

## MESSAGE FROM THE INTERIM SECTION ADMINISTRATOR

### Robert Griffin

Welcome to the Spring edition of IMMU-NEWS!

Spring is finally here and the Florida weather is warming up nicely. With cool mornings and warm, sunny afternoons everyone is sure to be out and about enjoying the weather.

Spring also brings two annual events of note: National Infant Immunization Week (NIIW), April 18–25, 2015 and World Immunization Week (WIW), April 24–30, 2015. These important public health campaigns aim to increase awareness and immunization rates world wide. Disease prevention is at the heart of of these campaigns. Promotional materials for NIIW were on display in Department buildings at the state health office campus.

The Immunization Section would like to congratulate Charles "Chuck" Alexander on his retirement. Chuck served as the Immunization Section Administrator for nearly 13 years. Congrats to Chuck and we wish him a happy retirement! Robert Griffin, Budget and Registry Services Director, now serves as the Interim Immunization Section Administrator.

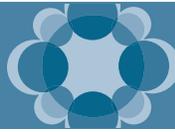
We would like to welcome Dearline Thomas-Brown as the new Executive Community Health Nursing Director for the QI/Clinical Team. Dearline is a bachelors prepared Registered Nurse and also holds a Masters degree in Public Health (MPH). She previously served as a Nursing Consultant/Performance Improvement Liaison for the State Title X Family Planning program. Additionally, she served as the lead Preconception Health Consultant and grant manager for the DOH March of Dimes' *Every Woman Florida Preconception Health Grand Rounds* grant. Welcome Dearline and we look forward to working with you!

The Vaccines for Children (VFC) program has had a few staffing changes of note. Tara Dugan was promoted to Area 2 Immunization Analyst and Ivette Medina-Daniels has transitioned from contractor status into a career position as a VFC Representative. Wendy Bailey has joined the VFC team as a VFC Representative. Wendy previously worked for DOH—Leon. In addition, Mamie Dykes has joined the Florida SHOTS team as a Government Operations Consultant. Mamie previously worked for the Leon County School Board. Karen Fowler has moved from Area 6 to Area 7 and is now an Immunization Consultant. YaVonne Sturdivant has joined Area 6 as an Immunization Analyst. Congratulations to you all on your new endeavors. Welcome aboard Wendy, Mamie, and YaVonne and we look forward to working with you all in your new roles!

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## National Infant Immunization Week

NIIW, April 18-25, 2015, was celebrated as part of World Immunization Week (WIW) and is an initiative of the World Health Organization (WHO). During WIW, all six WHO regions, including more than 180 Member States, territories and areas, simultaneously promoted immunization to advance equity in the use of vaccines, and universal access to vaccination services thus enabling cooperation on cross-border immunization activities.



### National Infant Immunization Week

**IMMUNIZATION.  
POWER TO PROTECT.**

Several important milestones have already been reached in controlling vaccine-preventable diseases among infants worldwide. Vaccines have drastically reduced infant death and disability caused by preventable diseases in the United States. For example:

- Through immunization, infants and children can be protected from 14 vaccine-preventable diseases before age two.
- Nearly every child developed measles in the 1950's with some leading to death. Today, many practicing physicians have never seen a case of measles.
- Routine childhood immunization prevents about 20 million cases of disease and about 42,000 deaths. It also saves about \$13.5 billion in direct care costs.
- The National Immunization Survey has consistently shown that childhood immunization rates for vaccines routinely recommended for children remain at or near record levels.

It's easy to think of these as diseases of the past, but the truth is they still exist. Data from 2014 showed a higher than normal number of

measles cases nationally and in individual states. By mid-July, 566 measles cases, making up 18 outbreaks, were reported.

NIIW provides an opportunity to highlight the dangers of vaccine-preventable diseases, especially to infants and young children, and the importance and benefits of childhood immunizations. It is an opportunity to educate parents and caregivers about the importance of vaccination in protecting their children against vaccine-preventable diseases starting from birth. Remind parents and caregivers of the need to schedule and keep immunization appointments.

Provide parents and caregivers with a toll-free number, 1-800-CDC-INFO (1-800-232-4636), to locate a facility that offers immunizations through the Vaccines for Children program, a federally funded program that provides vaccinations at no cost to children whose parents cannot afford to pay for them.

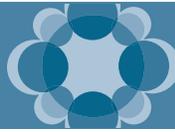
For more information and to find planning ideas, promotional materials and educational resources on NIIW week visit: [www.cdc.gov/vaccines/events/niiw/overview.html](http://www.cdc.gov/vaccines/events/niiw/overview.html).

## They depend on YOU!



## Standard Abbreviations in This Issue

- ACIP: Advisory Committee on Immunization Practices
- CDC: Centers for Disease Control and Prevention
- DTaP: Diphtheria, Tetanus, and acellular Pertussis
- DOH: Florida Department of Health
- Florida SHOTS™: Florida State Health Online Tracking System
- HBIG: Hepatitis B Immune Globulin
- Hib: *Haemophilus influenzae* type B
- IAC: Immunization Action Coalition
- MCV: Meningococcal Conjugate Vaccine
- MMR: Measles, Mumps, and Rubella
- MMRV: Measles, Mumps, Rubella, and Varicella
- MPSV: Meningococcal Polysaccharide Vaccine
- PCV13: Pneumococcal Conjugate Vaccine
- PPSV: Pneumococcal Polysaccharide Vaccine
- Tdap: Tetanus, diphtheria, and acellular pertussis
- VFC: Vaccines For Children



## 2015 National Adult and Influenza Immunization Summit

The 2015 face-to-face annual meeting of the National Adult and Influenza Immunization Summit will be held in Atlanta, Georgia, at the Hyatt Regency hotel on May 12-14, 2015.

The National Adult and Influenza Immunization Summit (NAIS) was founded by the American Medical Association (AMA) and the Centers for Disease Control and Prevention (CDC). Currently the NAIS is led by the Immunization Action Coalition (IAC), the CDC, and the National Vaccine Program Office (NVPO). The NAIS is dedicated to addressing and resolving adult and influenza immunization issues.

The NAIS now consists of over 700 partners, representing more than 130 public and private organizations. Summit participants include a wide range of professionals from the health care industry, public health and private medical sectors, vaccine manufacturers and distributors, consumers, and others interested in stopping the transmission of vaccine-preventable diseases. Broad-based leadership of the NAIS is conducted through the members of the Summit Organizing Committee (SOC).

For more information on the Summit visit:  
[www.izsummitpartners.org/](http://www.izsummitpartners.org/)

## Immunization Update: Addressing Vaccine Hesitancy

On March 26, 2015, the Palm Beach County Immunization Coalition, Bethesda Memorial Hospital, and the Department of Health—Palm Beach sponsored its annual vaccine update program at Bethesda Memorial Hospital East in Boynton Beach. The program was entitled *Immunization Update: Addressing Vaccine Hesitancy*. The target audience included local health care providers and their staff, DOH staff, and hospital employees. Several informational tables were set up with representatives from the following community partners: Vaccines for Children (VFC), Healthy Mothers-Healthy Babies, Walgreens, WIC, DOH—Immunizations, Bethesda Memorial—East, Sanofi, and Merck Pharmaceuticals. All provided educational materials regarding their respective programs and products. Attendees were able to meet the speakers and visit the informational tables prior to the start of the program.

Alina Alonso, MD, Director of DOH—Palm Beach was the moderator for this program. Following opening remarks from Deborah Hogan, RN, Chairperson for the Palm Beach County Immunization Coalition/Community Health Nursing Consultant for DOH—Palm Beach, Colette Chiacchiero, VFC Immunization Consultant from Area 10, gave a VFC update focusing on the latest provider requirement—the use of digital data loggers for continuous temperature monitoring/recording in the vaccine storage units.

Deborah Hogan led the following presentation—a group activity entitled “Community Immunity.” This exercise included audience participation to highlight how vaccine-preventable diseases spread, sicken, and sometimes have fatal consequences.

Next, *The Invisible Threat* documentary was shown. The Invisible Threat is a critically-acclaimed documentary that explores the science of vaccination and why fears and misperceptions have lead parents to delay or decline vaccines. This riveting 42-minute film was produced by high school students in California participating in a broadcast journalism and documentary film program. The students interviewed a wide range of experts, practitioners, parents, and students to represent all sides of this “hot button” debate.

The panel discussion began at the conclusion of the film. The four panelists were introduced by Dr. Alonso and included three prominent local pediatricians; Tommy Schechtman, MD; Chad Sanborn, MD, Pediatric Infectious Disease; Sharon Fox-Levine, MD; and Colette Chiacchiero, DOH VFC Immunization Consultant. After the physician panelists expressed their beliefs and practices regarding vaccine hesitancy, the panelists addressed a variety of questions from the audience, which led to a very lively discussion amongst all the participants.

Once again, the annual program was a great success and learning opportunity for everyone!



L to R—Shannon Fox-Levine, MD; Chad Sanborn, MD; Tommy Schechtman, MD; & Colette Chiacchiero



Martha Espinosa & Margareth Duval from Healthy Mothers/Healthy Babies in Palm Beach County



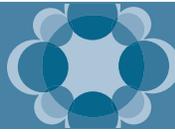
Lisa Bagocius & Elroy Schipper from Sanofi Pasteur (Pharmaceuticals)



Colette Chiacchiero, Area 10 Immunization Consultant & Rodney Johnson, Area 10 Immunization Analyst



Deborah Hogan—Chairperson for the Palm Beach County Immunization Coalition/Community Health Nursing Consultant for DOH—Palm Beach



## 7th Annual Southwest Florida Immunization Workshop

### *Creative Ideas for Increasing HPV and Other Adolescent Vaccination Rates*

**DATE:** Thursday, May 21, 2015  
**TIME:** 9:00 a.m. – 3:30 p.m.  
**REGISTRATION:** 8:00 a.m. – 9:00 a.m.  
**WHERE:** State College of Florida at Lakewood Ranch  
 7131 Professional Parkway East  
 Sarasota, FL 34240

[www.scf.edu/AboutSCF/Locations/SCFLakewoodRanch/](http://www.scf.edu/AboutSCF/Locations/SCFLakewoodRanch/)

#### KEYNOTE SPEAKERS:

- Donna Weaver, RN, MN, CDC Nurse Educator
- Jorge Lujan-Zilbermann, M.D., Hill-Top Research, Inc. St. Petersburg, FL

#### PRESENTATIONS TO INCLUDE:

- Immunization Schedule and ACIP recommendation changes
- Emphasis on HPV and other adolescent vaccines
- Improving vaccine communication efforts with parents
- Florida SHOTS Update and Epi Updates for SW Florida
- A special PITCH exercise!

#### CONTINUING EDUCATION:

FREE CEU's being offered through the DOH Office of Public Health Practice.

#### REGISTER NOW AT:

[www.planetReg.com/E1126563073547](http://www.planetReg.com/E1126563073547)

#### For Further Information or Questions Contact:

David Fee, DOH Immunization Section Field Office, Ft. Myers  
 (239) 461-6115, [david.fee@flhealth.gov](mailto:david.fee@flhealth.gov)  
 OR

Lori Wright, DOH Immunization Section Field Office, Tampa  
 (850) 728-3853, [lori.wright@flhealth.gov](mailto:lori.wright@flhealth.gov)

## Florida SHOTS Spring Training

It's not just for baseball players. Spring brings training opportunities for Florida SHOTS participants also. A variety of new online training services will have you knocking it out of the park in no time.

Live training sessions, hosted several times a week, feature timely topics updated on an ongoing basis. Topics of discussion

originate from feedback to our field staff. Sessions are available for private providers (in English and Spanish) and for county health departments. Registration, available on [www.FLSHOTSusers.com](http://www.FLSHOTSusers.com), is required. All sessions are free.

Covering all bases, our improved Florida SHOTS Training System now includes your existing vaccine inventory, orders, and shipment data. When you log into the training site, you will see a mirror image of your Florida SHOTS site, with the exception of patient data. You can explore, practice registry functionality, and perform training without worrying about consequences to your actual Florida SHOTS account. Fictitious patient data may be created within your training site.

The Training System will be updated quarterly. Vaccine inventory, orders, and shipment data changes will be reflected in quarterly updates.

Contact the Florida SHOTS Help Desk Monday through Friday from 8:00 a.m. – 5:00 p.m. ET at 1-877-888-SHOT (7468) with questions about the live webinars or the Training System.

Learn more about English and Spanish training videos and training guides available 24/7 at [www.FLSHOTSusers.com](http://www.FLSHOTSusers.com).



## Support Florida SHOTS Data Upload

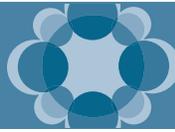
### *Doctors Are Asking For Your Help*

Become a certified data upload provider and give your clients the power they need to more efficiently upload and manage their immunization records.

Connect with your clients. With our easy-to-use data upload function, your clients can transmit all their immunization records from your software to the Florida SHOTS secure database in under four minutes.

Get certified. Become a Florida SHOTS certified provider and meet ONC "meaningful use" criteria that EHRs must be capable of submitting electronic data to immunization registries. Our data upload functionality is HL7-compliant and follows a standard protocol that can be replicated nationwide. We also accept delimited formats.

Ready to get started? [Download these documents](#) for information you will need to develop a link to Florida SHOTS. Our technology field rep will walk you through the process. Call 1-877-888-SHOT (7468), ext. 4, to get started.



## Advisory Committee on Immunization Practices Recommended Immunization Schedules

Each year, recommendations for routine use of vaccines in children, adolescents, and adults in the United States are developed by the Advisory Committee on Immunization Practices (ACIP).

In October 2014, ACIP approved the recommended immunization schedules for persons aged 0 through 18 years for 2015, including several changes from the 2014 immunization schedules. The recommendations for routine use of vaccines for children, adolescents, and adults are harmonized to the greatest extent possible with recommendations made by the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AAFP), the American College of Obstetricians and Gynecologists (ACOG), and the American College of Physicians (ACP). The ACIP recommendations adopted by the Centers for Disease Control and Prevention (CDC) became agency guidelines. The *ACIP Recommended Immunization Schedules for Persons Aged 0 Through 18 Years—United States, 2015* and *ACIP Recommended Immunization Schedule for Adults Aged 19 Years or Older—United States, 2015*, were both published in the February 6, 2015, *Morbidity and Mortality Weekly Report (MMWR) 64(04); 91-94*.

To review the changes to last year's schedules we recommend that health care providers use the following link: [www.floridahealth.gov/programs-and-services/immunization/children-and-adolescents/schedules-and-requirements/index.html](http://www.floridahealth.gov/programs-and-services/immunization/children-and-adolescents/schedules-and-requirements/index.html).

We also recommend that all health care providers to visit: [www.cdc.gov/mmwr/preview/mmwrhtml/mm6404a5.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6404a5.htm) to read the complete advisory for important details and changes to last year's schedules.

For 2015, the figures, footnotes, and tables were also published on the CDC immunization schedule website: [www.cdc.gov/vaccines/schedules/index.html](http://www.cdc.gov/vaccines/schedules/index.html).

For more information you can also use the following links to visit: [www.floridahealth.gov/programs-and-services/immunization/publications/\\_documents/15-16-schoolentry-eng.pdf](http://www.floridahealth.gov/programs-and-services/immunization/publications/_documents/15-16-schoolentry-eng.pdf).

## Measles

In the latter part of 2014 and into 2015, the United States experienced a large, multi-state outbreak of measles linked to an amusement park in California. The outbreak spread to more than a dozen other states. CDC urges health care professionals to consider measles when evaluating patients with febrile rash and ask about a patient's vaccine status, recent travel history, and contact with individuals who have febrile rash illness.

Over the past several months, measles has been reported among travelers who visited Florida. All had either an unknown or no history of measles vaccinations. More recently, at the time of this publication Florida has experienced five cases of measles among residents. Investigation is ongoing. Measles is an acute viral respiratory illness. It is characterized by initial symptoms of fever (as high as 105°F) and weakness, runny nose, cough, coryza, conjunctivitis (the three "C"s) and white lesions on the insides of the cheeks (Koplik spots) followed by a red flat rash covered with small bumps (maculopapular rash). The rash usually appears about 14 days after a person is exposed; however, the time from exposure until symptoms appear (incubation period) ranges from 7 to 21 days. The rash spreads from the head to the trunk to the lower extremities. Infected individuals are considered to be contagious from 4 days before to 4 days after the rash appears. Sometimes immunocompromised individuals do not develop the rash.

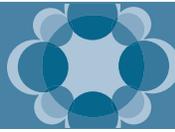
Measles is one of the most contagious of all infectious diseases; approximately nine out of ten susceptible persons with close contact



to a measles patient will develop measles. The virus is transmitted by direct contact with infectious droplets or by airborne spread when an infected person breathes, coughs, or sneezes. Measles virus can remain infectious in the air for up to two hours after an infected person leaves an area.

Health care providers should consider measles in patients presenting with febrile rash illness and clinically compatible measles symptoms, especially if the person recently traveled internationally or was exposed to a person with febrile rash illness. Health care providers should report suspected measles cases to their local health department within 24 hours.

Laboratory confirmation is essential for all sporadic measles cases and all outbreaks. Detection of measles-specific IgM antibody and measles RNA by real-time polymerase chain reaction (RT-PCR) are the most common methods for confirming measles infection. Health care providers should obtain both a serum sample and a throat swab



(or nasopharyngeal swab) from patients suspected to have measles at first contact with them. Urine samples may also contain virus, and when feasible to do so, collecting both respiratory and urine samples can increase the likelihood of detecting measles virus. For more information, see Measles Lab Tools at:

[www.cdc.gov/measles/lab-tools/index.html](http://www.cdc.gov/measles/lab-tools/index.html).

Measles can be prevented with measles-containing vaccine, which is primarily administered as the combination measles-mumps-rubella (MMR) vaccine. The combination measles-mumps-rubella-varicella (MMRV) vaccine can be used for children aged 12 months through 12 years for protection against measles, mumps, rubella and varicella. Single-antigen measles vaccine is not available.

One dose of MMR vaccine is approximately 93 percent effective at preventing measles; two doses are approximately 97 percent effective. Almost everyone who does not respond to the measles component of the first dose of MMR vaccine at age 12 months or older will respond to the second dose. Therefore, the second dose of MMR is administered to address primary vaccine failure.

For more information regarding measles, visit:

[www.cdc.gov/measles](http://www.cdc.gov/measles) or [www.floridahealth.gov/diseases-and-conditions/vaccine-preventable-disease/measles/index.html](http://www.floridahealth.gov/diseases-and-conditions/vaccine-preventable-disease/measles/index.html).

## Meningitis FAQs

### What is meningitis?

Meningitis is a disease caused by the inflammation of the protective membranes covering the brain and spinal cord known as the meninges. The inflammation is usually caused by an infection of the fluid surrounding the brain and spinal cord. Meningitis may develop in response to a number of causes, usually bacteria or viruses, but meningitis can also be caused by physical injury, cancer or certain drugs. The severity of illness and the treatment for meningitis differ depending on the cause. Thus, it is important to know the specific cause of meningitis.

Viral meningitis can be caused by viruses, like enteroviruses, arboviruses and herpes simplex viruses. It's serious, but less severe than bacterial meningitis, and people with normal immune systems usually recover on their own. There are vaccines to prevent some types of viral meningitis. On the other hand, bacterial meningitis can be quite severe and may result in brain damage, hearing loss, learning disabilities, or death. For bacterial meningitis, it is important to know which type of bacteria is causing the meningitis because antibiotics can be used to treat the disease and also prevent some types from spreading and infecting other people. In Florida, *Streptococcus* species and *Neisseria meningitidis* are the leading causes of bacterial meningitis. Bacteria, like *Neisseria meningitidis* and *Streptococcus pneumoniae*, can cause life-threatening

infections which require immediate medical attention. There are vaccines to prevent certain types of bacterial meningitis.

### What are the signs and symptoms of meningitis?

High fever, headache, and stiff neck are common symptoms of meningitis in anyone over the age of two years. These symptoms can develop over several hours, or they may take one to two days. Other symptoms may include nausea, vomiting, sensitivity to bright light, confusion, and sleepiness. In newborns and small infants, the classic symptoms of fever, headache, and neck stiffness may be absent or difficult to detect. Infants with meningitis may appear slow or inactive, have vomiting, be irritable, or be feeding poorly. As the disease progresses, patients of any age may experience seizures.



### How is bacterial meningitis diagnosed?

Early diagnosis and treatment are very important. If symptoms occur, the patient should see a doctor immediately. The diagnosis is usually made by obtaining a sample of spinal fluid. The spinal fluid is obtained by performing a spinal tap, in which a needle is inserted into an area in the lower back where fluid in the spinal canal can be collected. The agent causing the meningitis can then be identified by examination under a microscope, growing the agent in a culture, or by running a PCR test which detects the DNA of the infecting agent. Identification of the bacteria strain responsible is important for selection of correct antibiotics.

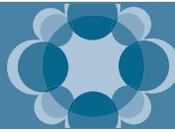
### Can bacterial meningitis be treated?

Bacterial meningitis can be treated with a number of effective antibiotics. It is important, however, that treatment be started early in the course of the disease. Appropriate antibiotic treatment of most common types of bacterial meningitis should reduce the risk of dying from meningitis to below 15 percent, although the risk is higher among the elderly.

### Is bacterial meningitis contagious?

Yes, some forms of bacterial meningitis are contagious. The bacteria can mainly be spread from person to person through the exchange of respiratory and throat secretions. This can occur

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through coughing, kissing, and sneezing. Fortunately, none of the bacteria that cause meningitis are as contagious as viruses like the common cold or flu. The bacteria are not spread by casual contact or by simply breathing the air where a person with meningitis has been. However, sometimes the bacteria which cause meningitis have spread to other people who have had close or prolonged contact with a patient. Such infections include meningitis caused by *N. meningitidis* (also called meningococcal meningitis) or *Haemophilus influenzae* type B (Hib). People in the same household or daycare center or anyone with direct contact with a patient's oral secretions (such as a boyfriend or girlfriend) should be considered at increased risk of acquiring the infection. People who qualify as close contacts of a person with meningococcal meningitis should receive antibiotics to prevent them from becoming infected. This prevention technique is known as prophylaxis. Prophylaxis for household contacts of someone with Hib disease is only recommended if there is one household contact younger than 48 months who has not been fully immunized against Hib or an immunocompromised child (a child with a weakened immune system) of any age is in the household. The entire household, regardless of age, should receive prophylaxis in these cases.

## Are there vaccines against bacterial meningitis?

The most effective way to protect you and your child against certain types of bacterial meningitis is to complete the recommended vaccine schedule. There are vaccines for three types of bacteria that can cause meningitis:

- *Neisseria meningitidis* (meningococcal conjugate)
- *Streptococcus pneumoniae* (pneumococcal conjugate)
- *Haemophilus influenzae* type b (Hib)

Meningococcal vaccines protect against most types of meningococcal disease, although they do not prevent all cases. There are two kinds of vaccines that protect against *Neisseria meningitidis* available in the United States: meningococcal polysaccharide vaccine and meningococcal conjugate vaccine. Both vaccines are safe and highly effective. The Advisory Committee on Immunization Practices (ACIP) recommends routine vaccination with meningococcal conjugate vaccine for all persons 11-12 years of age with a booster dose at age 16 years. For adolescents who receive the first dose at age 13 through 15 years, a one-time booster dose should be administered, preferably at age 16 through 18 years. College freshmen living in dormitories are at increased risk for meningococcal disease and should be vaccinated with meningococcal conjugate vaccine prior to college entry if they have not previously been vaccinated. The risk for meningococcal disease among non-freshmen college students is similar to that for the general population of similar age (age 18-24 years). However, since the vaccines are safe and produce immunity, they can be provided to non-freshmen college students who would like to reduce their risk for meningococcal disease. Routine vaccination is also recommended for certain persons who have increased risk for meningococcal disease, such as children 2-months through 10 years of age with certain immunocompromised medical conditions or who travel to

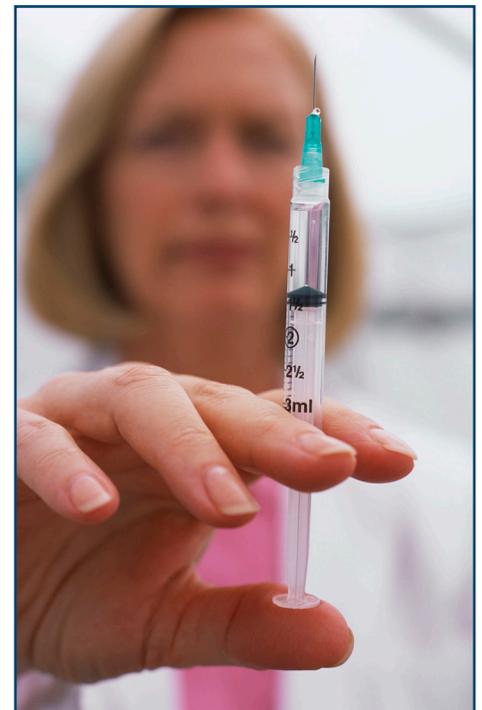
epidemic areas in the world. In addition, children ages 2 through 10 years who have anatomic or functional asplenia (absence of spleen function) should receive a 2-dose primary series administered two months apart and then receive a booster dose every five years. Use of meningococcal conjugate vaccine is preferred among people aged 2-55 years; however, use of meningococcal polysaccharide vaccine is recommended among adults over 55 years of age.

## Are there vaccines to prevent pneumococcal meningitis?

Yes, the Pneumococcal conjugate vaccine (PCV13) is recommended for all children younger than 5 years old, all adults 65 years or older, and people 6 years or older with certain risk factors. Pneumococcal polysaccharide vaccine (PPSV23) is recommended for all adults 65 years or older.

People 2 years through 64 years of age who are at high risk of pneumococcal disease should also receive PPSV23.

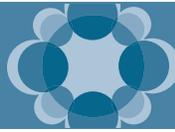
Are there vaccines to prevent *Haemophilus influenzae* type B infection (Hib)? Yes, the *Haemophilus influenzae* type b vaccine prevents meningitis, pneumonia (lung infection), epiglottitis (a severe throat infection), and other serious infections caused by a strain of bacteria called *Haemophilus influenzae* type b. It is recommended for all children younger than 5 years of age in the US, and it is usually given to infants starting at 2 months of age. In certain situations, patients at increased risk for invasive Hib disease who are fully vaccinated require additional doses of Hib vaccine and unimmunized older children, adolescents, and adults with certain specified medical conditions should receive Hib vaccine. The Hib vaccine can be combined with other vaccines. Some brands of vaccine contain Hib along with other vaccines in a single shot. Hib vaccine can safely be combined with other vaccines to make these combination vaccines.



## What is viral meningitis?

Viral infections are the most common cause of meningitis; with bacterial infections being the second most common cause. Other, rarer causes of meningitis include fungi, parasites, and non-infectious causes, including those that are related to drug exposure.

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Meningitis caused by viral infections is sometimes called "aseptic meningitis."

### Is viral meningitis a serious disease?

Viral ("aseptic") meningitis is serious but rarely fatal in people with uncompromised immune systems. Typically, the symptoms last from seven to ten days and the patient recovers completely. Bacterial meningitis, on the other hand, can be very serious and result in disability or death if not treated promptly. Often, the symptoms of viral meningitis and bacterial meningitis are the same. For this reason, if you think you or your child may have meningitis, see your health care provider immediately.

### What causes viral meningitis?

Different viral infections can lead to viral meningitis. Most cases in the United States, particularly during the summer and fall months, are caused by enteroviruses. Most people who are infected with enteroviruses either have no symptoms or only get a cold, rash, or mouth sores with low-grade fever. Only a small number of people with enterovirus infections develop meningitis. Other viral infections that can lead to meningitis include mumps, herpes virus, measles, and influenza. Arboviruses, spread by mosquitoes and ticks, can also cause infections that can lead to viral meningitis. Lymphocytic choriomeningitis virus, which is spread by rodents, is a rare cause of viral meningitis.

### What are the signs and symptoms of viral meningitis?

Symptoms usually appear after a cold or runny nose, diarrhea, vomiting, or other signs of infection are present. Symptoms common in infants include fever, irritability, poor eating, and hard to awaken. Symptoms common in older children and adults are high fever, severe headache, stiff neck, sensitivity to bright light, sleepiness or trouble waking up, nausea, vomiting, and lack of appetite.

### How is viral meningitis diagnosed?

Viral meningitis is usually diagnosed by laboratory tests of a patient's spinal fluid. Identifying the exact virus causing meningitis may be difficult. Because the symptoms of viral meningitis are similar to those of bacterial meningitis, which is usually more severe and can be fatal, it is important for anyone suspected of having meningitis to seek medical care immediately.

### How is viral meningitis treated?

There is no specific treatment for viral meningitis. Most patients completely recover on their own within two weeks. Antibiotics are not effective for treating viral infections, including viral meningitis. Health care providers often will recommend bed rest, plenty of fluids, and medicine to relieve fever and headache. A hospital stay may be necessary in more severe cases or for people with weakened immune systems.

### How is the virus spread?

Different viruses that cause viral meningitis are spread in different ways. Enteroviruses, the most common cause of viral meningitis, are most often spread through direct contact with an infected person's stool—usually among small children who are not yet toilet trained or adults changing the diapers of an infected infant.

Enteroviruses and other viruses can also be spread through direct or indirect contact with respiratory secretions of an infected person. This usually occurs through kissing or shaking hands with an infected person or by touching something they have handled and then touching your own nose or mouth. The viruses can also remain on surfaces for days and can be transferred from objects. Viruses also can spread directly when infected hosts cough or sneeze and send droplets containing the virus into the air we breathe. The time period from infection until symptoms develop is usually between three and seven days for enteroviruses. An infected person is usually contagious from the time they develop symptoms until the symptoms go away. Young children and people with compromised immune systems may spread the infection even after symptoms have resolved.

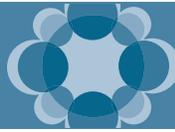
### Can I get viral meningitis if I'm around someone who has it?

If you are around someone with viral meningitis, you may be at risk of becoming infected with the same virus that made them sick. However, the chances are small developing meningitis as a complication of the illness.

### How can I reduce my chances of becoming infected with viruses that can lead to viral meningitis?

Viral meningitis most commonly results from infection with enteroviruses. However, there are other causes, such as measles, mumps, and chickenpox. Viral meningitis can also be caused by viruses that are spread by mosquitoes and other insects that bite people. To help reduce your chances of becoming infected with a virus or of passing it on to someone else:

- Wash your hands thoroughly and often. This is especially important after changing diapers, using the toilet, or coughing or blowing your nose into a tissue.
- Cleaning contaminated surfaces with soap and water and then disinfecting them with a dilute solution of chlorine-containing bleach may decrease the spread of viruses.
- Cover your cough with a tissue or, if you do not have a tissue, cough into your upper arm. After using a tissue, place it in the trash and wash your hands.
- Avoid kissing or sharing a drinking glass, eating utensil or other such items with sick individuals or with others when you are sick.



- **Get vaccinated**, including the recommended childhood vaccination schedule to protect children against diseases that can lead to viral meningitis. These include vaccines against measles, mumps and chickenpox.
- Avoiding bites from mosquitoes and ticks that carry diseases that infect humans may help reduce your risk for viral meningitis. If you have a rodent infestation in or around your home, follow recommended cleaning and control precautions.

For information from the CDC visit: [www.cdc.gov/meningitis/index.html](http://www.cdc.gov/meningitis/index.html).

Article and photo adapted from Centers for Diseases Control and Prevention

## Meningococcal Disease: FAQs

### What is meningococcal disease?

Meningococcal disease can refer to any illness that is caused by the type of bacteria called *Neisseria meningitidis*, also known as meningococcus [muh-ning-goh-KOK-us]. These illnesses are often severe and include infections of the lining of the brain and spinal cord (meningitis) and bloodstream infections (bacteremia or septicemia). Meningococcus bacteria are spread through the exchange of respiratory and throat secretions like saliva (e.g., by living in close quarters, kissing). Meningococcal disease can be treated with antibiotics, but quick medical attention is extremely important. Keeping up to date with recommended vaccines is the best defense against meningococcal disease.

### What is meningococcal meningitis?

Meningitis is an inflammation of the covering of the brain and spinal cord. Meningitis can be caused by many different viruses and bacteria. Meningococcal meningitis is a type of meningitis caused by the bacterium *Neisseria meningitidis*. It is rare in countries like the United States where meningococcal vaccine is part of the routine vaccination schedule for adolescents.

### What causes meningococcal disease?

There are several different types of *Neisseria meningitidis* bacteria, which can cause meningitis. Four of the five most common types of these bacteria are preventable by vaccines.

### Who is most likely to get meningococcal disease?

The disease is most common in infants and those with certain medical conditions, such as people without a spleen or with blood disorders. People at risk also include adolescents, in particular, youth living in close quarters, as well as the elderly and travelers to countries where meningococcal disease is common.

Other factors that make it more likely an individual will develop meningococcal disease include having an underlying chronic illness, and being exposed to cigarette smoke (either directly or second-hand).

### How is meningococcal disease spread?

*Neisseria meningitidis* bacteria are spread from person to person by contact with an infected person's saliva or respiratory droplets. About 10 percent people harbor this type of bacteria in the back of their nose and throat with no signs or symptoms and never develop an illness. People with prolonged or close contact such as persons in the same household, roommates, or anyone with direct contact with a patient's oral secretions, meaning saliva or spit, are at increased risk of becoming infected.

The bacteria cannot live for more than a few minutes outside the body, so these bacteria are less contagious than germs that cause the common cold or the flu. The bacteria are not spread by casual contact or by simply breathing the air where a person infected with meningococcal disease has been.

### What are the symptoms of meningococcal disease?

Symptoms of meningococcal meningitis in adults may differ from those in children:

#### Common symptoms in infants:

- Fever
- Irritability
- Vomiting
- Poor eating
- Hard to awaken
- Bulging fontanel (soft spot) on head

#### Common symptoms in adults:

- High fever
- Severe headache
- Stiff neck
- Confusion
- Nausea, vomiting
- Lack of appetite
- Sensitivity to bright light
- Sleepiness or trouble waking up

Persons with meningococcal disease may develop a rash. Since meningococcal disease can have severe complications and be fatal, it is important to see a health care provider immediately if you think you or your child has symptoms of meningococcal disease.

### How is meningococcal disease diagnosed?

If meningococcal disease is suspected, samples of blood or cerebrospinal fluid (surrounding the spinal cord) are collected and sent to the laboratory for testing.

*continued next page*



## How is meningococcal disease treated?

Health care providers prescribe antibiotics to treat meningococcal disease. People with meningococcal disease are no longer infectious and able to spread it to others after taking an appropriate antibiotic for 24 hours. People may also need advanced medical care, which could include treatment in an intensive care unit.

## What steps can I take to lower my chances of becoming infected or infecting others?

Keeping up to date with recommended immunizations is the best defense against meningococcal disease. Maintaining healthy habits, like getting plenty of rest and avoiding close contact with people who are sick, may also help.

Meningococcal vaccines protect against most types of meningococcal disease, although they do not prevent all cases. There are two types of vaccines that protect against meningococcal disease available in the U.S.—meningococcal polysaccharide vaccine and meningococcal conjugate vaccine. The most effective way to prevent meningococcal disease is for children and persons in high-risk populations to receive the meningococcal vaccine.

## Who needs to be vaccinated?

Routine vaccination with a meningococcal disease vaccine is recommended for adolescents aged 11 or 12 years, with a booster dose at age 16 years. The following adult populations are at risk for meningococcal disease: college freshmen living in dormitories who were not previously immunized, microbiologists who are routinely exposed to *N. meningitidis*, military recruits, persons who travel to or reside in countries in which *N. meningitidis* is hyperendemic or epidemic, persons who have terminal complement component deficiencies, and persons who have functional or anatomic asplenia. Adults who have human immunodeficiency virus (HIV) type 1 infection are also at increased risk for meningococcal infection, and vaccination should be considered in this group as well.

## At what age should preteen or teens get vaccinated?

All 11-12 years olds should be vaccinated with meningococcal conjugate vaccine (Menactra® or Menveo®). A booster dose should be given at age 16 years. For adolescents who receive the first dose at age 13 through 15 years, a one-time booster dose should be administered, preferably at age 16 through 18 years, before the peak for increased risk. Adolescents who receive their first dose of meningococcal vaccine at or after age 16 years do not need a booster dose.

## Why is a booster shot being recommended now?

When meningococcal conjugate vaccine was first recommended for adolescents in 2005, the expectation was that protection would last for ten years; however, currently available data suggest protection

declines in most adolescents within five years. Based on this information, a single dose at the recommended age of 11 or 12 years may not offer enough protection through the adolescent years when risk for meningococcal infection is highest (16 through 21 years of age). High-risk adolescents will have increased protection after having a booster dose.

## What if my child is about to start college and got their first dose more than 5 years ago?

For the best protection, we recommend that your child receives a booster dose. Meningococcal vaccination is required to attend many colleges. The Advisory Committee on Immunization Practices (ACIP) suggests that your child receive the vaccine less than five years before starting school.

## How soon after the first dose of vaccine can the booster dose be given?

Adolescents age 16 through 18 years can get the booster dose at any time. The minimum interval between doses is eight weeks.

## Are there safety concerns with getting a booster dose?

Available data suggests that the booster dose is very safe, but vaccine safety will continue to be monitored.

## As an adult, do I need it?

You should get meningococcal vaccine if:

- You are a first-year college student living in a residence hall
- You are a military recruit
- You have a damaged spleen or your spleen has been removed
- You have terminal complement deficiency
- You are a microbiologist who is routinely exposed to *Neisseria meningitidis* (the causal pathogen)
- You are traveling or residing in countries in which the disease is common.

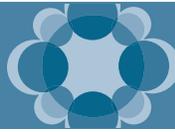
## Does my infant or child need this vaccine?

Meningococcal conjugate vaccine is recommended for certain children at increased risk from ages two months through ten years.

If you have any questions, please contact your health care provider. For additional information on vaccine recommendations visit: [www.floridahealth.gov/diseases-and-conditions/vaccine-preventable-disease/meningococcal-disease/index.html](http://www.floridahealth.gov/diseases-and-conditions/vaccine-preventable-disease/meningococcal-disease/index.html).

For information from the Centers for Disease Control and Prevention (CDC) visit: [www.cdc.gov/meningococcal/about/index.html](http://www.cdc.gov/meningococcal/about/index.html).

*Article adapted from Centers for Diseases Control and Prevention*



# Infant Immunizations: Tdap and Cocooning

These vaccination publications, and many more are available as Adobe Acrobat PDFs as a download from the Immunization Section website. Visit our publications page at: [www.floridahealth.gov/programs-and-services/immunization/publications/index.html](http://www.floridahealth.gov/programs-and-services/immunization/publications/index.html). Check back often as we will be adding to our publications gallery.

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# SUMMER TRAVELS

**Bring Home Memories—Not Diseases**

**Immunizations Can Protect You From Many Diseases Common in Other Countries**

Preparation for foreign travel should include a visit to your healthcare provider to talk about health safety at your travel destination for you and your family.

**Ask about:**

- Getting an appointment for immunization 4-6 weeks in advance of departure.
- Routine vaccinations recommended or required for any one specific country.
- Personal health issues, which may increase your risks for disease or complications.
- A personal immunization record card of immunization dates.

Immunizing before your trip will help prevent introduction of vaccine-preventable diseases into your community upon return home.

**FOR MORE INFORMATION, CALL 850-245-4342 OR VISIT [WWW.IMMUNIZEFLORIDA.ORG](http://WWW.IMMUNIZEFLORIDA.ORG). FOR INFORMATION REGARDING INTERNATIONAL TRAVEL, VISIT [WWW.CDC.GOV/TRAVEL](http://WWW.CDC.GOV/TRAVEL).**

Immunizing Florida. Protecting Health.

**Visiting Another Country? Protect Your Family.**

**Think Measles**

Measles is a serious viral disease that is easily spread through the air by breathing, coughing, or sneezing.

**Before You Travel**

Talk with your healthcare provider if you are planning an international trip. Measles is common in many countries worldwide, with outbreaks reported in Europe, Africa, and Asia. Measles is common in many areas of the United States. Children 12 months of age or older should have two doses, separated by at least 28 days. Adults should review their vaccination records to ensure they are up-to-date.

**After You Travel**

Call your healthcare provider if anyone gets a fever and rash within 3 weeks of returning from your trip. Describe your symptoms and where you traveled.

**FOR MORE INFORMATION, CALL 850-245-4342 OR VISIT [WWW.IMMUNIZEFLORIDA.ORG](http://WWW.IMMUNIZEFLORIDA.ORG). FOR INFORMATION REGARDING INTERNATIONAL TRAVEL, VISIT [WWW.CDC.GOV/TRAVEL](http://WWW.CDC.GOV/TRAVEL).**

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