	Purple	Orange	Orange	Orange	Orange

**More information:**


Preteens and teens should get a flu vaccine every year.


Preteens and teens should get one shot of Tdap at age 11 or 12 years.


All 11-12 year olds should get a 2-shot series of HPV vaccine at least 6 months apart. A 3-shot series is needed for those with weakened immune systems and those age 15 or older.


All 11-12 year olds should get a single shot of a meningococcal conjugate (MenACWY) vaccine. A booster shot is recommended at age 16.

Teens, 16-18 years old, **may** be vaccinated with a serogroup B meningococcal (MenB) vaccine.

 These shaded boxes indicate when the vaccine is recommended for all children unless your doctor tells you that your child cannot safely receive the vaccine.

 These shaded boxes indicate the vaccine should be given if a child is catching-up on missed vaccines.

 These shaded boxes indicate the vaccine is recommended for children with certain health or lifestyle conditions that put them at an increased risk for serious diseases. See vaccine-specific recommendations at [www.cdc.gov/vaccines/pubs/ACIP-list.htm](http://www.cdc.gov/vaccines/pubs/ACIP-list.htm).

 This shaded box indicates children not at increased risk may get the vaccine if they wish after speaking to a provider.



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

American Academy of Pediatrics



AMERICAN ACADEMY OF FAMILY PHYSICIANS  
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# Vaccine-Preventable Diseases and the Vaccines that Prevent Them

## **Diphtheria** (Can be prevented by Tdap vaccination)

Diphtheria is a very contagious bacterial disease that affects the respiratory system, including the lungs. Diphtheria bacteria can be spread from person to person by direct contact with droplets from an infected person's cough or sneeze. When people are infected, the bacteria can produce a toxin (poison) in the body that can cause a thick coating in the back of the nose or throat that makes it hard to breathe or swallow. Effects from this toxin can also lead to swelling of the heart muscle and, in some cases, heart failure. In serious cases, the illness can cause coma, paralysis, or even death.

## **Hepatitis A** (Can be prevented by HepA vaccination)

Hepatitis A is an infection in the liver caused by hepatitis A virus. The virus is spread primarily person-to-person through the fecal-oral route. In other words, the virus is taken in by mouth from contact with objects, food, or drinks contaminated by the feces (stool) of an infected person. Symptoms can include fever, tiredness, poor appetite, vomiting, stomach pain, and sometimes jaundice (when skin and eyes turn yellow). An infected person may have no symptoms, may have mild illness for a week or two, may have severe illness for several months, or may rarely develop liver failure and die from the infection. In the U.S., about 100 people a year die from hepatitis A.

## **Hepatitis B** (Can be prevented by HepB vaccination)

Hepatitis B causes a flu-like illness with loss of appetite, nausea, vomiting, rashes, joint pain, and jaundice. Symptoms of acute hepatitis B include fever, fatigue, loss of appetite, nausea, vomiting, pain in joints and stomach, dark urine, grey-colored stools, and jaundice (when skin and eyes turn yellow).

## **Human Papillomavirus** (Can be prevented by HPV vaccination)

Human papillomavirus is a common virus. HPV is most common in people in their teens and early 20s. About 14 million people, including teens, become infected with HPV each year. HPV infection can cause cervical, vaginal, and vulvar cancers in women and penile cancer in men. HPV can also cause anal cancer, oropharyngeal cancer (back of the throat), and genital warts in both men and women.

## **Influenza** (Can be prevented by annual flu vaccination)

Influenza is a highly contagious viral infection of the nose, throat, and lungs. The virus spreads easily through droplets when an infected person coughs or sneezes and can cause mild to severe illness. Typical symptoms include a sudden high fever, chills, a dry cough, headache, runny nose, sore throat, and muscle and joint pain. Extreme fatigue can last from several days to weeks. Influenza may lead to hospitalization or even death, even among previously healthy children.

## **Measles** (Can be prevented by MMR vaccination)

Measles is one of the most contagious viral diseases. Measles virus is spread by direct contact with the airborne respiratory droplets of an infected person. Measles is so contagious that just being in the same room after a person who has measles has already left can result in infection. Symptoms usually include a rash, fever, cough, and red, watery eyes. Fever can persist, rash can last for up to a week, and coughing can last about 10 days. Measles can also cause pneumonia, seizures, brain damage, or death.

## **Meningococcal Disease** (Can be prevented by meningococcal vaccination)

Meningococcal disease has two common outcomes: meningitis (infection of the lining of the brain and spinal cord) and bloodstream infections. The bacteria that cause meningococcal disease spread through the exchange of nose and throat droplets, such as when coughing, sneezing, or kissing. Symptoms include sudden onset of fever, headache, and stiff neck. With bloodstream infection, symptoms also include a dark purple rash. About one of every ten people who gets the disease dies from it. Survivors of meningococcal disease may lose their arms or legs, become deaf, have problems with their nervous systems, become developmentally disabled, or suffer seizures or strokes.

## **Mumps** (Can be prevented by MMR vaccination)

Mumps is an infectious disease caused by the mumps virus, which is spread in the air by a cough or sneeze from an infected person. A child can also get infected with mumps by coming in contact with a contaminated object, like a toy. The mumps virus causes swollen salivary glands under the ears or jaw, fever, muscle aches, tiredness, abdominal pain, and loss of appetite. Severe complications for children who get mumps are uncommon, but can include meningitis (infection of the covering of the brain and spinal cord), encephalitis (inflammation of the brain), permanent hearing loss, or swelling of the testes, which rarely results in decreased fertility.

## **Pertussis** (Whooping Cough) (Can be prevented by Tdap vaccination)

Pertussis spreads very easily through coughing and sneezing. It can cause a bad cough that makes someone gasp for air after coughing fits. This cough can last for many weeks, which can make preteens and teens miss school and other activities. Pertussis can be deadly for babies who are too young to receive the vaccine. Often babies get whooping cough from their older brothers or sisters, like preteens or teens, or other people in the family. Babies with pertussis can get pneumonia, have seizures, become brain damaged, or even die. About half of children under 1 year of age who get pertussis must be hospitalized.

## **Pneumococcal Disease** (Can be prevented by pneumococcal vaccination)

Pneumonia is an infection of the lungs that can be caused by the bacteria called pneumococcus. These bacteria can cause other types of infections too, such as ear infections, sinus infections, meningitis (infection of the lining of the brain and spinal cord), and bloodstream infections. Sinus and ear infections are usually mild and are much more common than the more serious forms of pneumococcal disease. However, in some cases pneumococcal disease can be fatal or result in long-term problems, like brain damage and hearing loss. The bacteria that cause pneumococcal disease spread when people cough or sneeze. Many people have the bacteria in their nose or throat at one time or another without being ill—this is known as being a carrier.

## **Polio** (Can be prevented by IPV vaccination)

Polio is caused by a virus that lives in an infected person's throat and intestines. It spreads through contact with the stool of an infected person and through droplets from a sneeze or cough. Symptoms typically include sore throat, fever, tiredness, nausea, headache, or stomach pain. In about 1% of cases, polio can cause paralysis. Among those who are paralyzed, about 2 to 10 children out of 100 die because the virus affects the muscles that help them breathe.

## **Rubella** (German Measles) (Can be prevented by MMR vaccination)

Rubella is caused by a virus that is spread through coughing and sneezing. In children rubella usually causes a mild illness with fever, swollen glands, and a rash that lasts about 3 days. Rubella rarely causes serious illness or complications in children, but can be very serious to a baby in the womb. If a pregnant woman is infected, the result to the baby can be devastating, including miscarriage, serious heart defects, mental retardation and loss of hearing and eye sight.

## **Tetanus** (Lockjaw) (Can be prevented by Tdap vaccination)

Tetanus mainly affects the neck and belly. When people are infected, the bacteria produce a toxin (poison) that causes muscles to become tight, which is very painful. This can lead to "locking" of the jaw so a person cannot open his or her mouth, swallow, or breathe. The bacteria that cause tetanus are found in soil, dust, and manure. The bacteria enter the body through a puncture, cut, or sore on the skin. Complete recovery from tetanus can take months. One to two out of 10 people who get tetanus die from the disease.

## **Varicella** (Chickenpox) (Can be prevented by varicella vaccination)

Chickenpox is caused by the varicella zoster virus. Chickenpox is very contagious and spreads very easily from infected people. The virus can spread from either a cough, sneeze. It can also spread from the blisters on the skin, either by touching them or by breathing in these viral particles. Typical symptoms of chickenpox include an itchy rash with blisters, tiredness, headache and fever. Chickenpox is usually mild, but it can lead to severe skin infections, pneumonia, encephalitis (brain swelling), or even death.

If you have any questions about your child's vaccines, talk to your healthcare provider.