



# Onondaga County Health Department

Joanne M. Mahoney, County Executive  
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John H. Mulroy Civic Center · 421 Montgomery Street, Syracuse, NY 13202



August 2017

Dear Colleague:

With the new school year right around the corner, the Onondaga County Health Department (OCHD) is updating our annual back-to-school resources. **New this year, the resources have been posted on the school nurse page on our website at <http://www.ongov.net/health/schools.html>.** You will find updated information about a number of important school health topics at this site. The posted materials can be printed and distributed to teachers, staff, students, parents and /or guardians. We hope this information will be helpful to you throughout the academic year.

## **1. GENERAL ANNOUNCEMENTS**

***Changes to Immunization Required for School Entrance/Attendance:*** Last year, a meningococcal vaccine was added to the list of school entrance/attendance requirement. In 2017-2018 school year, the meningococcal vaccine will be required for 7<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> grades. One dose is required for 7<sup>th</sup> grade (with a catch-up dose in 8<sup>th</sup> if the student did not get it in 7<sup>th</sup> grade). Two doses are required for 12<sup>th</sup> grade, unless the first dose was given after 16 years of age. All other vaccination requirements remain the same. Please note that medical exemptions have to be renewed annually.

***OCHD Immunization Clinic:*** For those without insurance, the OCHD immunization clinic offers all vaccines needed for school entrance. Clinic is located at the John H. Mulroy Civic Center, 421 Montgomery St., Room 30 (Basement level) in Syracuse. The clinic is open Wednesdays from 9:00 a.m. – 12:00 Noon. A parent or guardian must accompany children under the age of 18 and they must bring the child's shot records. If you exclude a student from school because of missing vaccinations, please attach a copy of the student's shot record to the referral letter to the immunization clinic. **Students with private insurance should be referred to their health care provider, the OCHD clinic cannot serve these students.**

## **2. ILLNESSES THAT MAY IMPACT SCHOOL HEALTH**

***Mumps:*** Mumps cases were reported in Onondaga County in May of this year. If students present with swollen parotid glands, have them seek medical care immediately. If mumps is suspected, report the case to the OCHD Bureau of Disease Control (315)435-3236, and the student should stay out of school for five days.

***Measles:*** In July, a resident of Onondaga County was diagnosed with Measles after traveling, fortunately there were no secondary cases. Measles is a very contagious viral illness, and can be transmitted even before a rash appears. If you suspect a case of measles, please isolate the sick individual in a room with a closed door, and seek health care immediately. Also you must promptly call the OCHD Bureau of Disease Control (315)435-3236 to phone in a report.

***Pertussis:*** Pertussis is endemic in Onondaga County, with an outbreak identified at the end of the last school year. The key to preventing pertussis is the expanded use of Tdap vaccine, as recommended by the Advisory County on Immunization Practices (ACIP). Adult staff and faculty are strongly encouraged to get a Tdap dose if they have not yet received a pertussis vaccine, regardless of time since last tetanus (Td) vaccine. Pregnant staff/students should receive one dose of Tdap in the 3<sup>rd</sup> trimester of each pregnancy.

**Seasonal Influenza:** The best protection against seasonal flu is to receive flu vaccine every year. The 2017-2018 injectable flu vaccines are already available this year. The core recommendations for injectable flu vaccination are the same as last year, including that the live attenuated flu vaccine should not be used. Please encourage staff, faculty and students to get flu vaccine as early as possible.

**Flu Vaccine Offered at OCHD Immunization Clinic.** OCHD will offer flu vaccines at its immunization clinic (see previous details), once vaccine becomes available. Please call (315)435-2000 for availability of vaccine. No one is turned away from our clinics, even if they are unable to pay.

**Mosquito and Tick-borne Diseases:**

West Nile Virus (WNV) and Eastern Equine Encephalitis (EEE) are transmitted by human biting mosquitos that are present in our area. The threat of WNV and EEE persists until the hard frost in late October that kills all mosquitos. OCHD traps and tests mosquito pools for WNV and EEE every week during the mosquito season and posts these results on our website. If students and staff attend sports or outdoor events in late afternoon or evening, please advise them to use proper protections against mosquito bites (long sleeve shirts and pants, careful use of insect repellents).

Lyme Disease (LD) bacterium is found in half of the black-legged deer ticks in our county. Please advise students and staff to take precautions to protect themselves against ticks (light clothing, tick spray, stay away from bushy areas, and check body for ticks after outdoor outings / nature walks). Removal of an embedded tick before 36 hours will greatly decrease the risk of getting LD. LD is a preventable and treatable disease, but the best defense is to avoid the tick bite.

**Zika Update:**

The mosquito known to transmit Zika remains undetected in Onondaga County. All cases of Zika infections in our county residents are associated with travel to areas with active Zika transmission. Continue to advise staff and students' families to check with <http://www.ongov.net/health/zikavirus.html> to find the most current update and recommendations by the CDC about Zika virus, including <http://www.cdc.gov/zika/schools.html>. Our website frequently updates any change in local epidemiology, areas with active Zika transmission and recommendations for personal protection measures.

I hope that you find these materials useful as you start the new school year. For immunization questions, please contact a health department immunization nurse at (315)435-2000. To report Communicable Diseases or cluster of illnesses, please call Bureau of Disease Control at (315)435-3236. If you have any other questions about this packet, or are unable to access our online resources, please contact Karyn Johnson at (315)435-2000. Best wishes for a healthy school year.

Sincerely,

Quoc V. Nguyen, MD  
Medical Director



**Get  
Rid of  
These,**

**Keep Them Clean !**

**Good handwashing takes  
20 seconds!**



**ongovhealth**  
Onondaga County  
Health Department

**Healthy Families Division**  
**Immunization Program**

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# The Flu:

## A Guide For Parents

### FLU INFORMATION

#### What is the flu?

Influenza (the flu) is an infection of the nose, throat, and lungs caused by influenza viruses. There are many different influenza viruses that are constantly changing. Flu viruses cause illness, hospital stays and deaths in the United States each year.

The flu can be very dangerous for children. Each year about 20,000 children younger than 5 years old are hospitalized from flu complications, like pneumonia.

#### How serious is the flu?

Flu illness can vary from mild to severe. While the flu can be serious even in people who are otherwise healthy, it can be especially dangerous for young children and children of any age who have certain long-term health conditions, including asthma (even mild or controlled), neurological and neurodevelopmental conditions, chronic lung disease, heart disease, blood disorders, endocrine disorders (such as diabetes), kidney, liver, and metabolic disorders, and weakened immune systems due to disease or medication.

Children with these conditions and children who are receiving long-term aspirin therapy can have severe illness from the flu.

#### How does the flu spread?

Most experts believe that flu viruses spread mainly by droplets made when people with the flu cough, sneeze or talk. These droplets can land in the mouths or noses of people who are nearby. Less often, a person might get the flu by touching something that has flu virus on it and then touching their own mouth, eyes or nose.

#### What are the symptoms of the flu?

Symptoms of the flu can include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills, fatigue and sometimes vomiting and diarrhea (more common in children than adults). Some people with the flu will not have a fever.

#### How long can a sick person spread the flu to others?

People with the flu may be able to infect others by shedding virus from 1 day before getting sick to 5 to 7 days after. However, children and people with weakened immune systems can shed virus for longer, and may be still contagious past 5 to 7 days of flu illness, especially if they still have symptoms.

### PROTECT YOUR CHILD

#### How can I protect my child against the flu?

To protect against the flu, the first and most important thing you can do is to get a flu vaccine for yourself and your child.

- ▶ Vaccination is recommended for everyone 6 months and older.
- ▶ It's especially important that young children and children with long term health conditions get vaccinated. (See list of conditions in "How serious is the flu?")
- ▶ Caregivers of children with health conditions or of children younger than 6 months old should get vaccinated. (Babies younger than 6 months are too young to be vaccinated themselves.)
- ▶ Another way to protect babies is to vaccinate pregnant women. Research shows that flu vaccination gives some protection to the baby both while the woman is pregnant and for up to 6 months after the baby is born.

Flu vaccine is updated annually to protect against the flu viruses that research indicates are most likely to cause illness during the upcoming flu season. Flu vaccines are made using strict safety and production measures. Over the years, millions of flu vaccines have been given in the United States with a very good safety record.



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## IF YOUR CHILD IS SICK

### What can I do if my child gets sick?

**Talk to your doctor early if you are worried about your child's illness.**

Make sure your child gets plenty of rest and drinks enough fluids. If your child is 5 years and older and does not have other health problems and gets flu-like symptoms, including a fever and/or cough, consult your doctor as needed.

Children younger than 5 years of age – especially those younger than 2 years old – and children with certain chronic conditions, including asthma, diabetes and disorders of the brain or nervous system, at high risk of serious flu-related complications. If your child is at high risk for flu complications, call your doctor or take them to the doctor right away if they develop flu-like symptoms.

### What if my child seems very sick?

Even previously healthy children can get very sick from the flu.

Make sure your child gets plenty of rest and drinks enough fluids. If your child is 5 years or older and does not have other health problems and gets flu-like symptoms, including a fever and/or cough, consult your doctor as needed:

- ▶ Fast breathing or trouble breathing
- ▶ Bluish or gray skin color
- ▶ Not drinking enough fluids (not going to the bathroom or not making as much urine as they normally do)
- ▶ Severe or persistent vomiting
- ▶ Not waking up or not interacting
- ▶ Being so irritable that the child does not want to be held
- ▶ Flu-like symptoms improve but then return with fever and worse cough
- ▶ Has other conditions (like heart or lung disease, diabetes, or asthma) and develops flu symptoms, including a fever and/or cough.

### Can my child go to school, day care or camp if he or she is sick?

No. Your child should stay home to rest and to avoid giving the flu to other children or caregivers.

### When can my child go back to school after having the flu?

Keep your child home from school, day care or camp for at least 24 hours after their fever is gone. (The fever should be gone without the use of a fever-reducing medicine.) A fever is defined as 100°F (37.8°C) or higher.

### Is there a medicine to treat the flu?

Antiviral drugs are prescription medicines that can be used to treat and prevent influenza illness. They can make people feel better and get better sooner. Antivirals can mean the difference between having milder illness instead of very serious illness that could result in a hospital stay. Antiviral drugs are different from antibiotics, which fight against bacterial infections. They work best when started during the first 2 days of illness. It's very important that antiviral drugs are used early to treat the flu in people who are very sick (for example, people who are in the hospital) or who are at high risk of having serious flu complications. Other people with flu illness may also benefit from taking antiviral drugs. These drugs can be given to children and pregnant women.

### What are some of the other ways I can protect my child against the flu?

In addition to getting vaccinated, you and your children can take everyday steps to help prevent the spread of germs.

**These include:**

- ▶ Stay away from people who are sick.
- ▶ If your child is sick with flu-like illness, try to keep him or her in a separate room from others in the household, if possible.
- ▶ CDC recommends that your sick child stay home for at least 24 hours after his or her fever is gone except to get medical care or for other necessities. The fever should be gone without the use of a fever-reducing medicine.
- ▶ Cover your mouth and nose with a tissue when you cough or sneeze. Throw the tissue in the trash after it has been used.
- ▶ Wash hands often with soap and water. If soap and water are not available, use an alcohol-based hand rub.
- ▶ Avoid touching your eyes, nose and mouth. Germs spread this way.
- ▶ Clean and disinfect hard surfaces and objects that may be contaminated with germs, including bathroom surfaces, kitchen counters and toys for children. Clean by wiping them down with a household disinfectant according to directions on the product label.

*These everyday steps are a good way to reduce your chances of getting sick. However, a yearly flu vaccine is the best protection against flu illness.*



For more information, visit [www.cdc.gov/flu](http://www.cdc.gov/flu) or [www.flu.gov](http://www.flu.gov) or call 800-CDC-INFO

# Everyday Preventive Actions That Can Help Fight Germs, Like Flu

FIGHT FLU



CDC recommends a three-step approach to fighting the flu.

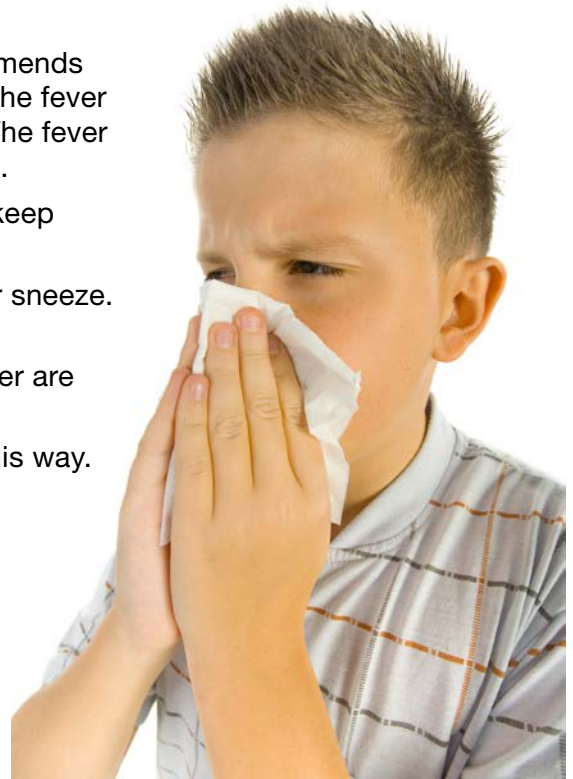
CDC recommends a three-step approach to fighting influenza (flu). The first and most important step is to get a flu vaccination each year. But if you get the flu, there are prescription antiviral drugs that can treat your illness. Early treatment is especially important for the elderly, the very young, people with certain chronic health conditions, and pregnant women. Finally, everyday preventive actions may slow the spread of germs that cause respiratory (nose, throat, and lungs) illnesses, like flu. This flyer contains information about everyday preventive actions.

## How does the flu spread?

Flu viruses are thought to spread mainly from person to person through droplets made when people with flu cough, sneeze, or talk. Flu viruses also may spread when people touch something with flu virus on it and then touch their mouth, eyes, or nose. Many other viruses spread these ways too. People infected with flu may be able to infect others beginning 1 day before symptoms develop and up to 5-7 days after becoming sick. That means you may be able to spread the flu to someone else before you know you are sick as well as while you are sick. Young children, those who are severely ill, and those who have severely weakened immune systems may be able to infect others for longer than 5-7 days.

## What are everyday preventive actions?

- Try to avoid close contact with sick people.
- If you or your child gets sick with flu-like illness, CDC recommends that you (or your child) stay home for at least 24 hours after the fever is gone except to get medical care or for other necessities. The fever should be gone without the use of a fever-reducing medicine.
- While sick, limit contact with others as much as possible to keep from infecting them.
- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- Wash your hands often with soap and water. If soap and water are not available, use an alcohol-based hand rub.
- Avoid touching your eyes, nose and mouth. Germs spread this way.
- Clean and disinfect surfaces and objects that may be contaminated with germs like the flu.
- If an outbreak of flu or another illness occurs, follow public health advice. This may include information about how to increase distance between people and other measures.



For more information, visit:  
[www.cdc.gov/flu](http://www.cdc.gov/flu)  
or call **1-800-CDC-INFO**



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## *What additional steps can I take at work to help stop the spread of germs that can cause respiratory illness, like flu?*

- Find out about your employer's plans if an outbreak of flu or another illness occurs and whether flu vaccinations are offered on-site.
- Routinely clean frequently touched objects and surfaces, including doorknobs, keyboards, and phones, to help remove germs.
- Make sure your workplace has an adequate supply of tissues, soap, paper towels, alcohol-based hand rubs, and disposable wipes.
- Train others on how to do your job so they can cover for you in case you or a family member gets sick and you have to stay home.
- If you begin to feel sick while at work, go home as soon as possible.



## *What additional preventive actions can I take to protect my child from germs that can cause respiratory illness, like flu?*

- Find out about plans your child's school, child care program, or college has if an outbreak of flu or another illness occurs and whether flu vaccinations are offered on-site.
- Make sure your child's school, child care program, or college routinely cleans frequently touched objects and surfaces, and that they have a good supply of tissues, soap, paper towels, alcohol-based hand rubs, and disposable wipes on-site.
- Ask how sick students and staff are separated from others and who will care for them until they can go home.

**Everyday preventive actions can help slow the spread of germs that can cause many different illnesses and may offer some protection against the flu.**



# Vaccines for Preteens: What Parents Should Know

Last updated JANUARY 2017

## Why does my child need vaccines now?

Vaccines aren't just for babies. Some of the vaccines that babies get can wear off as kids get older. And as kids grow up they may come in contact with different diseases than when they were babies. There are vaccines that can help protect your preteen or teen from these other illnesses.

## What vaccines does my child need?

### **Tdap Vaccine**

This vaccine helps protect against three serious diseases: tetanus, diphtheria, and pertussis (whooping cough). Preteens should get Tdap at age 11 or 12. If your teen didn't get a Tdap shot as a preteen, ask their doctor or nurse about getting the shot now.

### **Meningococcal Vaccine**

Meningococcal conjugate vaccine protects against some of the bacteria that can cause meningitis (swelling of the lining around the brain and spinal cord) and septicemia (an infection in the blood). Preteens need the first meningococcal shot when they are 11 or 12 years old. They need a second meningococcal shot at age 16.

### **HPV Vaccine**

Human papillomavirus (HPV) vaccines help protect both girls and boys from HPV infection and cancer caused by HPV. All 11- and 12-year-olds should receive two shots of HPV vaccine 6-12 months apart. Preteens and teens who haven't started or finished the HPV vaccine series should ask the doctor or nurse about getting them now.

### **Flu Vaccine**

The annual flu vaccine is the best way to reduce the chances of getting seasonal flu and spreading it to others. Even healthy preteens and teens can get very sick from the flu and spread it to others. While all preteens and teens should get a flu vaccine, it's especially important for those with chronic health conditions such as asthma, diabetes, and heart disease

to get vaccinated. The best time to get the flu vaccine is as soon as it's available in your community, ideally by October. While it's best to be vaccinated before flu begins causing illness in your community, flu vaccination can be beneficial as long as flu viruses are circulating, even in January or later.

## When should my child be vaccinated?

A good time to get these vaccines is during a yearly health checkup. Your preteen or teen can also get these vaccines at a physical exam required for sports, school, or camp. It's a good idea to ask the doctor or nurse every year if there are any vaccines that your child may need.

## What else should I know about these vaccines?

These vaccines have all been studied very carefully and are safe. They can cause mild side effects, like soreness or redness in the part of the arm where the shot was given. Some preteens and teens might faint after getting a shot. Sitting or lying down when getting a shot and then for about 15 minutes after the shot, can help prevent fainting. Serious side effects are rare. It is very important to tell the doctor or nurse if your child has any serious allergies, including allergies to yeast, latex, or chicken eggs, before they receive any shots.

## How can I get help paying for these vaccines?

The Vaccines for Children (VFC) program provides vaccines for children ages 18 years and younger, who are uninsured, Medicaid-eligible, American Indian or Alaska Native. You can find out more about the VFC program by going online to [www.cdc.gov](http://www.cdc.gov) and typing VFC in the search box.

## Where can I learn more?

Talk to your child's doctor or nurse about what vaccines they may need. You can also find more information about these vaccines on CDC's Vaccines for Preteens and Teens website at [www.cdc.gov/vaccines/teens](http://www.cdc.gov/vaccines/teens).

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**YOU WOULD DO  
ANYTHING TO  
PROTECT YOUR  
CHILD FROM  
CANCER. BUT  
HAVE YOU DONE  
EVERYTHING?**



HPV vaccine is cancer prevention for boys and girls. Just two shots at ages 11–12 provide safe and lasting protection against the infections that cause HPV cancer. Ask your child's doctor or nurse for HPV vaccine.



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**HPV VACCINE**  
IS CANCER PREVENTION

[www.cdc.gov/HPV](http://www.cdc.gov/HPV)



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

[www.cdc.gov/HPV](http://www.cdc.gov/HPV)





# 7th and 12th graders need the Meningococcal Vaccine to start school this fall

Students entering 8th grade who didn't get the vaccine in 7th will need it for 8th grade.

For more information,  
call the Onondaga County  
Health Department  
Immunization Program

**(315)435-2000**



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Check with your child's health care provider or school nurse to make sure they are ready for school.

FOR the  
2017-18  
SCHOOL YEAR

# Parents:

All kids entering **7<sup>th</sup>**, **8<sup>th</sup>** and **12<sup>th</sup>** grades must have the **meningococcal vaccine**.

**Without it, they can't start school.**

## About the Vaccine:

- It's not a new vaccine. It's been recommended for a decade.
- Most parents already choose to vaccinate their children.
- The meningococcal vaccine has been **required** for school entry since Sept. 1, 2016.

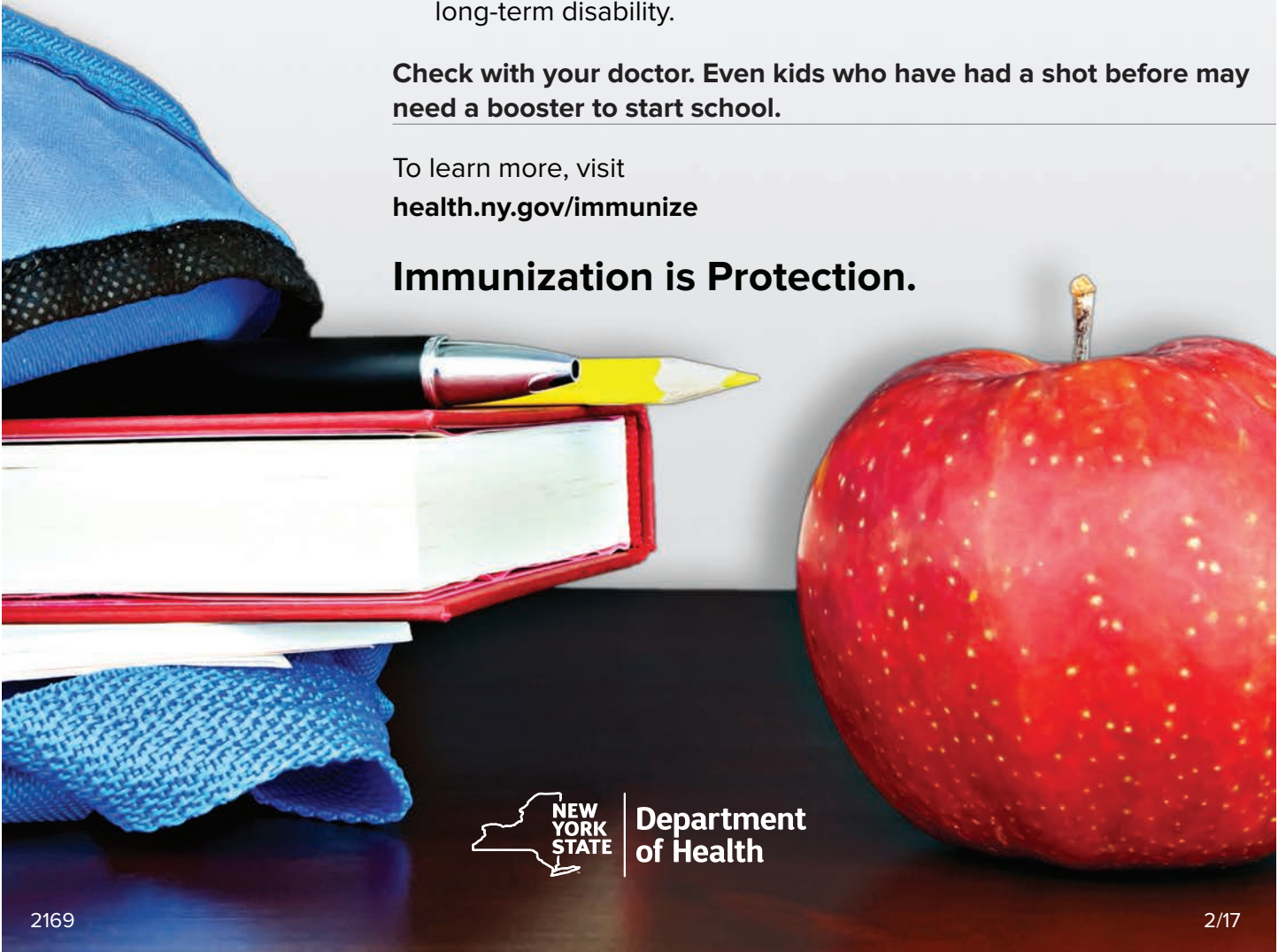
## About Meningococcal Disease:

- It causes **bacterial meningitis** and other serious diseases.
- Teens and young adults are at greater risk.
- It comes on quickly and without warning.
- Its symptoms are similar to the flu.
- Every case of this disease can result in death or long-term disability.

**Check with your doctor. Even kids who have had a shot before may need a booster to start school.**

To learn more, visit  
[health.ny.gov/immunize](http://health.ny.gov/immunize)

**Immunization is Protection.**



Department  
of Health



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# Meningococcal Disease

## What is meningococcal disease?

Meningococcal disease is caused by bacteria called *Neisseria meningitidis*. It can lead to serious blood infections. When the linings of the brain and spinal cord become inflamed, it is called meningitis. The disease strikes quickly and can have serious complications, including death.

Anyone can get meningococcal disease. Some people are at higher risk. This disease occurs more often in people who are:

- Teenagers or young adults
- Infants younger than one year of age
- Living in crowded settings, such as college dormitories or military barracks
- Traveling to areas outside of the United States, such as the “meningitis belt” in Africa
- Living with a damaged spleen or no spleen
- Being treated with Soliris® or, who have complement component deficiency (an inherited immune disorder)
- Exposed during an outbreak
- Working with meningococcal bacteria in a laboratory

## What are the symptoms?

Symptoms appear suddenly – usually 3 to 4 days after a person is infected. It can take up to 10 days to develop symptoms.

Symptoms may include:

- A sudden high fever
- Headache
- Stiff neck (meningitis)
- Nausea and vomiting
- Red-purple skin rash
- Weakness and feeling very ill
- Eyes sensitive to light

## How is meningococcal disease spread?

It spreads from person-to-person by coughing or coming into close or lengthy contact with someone who is sick or who carries the bacteria. Contact includes kissing, sharing drinks, or living together. Up to one in 10 people carry meningococcal bacteria in their nose or throat without getting sick.

## Is there treatment?

Early diagnosis of meningococcal disease is very important. If it is caught early, meningococcal disease can be treated with antibiotics. But, sometimes the infection has caused too much damage for antibiotics to prevent death or serious long-term problems. Most people need to be cared for in a hospital due to serious, life-threatening infections.

## What are the complications?

Ten to 15 percent of those who get meningococcal disease die. Among survivors, as many as one in five will have permanent disabilities. Complications include:

- Hearing loss
- Brain damage
- Kidney damage
- Limb amputations

## What should I do if I or someone I love is exposed?

If you are in close contact with a person with meningococcal disease, talk with your health care provider about the risk to you and your family. They can prescribe an antibiotic to prevent the disease.

## What is the best way to prevent meningococcal disease?

The single best way to prevent this disease is to be vaccinated. Vaccines are available for people 6 weeks of age and older. Various vaccines offer protection against the five major strains of bacteria that cause meningococcal disease:

- All teenagers should receive two doses of vaccine against strains A, C, W and Y. The first dose is given at 11 to 12 years of age, and the second dose (booster) at age 16.
  - It is very important that teens receive the booster dose at age 16 in order to protect them through the years when they are at greatest risk of meningococcal disease.
  - Talk to your health care provider today if your teen has not received two doses of vaccine against meningococcal strains A, C, W and Y.
- Teens and young adults can also be vaccinated against the “B” strain. Talk to your health care provider about whether they recommend vaccine against the “B” strain.

Others who should receive the vaccine include:

- Infants, children and adults with certain medical conditions
- People exposed during an outbreak
- Travelers to the “meningitis belt” of sub-Saharan Africa
- Military recruits

Please speak with your health care provider if you may be at increased risk.

## What are the meningococcal vaccine requirements for school attendance?

As of September 1, 2016, children entering grades 7 and 12 must be immunized against meningococcal disease strains A, C, W and Y according to the recommendations listed above.

## Is there an increased risk for meningococcal disease if I travel?

- Meningococcal disease and outbreaks occur in the United States and around the world. The disease is more common in the “meningitis belt” of sub-Saharan Africa. The risk is highest in people who visit these countries and who have prolonged contact with local populations during an epidemic.
- To reduce your risk of illness, wash your hands often, maintain healthy habits such as getting plenty of rest and try not to come into contact with people who are sick.

### Travel and meningococcal disease:

[wwwnc.cdc.gov/travel/diseases/meningococcal-disease](http://wwwnc.cdc.gov/travel/diseases/meningococcal-disease)

### Learn more about meningococcal disease:

[www.cdc.gov/meningococcal/](http://www.cdc.gov/meningococcal/)

**For more information about vaccine-preventable diseases:** [www.health.ny.gov/prevention/immunization/](http://www.health.ny.gov/prevention/immunization/)

# 2017-18 School Year New York State Immunization Requirements for School Entrance/Attendance<sup>1</sup>

**NOTES:**  
Children in a prekindergarten setting should be age-appropriately immunized. The number of doses depends on the schedule recommended by the Advisory Committee on Immunization Practices (ACIP). For grades Pre-k through 9, intervals between doses of vaccine should be in accordance with the ACIP-recommended immunization schedule for persons 0 through 18 years of age. (Exception: intervals between doses of polio vaccine DO NOT need to be reviewed for grades 4, 5, 10, 11 and 12.) Doses received before the minimum age or intervals are not valid and do not count toward the number of doses listed below. Intervals between doses of vaccine DO NOT need to be reviewed for grades 10 through 12. See footnotes for specific information for **each** vaccine. Children who are enrolling in grade-less classes should meet the immunization requirements of the grades for which they are age equivalent.

**Dose requirements MUST be read with the footnotes of this schedule.**

Vaccines	Prekindergarten (Day Care, Head Start, Nursery or Pre-k)	Kindergarten and Grades 1, 2 and 3	Grades 4 and 5	Grades 6, 7, 8 and 9	Grades 10, 11 and 12
<b>Diphtheria and Tetanus toxoid-containing vaccine and Pertussis vaccine (DTaP/DTP/Tdap/Td)<sup>2</sup></b>	<b>4 doses</b>	<b>5 doses or 4 doses</b> if the 4th dose was received at 4 years or older or <b>3 doses</b> if 7 years or older and the series was started at 1 year or older		<b>3 doses</b>	
<b>Tetanus and Diphtheria toxoid-containing vaccine and Pertussis vaccine booster (Tdap)<sup>3</sup></b>	<b>Not applicable</b>			<b>1 dose</b>	
<b>Polio vaccine (IPV/OPV)<sup>4</sup></b>	<b>3 doses</b>	<b>4 doses or 3 doses</b> if the 3rd dose was received at 4 years or older	<b>3 doses</b>	<b>4 doses or 3 doses</b> if the 3rd dose was received at 4 years or older	<b>3 doses</b>
<b>Measles, Mumps and Rubella vaccine (MMR)<sup>5</sup></b>	<b>1 dose</b>	<b>2 doses</b>			
<b>Hepatitis B vaccine<sup>6</sup></b>	<b>3 doses</b>	<b>3 doses or 2 doses</b> of adult hepatitis B vaccine (Recombivax) for children who received the doses at least 4 months apart between the ages of 11 through 15 years			
<b>Varicella (Chickenpox) vaccine<sup>7</sup></b>	<b>1 dose</b>	<b>2 doses</b>	<b>1 dose</b>	<b>2 doses</b>	<b>1 dose</b>
<b>Meningococcal conjugate vaccine (MenACWY)<sup>8</sup></b>	<b>Not applicable</b>			<b>Grades 7 and 8: 1 dose</b>	<b>Grade 12: 2 doses or 1 dose</b> if the dose was received at 16 years or older
<b>Haemophilus influenzae type b conjugate vaccine (Hib)<sup>9</sup></b>	<b>1 to 4 doses</b>	<b>Not applicable</b>			
<b>Pneumococcal Conjugate vaccine (PCV)<sup>10</sup></b>	<b>1 to 4 doses</b>	<b>Not applicable</b>			

1. Demonstrated serologic evidence of measles, mumps, rubella, hepatitis B, varicella or polio (for all three serotypes) antibodies is acceptable proof of immunity to these diseases. Diagnosis by a physician, physician assistant or nurse practitioner that a child has had varicella disease is acceptable proof of immunity to varicella.
2. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. (Minimum age: 6 weeks)
  - a. Children starting the series on time should receive a 5-dose series of DTaP vaccine at 2 months, 4 months, 6 months and at 15 through 18 months and at 4 years or older. The fourth dose may be received as early as age 12 months, provided at least 6 months have elapsed since the third dose. However, the fourth dose of DTaP need not be repeated if it was administered at least 4 months after the third dose of DTaP. The final dose in the series must be received on or after the fourth birthday.
  - b. If the fourth dose of DTaP was administered at 4 years or older, the fifth (booster) dose of DTaP vaccine is not required.
  - c. For children born before 1/1/2005, only immunity to diphtheria is required and doses of DT and Td can meet this requirement.
  - d. Children 7 years and older who are not fully immunized with the childhood DTaP vaccine series should receive Tdap vaccine as the first dose in the catch-up series; if additional doses are needed, use Td vaccine. If the first dose was received before their first birthday, then 4 doses are required. If the first dose was received on or after the first birthday, then 3 doses are required. A Tdap vaccine (or incorrectly administered DTaP vaccine) received at 7 years or older will meet the 6th grade Tdap requirement.
3. Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine. (Minimum age: 7 years)
  - a. Students 11 years or older entering grades 6 through 12 are required to have one dose of Tdap. A dose received at 7 years or older will meet this requirement.
  - b. Students who are 10 years old in grade 6 and who have not yet received a Tdap vaccine are in compliance until they turn 11 years old.
4. Inactivated polio vaccine (IPV) or oral polio vaccine (OPV). (Minimum age: 6 weeks)
  - a. Children starting the series on time should receive a series of IPV at 2 months, 4 months and at 6 through 18 months, and at 4 years or older. The final dose in the series must be received on or after the fourth birthday and at least 6 months after the previous dose.
  - b. For students who received their fourth dose before age 4 and prior to August 7, 2010, 4 doses separated by at least 4 weeks is sufficient.
  - c. If the third dose of polio vaccine was received at 4 years or older and at least 6 months after the previous dose, the fourth dose of polio vaccine is not required.
  - d. Intervals between the doses of polio vaccine do not need to be reviewed for grades 4, 5, 10, 11 and 12 in the 2017-18 school year.
  - e. If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age. If only OPV was administered, and all doses were given prior to age 4 years, 1 dose of IPV should be given at 4 years or older, at least 4 weeks after the last OPV dose.
5. Measles, mumps, and rubella (MMR) vaccine. (Minimum age: 12 months)
  - a. The first dose of MMR vaccine must have been received on or after the first birthday. The second dose must have been received at least 28 days (4 weeks) after the first dose to be considered valid.
  - b. Measles: One dose is required for prekindergarten. Two doses are required for grades kindergarten through 12.
  - c. Mumps: One dose is required for prekindergarten and grades 10 through 12. Two doses are required for grades kindergarten through 9.
  - d. Rubella: At least one dose is required for all grades (prekindergarten through 12).
6. Hepatitis B vaccine
  - a. Dose 1 may be given at birth or anytime thereafter. Dose 2 must be given at least 4 weeks (28 days) after dose 1. Dose 3 must be at least 8 weeks after dose 2 AND at least 16 weeks after dose 1 AND no earlier than age 24 weeks.
  - b. Two doses of adult hepatitis B vaccine (Recombivax) received at least 4 months apart at age 11 through 15 years will meet the requirement.
7. Varicella (chickenpox) vaccine. (Minimum age: 12 months)
  - a. The first dose of varicella vaccine must have been received on or after the first birthday. The second dose must have been received at least 28 days (4 weeks) after the first dose to be considered valid.
  - b. For children younger than 13 years, the recommended minimum interval between doses is 3 months (if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid); for persons 13 years and older, the minimum interval between doses is 4 weeks.
8. Meningococcal conjugate ACWY vaccine. (Minimum age: 6 weeks)
  - a. One dose of meningococcal conjugate vaccine (Menactra or Menveo) is required for students entering grades 7 and 8.
  - b. For students in grade 12, if the first dose of meningococcal conjugate vaccine was received at 16 years or older, the second (booster) dose is not required.
  - c. The second dose must have been received at 16 years or older. The minimum interval between doses is 8 weeks.
9. Haemophilus influenzae type b (Hib) conjugate vaccine. (Minimum age: 6 weeks)
  - a. Children starting the series on time should receive Hib vaccine at 2 months, 4 months, 6 months and at 12 through 15 months. Children older than 15 months must get caught up according to the ACIP catch-up schedule. The final dose must be received on or after 12 months.
  - b. If 2 doses of vaccine were received before age 12 months, only 3 doses are required with dose 3 at 12 through 15 months and at least 8 weeks after dose 2.
  - c. If dose 1 was received at age 12 through 14 months, only 2 doses are required with dose 2 at least 8 weeks after dose 1.
  - d. If dose 1 was received at 15 months or older, only 1 dose is required.
  - e. Hib vaccine is not required for children 5 years or older.
10. Pneumococcal conjugate vaccine (PCV). (Minimum age: 6 weeks)
  - a. Children starting the series on time should receive PCV vaccine at 2 months, 4 months, 6 months and at 12 through 15 months. Children older than 15 months must get caught up according to the ACIP catch-up schedule. The final dose must be received on or after 12 months.
  - b. Unvaccinated children ages 7 through 11 months of age are required to receive 2 doses, at least 4 weeks apart, followed by a third dose at 12 through 15 months.
  - c. Unvaccinated children ages 12 through 23 months are required to receive 2 doses of vaccine at least 8 weeks apart.
  - d. If one dose of vaccine was received at 24 months or older, no further doses are required.
  - e. For further information, refer to the PCV chart available in the School Survey Instruction Booklet at: [www.health.ny.gov/prevention/immunization/schools](http://www.health.ny.gov/prevention/immunization/schools)

For further information, contact:

**New York State Department of Health  
Bureau of Immunization  
Room 649, Corning Tower ESP  
Albany, NY 12237  
(518) 473-4437**

**New York City Department of Health and Mental Hygiene  
Program Support Unit, Bureau of Immunization,  
42-09 28th Street, 5th floor  
Long Island City, NY 11101  
(347) 396-2433**



# Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger, UNITED STATES, 2017

This schedule includes recommendations in effect as of January 1, 2017. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Vaccination providers should consult the relevant Advisory Committee on Immunization Practices (ACIP) statement for detailed recommendations, available online at [www.cdc.gov/vaccines/hcp/acip-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/index.html). Clinically significant adverse events that follow vaccination should be reported to the Vaccine Adverse Event Reporting System (VAERS) online ([www.vaers.hhs.gov](http://www.vaers.hhs.gov)) or by telephone (800-822-7967). Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for vaccination, is available from CDC online ([www.cdc.gov/vaccines/hcp/admin/contraindications.html](http://www.cdc.gov/vaccines/hcp/admin/contraindications.html)) or by telephone (800-CDC-INFO [800-232-4636]).

The Recommended Immunization Schedule for  
Children and Adolescents Aged 18 Years or Younger are approved by the

**Advisory Committee on Immunization Practices**  
([www.cdc.gov/vaccines/acip](http://www.cdc.gov/vaccines/acip))

**American Academy of Pediatrics**  
([www.aap.org](http://www.aap.org))

**American Academy of Family Physicians**  
([www.aafp.org](http://www.aafp.org))

**American College of Obstetricians and Gynecologists**  
([www.acog.org](http://www.acog.org))



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

**Figure 1. Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger—United States, 2017.**

**(FOR THOSE WHO FALL BEHIND OR START LATE, SEE THE CATCH-UP SCHEDULE [FIGURE 2]).**

These recommendations must be read with the footnotes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars in Figure 1. To determine minimum intervals between doses, see the catch-up schedule (Figure 2). School entry and adolescent vaccine age groups are shaded in gray.

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	9 mos	12 mos	15 mos	18 mos	19-23 mos	2-3 yrs	4-6 yrs	7-10 yrs	11-12 yrs	13-15 yrs	16 yrs	17-18 yrs		
Hepatitis B <sup>1</sup> (HepB)	1 <sup>st</sup> dose	←-----2 <sup>nd</sup> dose-----→		←-----3 <sup>rd</sup> dose-----→															
Rotavirus <sup>2</sup> (RV) RV1 (2-dose series); RV5 (3-dose series)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	See footnote 2														
Diphtheria, tetanus, & acellular pertussis <sup>3</sup> (DTaP: <7 yrs)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	3 <sup>rd</sup> dose				←-----4 <sup>th</sup> dose-----→			5 <sup>th</sup> dose							
<i>Haemophilus influenzae</i> type b <sup>4</sup> (Hib)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	See footnote 4		←-----3 <sup>rd</sup> or 4 <sup>th</sup> dose,-----→ See footnote 4												
Pneumococcal conjugate <sup>5</sup> (PCV13)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	3 <sup>rd</sup> dose				←-----4 <sup>th</sup> dose-----→										
Inactivated poliovirus <sup>6</sup> (IPV: <18 yrs)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	←-----3 <sup>rd</sup> dose-----→							4 <sup>th</sup> dose							
Influenza <sup>7</sup> (IIV)	Annual vaccination (IIV) 1 or 2 doses										Annual vaccination (IIV) 1 dose only								
Measles, mumps, rubella <sup>8</sup> (MMR)					See footnote 8		←-----1 <sup>st</sup> dose-----→					2 <sup>nd</sup> dose							
Varicella <sup>9</sup> (VAR)							←-----1 <sup>st</sup> dose-----→					2 <sup>nd</sup> dose							
Hepatitis A <sup>10</sup> (HepA)							←-----2-dose series, See footnote 10-----→												
Meningococcal <sup>11</sup> (Hib-MenCY ≥6 weeks; MenACWY-D ≥9 mos; MenACWY-CRM ≥2 mos)				See footnote 11										1 <sup>st</sup> dose			2 <sup>nd</sup> dose		
Tetanus, diphtheria, & acellular pertussis <sup>12</sup> (Tdap: ≥7 yrs)												Tdap							
Human papillomavirus <sup>13</sup> (HPV)													See footnote 13						
Meningococcal B <sup>11</sup>														See footnote 11					
Pneumococcal polysaccharide <sup>5</sup> (PPSV23)											See footnote 5								

Range of recommended ages for all children
  Range of recommended ages for catch-up immunization
  Range of recommended ages for certain high-risk groups
  Range of recommended ages for non-high-risk groups that may receive vaccine, subject to individual clinical decision making
  No recommendation

**NOTE: The above recommendations must be read along with the footnotes of this schedule.**

**FIGURE 2. Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind—United States, 2017.**

The figure below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. Always use this table in conjunction with Figure 1 and the footnotes that follow.

Children age 4 months through 6 years					
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Hepatitis B <sup>1</sup>	Birth	4 weeks	8 weeks and at least 16 weeks after first dose. Minimum age for the final dose is 24 weeks.		
Rotavirus <sup>2</sup>	6 weeks	4 weeks	4 weeks <sup>2</sup>		
Diphtheria, tetanus, and acellular pertussis <sup>3</sup>	6 weeks	4 weeks	4 weeks	6 months	6 months <sup>3</sup>
<i>Haemophilus influenzae</i> type b <sup>4</sup>	6 weeks	4 weeks if first dose was administered before the 1 <sup>st</sup> birthday. 8 weeks (as final dose) if first dose was administered at age 12 through 14 months. No further doses needed if first dose was administered at age 15 months or older.	4 weeks <sup>4</sup> if current age is younger than 12 months and first dose was administered at younger than age 7 months, and at least 1 previous dose was PRP-T (ActHib, Pentacel, Hiberix) or unknown. 8 weeks and age 12 through 59 months (as final dose) <sup>4</sup> • if current age is younger than 12 months and first dose was administered at age 7 through 11 months; OR • if current age is 12 through 59 months and first dose was administered before the 1 <sup>st</sup> birthday, and second dose administered at younger than 15 months; OR • if both doses were PRP-OMP (PedvaxHIB; Comvax) and were administered before the 1 <sup>st</sup> birthday. No further doses needed if previous dose was administered at age 15 months or older.	8 weeks (as final dose) This dose only necessary for children age 12 through 59 months who received 3 doses before the 1 <sup>st</sup> birthday.	
Pneumococcal <sup>5</sup>	6 weeks	4 weeks if first dose administered before the 1 <sup>st</sup> birthday. 8 weeks (as final dose for healthy children) if first dose was administered at the 1 <sup>st</sup> birthday or after. No further doses needed for healthy children if first dose was administered at age 24 months or older.	4 weeks if current age is younger than 12 months and previous dose given at <7 months old. 8 weeks (as final dose for healthy children) if previous dose given between 7-11 months (wait until at least 12 months old); OR if current age is 12 months or older and at least 1 dose was given before age 12 months. No further doses needed for healthy children if previous dose administered at age 24 months or older.	8 weeks (as final dose) This dose only necessary for children aged 12 through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age.	
Inactivated poliovirus <sup>6</sup>	6 weeks	4 weeks <sup>6</sup>	4 weeks <sup>6</sup>	6 months <sup>6</sup> (minimum age 4 years for final dose).	
Measles, mumps, rubella <sup>8</sup>	12 months	4 weeks			
Varicella <sup>9</sup>	12 months	3 months			
Hepatitis A <sup>10</sup>	12 months	6 months			
Meningococcal <sup>11</sup> (Hib-MenCY ≥6 weeks; MenACWY-D ≥9 mos; MenACWY-CRM ≥2 mos)	6 weeks	8 weeks <sup>11</sup>	See footnote 11	See footnote 11	
Children and adolescents age 7 through 18 years					
Meningococcal <sup>11</sup> (MenACWY-D ≥9 mos; MenACWY-CRM ≥2 mos)	Not Applicable (N/A)	8 weeks <sup>11</sup>			
Tetanus, diphtheria; tetanus, diphtheria, and acellular pertussis <sup>12</sup>	7 years <sup>12</sup>	4 weeks	4 weeks if first dose of DTaP/DT was administered before the 1 <sup>st</sup> birthday. 6 months (as final dose) if first dose of DTaP/DT or Tdap/Td was administered at or after the 1 <sup>st</sup> birthday.	6 months if first dose of DTaP/DT was administered before the 1 <sup>st</sup> birthday.	
Human papillomavirus <sup>13</sup>	9 years		Routine dosing intervals are recommended. <sup>13</sup>		
Hepatitis A <sup>10</sup>	N/A	6 months			
Hepatitis B <sup>1</sup>	N/A	4 weeks	8 weeks and at least 16 weeks after first dose.		
Inactivated poliovirus <sup>6</sup>	N/A	4 weeks	4 weeks <sup>6</sup>	6 months <sup>6</sup>	
Measles, mumps, rubella <sup>8</sup>	N/A	4 weeks			
Varicella <sup>9</sup>	N/A	3 months if younger than age 13 years. 4 weeks if age 13 years or older.			

**NOTE: The above recommendations must be read along with the footnotes of this schedule.**

**Figure 3. Vaccines that might be indicated for children and adolescents aged 18 years or younger based on medical indications**

VACCINE ▼	INDICATION ►	Pregnancy	Immunocompromised status (excluding HIV infection)	HIV infection CD4+ count (cells/ $\mu$ L)		Kidney failure, end-stage renal disease, on hemodialysis	Heart disease, chronic lung disease	CSF leaks/cochlear implants	Asplenia and persistent complement component deficiencies	Chronic liver disease	Diabetes
				<15% of total CD4 cell count	$\geq$ 15% of total CD4 cell count						
Hepatitis B <sup>1</sup>											
Rotavirus <sup>2</sup>			SCID*								
Diphtheria, tetanus, & acellular pertussis <sup>3</sup> (DTaP)											
<i>Haemophilus influenzae</i> type b <sup>4</sup>											
Pneumococcal conjugate <sup>5</sup>											
Inactivated poliovirus <sup>6</sup>											
Influenza <sup>7</sup>											
Measles, mumps, rubella <sup>8</sup>											
Varicella <sup>9</sup>											
Hepatitis A <sup>10</sup>											
Meningococcal ACWY <sup>11</sup>											
Tetanus, diphtheria, & acellular pertussis <sup>12</sup> (Tdap)											
Human papillomavirus <sup>13</sup>											
Meningococcal B <sup>11</sup>											
Pneumococcal polysaccharide <sup>5</sup>											

Vaccination according to the routine schedule recommended
  Recommended for persons with an additional risk factor for which the vaccine would be indicated
  Vaccination is recommended, and additional doses may be necessary based on medical condition. See footnotes.
  No recommendation
  Contraindicated
  Precaution for vaccination

\*Severe Combined Immunodeficiency

**NOTE: The above recommendations must be read along with the footnotes of this schedule.**



## Footnotes — Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger, UNITED STATES, 2017

For further guidance on the use of the vaccines mentioned below, see: [www.cdc.gov/vaccines/hcp/acip-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/index.html).

For vaccine recommendations for persons 19 years of age and older, see the Adult Immunization Schedule.

### Additional information

- For information on contraindications and precautions for the use of a vaccine and for additional information regarding that vaccine, vaccination providers should consult the ACIP General Recommendations on Immunization and the relevant ACIP statement, available online at [www.cdc.gov/vaccines/hcp/acip-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/index.html).
- For purposes of calculating intervals between doses, 4 weeks = 28 days. Intervals of 4 months or greater are determined by calendar months.
- Vaccine doses administered  $\leq 4$  days before the minimum interval are considered valid. Doses of any vaccine administered  $\geq 5$  days earlier than the minimum interval or minimum age should not be counted as valid doses and should be repeated as age-appropriate. The repeat dose should be spaced after the invalid dose by the recommended minimum interval. For further details, see Table 1, *Recommended and minimum ages and intervals between vaccine doses*, in *MMWR, General Recommendations on Immunization and Reports / Vol. 60 / No. 2*, available online at [www.cdc.gov/mmwr/pdf/rr/rr6002.pdf](http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf).
- Information on travel vaccine requirements and recommendations is available at [wwwnc.cdc.gov/travel/](http://wwwnc.cdc.gov/travel/).
- For vaccination of persons with primary and secondary immunodeficiencies, see Table 13, *Vaccination of persons with primary and secondary immunodeficiencies*, in *General Recommendations on Immunization* (ACIP), available at [www.cdc.gov/mmwr/pdf/rr/rr6002.pdf](http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf); and *Immunization in Special Clinical Circumstances*, (American Academy of Pediatrics). In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 report of the Committee on Infectious Diseases. 30th ed.* Elk Grove Village, IL: American Academy of Pediatrics, 2015:68-107.
- The National Vaccine Injury Compensation Program (VICP) is a no-fault alternative to the traditional legal system for resolving vaccine injury petitions. Created by the National Childhood Vaccine Injury Act of 1986, it provides compensation to people found to be injured by certain vaccines. All vaccines within the recommended childhood immunization schedule are covered by VICP except for pneumococcal polysaccharide vaccine (PPSV23). For more information; see [www.hrsa.gov/vaccinecompensation/index.html](http://www.hrsa.gov/vaccinecompensation/index.html).

#### 1. Hepatitis B (HepB) vaccine. (Minimum age: birth)

##### Routine vaccination:

##### At birth:

- Administer monovalent HepB vaccine to all newborns within 24 hours of birth.
- For infants born to hepatitis B surface antigen (HBsAg)-positive mothers, administer HepB vaccine and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) at age 9 through 12 months (preferably at the next well-child visit) or 1 to 2 months after completion of the HepB series if the series was delayed.
- If mother's HBsAg status is unknown, within 12 hours of birth, administer HepB vaccine regardless of birth weight. For infants weighing less than 2,000 grams, administer HBIG in addition to HepB vaccine within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if mother is HBsAg-positive, also administer HBIG to infants weighing 2,000 grams or more as soon as possible, but no later than age 7 days.

##### Doses following the birth dose:

- The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks.
- Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine on a schedule of 0, 1 to 2 months, and 6 months, starting as soon as feasible (see figure 2).
- Administer the second dose 1 to 2 months after the first dose (minimum interval of 4 weeks); administer the third dose at least 8 weeks after the second dose AND at least 16 weeks after the **first** dose. The final (third or fourth) dose in the HepB vaccine series should be administered **no earlier than age 24 weeks**.

- Administration of a total of 4 doses of HepB vaccine is permitted when a combination vaccine containing HepB is administered after the birth dose.

##### Catch-up vaccination:

- Unvaccinated persons should complete a 3-dose series.
- A 2-dose series (doses separated by at least 4 months) of adult formulation Recombivax HB is licensed for use in children aged 11 through 15 years.
- For other catch-up guidance, see Figure 2.

#### 2. Rotavirus (RV) vaccines. (Minimum age: 6 weeks for both RV1 [Rotarix] and RV5 [RotaTeq])

##### Routine vaccination:

Administer a series of RV vaccine to all infants as follows:

1. If Rotarix is used, administer a 2-dose series at ages 2 and 4 months.
2. If RotaTeq is used, administer a 3-dose series at ages 2, 4, and 6 months.
3. If any dose in the series was RotaTeq or vaccine product is unknown for any dose in the series, a total of 3 doses of RV vaccine should be administered.

##### Catch-up vaccination:

- The maximum age for the first dose in the series is 14 weeks, 6 days; vaccination should not be initiated for infants aged 15 weeks, 0 days, or older.
- The maximum age for the final dose in the series is 8 months, 0 days.
- For other catch-up guidance, see Figure 2.

#### 3. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. (Minimum age: 6 weeks. Exception: DTaP-IPV [Kinrix, Quadracel]: 4 years)

##### Routine vaccination:

- Administer a 5-dose series of DTaP vaccine at ages 2, 4, 6, 15 through 18 months, and 4 through 6 years. The fourth dose may be administered as early as age 12 months,

provided at least 6 months have elapsed since the third dose.

- Inadvertent administration of fourth DTaP dose early: If the fourth dose of DTaP was administered at least 4 months after the third dose of DTaP and the child was 12 months of age or older, it does not need to be repeated.

##### Catch-up vaccination:

- The fifth dose of DTaP vaccine is not necessary if the fourth dose was administered at age 4 years or older.
- For other catch-up guidance, see Figure 2.

#### 4. Haemophilus influenzae type b (Hib) conjugate vaccine. (Minimum age: 6 weeks for PRP-T [ActHIB, DTaP-IPV/Hib (Pentacel), Hiberix, and Hib-MenCY (MenHibrix)], PRP-OMP [PedvaxHIB])

##### Routine vaccination:

- Administer a 2- or 3-dose Hib vaccine primary series and a booster dose (dose 3 or 4, depending on vaccine used in primary series) at age 12 through 15 months to complete a full Hib vaccine series.
- The primary series with ActHIB, MenHibrix, Hiberix, or Pentacel consists of 3 doses and should be administered at ages 2, 4, and 6 months. The primary series with PedvaxHIB consists of 2 doses and should be administered at ages 2 and 4 months; a dose at age 6 months is not indicated.
- One booster dose (dose 3 or 4, depending on vaccine used in primary series) of any Hib vaccine should be administered at age 12 through 15 months.
- For recommendations on the use of MenHibrix in patients at increased risk for meningococcal disease, refer to the meningococcal vaccine footnotes and also to *MMWR* February 28, 2014 / 63(RR01):1-13, available at [www.cdc.gov/mmwr/PDF/rr/rr6301.pdf](http://www.cdc.gov/mmwr/PDF/rr/rr6301.pdf).

For further guidance on the use of the vaccines mentioned below, see: [www.cdc.gov/vaccines/hcp/acip-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/index.html).

#### Catch-up vaccination:

- If dose 1 was administered at ages 12 through 14 months, administer a second (final) dose at least 8 weeks after dose 1, regardless of Hib vaccine used in the primary series.
- If both doses were PRP-OMP (PedvaxHIB or COMVAX) and were administered before the first birthday, the third (and final) dose should be administered at age 12 through 59 months and at least 8 weeks after the second dose.
- If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a third (and final) dose at age 12 through 15 months or 8 weeks after second dose, whichever is later.
- If first dose is administered before the first birthday and second dose administered at younger than 15 months, a third (and final) dose should be administered 8 weeks later.
- For unvaccinated children aged 15–59 months, administer only 1 dose.
- For other catch-up guidance, see Figure 2. For catch-up guidance related to MenHibrix, see the meningococcal vaccine footnotes and also *MMWR* February 28, 2014 / 63(RR01):1-13, available at [www.cdc.gov/mmwr/PDF/rr/r6301.pdf](http://www.cdc.gov/mmwr/PDF/rr/r6301.pdf).

#### Vaccination of persons with high-risk conditions:

- Children aged 12 through 59 months who are at increased risk for Hib disease, including chemotherapy recipients and those with anatomic or functional asplenia (including sickle cell disease), human immunodeficiency virus (HIV) infection, immunoglobulin deficiency, or early component complement deficiency, who have received either no doses or only 1 dose of Hib vaccine before age 12 months, should receive 2 additional doses of Hib vaccine, 8 weeks apart; children who received 2 or more doses of Hib vaccine before age 12 months should receive 1 additional dose.
- For patients younger than age 5 years undergoing chemotherapy or radiation treatment who received a Hib vaccine dose(s) within 14 days of starting therapy or during therapy, repeat the dose(s) at least 3 months following therapy completion.
  - Recipients of hematopoietic stem cell transplant (HSCT) should be revaccinated with a 3-dose regimen of Hib vaccine starting 6 to 12 months after successful transplant, regardless of vaccination history; doses should be administered at least 4 weeks apart.
  - A single dose of any Hib-containing vaccine should be administered to unimmunized\* children and adolescents 15 months of age and older undergoing an elective splenectomy; if possible, vaccine should be administered at least 14 days before procedure.
  - Hib vaccine is not routinely recommended for patients 5 years or older. However, 1 dose of Hib vaccine should be administered to unimmunized\* persons aged 5 years or older who have anatomic or functional asplenia

(including sickle cell disease) and unimmunized\* persons 5 through 18 years of age with HIV infection.

*\*Patients who have not received a primary series and booster dose or at least 1 dose of Hib vaccine after 14 months of age are considered unimmunized.*

#### 5. Pneumococcal vaccines. (Minimum age: 6 weeks for PCV13, 2 years for PPSV23)

##### Routine vaccination with PCV13:

- Administer a 4-dose series of PCV13 at ages 2, 4, and 6 months and at age 12 through 15 months.

##### Catch-up vaccination with PCV13:

- Administer 1 dose of PCV13 to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.
- For other catch-up guidance, see Figure 2.

##### Vaccination of persons with high-risk conditions with PCV13 and PPSV23:

- All recommended PCV13 doses should be administered prior to PPSV23 vaccination if possible.
- For children aged 2 through 5 years with any of the following conditions: chronic heart disease (particularly cyanotic congenital heart disease and cardiac failure); chronic lung disease (including asthma if treated with high-dose oral corticosteroid therapy); diabetes mellitus; cerebrospinal fluid leak; cochlear implant; sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; solid organ transplantation; or congenital immunodeficiency:
  1. Administer 1 dose of PCV13 if any incomplete schedule of 3 doses of PCV13 was received previously.
  2. Administer 2 doses of PCV13 at least 8 weeks apart if unvaccinated or any incomplete schedule of fewer than 3 doses of PCV13 was received previously.
  3. The minimum interval between doses of PCV13 is 8 weeks.
  4. For children with no history of PPSV23 vaccination, administer PPSV23 at least 8 weeks after the most recent dose of PCV13.
- For children aged 6 through 18 years who have cerebrospinal fluid leak; cochlear implant; sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; congenital or acquired immunodeficiencies; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; generalized malignancy; solid organ transplantation; or multiple myeloma:
  1. If neither PCV13 nor PPSV23 has been received previously, administer 1 dose of PCV13 now and 1 dose of PPSV23 at least 8 weeks later.

2. If PCV13 has been received previously but PPSV23 has not, administer 1 dose of PPSV23 at least 8 weeks after the most recent dose of PCV13.

3. If PPSV23 has been received but PCV13 has not, administer 1 dose of PCV13 at least 8 weeks after the most recent dose of PPSV23.

- For children aged 6 through 18 years with chronic heart disease (particularly cyanotic congenital heart disease and cardiac failure), chronic lung disease (including asthma if treated with high-dose oral corticosteroid therapy), diabetes mellitus, alcoholism, or chronic liver disease, who have not received PPSV23, administer 1 dose of PPSV23. If PCV13 has been received previously, then PPSV23 should be administered at least 8 weeks after any prior PCV13 dose.
- A single revaccination with PPSV23 should be administered 5 years after the first dose to children with sickle cell disease or other hemoglobinopathies; anatomic or functional asplenia; congenital or acquired immunodeficiencies; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; generalized malignancy; solid organ transplantation; or multiple myeloma.

#### 6. Inactivated poliovirus vaccine (IPV). (Minimum age: 6 weeks)

##### Routine vaccination:

- Administer a 4-dose series of IPV at ages 2, 4, 6 through 18 months, and 4 through 6 years. The final dose in the series should be administered on or after the fourth birthday and at least 6 months after the previous dose.

##### Catch-up vaccination:

- In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk of imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).
- If 4 or more doses are administered before age 4 years, an additional dose should be administered at age 4 through 6 years and at least 6 months after the previous dose.
- A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose.
- If both oral polio vaccine (OPV) and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age. If only OPV was administered, and all doses were given prior to age 4 years, 1 dose of IPV should be given at 4 years or older, at least 4 weeks after the last OPV dose.
- IPV is not routinely recommended for U.S. residents aged 18 years or older.
- For other catch-up guidance, see Figure 2.

For further guidance on the use of the vaccines mentioned below, see: [www.cdc.gov/vaccines/hcp/acip-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/index.html).

**7. Influenza vaccines. (Minimum age: 6 months for inactivated influenza vaccine [IIV], 18 years for recombinant influenza vaccine [RIV])**

**Routine vaccination:**

- Administer influenza vaccine annually to all children beginning at age 6 months. For the 2016–17 season, use of live attenuated influenza vaccine (LAIV) is not recommended.

**For children aged 6 months through 8 years:**

- For the 2016–17 season, administer 2 doses (separated by at least 4 weeks) to children who are receiving influenza vaccine for the first time or who have not previously received  $\geq 2$  doses of trivalent or quadrivalent influenza vaccine before July 1, 2016. For additional guidance, follow dosing guidelines in the 2016–17 ACIP influenza vaccine recommendations (see *MMWR* August 26, 2016;65(5):1-54, available at [www.cdc.gov/mmwr/volumes/65/rr/pdfs/rr6505.pdf](http://www.cdc.gov/mmwr/volumes/65/rr/pdfs/rr6505.pdf)).
- For the 2017–18 season, follow dosing guidelines in the 2017–18 ACIP influenza vaccine recommendations.

**For persons aged 9 years and older:**

- Administer 1 dose.

**8. Measles, mumps, and rubella (MMR) vaccine. (Minimum age: 12 months for routine vaccination)**

**Routine vaccination:**

- Administer a 2-dose series of MMR vaccine at ages 12 through 15 months and 4 through 6 years. The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.
- Administer 1 dose of MMR vaccine to infants aged 6 through 11 months before departure from the United States for international travel. These children should be revaccinated with 2 doses of MMR vaccine, the first at age 12 through 15 months (12 months if the child remains in an area where disease risk is high), and the second dose at least 4 weeks later.
- Administer 2 doses of MMR vaccine to children aged 12 months and older before departure from the United States for international travel. The first dose should be administered on or after age 12 months and the second dose at least 4 weeks later.

**Catch-up vaccination:**

- Ensure that all school-aged children and adolescents have had 2 doses of MMR vaccine; the minimum interval between the 2 doses is 4 weeks.

**9. Varicella (VAR) vaccine. (Minimum age: 12 months)**

**Routine vaccination:**

- Administer a 2-dose series of VAR vaccine at ages 12 through 15 months and 4 through 6 years. The second dose may be administered before age 4 years, provided at least 3 months have elapsed since the first dose. If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.

**Catch-up vaccination:**

- Ensure that all persons aged 7 through 18 years without evidence of immunity (see *MMWR* 2007;56[No. RR-4], available at [www.cdc.gov/mmwr/pdf/rr/rr5604.pdf](http://www.cdc.gov/mmwr/pdf/rr/rr5604.pdf)) have 2 doses of varicella vaccine. For children aged 7 through 12 years, the recommended minimum interval between doses is 3 months (if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid); for persons aged 13 years and older, the minimum interval between doses is 4 weeks.

**10. Hepatitis A (HepA) vaccine. (Minimum age: 12 months)**

**Routine vaccination:**

- Initiate the 2-dose HepA vaccine series at ages 12 through 23 months; separate the 2 doses by 6 to 18 months.
- Children who have received 1 dose of HepA vaccine before age 24 months should receive a second dose 6 to 18 months after the first dose.
- For any person aged 2 years and older who has not already received the HepA vaccine series, 2 doses of HepA vaccine separated by 6 to 18 months may be administered if immunity against hepatitis A virus infection is desired.

**Catch-up vaccination:**

- The minimum interval between the 2 doses is 6 months.

**Special populations:**

- Administer 2 doses of HepA vaccine at least 6 months apart to previously unvaccinated persons who live in areas where vaccination programs target older children, or who are at increased risk for infection. This includes persons traveling to or working in countries that have high or intermediate endemicity of infection; men having sex with men; users of injection and non-injection illicit drugs; persons who work with HAV-infected primates or with HAV in a research laboratory; persons with clotting-factor disorders; persons with chronic liver disease; and persons who anticipate close, personal contact (e.g., household or regular babysitting) with an international adoptee during the first 60 days after arrival in the United States from a country with high or intermediate endemicity. The first dose should be administered as soon as the adoption is planned, ideally, 2 or more weeks before the arrival of the adoptee.

**11. Meningococcal vaccines. (Minimum age: 6 weeks for Hib-MenCY [MenHibrix], 2 months for MenACWY-CRM [Menveo], 9 months for MenACWY-D [Menactra], 10 years for serogroup B meningococcal [MenB] vaccines: MenB-4C [Bexsero] and MenB-FHbp [Trumenba])**

**Routine vaccination:**

- Administer a single dose of Menactra or Menveo vaccine at age 11 through 12 years, with a booster dose at age 16 years.
- For children aged 2 months through 18 years with high-risk conditions, see “Meningococcal conjugate ACWY vaccination of persons with high-risk conditions and other persons at increased risk” and “Meningococcal B

vaccination of persons with high-risk conditions and other persons at increased risk of disease” below.

**Catch-up vaccination:**

- Administer Menactra or Menveo vaccine at age 13 through 18 years if not previously vaccinated.
- If the first dose is administered at age 13 through 15 years, a booster dose should be administered at age 16 through 18 years, with a minimum interval of at least 8 weeks between doses.
- If the first dose is administered at age 16 years or older, a booster dose is not needed.
- For other catch-up guidance, see Figure 2.

**Clinical discretion:**

- Young adults aged 16 through 23 years (preferred age range is 16 through 18 years) who are not at increased risk for meningococcal disease may be vaccinated with a 2-dose series of either Bexsero (0,  $\geq 1$  month) or Trumenba (0, 6 months) vaccine to provide short-term protection against most strains of serogroup B meningococcal disease. The two MenB vaccines are not interchangeable; the same vaccine product must be used for all doses.
- If the second dose of Trumenba is given at an interval of  $< 6$  months, a third dose should be given at least 6 months after the first dose; the minimum interval between the second and third doses is 4 weeks.

**Meningococcal conjugate ACWY vaccination of persons with high-risk conditions and other persons at increased risk:**

**Children with anatomic or functional asplenia (including sickle cell disease), children with HIV infection, or children with persistent complement component deficiency (includes persons with inherited or chronic deficiencies in C3, C5-9, properdin, factor D, factor H, or taking eculizumab [Soliris]):**

▪ **Menveo**

- *Children who initiate vaccination at 8 weeks.* Administer doses at ages 2, 4, 6, and 12 months.
- *Unvaccinated children who initiate vaccination at 7 through 23 months.* Administer 2 primary doses, with the second dose at least 12 weeks after the first dose AND after the first birthday.
- *Children 24 months and older who have not received a complete series.* Administer 2 primary doses at least 8 weeks apart.

▪ **MenHibrix**

- *Children who initiate vaccination at 6 weeks.* Administer doses at ages 2, 4, 6, and 12 through 15 months.
- If the first dose of MenHibrix is given at or after age 12 months, a total of 2 doses should be given at least 8 weeks apart to ensure protection against serogroups C and Y meningococcal disease.



For further guidance on the use of the vaccines mentioned below, see: [www.cdc.gov/vaccines/hcp/acip-recs/index.html](http://www.cdc.gov/vaccines/hcp/acip-recs/index.html).

- **Menactra**
  - **Children with anatomic or functional asplenia or HIV infection**
    - *Children 24 months and older who have not received a complete series.* Administer 2 primary doses at least 8 weeks apart. If Menactra is administered to a child with asplenia (including sickle cell disease) or HIV infection, do not administer Menactra until age 2 years and at least 4 weeks after the completion of all PCV13 doses.
  - **Children with persistent complement component deficiency**
    - *Children 9 through 23 months.* Administer 2 primary doses at least 12 weeks apart.
    - *Children 24 months and older who have not received a complete series.* Administer 2 primary doses at least 8 weeks apart.
  - **All high-risk children**
    - If Menactra is to be administered to a child at high risk for meningococcal disease, it is recommended that Menactra be given either before or at the same time as DTaP.

**Meningococcal B vaccination of persons with high-risk conditions and other persons at increased risk of disease: Children with anatomic or functional asplenia (including sickle cell disease) or children with persistent complement component deficiency (includes persons with inherited or chronic deficiencies in C3, C5-9, properdin, factor D, factor H, or taking eculizumab [Soliris]):**

- **Bexsero or Trumenba**
  - *Persons 10 years or older who have not received a complete series.* Administer a 2-dose series of Bexsero, with doses at least 1 month apart, or a 3-dose series of Trumenba, with the second dose at least 1–2 months after the first and the third dose at least 6 months after the first. The two MenB vaccines are not interchangeable; the same vaccine product must be used for all doses.

**For children who travel to or reside in countries in which meningococcal disease is hyperendemic or epidemic, including countries in the African meningitis belt or the Hajj:**

- Administer an age-appropriate formulation and series of Menactra or Menveo for protection against serogroups A and W meningococcal disease. Prior receipt of MenHibrix is not sufficient for children traveling to the meningitis belt or the Hajj because it does not contain serogroups A or W.

**For children at risk during an outbreak attributable to a vaccine serogroup:**

- For serogroup A, C, W, or Y: Administer or complete an age- and formulation-appropriate series of MenHibrix, Menactra, or Menveo.

- For serogroup B: Administer a 2-dose series of Bexsero, with doses at least 1 month apart, or a 3-dose series of Trumenba, with the second dose at least 1–2 months after the first and the third dose at least 6 months after the first. The two MenB vaccines are not interchangeable; the same vaccine product must be used for all doses.

For MenACWY booster doses among persons with high-risk conditions, refer to *MMWR* 2013;62(RR02):1–22, at [www.cdc.gov/mmwr/preview/mmwrhtml/rr6202a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6202a1.htm), *MMWR* June 20, 2014 / 63(24):527–530, at [www.cdc.gov/mmwr/pdf/wk/mm6324.pdf](http://www.cdc.gov/mmwr/pdf/wk/mm6324.pdf), and *MMWR* November 4, 2016 / 65(43):1189–1194, at [www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6543a3.pdf](http://www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6543a3.pdf).

For other catch-up recommendations for these persons and complete information on use of meningococcal vaccines, including guidance related to vaccination of persons at increased risk of infection, see meningococcal *MMWR* publications, available at: [www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/mening.html](http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/mening.html).

## **12. Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine. (Minimum age: 10 years for both Boostrix and Adacel)**

**Routine vaccination:**

- Administer 1 dose of Tdap vaccine to all adolescents aged 11 through 12 years.
- Tdap may be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.
- Administer 1 dose of Tdap vaccine to pregnant adolescents during each pregnancy (preferably during the early part of gestational weeks 27 through 36), regardless of time since prior Td or Tdap vaccination.

**Catch-up vaccination:**

- Persons aged 7 years and older who are not fully immunized with DTaP vaccine should receive Tdap vaccine as 1 dose (preferably the first) in the catch-up series; if additional doses are needed, use Td vaccine. For children 7 through 10 years who receive a dose of Tdap as part of the catch-up series, an adolescent Tdap vaccine dose at age 11 through 12 years may be administered.
- Persons aged 11 through 18 years who have not received Tdap vaccine should receive a dose, followed by tetanus and diphtheria toxoids (Td) booster doses every 10 years thereafter.
- Inadvertent doses of DTaP vaccine:
  - If administered inadvertently to a child aged 7 through 10 years, the dose may count as part of the catch-up series. This dose may count as the adolescent Tdap dose, or the child may receive a Tdap booster dose at age 11 through 12 years.
  - If administered inadvertently to an adolescent aged 11 through 18 years, the dose should be counted as the adolescent Tdap booster.
- For other catch-up guidance, see Figure 2.

## **13. Human papillomavirus (HPV) vaccines. (Minimum age: 9 years for 4vHPV [Gardasil] and 9vHPV [Gardasil 9])** **Routine and catch-up vaccination:**

- Administer a 2-dose series of HPV vaccine on a schedule of 0, 6–12 months to all adolescents aged 11 or 12 years. The vaccination series can start at age 9 years.
- Administer HPV vaccine to all adolescents through age 18 years who were not previously adequately vaccinated. The number of recommended doses is based on age at administration of the first dose.
- For persons initiating vaccination before age 15, the recommended immunization schedule is 2 doses of HPV vaccine at 0, 6–12 months.
- For persons initiating vaccination at age 15 years or older, the recommended immunization schedule is 3 doses of HPV vaccine at 0, 1–2, 6 months.
- A vaccine dose administered at a shorter interval should be readministered at the recommended interval.
  - In a 2-dose schedule of HPV vaccine, the minimum interval is 5 months between the first and second dose. If the second dose is administered at a shorter interval, a third dose should be administered a minimum of 12 weeks after the second dose and a minimum of 5 months after the first dose.
  - In a 3-dose schedule of HPV vaccine, the minimum intervals are 4 weeks between the first and second dose, 12 weeks between the second and third dose, and 5 months between the first and third dose. If a vaccine dose is administered at a shorter interval, it should be readministered after another minimum interval has been met since the most recent dose.

**Special populations:**

- For children with history of sexual abuse or assault, administer HPV vaccine beginning at age 9 years.
- Immunocompromised persons\*, including those with human immunodeficiency virus (HIV) infection, should receive a 3-dose series at 0, 1–2, and 6 months, regardless of age at vaccine initiation.
- Note: HPV vaccination is not recommended during pregnancy, although there is no evidence that the vaccine poses harm. If a woman is found to be pregnant after initiating the vaccination series, no intervention is needed; the remaining vaccine doses should be delayed until after the pregnancy. Pregnancy testing is not needed before HPV vaccination.

\*See *MMWR* December 16, 2016;65(49):1405–1408, available at [www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6549a5.pdf](http://www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6549a5.pdf).



# When Do Children and Teens Need Vaccinations?

Age	HepB Hepatitis B	DTaP/Tdap Diphtheria, tetanus, pertussis (whooping cough)	Hib <i>Haemophilus influenzae</i> type b	IPV Polio	PCV13 Pneumococcal conjugate	RV Rotavirus	MMR Measles, mumps, rubella	Varicella Chickenpox	HepA Hepatitis A	HPV Human papillomavirus	Men- ACWY	MenB	Influenza Flu
											Meningococcal		
at Birth (within 24 hours of birth)	✓												
2 months	✓	✓	✓	✓	✓	✓							
4 months	✓ <sup>1</sup>	✓	✓	✓	✓	✓							
6 months	✓ (6–18 mos)	✓	✓ <sup>1</sup>	✓ (6–18 mos)	✓	✓ <sup>1</sup>							✓ (6 mos and older)
12 months			✓ (12–15 mos)		✓ (12–15 mos)		✓ (12–15 mos)	✓ (12–15 mos)	✓✓ (2 doses given 6 mos apart at age 12–23 mos)				
15 months		✓ <sup>2</sup> (15–18 mos)											
18 months													
19–23 months													
4–6 years		✓		✓			✓	✓					Influenza vaccine is recom- mended every year for every- one age 6 months and older.
7–10 years													
11–12 years		✓ (Tdap)								✓✓ <sup>3</sup>	✓		
13–15 years													
16–18 years											✓	✓✓ <sup>4,5</sup>	

One dose each fall or winter to all people ages 6 mos and older. Some children younger than age 9 years need 2 doses; ask your child's health-care provider if your child needs more than 1 dose.

**FOOTNOTES**

- 1 Your child may not need this dose depending on the brand of vaccine that your healthcare provider uses.
- 2 This dose of DTaP may be given as early as age 12 months if it has been 6 months since the previous dose.
- 3 Children with certain medical conditions will need a third dose.
- 4 This vaccine may be given to healthy teens. It is also recommended for adolescents with certain health conditions.
- 5 Your teen may need an additional dose depending on your healthcare provider's recommendation.

# Onondaga County Health Department

## Bureau of Disease Control Tip Sheet for School

The Onondaga County Health Department's Bureau of Disease Control can assist school nurses on a variety of health related topics that involve Communicable Diseases (CD), Sexually Transmitted Disease (STDs) and Tuberculosis (TB). Please call our office at (315) 435-3236 to speak with a nurse regarding any of these areas and please visit our website for school nurses at <http://www.ongov.net/health/schools.html>

### COMMUNICABLE ILLNESSES REQUIRING EXCLUSION

Students should be excluded from school and school activities if they have documented fevers ( $T \geq 100^{\circ} F$ ) and are suspected of having a contagious illness (influenza-like illness, conjunctivitis, persistent cough etc).

#### Communicable diseases that *require* exclusion from school and school activities:

- Airborne, droplet spread: Measles, Mumps, Rubella, Pertussis, active pulmonary tuberculosis, varicella, influenza, Strep pharyngitis/Scarlet fever
- Food-borne: acute hepatitis A

**Skin infections may require exclusion from contact sports (if the lesions cannot be completely covered):** Herpes, Shingles, Staph/Strep skin infections, fungal skin infections (e.g. ringworm)

#### Exclusion at the *end of the day*, readmission to school after treatment is initiated:

- Head lice
- Scabies

### PROPHYLAXIS OF CLOSE CONTACTS

Prophylactic measures exist for close contacts of the following diagnosed infectious diseases; consult with your medical director, the student's health care provider, and please notify the Onondaga County Health Department at (315) 435-3236 if you are aware of a student with the following:

- Meningococcal infections
- Hepatitis A
- Pertussis
- Influenza
- Active Pulmonary (lungs or throat) Tuberculosis

### SEXUALLY TRANSMITTED DISEASES

Free and confidential STD and HIV screening and treatment is available for patients 12 years and older. No appointment necessary. Clinic is located in the John H. Mulroy Civic Center, 421 Montgomery Street, Basement, Room 80, Syracuse, NY.

Hours of operation:

Monday:	9:00 – 10:30 am and 1:00 – 3:00 pm
Tuesday:	1:00 – 3:00 pm
Thursday:	12:30 – 4:30 pm
Friday:	9:00 – 10:30 am

## TUBERCULOSIS DISEASE

The difference between latent TB infection and active TB disease:

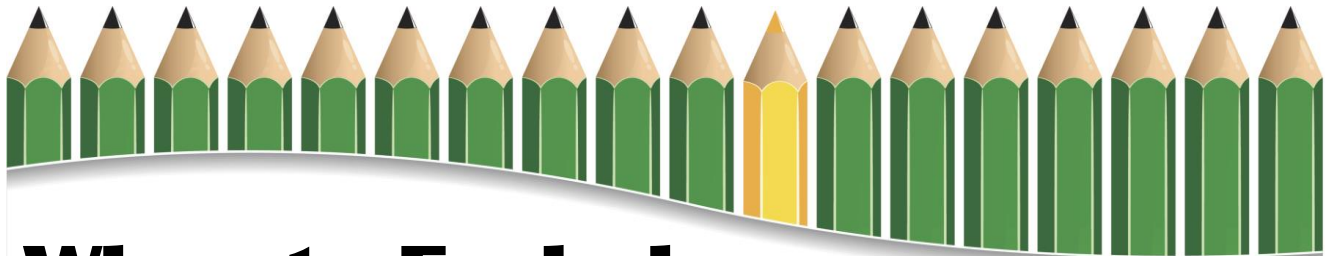
A person with LATENT TB INFECTION	A person with ACTIVE PULMONARY TB DISEASE
Does not feel sick	Usually feels sick
Has no symptoms	Has signs and symptoms that may include: a bad cough that lasts 3 weeks or longer, pain in the chest, Coughing up blood or sputum, weakness or fatigue, weight loss, no appetite, chills, fever, night sweats
<b>Cannot spread TB bacteria to others</b>	May spread bacteria to others
Usually has a positive skin test or positive TB blood test	Usually has a positive skin test or positive TB blood test
Has a normal chest x-ray and a negative sputum smear	May have an abnormal chest x-ray, or positive sputum smear or culture
Should consider treatment for latent TB infection to prevent active TB disease	Needs treatment for active TB disease

Commonly used medications: Isoniazid (INH), Rifampin (RIF), Pyrazinamide (PZA), Ethambutol (EMB)

## RESOURCES AND WEBSITES

- Call the Onondaga County Health Department at 435-3236 to report:
  - 1) Clusters of illness, unusual illnesses
  - 2) Vaccine preventable illness
  - 3) Animal bites and bat exposures
- Please visit the Onondaga County Health Department website at [www.ongov.net/health](http://www.ongov.net/health)
  - 1) Communicable disease fact sheets to send home to parents.
  - 2) Current communicable diseases in Onondaga County with health tips
  - 3) Press releases from the Commissioner of Health
- New York State Department of Health - [www.health.ny.gov](http://www.health.ny.gov) (useful and informative site, especially about what is happening in NY State)
- <http://www.cdc.gov/HealthyYouth/healthtopics/>
- Center of Disease Control and Prevention - [www.cdc.gov](http://www.cdc.gov) A-Z Communicable Disease Index (This site has well-written fact sheets on significant diseases)





# When to Exclude

## If a Child is Behind on Immunizations



Per NYS Public Health Law Section #2164, the school principal or person in charge is required to exclude (not permit the child to attend school) until the student receives the required immunizations, if they are not considered “in process”.

### Students who should be excluded include:

- Any student who lacks an immunization record unless he / she has a medical or religious exemption.
- Any student who fails to provide the school with proof of immunity within 14 days of school entry. The 14 days may be extended to 30 days for a student transferring from out-of-state or from another country.
- Any student who has exceeded the 14 or 30 day grace period and who is not considered “in process” of completing immunizations.
- Any student who is obtaining serologic testing and has not provided test results or an appointment date to begin or complete the vaccine series within 30 days.

### What does “in process” mean?

“In process” is defined as a child that has received at least the first dose of each required vaccine series and has age-appropriate appointments to complete the series according to the ACIP catch-up schedule. Children following “alternative” immunization schedules are no longer considered “in process”.

## Questions?

Contact the Onondaga County Immunization Program at

**435-2000**



ongovhealth  
Onondaga County  
Health Department

Healthy Families Division  
Immunization Program

[ongov.net/health](http://ongov.net/health) · [facebook.com/ongovhealth](https://facebook.com/ongovhealth)

# Attention! Attention! All Healthcare Workers! **THIS IS NOT A TEST**

This is an Important Notice about Common Misperceptions of Influenza

## MYTH #1

You are not at risk for getting influenza because you're healthy, and as someone who works in a healthcare environment, you've been exposed to so many germs that you're immune to everything.

### FACT

Healthcare workers can have an increased risk of exposure to influenza due to the nature of the job.

## MYTH #2

You don't have any influenza symptoms so you can't transmit the influenza virus to your patients.

### FACT

Even if you don't show symptoms of having influenza yet, the virus can still be transmitted to patients. Healthcare workers infected with influenza can transmit the highly contagious virus to patients in their care, which is particularly troubling for the many patients at high-risk for influenza-related complications that can lead to serious illness, and even death. Preventing the incidence of the influenza virus protects patients and may save lives.

## MYTH #3

You work in a large facility and there are many staff members who don't get vaccinated against influenza. So, one influenza vaccination won't make a difference.

### FACT

You can demonstrate your leadership by getting vaccinated against influenza and show that quality of patient care is important to you. Vaccination of healthcare workers can prevent the incidence of influenza in healthcare settings. In addition, the Centers for Disease Control and Prevention (CDC) clearly states that influenza vaccination is the most effective method for preventing influenza virus infection and its potentially severe complications. Healthcare worker vaccination is important for influenza prevention and control.

## MYTH #4

Getting the influenza vaccine can actually give you influenza.

### FACT

Trivalent inactivated influenza vaccine (TIV) contains killed viruses and thus cannot cause influenza. However, live, attenuated influenza vaccine (LAIV) contains live, attenuated viruses and therefore does have the potential to produce mild signs or symptoms related to attenuated influenza virus infection.

## MYTH #5

The influenza vaccine doesn't work.

### FACT

The influenza vaccine can be expected to reduce influenza illness by approximately 70% to 90% in healthy adults less than 65 years of age, when the vaccine and circulating virus are well matched. The ability of the influenza vaccine to protect a person depends on the age and health status of the person getting the vaccine, and the similarity or "match" between the virus strains in the vaccine and those in circulation.

## MYTH #6

Antibiotics can work just as well as the influenza vaccine.

### FACT

The single best way to protect yourself against influenza is by getting vaccinated. Influenza is a viral infection and cannot be treated by antibiotics. Taking antibiotics when they aren't needed contributes to the serious problem of antibiotic resistance. Antibiotics are not a substitute for the influenza vaccine.

## MYTH #7

By January, it's too late to get the influenza vaccine.

### FACT

The CDC recommends that influenza vaccination begin as soon as healthcare providers have the vaccine in stock, and should continue throughout the influenza season, even into January. In most years the influenza season does not peak until January or February, therefore vaccination beyond December is medically beneficial and necessary in order to protect as many people as possible.





# This School is a Flu-Free Zone!



**If you are sick,  
stay home!**



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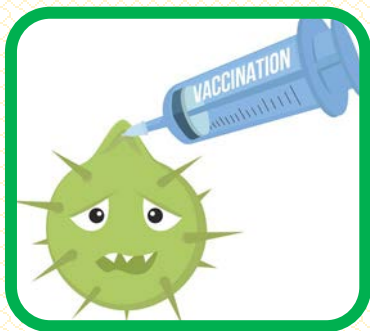
Healthy Families Division  
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# Don't let the flu



# Stop the fun!



## Get a flu vaccine every year!

No insurance? Call 315-435-2000 to learn how  
you can get a flu vaccine.



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