Common Communicable Diseases of Children





DeKalb County Board of Health
Decatur, Georgia
June 2009

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DeKalb County Board of Health
445 Winn Way
Decatur, GA 30030
404-294-3700
http://www.dekalbhealth.net/index.html

<u>Photos on front cover</u> (clockwise from top left): ringworm (a kerion); measles; herpes simplex; impetigo

Photos courtesy of Dermnet.com and Logical Images, Inc.

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DeKalb County Board of Health Contact Information

Disease Reporting

 Office of Infectious Diseases Coordinator 	(404) 508-7851
Office of Infectious Diseases Nurse	(404) 294-3854
Office of Infectious Diseases fax number	(404) 508-7813
 Health Assessment and Promotion switchboard 	(404) 508-7847
Immunization Information	(404) 294-3762
Birth/Death Certificates	(404) 294-3783
Dental Health Clinic (T. O. Vinson Health Center)	(404) 508-7890
Volunteer Services	(404) 294-3792
General Information	(404) 294-3700

DeKalb County Board of Health Centers

1. Eleanor L. Richardson Health Center

445 Winn Way, Decatur, GA 30030

Main: (404) 294-3700 Fax: (404) 294-3883

2. T.O. Vinson Health Center

440 Winn Way, Decatur, GA 30030

Main: (404) 294-3762 Fax: (404) 508-7941

3. East DeKalb Health Center

2277 S. Stone Mountain-Lithonia Road, Lithonia, GA 30058

Main: (770) 484-2600 Fax: (770) 484-0155

4. North DeKalb Health Center

3807 Clairmont Road, Chamblee, GA 30341

Main: (770) 454-1144 Fax: (770) 234-0022

5. South DeKalb Health Center (Clifton Springs)

3110 Clifton Springs Road, Decatur, GA 30034

Main: (404) 244-2200 Fax: (404) 244-2209

6. Kirkwood Health Center

30 Warren Street, Atlanta, GA 30317

Main: (404) 370-7360 Fax: (404) 370-7379

Information on Illness (General)

Signs and Symptoms of Communicable Illness

Any of the signs and symptoms below may indicate the beginning of an acute illness. Isolate the child and arrange to send him/her home, if possible.

- 1. Flushed face, not related to exercise or other physical activity.
- 2. Runny nose, excessive sneezing or coughing, sore throat, earache, swollen glands.
- 3. Watery or glassy appearance of eyes.
- 4. Unexpected sweating, pallor, blueness of lips or fingernails.
- 5. Rash, "bumps" or other skin changes, including discharge such as pus.
- 6. Body temperature above 100° F orally on repeated checks.
- 7. Abdominal pain, nausea, vomiting and diarrhea.
- 8. Pain on urination.
- 9. Swelling of any part of the body.
- 10. Stiff neck.
- 11. Sudden onset of severe headache.

Many illnesses are most communicable during the one or two days before and the first few days after symptoms appear. For more information, consult with the Office of Infectious Diseases, DeKalb County Board of Health, at (404) 508-7851.

General Illness Prevention Measures

Most communicable diseases can be prevented through basic infection control measures such as regular hand-washing, practicing respiratory etiquette (covering coughs and sneezes), and proper disinfection of high touch/high traffic surfaces.

The Teacher Should

Observe children daily for signs of illness. Remove a sick child from the student population as promptly as possible and arrange to have him/her sent home.

The Parent Should

Observe sick child at home until he or she is well. Encourage good hand-washing and respiratory etiquette.

School Personnel Should

If sick, be encouraged to remain at home until he or she is well. Practice good hand-washing and respiratory etiquette.

For some illnesses, permission from the child's physician or the DeKalb County Board of Health is recommended for readmission to child care or school. Please see individual diseases for more specific information.

Acute Viral Rhinitis (The Common Cold)

Signs and Symptoms

Runny nose, sneezing, cough, lethargy, muscle aches, irritability, irritation of the nose and throat. These signs and symptoms are also often early signs of other illnesses. Fever is uncommon in children over 3 years of age and rare in adults.²

Cause

Rhinoviruses are the most common cause of colds. Other viral causes include adenoviruses and coronaviruses.

Transmission

Direct contact with or inhalation of respiratory droplets. Spread can also occur through contact with items freshly contaminated with the nasal or throat secretions of an infected individual, e.g., hands, clothing, toys, utensils, etc.

Incubation period

Varies, depending on the viral agent. The average incubation period is usually 2 to 3 days, but can last as long as 7 to 10 days.¹

Period of Communicability

Varies by agent, but viral shedding from the nose and throat is greatest during the first 2 to 3 days of the infection and usually stops in 7 to 10 days.¹

Treatment

Only symptomatic treatment is given.

Child Care/School Attendance

If the child has a fever or complications, he/she should see a physician. After seeing a physician, a child having a fever should remain at home until the temperature has been normal for 24 hours

Preventive Measures

Proper hygiene including meticulous hand-washing, covering the mouth and nose when coughing and sneezing, and proper disposal/decontamination of items used to collect nasal and throat secretions, e.g., tissues, handkerchiefs, towels, bulb syringes, etc.

Bacterial Gastroenteritis

(Campylobacter, Pathogenic E. coli, Salmonella, Shigella and Yersinia)

Signs and Symptoms

Sudden onset of diarrhea, abdominal pain, fever, vomiting, headache and/or malaise. *Campylobacter* and some species of pathogenic *E. coli* and *Shigella* may produce bloody stool. *Yersinia* infection in young children may also produce bloody stool.¹

Cause

Bacterial.

Transmission

- Contact with stool from an infected individual or ingestion of contaminated food, beverages, or recreational water.
- Some pathogenic strains of *E. coli* (such as *E. coli* 0157:H7) have been associated with the consumption of under-cooked ground beef, contaminated water or produce, as well as unpasteurized juices and dairy products.
- Campylobacter is associated with the consumption of under-cooked poultry or poultry products as well as exposure to infected pets, particularly puppies, kittens, and birds.
- Salmonella infection is associated with the ingestion of under-cooked chicken, eggs
 and egg products, and contaminated water and produce. Contact with infected animals
 including pet turtles, iguanas, lizards, snakes, birds, and frogs is also a possible mode
 of transmission for Salmonella.¹
- Young children are often infected with *Yersinia* due to cross-contamination resulting from the preparation of pork chitterlings or other pork products.
- Shigella is exclusively a human infection. Shigella is very contagious and is frequently the cause of diarrheal outbreaks in child care centers and elementary schools.

Incubation Period

Campylobacter	1 to 7 days or longer
Pathogenic <i>E. coli</i>	For most strains, 10 hours to 6 days; for <i>E. coli</i>
_	O157:H7, the incubation period is 3 to 4 days, but
	can range from 1 to 8 days. ¹
Salmonella	12 to 36 hours with an average of 6-72 hours ¹
Shigella	1 to 7 days with an average of 2 to 4 days ¹
Yersinia	Average of 4 to 6 days, varying from 1 to 14 days ¹

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Period of Communicability

Campylobacter	Person-to-person spread is uncommon, however it has been reported among young children in child care facilities. The bacteria can persist in the stool of infected individuals for 2 to 3 weeks. ¹
Pathogenic <i>E. Coli</i>	Adults typically shed the bacteria in their stool for about 1 week; children for approximately 3 weeks. Prolonged shedding is uncommon. ²
Salmonella	Transmission is possible for as long as bacteria remain in the stool. This timeframe is variable; the bacteria can be shed for several days to several weeks. May be prolonged in infants. 1,2
Shigella	Transmission is possible for as long as bacteria remain in the stool. Shedding of the bacteria from the stool usually resolves within 3 weeks, even without antibiotic therapy. Chronic shedding (>1 year) is uncommon.
Yersinia	Person-to-person transmission is rare. Fecal shedding of the bacteria occurs for at least as long as the child is symptomatic, approximately 2-3 weeks. Untreated cases may shed the bacteria for 2-3 months.

Treatment

Refer child to physician for proper diagnosis and treatment.

Child Care/School Attendance

- Children with Shigella aged 5 years and younger should be excluded from child care or school until two negative successive stool cultures collected at least 24 hours apart are obtained. Students aged 6 years and older should be excluded until fever and diarrhea have resolved.¹
- In cases of Salmonella typhi (typhoid fever), exclusion from child care or school should occur for children under the age of 5 years until 3 negative successive stool cultures (collected at least 48 hours after antibiotic therapy has ended) are obtained. Children 5 years of age and older infected with S. typhi may return to

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school after 24 hours without a diarrheal stool. Children with all other forms of Salmonella may return to school as long as diarrhea and fever have been absent for at least 24 hours.¹

- Children with pathogenic *E. coli* should be excluded until diarrhea has resolved and 2 negative successive stool cultures (collected at least 24 hours apart) are obtained.
- Children with Yersinia and Campylobacter should not be excluded unless diarrhea and/or fever are present.¹

Preventive Measures

- Proper hand-washing and personal hygiene. Children and staff should be reminded to wash hands after using the restroom or changing diapers, and before eating or preparing meals/snacks.
- Only pasteurized juices and dairy products should be served.
- Practice safe handling of raw meat, meat products, and eggs.
- All ground meat and chicken should be cooked thoroughly until no pink meat remains and juices run clear.¹
- Proper disposal of diapers and baby wipes as well as thorough cleaning of clothing, mats, towels, toys and other items contaminated with fecal material.

Chicken Pox (Varicella-Zoster virus)

Signs and Symptoms

Initial infection begins with sudden onset of fever that coincides with a rash on the surface of the skin.^{1,2} The bumps are initially vesicular (fluid-filled) for 3-4 days and then form pustules (pus-filled lesions) and scab or crust over. As the illness progresses, the skin lesions often appear with several stages of maturity at the same time, e.g., raised bumps, vesicles, and scabs. The skin lesions tend to be more numerous on covered, rather than exposed, areas of the body.²



Vesicles
Photo courtesy of DermNet.com

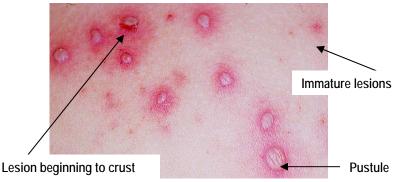


Photo Courtesy of Dr. CW Leung of the Department of Pediatrics and Adolescent Medicine, Princess Margaret Hospital, Hong Kong

Cause

Varicella-Zoster virus

Transmission

Person to person by contact with respiratory droplets (e.g., through coughing, sneezing, or from a runny nose) or by direct contact with chicken pox lesions.

Incubation Period

Usually 14 to 16 days; occasionally as early as 10 days or as late as 21 days.

Period of Communicability

Patients are most contagious from 1 to 2 days before onset of rash until all lesions are crusted (usually about 5 days).

Treatment

Child's parents should contact his/her pediatrician for instructions. Children with chicken pox should NOT be given salicylates (aspirin or medications containing aspirin) because administration of such medications increases the risk of Reye

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Syndrome. The physician may prescribe antiviral medication.

Child Care/School Attendance

The child should be excluded from child care and/or school until all the lesions have formed scabs. Other children in the family may attend child care/school, but should be excluded at the <u>first</u> sign of illness.

Preventive Measures

- The Varicella vaccine is the best way to prevent chicken pox. Vaccination not only protects those who receive the vaccine, it also reduces the risk for exposure in individuals who are unable to be vaccinated because of illness or other conditions, e.g., those who are immunocompromised. "While no vaccine is 100% effective in preventing disease, the chicken pox vaccine is very effective: about 8 to 9 of every 10 people who are vaccinated are completely protected from chicken pox." In addition, the vaccine reduces the risk of severe disease in those who do become infected, producing a milder course of illness.
- Per the Advisory Committee on Immunization Practice (ACIP), two doses of varicella vaccine are recommended for children. The first dose should be given between 12 and 15 months of age. The other dose should be given between the ages of 4 and 6 years, before the child enters kindergarten or first grade.⁴
- Susceptible individuals who are exposed to chicken pox can receive varicella vaccine as post-exposure prophylaxis, provided there are no contraindications for its use. When administered within 3 to 5 days following exposure to chicken pox, the vaccine can prevent or modify the disease. In exposed individuals who cannot receive the varicella vaccine, VariZIG, IGIV or acyclovir can be considered to prevent illness.¹
- Children who have not been immunized for chicken pox should receive the vaccine within 3 to 5 days of exposure OR be excluded from child care or school from the 10th to the 21st day following exposure to the last person with chicken pox at the affected school.¹

Report to the DeKalb County Board of Health unusually high numbers of cases and/or cases with prolonged illness.

Conjunctivitis (Pink eye)

Signs and Symptoms

Pinkness or redness of the mucous membranes that cover the eyelid and extend over the white portion of the eye. May exhibit a white or yellowish discharge and the child may complain of eye pain.

Cause

Bacteria, viruses, fungi and allergies. If bacterial, *Haemophilus influenzae*, Streptococcus pneumoniae, and Staphylococcus are common sources of infection.¹

Transmission

Contact with discharge from the eyes or upper respiratory secretions of an infected individual, or by contact with contaminated fingers, clothing, make-up, eye drops, etc.

Incubation Period

Varies depending on causative agent.



Photo courtesy of CDC Public Health Library

Period of Communicability

Varies depending on causative agent. Infected individuals should be considered contagious until symptoms resolve completely.¹

Treatment

Students with conjunctivitis should be evaluated by their physician. Bacterial and fungal infections will require treatment with an antimicrobial agent.

Child Care/School Attendance

Infected students should be allowed to return to school 24 hours after the appropriate antimicrobial treatment is initiated. Students who show signs of more serious illness, e.g. fever, should be excluded until symptoms have resolved. Students with behavioral or developmental problems that make proper hand hygiene and avoidance of close contact with students difficult or impossible should also be excluded until symptoms resolve.¹

Preventive Measures

Meticulous hand-washing and regular disinfection of high touch/high traffic surfaces. Discourage students from sharing personal items, e.g., eye make-up/applicators, towels, etc. Monitor students for signs and symptoms of pink eye.

Cryptosporidiosis ("Crypto")

Signs and Symptoms

Cryptosporidium typically causes frequent, watery, non-bloody diarrhea. Other symptoms may include stomach cramps, fatigue, poor appetite, vomiting, and fever. Fatigue and fever are particularly common in children with cryptosporidiosis. Symptoms such as diarrhea may come and go for up to 30 days.

Cause

The parasitic protozoa Cryptosporidium, known as "Crypto."

Transmission

Ingestion of the Crypto parasite. Crypto may be found in soil, food, water, or on surfaces that have been contaminated with the feces of infected humans or animals. Cryptosporidium outbreaks have been associated with contamination of municipal water supplies and swimming pools.

Incubation period

Seven days with a range of 2 to 14 days.

Period of Communicability

Depending on species, *Cryptosporidium* can be shed in the stool of an infected individual from 7 days to 2 weeks.¹ "Person-to-person transmission occurs and can cause outbreaks in childcare centers."¹

Treatment

Refer to a physician for diagnosis and treatment.

Child Care/School Attendance

The child should not be excluded from childcare/school if under treatment unless the child is experiencing fever or diarrhea. Children with Crypto should be excluded from water play and swimming for an additional 2 weeks after diarrhea has resolved.⁵

Preventive Measures

Thorough hand-washing after toileting, changing diapers and before eating or preparing meals and snacks is essential to preventing the spread of illness.

IMPORTANT: Crypto is NOT killed by alcohol gel or hand sanitizers.5

Report all cases to the DeKalb County Board of Health.

Fifth's Disease (Erythema infectiosum, "Slapped Cheek Disease")

Signs and Symptoms

Characteristic erythematous (red) rash that appears on the cheeks giving a "slapped face" appearance. The facial rash is often accompanied by a lace-like rash that appears on the trunk and extremities.² The rash may be preceded by a brief non-specific illness characterized by fever, malaise, muscle ache, and headache. The rash may be itchy and fluctuate in intensity in response to environmental factors such as temperature and exposure to sunlight.¹



Photo courtesy of DermNet.com



Photo courtesy of DermNet.com

Cause

Parvovirus B19.

Transmission

Contact with respiratory secretions, exposure to blood and blood products, and from mother to fetus

Incubation Period

Usually 4 to 14 days, but can be as long as 21 days.

Period of Communicability

Before onset of rash; not communicable after rash appears (except in those with aplastic anemia, who may be communicable for extended periods of time).

Treatment

Supportive.

Child Care/School Attendance

Children with visible rash <u>can</u> attend school because they are no longer contagious. Only exclude if fever is present.

Preventive Measures

Adequate hand-washing and proper disposal of facial tissue. Pregnant women, immuno-compromised individuals, and those with sickle cell disease who have been exposed to Fifth's disease should contact their physician.

Giardiasis

Signs and Symptoms

Foul-smelling, greasy diarrhea that is often accompanied by gas, stomach cramps, fatigue, and weight loss.

Cause

The parasite Giardia lambia.

Transmission

Giardiasis is spread from person to person when a person touches the stool of (or an object contaminated with the stool of) an infected person and then ingests the parasite.⁶

Incubation Period

One to 4 weeks with an average of 7-10 days. 1,2

Period of Communicability

Entire period of infection, often months.²

Treatment

Suspected cases should be referred to a physician for diagnosis and treatment.

Child Care/School Attendance

Exclude any child from childcare and/or school until diarrhea is resolved. Children with Giardiasis should be excluded from water play and swimming activities for 1 week after diarrhea has resolved.⁶

Preventive Measures

Meticulous hand-washing, especially between diaper changes and before eating and preparing meals and snacks. After each use, clean and disinfect toys that children can put in their mouths. Do not use portable wading pools.

Report all cases to the DeKalb County Board of Health.

Hand, Foot and Mouth Disease (HFM)

Signs and Symptoms

Illness begins with a fever, sore throat, poor appetite, and malaise. One to 2 days later, painful sores develop in the mouth. The lesions begin as small red spots that blister and often become ulcers, usually located on the tongue, gums, and inside the cheeks. A non-itchy rash may also develop. The rash has flat or raised red spots, sometimes with blisters. The rash may be found on the



Photo courtesy of DermNet.com

palms of the hands and soles of the feet; it may also appear on the buttocks and/or genitalia. A person infected with HFM may have only the rash or only the mouth sores.



Photo courtesy of DermNet.com

Cause

Coxsackievirus or other enteroviruses.2

Transmission

Direct contact with nose and throat secretions, blister fluid, and feces of infected persons.

Incubation Period

Three to 6 days.

Period of Communicability

Infected persons are most contagious during the first week of illness and possibly longer as viral shedding can occur in the absence of clinical symptoms. The virus may persist in the stool of infected individuals for several weeks.^{1,2,7}

Treatment

No specific treatment is available; only supportive therapy is given.

Child Care/School Attendance

If the child has a fever or complications resulting from illness, he/she should see a physician. A child with a fever should remain at home until the temperature has been normal for 24 hours.

Preventive Measures

Meticulous hand-washing, particularly after diaper changing and using the toilet. Proper disposal of tissues, diapers and baby wipes. Proper cleaning and disinfection of items shared by children, e.g., towels, mats, toys, etc.

Hepatitis A

Signs and Symptoms

Hepatitis A infection in children often causes only mild illness or no illness at all. In fact, only 30 percent of infected children under 6 years of age will show symptoms. Conversely, 70 percent of older children and adults infected with Hepatitis A are symptomatic. Symptoms include: jaundice (yellowing of the skin and whites of the eyes), fever, malaise, appetite loss, nausea, vomiting, abdominal pain, and dark or tea-colored urine.¹

Cause

Hepatitis A virus (HAV).

Transmission

Fecal-oral route. HAV can cause large-scale disease outbreaks when food or water is contaminated by human sewage. HAV also can cause outbreaks in childcare centers, where asymptomatic infected children can spread the virus to others.

Incubation Period

Fifteen to 50 days with an average of 30 days.

Period of Communicability

Communicable 1 to 2 weeks before the onset of symptoms and until a week after the onset of jaundice. The virus is present in the stool and may contaminate the hands of infected individuals who, in turn, may contaminate objects and food that are handled.

Treatment

Refer to a physician. HAV infection can be confirmed only through a blood test.

Child Care/School Attendance

Child should be excluded until a physician determines the child is no longer contagious.

Preventive Measures

Good personal hygiene and hand-washing are important in preventing the spread of the virus, particularly after each visit to the toilet and before preparing or eating food. Children with acute HAV infection who attend child care should be excluded for one week after the start of symptoms. Also, adults with acute HAV infection who work in child care or who handle food should be excluded for one week after symptoms appear. Depending on age, immunoglobulin or Hepatitis A vaccine is recommended to protect household and other close personal contacts of the infected individual.

Herpes Simplex virus ("Cold Sores," "Fever Blisters")

Signs and Symptoms

Clear vesicular (fluid-filled) lesion(s) on the surface of the skin, usually the face or lips.



The lesions have a reddened base and crust and heal within days. Once an individual is infected with herpes simplex virus (HSV-1), the virus remains in that person's body in a latent (inactive) form for life. Reactivation of the virus (i.e., return of lesions) can occur as a result of factors such as trauma, stress, immunocompromise, food allergies, and pregnancy.^{1,2}

Photo courtesy of Dr. Heddie O. Sedano, DDS University of California Los Angeles (UCLA) Dental School

Cause

Herpes simplex virus 1 (HSV-1).



Photo courtesy of DermNet.com

Transmission

Contact with the saliva of carriers of HSV-1 or direct contact with lesions caused by the virus.

Incubation Period

Two days to 2 weeks.

Period of Communicability

While unhealed lesions are present.

Treatment

Consult with physician, especially for primary (first) infection. Various prescription and over-the-counter medications are available that may shorten the duration of lesions and/or relieve discomfort.

Child Care/School Attendance

Exclude until all lesions are scabbed over.

Impetigo

Signs and Symptoms

Initial signs include red or pimple-like lesions surrounded by inflamed skin. These sores can be located anywhere on the body, but occur most commonly on the face, arms, and legs. The sores fill with pus, then break open after a few days and form a thick crust. Impetigo is most common in children between the ages of 2 and 6. Infection usually occurs when bacteria enter through a break in the skin, such as a cut, scratch or insect bite.⁸



Photo Courtesy of DermNet.com

Cause

Bacteria: Staphylococcus and Streptococcus.

Transmission

By direct contact with sores of or nasal discharge from an infected person or indirectly by contact with articles recently soiled by discharge from the lesions.

Incubation Period

Variable, from 1 to 10 days.

Period of Communicability

Impetigo is contagious as long as the skin lesions continue to drain.2

Treatment

Child should be treated with an appropriate oral or topical antibiotic as prescribed by a physician.

Child Care/School Attendance

Exclude children until lesions are under treatment with an appropriate antibiotic for at least 24 hours

Preventive Measures

Promptly manage cuts or scratches using appropriate first aid. Prevent insect bites by using protective clothing and insect repellants according to the manufacturer's label. Children with insect bites may scratch, allowing the bacteria to enter through the skin. Once infection has occurred, prompt treatment of the initial lesion with an appropriate topical or oral antibiotic as prescribed by a physician.

Report to the DeKalb County Board of Health unusually high numbers of cases and/or cases with a prolonged course of illness.

Infectious Mononucleosis

Signs and Symptoms

Fever, sore throat (often with a pus-like discharge), enlarged lymph nodes in the neck region, enlarged spleen. Illness is usually milder in children than in young adults, and can

last from one to several weeks.2

Cause

Epstein-Barr virus is the most common cause.

Transmission

Person to person via direct contact with saliva. The virus is occasionally transmitted by blood transfusion.1

Incubation Period

From 4 to 6 weeks.

Period of Communicability

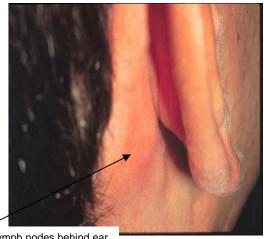
Exact length of communicability is unknown; may be prolonged, i.e. virus may persist in throat and respiratory tract for many months after infection.1

Diagnosis and Treatment

Refer to a physician for diagnosis and treatment.



Photos Courtesy of DermNet.com



Enlarged lymph nodes behind ear

Child Care/School Attendance

Child should be excluded from child care/school until he/she has been without fever for 24 hours. A physician statement is recommended for readmission to child care or school.

Preventive Measures

Regular hand-washing can interrupt spread of the virus. Avoid direct contact with the saliva of an infected individual (such as through kissing or sharing drinking cups/glasses and silverware).

Influenza (The Flu)

Signs and Symptoms

Sudden onset of high fever, chills, headache, muscle aches, fatigue, cough, sore throat and runny nose. Illness lasts from two to seven days. Nausea, vomiting, and diarrhea can also occur, most commonly in children. In the U.S., the influenza "season" runs from October to May, but influenza cases have been identified throughout the year. Outbreaks are common in institutional settings, such as schools, nursing homes and jails.

Cause

Influenza A and B viruses.

Transmission

Transmitted from person to person by direct contact with droplets from nose, eyes or mouth, or by hands or other articles contaminated with nose and throat secretions.

Incubation Period

One to 3 days.

Period of Communicability

A person is communicable for 24 hours before the onset of influenza symptoms and up to 5 days after becoming sick. Children may be contagious for longer than 7 days. During an outbreak of influenza, the highest illness rate occurs in school age children.¹

Treatment

Antiviral medication started <u>within 48 hours of onset</u> of influenza illness can reduce symptoms and virus shedding in respiratory secretions.

Child Care/School Attendance

A child with influenza should remain at home during the first days of illness when symptoms are most severe and the infection is most contagious. A child can return to child care and/or school when symptoms have improved and he/she has been fever-free for at least 24 hours.

Preventive Measures

Per Advisory Committee on Immunization Practices (ACIP) guidelines, annual vaccination of all children aged 6 months to 19 years is recommended. Children should be vaccinated every September or as soon as vaccine is available. In addition, household contacts and out-of-home caregivers (including childcare center staff) of children less than 6 months

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of age should receive annual influenza vaccine, as these children are too young to be vaccinated.9

Other preventive measures include:

- Practice meticulous hand-washing.
- Avoid touching eyes, nose and mouth, and discourage students from doing so.
- Cover coughs and sneezes with a tissue, or cough and sneeze into an elbow to avoid contaminating your hands. Wash your hands after coughing and sneezing!
- On a regular basis, clean and disinfect frequently touched surfaces, including doorknobs, telephones and faucets.

Report to the DeKalb County Board of Health unusually high numbers of cases and/or cases with a prolonged course of illness.

Intestinal Parasites (Tapeworms, Pinworms)

Signs and Symptoms

Persons infected with tapeworms often have no symptoms or they may complain of nausea, abdominal pain, and diarrhea. Tapeworm segments can be seen passing from the anus or in the feces. A child infected with pinworms may exhibit signs of restlessness and itching in the anal area.

Cause

Parasitic worms: *Taenia saginata* (beef tapeworm), *Taenia solium* (pork tapeworm), *Enterobius vermicularis* (pinworm).

Transmission

Fecal-oral route (ingestion of fecal particles of an infected person or animal, usually via contact with contaminated water, food or surfaces).

Incubation Period

Directly related to the type of parasite involved.

- Tapeworm-two to three months from ingestion of eggs.
- **Pinworm**-from ingestion of an egg until an adult female worm travels to the perianal area, approximately 2 to 8 weeks.

Period of Communicability

Beef tapeworms are not transmitted from person to person; infection occurs following ingestion of contaminated meat. The pork tapeworm is acquired by eating raw or undercooked infected pork.² It is unclear whether pork tapeworms are transmitted from person to person.¹ A person with pinworms remains infectious as long as the female worm is releasing eggs onto the anal area. Pinworm eggs remain infective in an indoor environment for approximately 2 to 3 days.

Diagnosis and Treatment

Refer to a physician for diagnosis and treatment.

Child Care/School Attendance

The child should not be excluded from child care/school, provided (s)he is being treated by a physician and is not experiencing fever, diarrhea or vomiting.

Preventive Measures

Thorough hand-washing after toileting and before meals is essential to prevent the spread of illness. Keeping children's fingernails short and clean is also helpful.

Measles (Rubeola)

Signs and Symptoms

Measles is an acute disease characterized by fever, cough, red and watery eyes and/or nasal congestion. A blotchy red rash appears on the third to seventh day of illness, starting around the face and hairline. The fever often increases when the rash appears. The rash lasts from 4 to 7 days. Koplik spots (small lesions with bluish or white centers) may be visible inside the mouth.

Cause

Measles virus.

Transmission

Airborne by droplet spread and by direct contact with nasal or throat secretions of infected individuals. May also be spread by contact with items freshly soiled with contaminated nose and throat secretions.² Measles is extremely contagious.



Photo Courtesy of Logical Images, INC.



Photo Courtesy of Logical Images, INC.

Incubation Period

Seven to 21 days from exposure to onset of fever (average of 10 days), and usually 14 days from exposure until appearance of rash.^{1,2}

Period of Communicability

From approximately 4 days before onset of rash to 4 days after rash appears.

Diagnosis and Treatment

Measles infection can be confirmed only through a blood test. Treatment is supportive.

Child Care/School Attendance

Children should be excluded from child care/school from the onset of symptoms and for four days after the appearance of the rash. Other children in the family may attend school if they are fully immunized for measles, but should be observed closely and excluded at the first sign of illness. Children who have not been vaccinated for measles

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should either be vaccinated within 72 hours of exposure or excluded from school for 3 weeks from the last case of measles.

Preventive Measures

Measles vaccine administered with 72 hours of exposure may provide protection in non-immune individuals (persons without a natural history of disease or record of complete immunization). Immunoglobulin (IG) can also be given to prevent measles in susceptible persons or for those who cannot receive the measles vaccine. IG must be given within 6 days of exposure.

Measles, mumps, and rubella (MMR) vaccine is routinely recommended for all children at 12 to 15 months of age, with a second dose at school entry (4 to 6 years of age).

<u>A single case of measles is considered a public health emergency.</u> Immediately report all cases to the DeKalb County Board of Health.

Meningitis, Bacterial

Sign and Symptoms

Meningitis is an acute illness characterized by sudden onset of fever, nausea and vomiting, headache, stiff neck, rash, delirium and coma. Bacterial meningitis can be fatal if not treated quickly.

Cause

Bacterial meningitis can be caused by different types of bacteria, such as pneumococcus, meningococcus, or *haemophilus influenzae* type B (Hib).

Transmission

By direct contact with droplets from the nose or throat of an infected person.

Incubation Period

Varies from 1 to 10 days, commonly 3 to 4 days.

Period of Communicability

From up to 7 days before symptom onset to 24 hours after the start of appropriate antibiotic treatment.

Treatment

Immediately refer the child to a physician for diagnosis and treatment.

Child Care/School Attendance

A letter or documentation from a physician is recommended for readmission.

Preventive Measures

Medication is recommended for household and other close contacts for only certain types of bacterial meningitis (meningococcal and Hib meningitis). A physician or the Board of Health should be contacted regarding the management of close contacts. General measures helpful in preventing the spread of any respiratory illness (covering coughs and sneezes, regular hand-washing) apply here.

Vaccines are available to protect against several types of bacterial infections that can result in meningitis. The Hib vaccine and the pneumococcal vaccine are recommended at 2, 4, 6, and 12-15 months of age. The meningococcal vaccine is recommended for certain high-risk children aged 2 to 10 years, and is routinely recommended for all children aged 11-18 years.¹¹

Immediately report all cases to the DeKalb County Board of Health.

Meningitis, Viral

Signs and Symptoms

Viral meningitis is an acute illness characterized by sudden onset of fever, nausea and vomiting, headache, and stiff neck. Sometimes a rash is present. Viral meningitis is rarely life-threatening, unlike bacterial meningitis.

Cause

Viral.

Transmission

Varies with the particular virus. May be transmitted through respiratory droplets, through the fecal-oral route, or through the bite of an infected tick or mosquito.

Incubation Period

Varies with the particular virus.

Period of Communicability

Varies; usually not longer than 7 days.

Diagnosis and Treatment

Refer child to a physician for diagnosis. The cause of meningitis (viral or bacterial) can be determined only through appropriate lab tests. Treatment is supportive.

Child Care/School Attendance

A child can return to child care or school when symptoms resolve. A letter from the child's physician is recommended for readmission.

Preventive Measures

Thorough hand-washing and disinfection of surfaces and toys. Prevent insect bites by using protective clothing and insect repellants (according to manufacturer's instructions).

Methicillin-resistant Staphylococcus aureus (MRSA)

Signs and Symptoms

Staphylococcus bacteria (or "staph") can cause a skin infection that may look like a pimple or boil. The infection can be red, swollen, and painful, and may have pus or other discharge. MRSA is a drug-resistant form of staph that can cause lesions commonly misidentified as

spider bites. MRSA can also cause more serious infections such as pneumonia, meningitis, and sepsis.

Cause

Staphylococcus aureus bacteria.

Transmission

By direct skin-to-skin contact or through hands contamin
Photo courtesy of DeKalb County Board of Health ated with fluid from a draining lesion. The infection also can be spread when an infected person uses and then shares an item with an uninfected person without first cleaning or sanitizing the item, like a towel, soap, razor, or athletic equipment.



Photo courtesy of DeKalb County Board of Health

Incubation Period

Variable and indefinite, usually 4 to 10 days.

Period of Communicability

As long as the lesion continues to drain.

Treatment

Children with lesions should be evaluated by their physician.

Child Care/School Attendance

A child with MRSA should not be excluded from child care or school, assuming any draining lesion is covered with a clean, dry dressing and the child exhibits good hygiene. Children with active lesions should be excluded from contact sports until the lesion dries up since it would be easy for a dressing to dislodge.

Preventive Measures

Encourage good hygiene and hand-washing; discourage athletes from sharing towels, equipment and personal items. All draining lesions should be covered with a clean, dry dressing.

Report to the DeKalb County Board of Health unusually high numbers of cases and/or cases with a prolonged course of illness.

Mumps

Signs and Symptoms

Mumps is an infectious disease characterized by swelling of one or more of the salivary glands, usually the parotid glands. At onset of illness, a person may have a fever followed by swelling near the angle of the jaw and in front of the ear. However, more than one-third of infections do not cause swelling.

Cause

Mumps virus.

Transmission

The virus is spread by direct contact with respiratory secretions.

Incubation Period

Usually 16 to 18 days, but cases may occur from 12 to 25 days after exposure. 1



Photo courtesy of CDC

Period of Communicability

From 3 days before symptoms appear to about 9 after illness onset.

Diagnosis and Treatment

A child suspected of having mumps should be evaluated by a physician. Mumps infection can be confirmed only through a blood test. Treatment is supportive.

Child Care/School Attendance

Children should be excluded from child care or school for nine days from the onset of the swelling. Children who have not been immunized for mumps should receive the vaccine immediately OR be excluded from the 12^{th} to the 25^{th} day following exposure to the last person with mumps at the affected school.

Preventive Measures

Mumps vaccine is recommended at 12 to 15 months of age with a second dose at 4 to 6 years of age.

Immediately report all cases to the DeKalb County Board of Health.

Norovirus ("Stomach Flu," Viral gastroenteritis)

Signs and Symptoms

Low-grade fever, vomiting, non-bloody diarrhea, dehydration, abdominal pain, muscle ache, and headache. Symptoms usually last 24-60 hours.

Cause

Norovirus.

Transmission

Norovirus is found in the stool and vomitus of an infected person. Transmission of the virus occurs through consumption of contaminated food or liquids (including ice), touching contaminated surfaces, or through direct contact with a person exhibiting symptoms of norovirus infection.¹²

Incubation Period

Usually between 24 and 48 hours, but illness can occur within 12 hours or a long as 72 hours after exposure.

Period of Communicability

During acute phase of the illness and up to 72 hours after the diarrhea and vomiting stops.

Diagnosis and Treatment

Norovirus infection can only be confirmed through a stool test. Treatment is supportive.

Child Care/School Attendance

Exclude from child care or school until at least 3 days after symptoms have resolved. Children with norovirus infection should be excluded from water play and swimming activities for 2 weeks after diarrhea has resolved.

Preventive Measures

Frequent hand-washing, especially after toilet visits and changing diapers and before eating or preparing food. Thorough cleaning and disinfection of contaminated surfaces immediately after an episode of illness, using a bleach-based household cleaner. Immediate removal and laundering of clothing or linens that may be contaminated with virus after an episode of illness (use hot water and soap). Flush or discard any vomitus and/or stool in the toilet and make sure that the surrounding area is kept clean.¹²

Norovirus is a common cause of outbreaks in child care facilities and schools. Notify the Board of Health if you observe an unusually high number of cases of gastroenteritis (diarrhea and/or vomiting) in your facility.

Pediculosis (Nits and Lice)

Signs and Symptoms

Irritation and itching of the scalp. Pinhead-size, transparent eggs attached firmly to individual strands of hair on the head.





Photos Courtesy of DermNet.com

Cause

Lice are light gray insects that lay eggs (nits) in the hair, especially at the nape of the neck and above the ears. Lice move by crawling; they cannot hop or fly.

Transmission

Direct contact with hair of infested person or with their personal belongings.

Incubation Period

Eggs hatch in 1 week and reach sexual maturity in about 14 days.

Period of Communicability

While adult lice, larval nymphs, or viable nits (located on the hair shaft within $\frac{1}{2}$ inch from the scalp) are present in the hair.

Treatment

Refer to treatment sheets provided by the Georgia Head Lice Manual (http://health.state.ga.us/epi/zvbd/infest/index.asp) or refer to child's physician.

Child Care/School Attendance

Exclude until treated.

Preventive Measures

Children should be instructed not to share combs, brushes, picks or hair decorations. Avoid close proximity or sharing of clothing such as hats or coats.

Ringworm

Signs and Symptoms

Tinea Capitis (Ringworm of the Scalp)

May present in any of the following ways:

- Patchy areas of dandruff-like scaling along with scant to considerable hair loss.
- Stubs of broken hairs forming a dotted pattern on the scalp is indicative of black-dot ringworm.
- Abundant pustules or raw areas with limited hair loss or scaling.
- A kerion (an inflamed, thickened, pus-filled area of the scalp often accompanied by fever and swollen lymph nodes).



Photo Courtesy of DermNet.com



Photo Courtesy of DermNet.com

Tinea Corporis (Ringworm of the Body)

A circular lesion which is typically red with a well-demarcated border that can be scaly, vesicular (fluid-filled) or pustular (pus-filled).

Cause

Ringworm is a fungus.

Transmission

Direct skin-to-skin contact with affected areas of infected people or animals. May also be transmitted indirectly by contact with contaminated items such as the backs of seats, hair combs, hair clippers, hair ornaments or brushes, as well as clothing and hats.¹

Incubation Period

For ringworm of the scalp: 10-14 days.² For ringworm of the body: 4-10 days.²

Period of Communicability

For the duration of the infection.



Kerion shown at base of child's head. Photo courtesy of Logical Images, Inc.

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Treatment

Refer to child's physician for treatment; usually requires 3 to 4 weeks of treatment.

Child Care/School Attendance

The child may return to child care/school at the discretion of the treating physician. Lesions should be covered and child should be undergoing treatment as prescribed by the physician.

Preventive Measures

Direct contact with the source of the infection (hair, scalp, or body lesion) should be avoided. Prompt therapy for infected persons is recommended. Sharing hair ornaments, combs, brushes and hats should be discouraged. Ensure thorough hand-washing following any contact with affected areas.

Educate parents, children, and staff about avoiding direct contact with animals and pets with ringworm infection. Ringworm is a zoonotic disease, meaning that it can be spread from animals to people.

Untreated cases should be reported to the health center serving the school or childcare center.

Roseola (Sixth Disease)

Signs and Symptoms

Sudden onset of high fever (>103°F) that persists for 3 to 7 days followed by a red rash over the body lasting one to two days. The illness usually occurs in children under 4 years of age. Seizures may occur due to high fever.¹

Cause

Human herpesvirus (HHV)-6.

Transmission

Direct contact with respiratory secretions.

Incubation Period

Average of 9-10 days (range: 5 to 15 days).

Period of Communicability

As long as virus continues to be shed. People without signs of illness may shed the virus and allow illness to develop in susceptible children.



Photo courtesy of Logical Images, Inc.

Treatment

Medication to reduce fever, but NOT aspirin.

Child Care/School Attendance

The child should be excluded from child care /school until fever-free for 24 hours.

Preventive Measures None.²



Photo courtesy of Logical Images, Inc.

Rubella (German Measles)

Signs and Symptoms

In children and young adults, rubella is usually a mild viral illness characterized by fever and rose-colored rash which lasts 2 to 3 days. The glands in the back of the neck and behind the ears are usually enlarged. Rubella can cause birth defects in a developing fetus, if acquired by a pregnant woman.¹³

Cause

Rubella virus.

Transmission

Direct or droplet contact with nasal and throat secretions.

Incubation Period

Ranges from 14 to 23 days, usually 16 to 18 days.¹



Photo courtesy of Logical Images, Inc.

Period of Communicability

From a few days before to 7 days after onset of rash.



Photo courtesy of Logical Images, Inc.

Diagnosis and Treatment

Rubella infection can be confirmed only through a blood test. Treatment is supportive.

Child Care/School Attendance

Children should be excluded from child care or school for 7 days after the onset of the rash. Children who have not been vaccinated should receive the vaccine within 72 hours of exposure or be excluded from school for 3 weeks after the onset of symptoms in the last case.

Preventive Measures

Vaccine is recommended at 12 to 15 months, and again at 4-6 years of age. In early pregnancy, the disease may severely damage the fetus; therefore, women considering becoming pregnant should consult with their physician concerning the need for immunization. All susceptible school employees who may be exposed to persons with rubella should be immunized to prevent transmission. Pregnant women who have been exposed to rubella should seek advice from their physician immediately.

Scabies

Signs and Symptoms

Characterized by an extremely itchy, red, pimple-like rash caused by the burrowing of adult female mites in the upper layers of the skin. The itching is more intense at night. The mites like to burrow between the fingers; in skin folds of the wrists, elbows, knees and underarms; as well as at the waistline, stomach, thighs, navel, genitalia, buttocks and breasts. In infants and young children, the head, face, neck, palms, and soles of the feet are often affected.

Cause

Scabies is an infestation of the skin by the microscopic mite Sarcoptes scabiei.

Transmission

By direct prolonged, skin-to-skin contact with a person already infested with scabies.¹ (Usually a quick handshake or a hug will not spread infestation.) Infestation is most commonly spread to sexual partners and household members. Infestation may also occur by sharing clothing, towels and bedding.



Photo courtesy of DermNet.com

Incubation Period

Two to 6 weeks before the onset of itching in people without previous exposure. People who have been previously infested develop symptoms 1 to 4 days after re-exposure.

Period of Communicability

Until mites and eggs are destroyed by treatment, ordinarily after 1 or 2 courses of treatment.

Treatment

Refer to a physician for diagnosis and treatment. Scabies infestation can be confirmed only through a skin scraping. All household members and other exposed individuals should be treated at the same time as the affected person to prevent re-exposure.¹⁴

Child Care/School Attendance

Child may return following treatment. A physician's statement is recommended for readmission.

Preventive Measures

Early diagnosis and treatment of infested patients and contacts.

Shingles (Herpes Zoster)

Signs and Symptoms

A painful, blistering rash that usually appears in a well-defined band on one side of the body, typically the torso, or on one side of the face, around the nose and eyes. Pain usually occurs before the rash and can continue even after the rash clears up.

Cause

Varicella zoster virus—the same virus that causes chicken pox. After causing chicken pox, the virus lies dormant in the nerves, and shingles occurs when it is reactivated in one particular nerve.1



Photo Courtesy of DermNet.com

Transmission

Person to person, primarily by direct contact with blister fluid of an infected person. Shingles is <u>not</u> transmitted through contact with someone with either shingles or chicken pox; it is merely a reactivation of the virus with which the person was infected earlier. However, it is possible for a person with shingles to transmit chicken pox to someone who has not had it.

Incubation Period

Indefinite, as shingles is the reactivation of the dormant Varicella zoster virus.

Period of Communicability

A person with shingles can spread the virus when the rash is in the blister phase. Once the rash has developed crusts, the person is no longer contagious. 15

Treatment

Refer child to physician for diagnosis and treatment. Children with shingles should not receive salicylates (aspirin or medications that contain aspirin) due to increased risk of Reye Syndrome. Acetaminophen is an acceptable medication for control of pain.

Child Care/School Attendance

The child should not be excluded from child care/school if the rash can be covered well. A child who is excluded from child care/school because the rash cannot be covered may return after the lesions have crusted.

Preventive Measures

Because a person with shingles can transmit chicken pox to someone who has not had it, he or she should avoid contact with susceptible individuals, especially pregnant women and newborn babies, until the lesions have dried (usually within 7 days).

Strep Throat and Scarlet Fever

Signs and Symptoms

Strep Throat: sudden onset of sore throat and fever; child may also experience tender, enlarged glands on the sides of the neck.²

Scarlet Fever: presents as a fine red rash with blanching on pressure; the skin often feels like sandpaper. The rash most often appears on the neck, chest and beneath the arms. Puslike patches may appear on the tonsils and the tonsils may appear red and swollen. The tongue is first coated white; the white coat then disappears to reveal a beefy red "strawberry tongue."²





Photos courtesy of DermNet.com

Cause

Group A streptococcus bacteria, specifically Streptococcus pyogenes.

Transmission

Direct contact with respiratory droplets of persons who are ill or carriers of Group A strep.

Incubation Period

Two to 5 days.1

Period of Communicability

From the first sign of illness until the child has been on antibiotic therapy for 24 hours.

Treatment

Refer to child's physician for diagnosis and treatment.

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Child Care/school Attendance

The child should be excluded from child care or school from onset of symptoms until (s)he has been on antibiotic treatment and fever-free for 24 hours. Return to child care or school at the discretion of the treating physician. Exposed children should be watched closely for any evidence of the disease.

Preventive Measures

Prompt isolation of an ill child during the period of communicability. Observe other children for signs and symptoms of illness and isolate as needed. Proper hand washing, disposal of tissues, and disinfection of articles and surfaces contaminated with respiratory secretions.

Report to the DeKalb County Board of Health unusually high numbers of cases and/or cases with a prolonged course of illness.

Tuberculosis (TB)

Signs and Symptoms

Children with TB may have no symptoms or only a low-grade fever. Adults also may not have symptoms or they may have a low-grade fever, persistent cough, and recent history of unexplained weight loss, night sweats, and appetite loss.

Cause

Mycobacterium tuberculosis bacteria.

Transmission

Prolonged contact with a person with active tuberculosis (TB) disease. Most commonly, exposure occurs following inhalation of airborne respiratory droplets.

Incubation Period

The time from exposure to an infected person to the development of a positive skin test in the exposed individual varies from 2 to 12 weeks. The first 6 to 12 months after exposure (infection) is the period of greatest risk for developing active disease. The risk of developing active TB disease remains high for 2 years; however, years may elapse between infection and the development of disease.¹

Period of Communicability

Until the bacteria are no longer present in the sputum. Drug therapy shortens this period.

Diagnosis and Treatment

Immediately refer to the DeKalb County Board of Health or the child's physician for diagnosis and treatment.

Child Care/School Attendance

Children with active tuberculosis disease should be excluded until the child is on adequate anti-tuberculosis medication and is determined to be non-infectious.

Preventive Measures

Prompt and adequate treatment of all persons with TB infection and disease. Investigation, testing, and follow-up of contacts and prescribing of preventive medications as necessary.

Immediately report all cases to the DeKalb County Board of Health TB Program at (404) 508-7857.

Whooping Cough (Pertussis)

Signs and Symptoms

Begins with mild upper respiratory symptoms (runny nose, sneezing), followed several days later by a dry cough. Coughing can become severe and occur in "spells," which are often followed by vomiting or a characteristic high-pitched "whoop" when inhaling. Pertussis in infants usually involves apnea (stopped breathing) instead of the whoop. Coughing can continue for 1 to 2 months. Fever is absent or minimal.¹

Cause

Bordetella pertussis bacteria.

Transmission

Direct contact with respiratory droplets from persons with the disease.

Incubation Period

Six to 20 days, usually 7 to 10 days.

Period of Communicability

Highly communicable during the first few weeks of illness (including the mild upper respiratory symptoms phase and the first 1 to 2 weeks of coughing). Communicability gradually decreases and is very low within three weeks of illness onset.

Diagnosis and Treatment

Refer to child's physician for diagnosis and treatment.

Child Care/School Attendance

A child diagnosed with whooping cough should remain at home until well <u>and</u> with at least 5 days of appropriate antibiotic therapy. A note from a physician is recommended for readmission. Children who are not vaccinated for pertussis should be excluded for 21 days after onset of last case or until adequately immunized.

Preventive Measures

Parents of a child with whooping cough should be advised to consult their physician or the DeKalb County Board of Health about treatment of household contacts. Preventive antibiotics may be indicated for childcare or school contacts. Vaccine is usually given with diphtheria, tetanus, and pertussis immunization (DTaP). Per Advisory Committee on Immunization Practice (ACIP) guidelines, children should receive 5 DTaP shots, given at 2, 4, 6, and 15-18 months of age, and again at school entry (4-6 years of age). A booster dose is available for adolescents and adults that contain tetanus, diphtheria, and pertussis (Tdap). Pre-teens at age 11 or 12 years should get a dose of Tdap. Adults who didn't get Tdap as a pre-teen or teen should get one dose of Tdap instead of the Td (tetanus and diphtheria) booster.¹⁶

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