Office of the Chief Medical Director

LAUSD UNIFIED

# COMMUNICABLE DISEASES IN SCHOOLS

# A Reference Guide

**Office of the Chief Medical Director**
**Student Medical Services**
**District Nursing Services**
**Los Angeles Unified School District**
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# PART I - INTRODUCTION TO COMMUNICABLE DISEASE IN SCHOOLS

# Overview

From a very young age through adolescence, students spend a great deal of time in the school setting. Schools place a high priority on attendance which is necessary for optimal student learning and achievement. Yet, the nature of schools (close, confined contact among students and staff) make the transmission of infectious disease possible. Determining the likelihood that an infection will spread from one person to another requires an understanding of the ease and mechanism by which a particular organism is transmitted, as well as some knowledge of the host immunity (i.e., Has the student been vaccinated against the disease? Does the student have a compromised immune system?). We must also recognize that many schools do not have a full-time health professional on site, and some students have limited access to medical services. This makes it important to have some reference for administrators and staff (including school nurses and physicians) to make informed decisions when intervening in communicable disease cases.

This Reference Guide has been compiled using existing District publications along with the most current available information from the American Academy of Pediatrics and the Center for Disease Control and Prevention. In addition, current State, County and Los Angeles Unified School District policies are reflected in this Reference Guide. The changing nature and evolving understanding of communicable diseases, particularly with the transmission of new disease entities between countries, makes it important to stay abreast of local disease patterns and infection control policy. District personnel are advised to contact Student Medical Services or District Nursing Services (Communicable Disease Team) if there are any questions regarding the management of communicable disease in schools.

The Reference Guide is designed to be a quick reference for LAUSD personnel. The following sections describe general recommendations for inclusion/exclusion and readmission to school due to illness. There is also a section defining the terms used in this Reference Guide. **Part II** references the various policies that relate to the control of communicable diseases in school. **Part III** catalogues common infectious diseases in alphabetical order, offering general information as well as specific exclusion, readmission and contact guidelines for school settings. **Part V** gives a brief summary of bioterrorism and includes a table describing early clinical signs of certain infectious agents that could be used in a bioterrorist attack. The appendices found in **Part VI** give more specific information about communicable disease control, including District bulletins and reference sheets and forms from other agencies. All of this is in an effort to keep students, staff, and families healthy and able to participate fully in the educational process.

# General Inclusion and Exclusion Criteria

Determining when to include and exclude students from school is a difficult decision, particularly as there are different factors that influence the decision. On the one hand, schools are inclusive institutions that accommodate children with a variety of medical issues. Student attendance is linked to academic achievement; therefore avoiding unnecessary exclusion is important for student success. On the other hand, children and adolescents who attend school with a communicable disease put others at risk. Fortunately, most of the commonly encountered infections in school-age children (e.g., respiratory viruses) are relatively harmless. In some cases, children exposed to certain infection through contact with other children develop immunity that protects the children as they grow older.

This Reference Guide is designed to help staff make an informed decision about when to exclude students from the school setting. While guidance of this type is helpful, there are multiple different presentations of infectious diseases in children. School personnel are not expected (nor qualified, in some cases) to make a diagnosis of a communicable disease in a student. Staff are encouraged to use what is presented in this Guide and their best judgment to help ensure a safe and healthy school environment. **Table 1** lists general conditions that need medical attention and are referred to as "general exclusion criteria" in the Reference Guide. In addition, California law requires exclusion if a student's immunization status does not comply with Health and Safety Code (Division 105) and Administrative Code (Title 17) regulations. The laws address immunization against communicable diseases such as polio, diphtheria, pertussis, tetanus, measles, mumps, rubella, Hepatitis B, and varicella. The law does allow exemptions due to personal beliefs and certain medical conditions, but now requires that the parent/guardian receive education/information about the consequences of not immunizing their child from a licensed healthcare provider who then signs the exemption indicating that the information has been provided. Effective January 1, 2016, State law does not allow personal or religious belief exemptions from immunization. There are other situations where students can be admitted "conditionally" (see **Appendix B**). Remember, most illnesses do not require exclusion. Conditions and diseases not listed in Table 1 generally **do not** require automatic exclusion**. Table 2** lists conditions requiring immediate medical attention. **Table 3** lists conditions requiring temporary exclusion.

General Exclusion Criteria for Schools[1]

| **Table 1** | |
|---|---|
| Call emergency medical services for a student who: | Has difficulty breathing or is unable to speak<br>Has blue, purple or gray skin or lips<br>Is increasingly less responsive, or unconscious<br>Is vomiting blood<br>Has signs of meningitis (stiff neck, fever[2] and headache)<br>Is severely dehydrated (lethargic, sunken eyes, no urine)<br>Has a serious injury or is experiencing severe pain<br>Is acting very strangely, less alert or very withdrawn |

| Table 2 | |
|---|---|
| Seek immediate medical attention (within one hour) for a student who: | Has a fever and looks more than mildly ill<br>Has a quickly spreading purple or red rash<br>Severe vomiting or diarrhea<br>An injury that may require medical treatment, such as a deep cut that may require stitches<br>Any animal bite that breaks the skin<br>Venomous bites or stings with spreading local redness and swelling, or evidence of general illness<br>Any medical condition that is outlined in the child's care plan as requiring immediate medical attention |

| Table 3 | |
|---|---|
| Temporarily exclude a student if there is: | An illness that prevents the student from participating comfortably in school activities<br>An illness that results in a need for care that is greater than the staff can provide without compromising the health and safety of other students.<br>An illness that poses a risk of spread of disease to others<br>Fever[2] *and* behavior change or other signs and symptoms (e.g., sore throat, rash, vomiting, diarrhea)<br>Diarrhea[3] or blood in the stool not explained by dietary change, medications or hard stool<br>Vomiting more than 2 times in the previous 24 hours, unless the vomiting is determined to be from a non-communicable condition and the child is not in danger of dehydration<br>Abdominal pain that continues for more than 2 hours or intermittent pain associated with fever or other signs and symptoms<br>Mouth sores with excessive drooling (in young children)<br>Rash with fever or behavioral changes<br>Pink or red conjunctiva (whites of the eyes) with white or yellow eye mucous drainage — until treatment has been started<br>Impetigo — until 24 hours after treatment has been started<br>Strep throat (or other streptococcal infection)—until 24 hours after treatment has been started<br>Head lice — until after the first treatment (note: exclusion is not necessary before the end of the school day)<br>Scabies — until after treatment has been given<br>Chickenpox (varicella) — until all lesions have dried and crusted<br>Whooping Cough (pertussis) — until 5 days after appropriate treatment (antibiotic)<br>Any child determined by the local health department to be contributing to the transmission of illness during an outbreak |

[1] Adapted from *Managing Infectious Diseases in Child Care and Schools*, *A Quick Reference Guide*, 3rd Edition (2013), Susan Aronson and Timothy Shope

[2] See definition of fever (page 8)

[3] See definition of diarrhea (page 8)

Readmission to school after exclusion for a communicable disease generally falls to the school principal or principal's designee. There may be instances where certain readmission criteria should be met and these are delineated in the listings of each communicable disease (Part III). In more serious cases of infection, the attending physician or the local health department should clear the student in writing before readmission.

## Definitions of Terms

**Bacteria:** Organisms that may be responsible for localized or generalized diseases and can survive in and out of the body. They can be treated effectively with antibiotics.

**Body fluids:** Urine, stool, saliva, blood, nasal discharge, eye discharge and tissue discharge (i.e., seepage from wound). Not all body fluids transmit all types of micro- organisms.

**Communicable disease:** A disease caused by a micro-organism (e.g., bacteria, virus, fungus, parasite) that can be transmitted from person to person by an infected body fluid or respiratory spray. This may occur with or without an intermediary agent (e.g., mosquito) or object (e.g., table surface).

**Confirmed case**: An individual diagnosed with a disease by a licensed health care provider (MD, DO, NP) with written verification.

**Dermatitis:** An inflammation of the skin caused by irritation or infection.

**Diarrhea:** More frequent loose or watery stools compared to the student's normal pattern (not associated with change in diet or use of medications). Exclusion may be needed if diarrhea cannot be contained in toilet or there are other signs, such as blood or color change (black).

**Fever:** An elevation of the body temperature. While there are several definitions of fever, for the purpose of evaluating a student in school, fever is defined as temperature:

>100°F (38°C) oral
>101°F (39°C) rectally
>100°F (37.8°C) axillary (armpit) or measurement by equivalent method

Fever is an indication of the body's response to something, but is neither a disease nor a serious problem by itself.

**Fungi:** Plantlike organisms such as yeasts, molds, mildews and mushrooms that get their nutrition from other living organisms or dead organic matter.

**Health care professional:** Practices medicine by an established licensing body with or without supervision. The most common types of health care professionals include physician, nurses, nurse practitioners, and physician assistants.

**Immunizations:** Vaccines that are given to children and adults to help them develop protection (antibodies) against specific infections. Vaccines may contain an inactivated or killed agent or a weakened live organism.

**Incubation period:** Time between exposure to an infectious microorganism and beginning of symptoms.

**Mantoux intradermal skin test:** Involves the injection of a standard amount to tuberculin protein under the skin. The reaction to the protein on the skin can be measured and the result is used to assess the likelihood of infection with tuberculosis.

**Parasite:** An organism that lives on or in another living organism (e.g., tick, louse)

**Universal precautions:** Universal precautions include avoiding injuries caused by sharp instruments or devices and the use of protective barriers such as gloves, gowns, masks and protective eyewear, which can reduce the risk of exposure of a worker to materials that may contain blood-borne pathogens while the worker is providing first aid or care.

**Blood-borne pathogens:** Apply to blood and other body fluids containing blood, semen and vaginal secretions-- but *not* generally stool, nasal secretions, sputum, sweat, tears, urine, saliva, or vomitus, unless they contain visible blood or are likely to contain blood.

**Virus:** A microscopic organism that may cause disease. Viruses can grow or reproduce only in living cells.

# PART II - POLICIES ON THE CONTROL OF COMMUNICABLE DISEASE IN SCHOOLS

# Policies Concerning Communicable Disease in Schools

The health and safety of the students is guided by several policies, some are LAUSD- specific and others are part of California health, administrative and educational codes. Listed below are some of the pertinent policies for communicable disease identification, reporting, treatment and prevention. While these are provided for reference, it should be noted that policies cannot cover every possible individual scenario. It is each staff member's responsibility to use good judgment when dealing with communicable diseases.

Student Medical Services and District Nursing (Communicable Disease Team) are available for consultation, and should be used as a resource when there is any question regarding communicable disease diagnosis, exclusion, reporting, readmission and notification criteria.

**Student Medical Services**
**213-202-7584**

**District Nursing**
**(Communicable Disease Team)**
**213-202-7575**

## Exclusion of students with communicable disease

- *"*A pupil while infected with any contagious or infectious disease may not remain in any public school." (*California Code of Regulations, Title 5, Education, 202*.)

- "The governing body of any school district may exclude children of filthy or viscous habits, or children suffering from contagious or infectious diseases." (*California Education Code, 48211*)

- "Students showing signs and symptoms of communicable or infectious diseases shall be excluded from attending school. The Student Health Services Division, in cooperation with the County of Los Angeles, Department of Health Services, shall prescribe such measures as shall be necessary for the control of communicable diseases, including the exclusion and readmission of students. (For provisions relating to employees, see Board Rule 1942.) Students whose continued presence would constitute a clear and present danger to the life, safety, or health of other students or school personnel shall be exempted or excluded." *(LAUSD Board Rule 2312)*

- "It shall be the duty of the principal or other person in charge of any public, private or Sunday School to exclude therefrom any child or other person affected with a disease presumably communicable, until the expiration of the prescribed period of isolation for the particular communicable disease. If the attending physician, school physician, or health officer finds upon examination that the person is not suffering from a communicable disease, he may submit a certificate to this effect to the school authority who shall readmit the person." *(California Code of Regulations, Title 17, Public Health, 2526)*

- "A parent or guardian having control or charge of any child enrolled in the public schools may file annually with the principal of the school in which he is enrolled a statement in writing, signed by the parent or guardian, stating that he will not consent to a physical examination of his child. Thereupon the child shall be exempt from physical examination, but whenever there is a good reason to believe that the child is suffering from a recognized contagious or infectious disease, he shall be sent home and shall not be permitted to return until the school authorities are satisfied that any contagious or infectious disease does not exist." *(California Education Code, 49541)*

## Exclusion of school employees with communicable disease

- "… [regarding communicable disease]… applicants and employees with any acute or chronic (e.g., tuberculosis AIDS/HIV infection) communicable diseases which may endanger health or safety of self and/or others, shall be evaluated on an individual basis in relation to the successful performance of the core duties of the class for which applying or in which serving…" *(LAUSD Board Rule 1942)*

## Reporting communicable diseases

*A list of reportable diseases for the County of Los Angeles is included in the Appendix A of this Reference Guide.* ***All reporting of communicable disease within LAUSD is coordinated by the District Nursing Communicable Disease Unit and Student Medical Services.*** *Please use the phone numbers listed above to receive information and assistance in the event of a communicable disease case on a school campus.*

- "It shall be the duty of every health care provider, knowing of or in attendance on a case or suspected case of any of the diseases or conditions listed in [Appendix A], to report to the local health officer for the jurisdiction where the patient resides... Where no health care provider is in attendance, any individual having knowledge of a person who is suspected to be suffering from one of the diseases or conditions listed in [Appendix A] may make such a report." *(California Code of Regulations, Title 17, section 2500)*

  *Please note: "Health care provider" includes physicians, surgeons, nurse practitioners, physician assistants, registered nurses, school nurses, infection control practitioners, dentists and others as specified in subsections (h) in Title 17 section 2500.*

- "It shall be the duty of anyone in charge of a public or private school, kindergarten, boarding school, or day nursery to report at once to the local health officer the presence or suspected presence of any of the communicable diseases." *(California Code of Regulations, Title 17, section 2508)*

## Notification of communicable disease

- "The Director, Student Medical Services, and the Director, District Nursing Services, must be consulted before notification (written or oral) to parent/guardian or school employees regarding possible exposure to any communicable disease (with the exception of certain allowed template letters as outlined in bulletin and provided in Appendix)." (*LAUSD Bulletin No. 1937.2, Reporting Communicable Diseases, November 1, 2014*)

## Immunizations

*Immunization is an important method of preventing certain communicable diseases, especially in group settings such as schools and child care. The California School Immunization Law requires children to have a series of immunizations before they enter school (public and private elementary and secondary schools). See LAUSD Bulletin No. BUL-1660.7 (April 2015) "Immunization Guidelines for School Admission" and the California Immunization Handbook (website: http://eziz.org/assets/docs/IMM-1080.pdf)*

A *Guide to Immunizations Required for School Entry* is included in this Reference Guide, Appendix B.

- "… the governing board of any school district shall cooperate with the local health officer in measures necessary for the prevention and control of communicable diseases in school age children. For that purpose the board may use any funds, property, and personnel of the district, and may permit any person licensed as a physician and surgeon, or any person licensed as a registered nurse acting under the direction of a supervising physician and surgeon … to administer an immunizing agent to any pupil whose parents have consented in writing to the administration of such immunizing agent." *(California Education Code 49403)*

- "A 'Health Record' card and health history must be maintained for each student. Mandated health information such as immunization status, child health and disability prevention screening, visual activity, color vision testing, audiometric test results, scoliosis screening results, and tuberculosis test results must be recorded. Reports of school physicians and school nurses are also recorded." *(LAUSD Board Rule 2309)*

- "Physicians of the County of Los Angeles, Department of Health Services, or school physicians or any school nurse under supervision of a school physician, may immunize students on school premises. The school nurse will notify the school of the date set for giving immunizations and will assist with the program. A parent or guardian consent slip, provided by the County of Los Angeles, Department of Health Services, shall be completely filled out and be on file at the school before an immunization may be given." *(LAUSD Board Rule 2313)*

## Tuberculosis

- "Effective July 1, 2012, schools shall not require a TB skin test for kindergarten or first grade entry. In addition, any student entering in any other grade level who has not attended a California school will not be subject to a mandate for TB skin testing. Instead, entering students will be screened for risk of disease as part of their regular well child care and school entry exam. Providers of well child and school entry exams will target their testing to those that are at increased risk for TB. Screening procedures and guidance on this topic are available to providers through the Child Health and Disability Prevention Program, Los Angeles County Department of Public Health, and other national organizations." (Updated Policy Regarding Tuberculosis (TB) Testing for School Entry: MEM-5718, (Feb. 2012)

- If a TB test is given in the course of a Tuberculosis follow-up (contact investigation) program, "A parent or guardian consent slip, provided by the District, shall be completely filled out and be on file at the school before a TB test may be given. However, a minor child over the age of 12 may give consent for the TB testing (California Family Code Section 6926). If the test is positive, it shall be followed by an X-ray of the chest. The skin test must be administered and read within 48 to 72 hours by a licensed health care provider (school nurse, school nurse practitioner, school physician).

## Exposure control plan and general sanitation

- "Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials…" and "Each employee shall ensure that the worksite is maintained in a clean and sanitary condition." (*LAUSD, Bloodborne Pathogens—Exposure Control Plan, July 2005*)

- "Clean all contaminated areas and materials first with soap/detergent and water. An LAUSD approved commercial product may be used for cleaning surfaces which are not contaminated with blood…" (Approved chemical product list for use in the District can be found at http://lausd-oehs.org/productreview_chemeval.asp. "For washable surfaces always use freshly made 1:10 bleach solution (1 part bleach to 9 parts cold water) when cleaning up blood." (*LAUSD Bulletin No. 1645.2, Infection Control Guidelines for Preventing the Spread of Communicable Diseases, July 13, 2015*)

# PART III - COMMONLY ENCOUNTERED COMMUNICABLE DISEASES

# Chickenpox (Varicella-Zoster Infections)

**1. What is chickenpox?**
Chickenpox is an infectious disease caused by the varicella-zoster virus that results in a rash, most often occurring in persons less than 15 years old.

**2. What are the signs and symptoms of chickenpox?**
The most obvious sign of chickenpox infection is the development of a blister-like rash. This rash begins with small, red spots that develop into blisters (vesicles) after a few hours. It first appears on the trunk and face, but can spread over the entire body. These blisters will become pus-filled after 3-4 days, and then develop into scabs. Fever, itching, cough, runny nose, and/or headache commonly accompany this rash.

**3. Incubation period:** Usually 14 – 16 days

**4. Contagious period:** From 1 – 2 days before the rash appears until after the last crop of vesicles. A person no longer spreads the virus when all blisters have scabs and no new blisters are forming.

**5. How does infection with chickenpox occur?**
Chickenpox is a highly infectious virus; it spreads from person to person by direct contact with an infected person or by breathing in air containing germs that are released when the infected person coughs or sneezes.

**6. How can infection with chickenpox be prevented?**
Chickenpox can be prevented with a vaccination that is required by law for school admission. There are other methods to prevent chickenpox in immunocompromised children after exposure (such as varicella-zoster immune globulin, VZIG). VZIG must be given very early after exposure to be effective.

**7. Is there a treatment for chickenpox?**
Antiviral medication and treatment should be considered for individuals at increased risk for moderate to severe disease (e.g., >12 years old, chronic skin or lung infections, immunocompromised, etc.). Antivirals are most effective when administered early in the course of the disease. Children that have chickenpox ***should not*** be given aspirin, as it can lead to serious liver disease (Reye's syndrome).

**8. What are the circumstances in which chickenpox could be significant?** One in ten children has a complication that is serious enough to visit a health care provider. Complications include: infected skin lesions, other infections (such as pneumonia), dehydration from vomiting or diarrhea, and exacerbation of asthma. Adults, infants, adolescents, and people with weak immune systems are more likely to have a serious illness with complications.

**9. Can you get chickenpox more than once?**
Yes, but it is very rare. Cases are generally mild with less fever and fewer blisters than the first time.

**10. Exclusion: Yes** – routine exclusion of infected children from school is warranted until they are no longer contagious.

**11. Readmission:** When all blisters have scabs and there are no new blisters appearing (usually 6 days after the start of the rash in healthy individuals).

**12. Contacts and reporting:** Informational letters are to be sent to parent/guardian of all students and to all employees when chickenpox is first identified in the school, for each new semester. (Reporting Communicable Diseases, Bulletin No. BUL-1937.2, August 2015)

# Chlamydia

## 1. What is chlamydia?

Chlamydia is a common sexually transmitted disease that is caused by the bacterium *Chlamydia trachomatis*. (*C. trachomatis* may also cause neonatal conjunctivitis, blindness and pneumonia in young infants). Most people with chlamydia have no symptoms and may not seek health care for their infection. When chlamydia is diagnosed, it can be easily treated and cured. Untreated chlamydia can cause serious health problems and infertility.

## 2. What are the signs and symptoms of chlamydia?

While 75% of infected women and 50% of infected men will show no symptoms, those men and women that do show symptoms experience pain and difficulty when urinating and abnormal discharge from the penis or vagina. Men may also have swelling in the testicles. Some women experience abdominal pain, lower back pain, nausea, fever, pain during intercourse, and bleeding between menstrual periods.

**3. Incubation period:** Varies with the type of infection, the average is 5 – 7 days.

**4. Contagious period:** Communicable until the organism is eradicated by appropriate antibiotic.

## 5. How does infection with chlamydia occur?

Chlamydia is passed from an infected person to a healthy person through anal, oral, or vaginal sexual contact. In addition, it can be passed from a mother to her baby during birth.

## 6. How can infection with chlamydia be prevented?

Frequent examination of sexually active individuals and safe sex practices, including the use of latex condoms during sexual contact are effective prevention measures.

## 7. Is there a treatment for chlamydia?

Chlamydia can be treated and cured with antibiotics.

## 8. What are the circumstances in which chlamydia could be significant?

If left untreated, chlamydia bacteria can spread into a woman's uterus or fallopian tubes, and can lead to the development of pelvic-inflammatory disease, which can cause chronic pelvic pain and infertility. If chlamydia is passed to a baby during birth, an eye infection or pneumonia can result. In men, untreated chlamydia typically causes a urinary infection and, potentially, infertility.

**9. Exclusion: None,** unless they meet other exclusion criteria (see "General Exclusion Criteria")

**10. Readmission:** No restrictions.

**11. Contacts and reporting:** All sexual contacts of patients with Chlamydia infection should be evaluated and treated. Chlamydia is a reportable disease to the County by the lab/provider who diagnosed the chlamydia.

# Common Cold (Upper Respiratory Infection)

## 1. What is the common cold?

The common cold is a highly contagious viral infection of the upper respiratory tract that increases in prevalence during the fall and winter.

## 2. What are the signs and symptoms of the common cold?

Symptoms of the common cold often include runny nose, sneezing, sore throat, cough, and headache. Fever is usually slight but can climb to 102 degrees Fahrenheit in infants and young children. While nasal discharge usually is watery and clear at the onset, it can become colored and thick after a few days. This has no correlation with bacterial infections, although occasionally the common cold can lead to ear or sinus infections that require treatment with antibiotics. High fever, significantly swollen glands, severe facial pain in the sinuses, and a cough that produces mucus may indicate a complication or more serious illness requiring a doctor's attention.

**3. Incubation period:** 2 – 14 days

**4. Contagious period:** Usually few days before signs and symptoms appear and while clear runny nasal secretions are present. Viral shedding is most abundant in the first few days of infection and usually ceases within 7 – 10 days.

## 5. How does infection with the common cold occur?

The common cold is passed person-to-person through direct or close contact with mouth and nose secretions, including inhalation of tiny droplets containing the virus. Transmission can also happen indirectly when a healthy person touches an object or surface that has been soiled by nasal or oral discharges from the infected person and then touches his or her eyes or nose.

## 6. How can infection with the common cold be prevented?

General hygiene measures, such as frequent hand washing, covering the mouth and nose with tissues when coughing or sneezing, and proper disposal of tissues are the best methods of prevention. If possible, one should avoid close, prolonged exposure to persons who have colds.

## 7. Is there a treatment for common cold?

Only the symptoms can be treated, there is no cure or vaccine for the common cold at this time. Children that have a viral infection ***should not*** be given aspirin, for they run the risk of developing a rare but serious illness called Reye's syndrome.

**8. Exclusion: Generally none** for children with the common cold, unless they meet other exclusion criteria (see "General Exclusion Criteria").

**9. Readmission:** Upon recovery, by school principal or principal's designee.

# Conjunctivitis ("Pink Eye")

## 1. What is conjunctivitis?

Conjunctivitis is a condition in which the conjunctiva, the clear membrane that covers the eye, becomes inflamed. Conjunctivitis is caused by bacteria, viruses, chemicals, allergies, etc. Infectious conjunctivitis is commonly known as "pink-eye".

## 2. What are the signs and symptoms of conjunctivitis?

Signs and symptoms vary according to the kind of conjunctivitis:

- **Bacterial Conjunctivitis** is characterized by redness, itching and pain in the eyes, with discharge containing mucus and or pus. It may affect one or both eyes.
- **Viral Conjunctivitis** is characterized by redness, watery eyes, sensitivity to light and may affect only one eye.
- **Allergic Conjunctivitis** is characterized by itching, redness and excessive tearing usually of both eyes.
- **Chemical Conjunctivitis** is characterized by red, watery eyes especially after swimming in chlorinated water.

**3. Incubation period:** Depends on the type of conjunctivitis.

**4. Contagious period:** Allergic and chemical conjunctivitis are not contagious. Bacterial conjunctivitis contagious period ends when the course of medication is started. Viral conjunctivitis contagious period continues while the signs or symptoms are present.

## 5. How does infection with conjunctivitis occur?

Conjunctivitis caused by bacteria or viruses can be passed from an infected person to a healthy person through direct contact, or through indirect contact with articles, such as those used for eye makeup, that are freshly soiled with infectious discharge. Conjunctivitis caused by an allergy is not contagious.

## 6. How can infection with conjunctivitis be prevented?

Strict personal hygiene, careful hand washing, use of separate towels, prompt treatment of bacterial infected eyes, and avoiding contagious individuals can help prevent the spread of conjunctivitis.

## 7. Is there a treatment for conjunctivitis?

Bacterial conjunctivitis can be treated with antibiotics that are usually given in the form of eye drops.

## 8. What are the circumstances in which conjunctivitis could be significant?

If left untreated, conjunctivitis can create serious complications, such as infection in the cornea, lids, and tear ducts. One type of conjunctivitis, caused by the bacterium *Chlamydia trachomatis*, can lead to blindness.

**9. Exclusion: Yes**, for bacterial conjunctivitis; and **no**, for other forms except on recommendation of health department or the child's health professional for epidemic viral conjunctivitis.

**10. Readmission:** After exclusion for bacterial conjunctivitis, the child may return after treatment has begun with antibiotic eye drops or ointment.

# Cytomegalovirus Infection (CMV)

## 1. What is CMV?

Cytomegalovirus (CMV) is a common virus that infects 50%-85% of adults in the United States by 40 years of age. CMV is the most common infection among those transmitted from a pregnant mother to her baby.

## 2. What are the signs and symptoms of CMV?

For most healthy persons who acquire CMV after birth, there are few symptoms and no long-term health consequences. Some adolescents and adults may have a mononucleosis-like infection with a prolonged fever and a mild hepatitis.

**3. Incubation period:** Unknown

**4. Contagious period:** Unknown. Virus continues to be excreted and urine and saliva for many months and sometimes for several years.

## 5. How does infection with CMV occur?

Transmission of CMV occurs through various modes: close contact with a person excreting the virus in saliva, breast milk, urine, blood, and tears; sexual contact; blood transfusions; organ transplants; and from a mother to her baby before, during and after birth. CMV has been shown to spread in households and day care centers.

## 6. How can infection with CMV be prevented?

To decrease the transmission of CMV, good personal hygiene is recommended. This includes care when handling children and items like soiled diapers, avoidance of contact with oral secretions, and simple hand washing with soap and water, which is effective in removing the virus from the hands. This is especially important for women of childbearing age working with young children.

## 7. Is there a treatment for CMV?

Treatment consists of an antiviral medication that is used for certain patients, depending on age, disease, and mode of transmission. Treatment decisions are reserved for experienced health care professionals.

## 8. Should children infected with CMV stay home from school to prevent spreading the disease?

CMV infection without symptoms is common in infants and children. There is no need to either screen or exclude CMV-excreting children from schools or institutions because the virus is frequently found in many healthy children and adults. Absence from school should only occur if symptoms are severe enough to prevent attendance.

## 9. What are the circumstances in which CMV could be significant?

Infection can be significant in infants born to women whose first infection with CMV occurs during pregnancy. In addition, people with weak immune systems, such as organ transplant recipients and persons infected with HIV, may experience pneumonia, eye infections, gastrointestinal disease, or even death due to CMV. Hence, these groups should take extra hygienic precautions to prevent infection.

**10. Exclusion: Generally none** for children with CMV, unless they meet other exclusion criteria (see "General Exclusion Criteria").

**11. Readmission:** Upon recovery, by school principal or principal's designee.

# Diphtheria

## 1. What is diphtheria?

Diphtheria is an acute disease caused by a toxin produced by the bacterium *Corynebacterium diphtheriae*. Diphtheria was once a major cause of death in children, but due to the development of an effective vaccine in the 1920s, cases of diphtheria in the United States are very rare today. However, diphtheria still occurs in other parts of the world, and most recently caused an epidemic in the former Soviet Union.

## 2. What are the signs and symptoms of diphtheria?

Diphtheria begins with symptoms such as sore throat, loss of appetite, and low-grade fever. It most commonly affects the throat and tonsils or skin.

Diphtheria of the throat and tonsils causes a bluish-white membrane to form at the back of the mouth (on the soft palate) within 2-3 days. This membrane sticks to the tissues and attempts to remove it cause bleeding. Its color can change to grayish green or black if bleeding occurs. The membrane may cause an airway obstruction and prevent the ability to breathe, which can lead to serious complications.

Diphtheria of the skin causes a scaling rash or ulcers with clearly marked edges. Diagnosis of diphtheria is determined by taking a culture from these lesions or membranes.

**3. Incubation period:** 2 – 5 days

**4. Contagious period:** Varies. The average is 2 - 6 weeks if untreated; less than 4 days if appropriately treated.

## 5. How does infection with diphtheria occur?

Infected persons may shed the bacteria to others through their respiratory secretions by coughing or sneezing and from their infected wounds. Ill persons can remain contagious for 2-6 weeks without antibiotic treatment. Individuals who are chronic carriers of diphtheria, i.e. those who carry the bacteria but do not manifest signs or symptoms of diphtheria, may remain contagious for up to 6 months.

## 6. How can infection with diphtheria be prevented?

The diphtheria vaccine can prevent this disease. It is usually combined with the tetanus vaccine (Td) or with both tetanus and pertussis vaccines (DTaP/Tdap). Persons of all ages should be vaccinated against diphtheria, and it is required for school admission.

## 7. Is there a treatment for diphtheria?

Antitoxin and antibiotics are used in cases of throat and tonsil infection. Antibiotics are used for skin infections.

## 8. What are the circumstances in which diphtheria could be significant?

Most complications of diphtheria are due to the effects of the toxin. The toxin can spread through the blood to other parts of the body and can cause ear infections, pneumonia, heart failure, paralysis, respiratory failure, and death.

**9. Exclusion: Immediate** isolation and exclusion in the case of the disease.

**10. Readmission:** Student and contacts are readmitted only by written permission of the County of the Los Angeles, Department of Health.

**11. Contacts and reporting:** Identification, surveillance and treatment of close contacts in congruence with County of the Los Angeles, Department of Public Health policy. Diphtheria is an immediately reportable disease; call Nursing Services Communicable Disease Unit if you have a confirmed case.

# Enterovirus (non-Polio)

## 1. What is a Non-Polio Enterovirus?

Non-polio enteroviruses are very common viruses. They cause about 10 to 15 million infections in the United States each year. Anyone can get infected with non-polio enteroviruses. But infants, children, and teenagers are more likely to get infected and become sick because they do not yet have immunity (protection) from previous exposures to the viruses. Most people who get infected with non-polio enteroviruses do not get sick or they may have mild illness, like the common cold. But some people can get very sick and have an infection in their heart or brain or even become paralyzed (Enterovirus D68 has been known to cause paralysis). Infants and people with weakened immune systems have a greater chance of having these complications. You can get infected with non-polio enteroviruses by having close contact with an infected person. You can also get infected by touching objects or surfaces that have the virus on them then touching your mouth, nose, or eyes.

## 2. What causes the Non-Polio Enterovirus?

Non-polio enteroviruses can be found in an infected person's feces (stool), eyes, nose, and mouth secretions (such as saliva, nasal mucus, or sputum), or blister fluid. You can get exposed to the virus by having close contact, such as touching or shaking hands, with an infected person, touching objects or surfaces that have the virus on them, changing diapers of an infected person, or drinking water that has the virus in it. If you then touch your eyes, nose, or mouth before washing your hands, you can get infected with the virus and become sick.

**3. Incubation period:** 2 - 7 days

**4. Contagious period:** Non-polio enterovirus can be shed (passed from a person's body into the environment) in your stool for several weeks or longer after you have been infected. The virus can be shed from your respiratory tract for 1 to 3 weeks or less. Infected people can shed the virus even if they don't have symptoms.

## 5. How is infection with enteroviruses diagnosed?

Non-polio enteroviruses can be detected in stool or rectal swabs and respiratory specimens (including from the throat). Depending on the symptoms, other specimen types, such as cerebrospinal fluid, blister fluid, and blood, can be collected for testing by the health care provider. A positive laboratory test for non-polio enteroviruses from certain specimens, such as rectal or respiratory swab, does not necessarily mean the virus is the cause of infection. Non- polio enteroviruses can be shed for an extended period of time after the symptoms have resolved.

## 6. How can infection be prevented?

There is no vaccine to protect you from non-polio enterovirus infection. Since many infected people do not have symptoms, it is difficult to prevent non-polio enteroviruses from spreading. You can help protect yourself and others from non-polio enterovirus infections by:

- Washing your hands often with soap and water, especially after using the toilet and changing diapers,
- Avoiding close contact, such as touching and shaking hands, with people who are sick, and
- Cleaning and disinfecting frequently touched surfaces.

## 7. Is there a treatment for Non-Polio Enteroviruses?

There is no specific treatment for non-polio enterovirus infection. People with mild illness caused by non-polio enterovirus infection typically only need symptom treatment. They usually recover completely. However, some illnesses caused by non-polio enteroviruses can be severe enough to require hospitalization.

**8. Exclusion:** Yes, if the person is symptomatic or meets other exclusion criteria (see "General Exclusion Criteria")

**9. Readmission:** Upon recovery, by school principal or principal's designee.

**10. Contacts and reporting:** Non reportable, but if >10% of school/classroom, call Nursing Services Communicable Disease desk.

# Fifth Disease (Human Parvovirus B19)

**1. What is fifth disease?**
Fifth disease is a mild rash illness caused by human parvovirus B19 that occurs most commonly in children.

**2. What are the signs and symptoms of fifth disease?**
A child infected with fifth disease has a characteristic "slapped-cheek" rash on the face, followed by a lacy red rash on the trunk and limbs. Occasionally, the rash may itch. The illness usually starts 7 to 10 days before the appearance of the rash with a low-grade fever, muscle aches and headache, but some children may be asymptomatic. The rash usually resolves in 7-10 days, but can reappear after exposure to sunlight or heat.

**3. Incubation period:** From 4 – 14 days but can be as long as 21 days.

**4. Contagious period:** Healthy individuals are contagious until the rash appears.

**5. How does infection with fifth disease occur?**
During the early part of the illness, before the rash appears, the virus can be passed from an infected person to a healthy person through direct contact with saliva, sputum, or nasal mucus. The virus may also spread through blood products and from a mother to her unborn baby.

**6. How can infection with fifth disease be prevented?**
There is no vaccine or medicine that prevents fifth disease at this time. Frequent hand washing is recommended as a practical and effective method to decrease the chance of becoming infected.

**7. Is there a treatment for fifth disease?**
Treatment of symptoms such as fever, pain, or itching is usually all that is needed, unless a more serious condition develops.

**8. Does keeping an infected child home from school help prevent the spread of fifth disease?**
Excluding persons with fifth disease from work, child care centers, or schools is not likely to prevent the spread of the virus, since people are contagious before they develop the rash and are no longer contagious once the rash appears.

**9. What are the circumstances in which fifth disease could be significant?** Fifth disease is usually a mild illness that resolves on its own among children and adults who are otherwise healthy. However, fifth disease may cause a serious illness in persons with sickle-cell disease or similar types of chronic anemia. Persons with weak immune systems, due to leukemia, cancer, organ transplants, HIV, etc. are also risk for serious illness due to fifth disease infection and should seek medical care if exposed. Pregnant women who may be exposed to fifth disease should consult their health professional about their immune status and risk of infection.

**10. Exclusion: Generally none** unless the child has sickle cell disease or compromised immune system or they meet other exclusion criteria (see "General Exclusion Criteria").

**11. Readmission:** Upon recovery, by school principal or principal's designee.

**12. Contacts and reporting:** Non reportable, but consider sending letters to parents and employees with each new case to protect immunocompromised or pregnant individuals exposed to fifth disease. If letters are sent, notify Nursing Services.

# Foodborne Illness (Food Poisoning)

## 1. What is foodborne illness?

Foodborne illness, or food poisoning, is caused by consuming contaminated food or beverages. Many different microbes can contaminate foods. More than 250 different foodborne illnesses have been described. Most of these diseases are infectious, caused by a variety of bacteria, viruses, and parasites. Harmful toxins and chemicals can also contaminate food, such as those found in poisonous mushrooms.

## 2. What are the symptoms of a foodborne illness?

Symptoms vary based on the cause of food poisoning; hence there is no one "syndrome" caused by foodborne illness. In all types of foodborne disease, the microbe or toxin enters the body through the gastrointestinal tract, and often causes nausea, vomiting, abdominal cramps, and diarrhea.

**3. Incubation period:** May begin within hours to days of food ingestion, depending on the organism.

**4. Contagious period:** Varies according to the organism.

## 5. What are the most common microbes that cause foodborne illness?

Bacteria causing foodborne illness include *Salmonella, E. Coli, Shigella, Clostridium botulinum*, and others. Viruses include hepatitis A and Calicivirus or Norwalk-like virus, while parasites like *Giardia lamblia* (see chapter on Giardiasis) and *Cryptosporidia* can also cause foodborne diseases. There is so much overlap that it is rarely possible to say which microbe is likely to be causing a given illness unless laboratory tests are done to identify the microbe, or the illness is part of a recognized outbreak.

## 6. How can foodborne illness be prevented?

Thoroughly cook all food stuff (i.e., meat, poultry, eggs). Avoid cross-contamination by washing hands, utensils and cutting boards after contact with raw meat or poultry. Refrigerate prepared foods and leftovers. Protect food against contamination by washing hands and rinsing vegetables.

## 7. Is there treatment for foodborne illnesses?

There are many different types of foodborne illnesses and they may require different treatments depending on the symptoms they cause. Fluids and electrolyte replacement are important. Medical attention may be necessary if symptoms are severe. Antibiotics are not always needed.

**8. What are the circumstances in which foodborne illness could be significant?** While some foodborne illnesses are self-limited in nature, others are, or can become, serious illnesses. Certain strains of *E. Coli* can result in bleeding disorders and kidney failure. Botulism can result in paralysis and death, particularly in infants. Immunocompromised individuals may be at greater risk for severe disease in some cases. All persons suffering from foodborne illness may become dehydrated, and possibly septic.

**9. Exclusion: Yes**, if person is symptomatic or meets other exclusion criteria (see "General Exclusion Criteria"). In cases of salmonella infections, symptomatic employees (including food handlers) should be referred to employee health for assessment, treatment and readmission

**10. Readmission:** By school nurse or physician, the County of Los Angeles, Department of Health Services, or other licensed physician.

**11. Contacts and reporting:** Many foodborne illness pathogens, as well as commercial food products suspected of causing illness are reportable to the County. Call Nursing Services Communicable Disease Unit if there is a need to report a foodborne illness or outbreak. An outbreak is considered 10% of the school/classroom population (usually 2 - 3 or more cases in a classroom).

# Giardiasis

## 1. What is Giardiasis?

Giardiasis is an intestinal infection caused by a parasite (*Giardia lamblia*). The organism is common in the stools of young children in child care programs and schools, and outbreaks in these settings can occur.

## 2. What are the signs and symptoms of Giardiasis?

Acute watery diarrhea
Excessive gas
Abdominal pain and cramps
Decreased appetite
Weight loss
Individual can be infected and infectious without signs and symptoms. The asymptomatic carrier state is more common in children than adults.

**3. Incubation period:** 1 - 4 weeks after exposure

**4. Contagious period:** Highly variable, but infected individuals can be contagious for months.

## 5. How does infection with Giardia occur?

Giardia is caused by ingestion of contaminated water or food, contamination of water supply by human or animal feces, and hand- to- mouth transfer of cysts from feces of infected individuals. Individuals may contract the organism while drinking from streams or lakes while camping. Outbreaks can occur with contamination of the public water supply. Asymptomatic carriers probably are more important to the spread of disease than persons with active disease.

## 6. How can infection with Giardia be prevented?

Practice careful and frequent hand-washing, especially after the use of the toilet or changing soiled clothing
Identify and treat family members, staff and children who have symptoms.
Exclude people with diarrhea until they are symptom-free.
**Note:** Treatment and exclusions of asymptomatic carriers is not effective for outbreak control.

## 7. Is there a treatment for Giardiasis?

Treatment generally consists of an anti-parasitic drug and correction of any electrolyte imbalances or dehydration. Treatment for asymptomatic carriers is generally not recommended.

**8. Exclusion: Yes**, if diarrhea is present or the child is unable to participate and staff determines that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.

**Note:** For caregivers/teachers and children without symptoms, (i.e., recently recovered or exposed) testing stool cultures, treatment and exclusions are not necessary.

**9. Readmission:** Once exclusion criteria (diarrhea) has resolved.

**10. Contacts and reporting:** Giardiasis is a reportable disease to the County. Call Nursing Services, Communicable Disease Unit if there is a need to report a **confirmed** case of Giardiasis.

# Gonorrhea

**1. What is gonorrhea?**
Gonorrhea is a common sexually transmitted disease caused by the bacterium *Neisseria gonorrhoeae*.

**2. What are the signs and symptoms of gonorrhea?**
In males, signs and symptoms include a burning sensation when urinating and a yellowish white discharge from the penis. Painful or swollen testicles may also occur. In females, gonorrhea may be asymptomatic or painful or burning sensation when urinating, and a yellowish or occasionally bloody vaginal discharge. Women with no or mild gonorrhea symptoms are still at risk for developing serious complications from the infection (PID, ectopic pregnancy, or infertility). Symptoms of rectal infection in both men and women include painful bowel movements, discharge, anal itching, soreness, and bleeding. Infections in the throat cause few symptoms.

**3. Incubation period**: 1 – 30 days, usually 3 – 5 days following exposure

**4. Contagious period**: Weeks or months if untreated, even if asymptomatic. Communicable period ends with appropriate antibiotic therapy.

**5. How does infection with gonorrhea occur?**
Gonorrhea is spread through sexual contact: vaginal, oral, or anal. It can also be spread from mother to child during birth. An infected person can spread gonorrhea even if they are not showing symptoms.

**6. How can infection with gonorrhea be prevented?**
Abstinence and safe sex practices such as the use of latex condoms are the most effective prevention measures.

**7. Is there a treatment for gonorrhea?**
Antibiotics can successfully cure gonorrhea in adolescents and adults.

**8. What are the circumstances in which gonorrhea could be significant?**
Untreated gonorrhea can cause permanent problems in both men and women. In women, gonorrhea is a common cause of pelvic inflammatory disease, which can cause severe abdominal pain and infertility. In men, gonorrhea can cause a painful condition of the testicles that can also result in infertility. Gonorrhea can in some instances cause a life-threatening infection. In addition, persons with gonorrhea are more likely to contract and transmit HIV. Lastly, the infant of a pregnant woman with gonorrhea can contract the disease and develop a life-threatening infection, which may lead to blindness.

**9. Exclusion: None,** unless they meet other exclusion criteria (see "General Exclusion Criteria")

**10. Readmission:** No restrictions.

**11. Contacts and reporting:** All sexual contacts of patients with gonorrhea infection should be evaluated and treated. Gonorrhea is a reportable disease to the County by the lab/provider who diagnosed the chlamydia.

# Hand, Foot, and Mouth Disease (Commonly Enterovirus)

## 1. What is hand, foot, and mouth disease?

Hand, foot, and mouth disease (HFMD) is a common illness caused by a virus (most commonly Enterovirus 71 and Coxsackievirus A16) in infants and children. It is rarely serious. Although it mainly occurs in children under 10 years old, adults may also be at risk. HFMD is not to be confused with foot- and-mouth disease of cattle, sheep, and swine, which is unrelated.

## 2. What are the signs and symptoms of HFMD?

HFMD begins with a mild fever, poor appetite, a sore throat, and general signs of a "cold." A few days after the fever begins, sores develop in the mouth. The sores appear as red spots that turn into blisters on the tongue, gums, and inside of the cheeks. A skin rash may also occur which develops over 1-2 days and is characterized by flat or red raised spots that may blister. The rash does not itch and usually occurs on the palms of the hands and soles of the feet. A person with HFMD may have only the rash on the body or the mouth ulcers. Nearly all patients recover without medical treatment in 7 - 10 days.

**3. Incubation period:** 3 – 6 days

**4. Contagious period:** Virus may be shed for several weeks after the infection starts; respiratory shedding of the virus is usually limited to < 1 week.

## 5. How does infection with HFMD occur?

HFMD is moderately contagious, and infection is spread from person to person by direct contact with nose and throat discharge or the stool of an infected person. HFMD is not transmitted to or from pets or other animals. A person is most contagious during the first week of the illness.

## 6. How can infection with HFMD be prevented?

A vaccine for the HFMD virus does not exist at this time; hygiene is the best prevention measure. This includes frequent hand washing, especially after diaper changes, and disinfection of contaminated surfaces with household cleaners. Children are often excluded from childcare programs, schools, or other group settings during the first few days of their illness, but these measures will not reduce disease transmission because some children shed the virus without symptoms, and other children may shed virus for weeks after recovery.

## 7. Is there a treatment for HFMD?

HFMD cannot be cured by medication, but treatment is available for symptoms such as fever or pain in the mouth from ulcers.

## 8. What are the circumstances in which HFMD could be significant?

Rarely, HFMD may be associated with serious infections such as viral meningitis/encephalitis with fever, headache, stiff-neck, or a polio-like paralysis. The individual may need to be hospitalized.

**9. Exclusion:** **None** for children with the HFMD, unless they meet other exclusion criteria (see "General Exclusion Criteria")

**10. Readmission:** Upon recovery, by school principal or principal's designee.

**11. Contacts and reporting:** Non reportable, but consider sending letters to parents when there is an outbreak of HFMD with the first case each semester (see template letter in Appendix).

# Head Lice (Pediculosis)

## 1. What are head lice?

Head lice are parasitic insects called *Pediculus humanus capitis* that must feed on blood to live. Having head lice is very common; as many as 6 - 12 million people worldwide get head lice each year.

## 2. What are the signs and symptoms of head lice?

Signs that head lice are present include: a tickling feeling of something moving in the hair; itching caused by an allergic reaction to the bites; irritability; and, sores on the head from scratching that may become infected. Head lice lay eggs, called nits, that are hard to see and are often confused for dandruff or hair-spray droplets. Once hatched and full grown, a live louse is about the size of a sesame seed, and they are tan to grayish white.

**3. Incubation period:** 6 – 10 days from laying to hatching of eggs

**4. Contagious period:** Until treated with a chemical that kills lice and viable eggs have been killed or removed

## 5. Who is at risk for getting head lice?

Anyone who comes in close contact with someone who already has head lice, or with contaminated clothing and other belongings, is at risk for getting head lice. Preschool and elementary-age children are most often infested.

## 6. How does infestation with head lice occur?

Infestation with head lice occurs by direct contact with an already infested person, which is common during play at school and at home. Infestation can also occur by the wearing of infested clothing such as hats, scarves, etc.; by using infested combs or brushes; or, by lying on a bed or a couch that has been in contact with an infested person. Presence of nits alone does not indicate active infestation.

## 7. How can infestation with head lice be prevented?

It is probably impossible to totally prevent head lice infestations. Avoiding contact with an infested person or objects as mentioned above is the best prevention measure. Inspection of children demonstrating symptoms, especially in areas where head lice are prevalent, is also helpful.

## 8. Is there a treatment for head lice?

Over the counter treatments and prescription drugs are available for treating head lice. Treatment often entails combing out the eggs and casings (nits) attached to the hair shaft with a specialized or fine-toothed comb. It is important to treat the infested person and any infested family members; wash or dry clean all clothing and bed linens; store stuffed animals and comforters in a plastic bag for 2 weeks; clean combs and brushes; and vacuum the floor and furniture.

## 9. What are the circumstances in which head lice could be significant?

Head lice rarely pose a serious problem. Sores that occur due to scratching can become infected, in which case a physician should be consulted.

**10. Exclusion: Yes,** when a student has the signs and symptoms of infestation (the most specific being the presence of a live louse), but the condition **does not warrant immediate exclusion**. Inform parents of suspected infestation and avoid any activity that involves the child in head-to-head contact with other children or sharing of any head gear until the end of the school day.

**11. Readmission:** After the child has received the proper treatment they may return to school. While the removal of nits is desirable to avoid diagnostic confusion, the presence of nits alone (after treatment) is *not* sufficient criteria to exclude children from school. A lice notification letter may be sent home with the first case each semester. Subsequent letters are not necessary unless there is an outbreak (10% or more in a single classroom).

# Hepatitis A, B, and C

## 1. What are hepatitis A, B, and C?

Hepatitis A, B, and C are liver diseases caused by the hepatitis A, B, and C virus, respectively.

## 2. What are the signs and symptoms of hepatitis A, B and C?

All three viruses can cause asymptomatic infection, and adults are more likely to have symptoms than children. Symptoms common to the three viruses are as follows: fatigue, loss of appetite, nausea, vomiting, abdominal discomfort, jaundice (yellowing of the skin and eyes), and dark urine. In addition, hepatitis A is usually more abrupt in onset; hepatitis B may cause joint pains and rash.

## 3. Incubation period:

**Hepatitis A:** 15 – 50 days; average 25 – 30 days
**Hepatitis B:** 45 – 160 days; average 90 days
**Hepatitis C:** 14 – 180 days; average 45 days

## 4. Contagious period:

**Hepatitis A:** 2 weeks before onset of signs and symptoms, infectivity is minimal one week after onset of jaundice
**Hepatitis B:** As long as the virus is present in the blood of the infected person
**Hepatitis C:** Unknown

## 5. How does infection with hepatitis A, B, and C occur?

**Hepatitis A** is found in an infected person's feces, thus it is usually spread from person to person by putting something in the mouth that has been contaminated with the feces of a person with hepatitis A.

**Hepatitis B** is found in bodily fluids and blood, and it is spread from person to person through unprotected sex, needle sharing, or blood transfusion. It can also be spread from mother to infant.

**Hepatitis C** is found in bodily fluids and blood, and is usually spread through needle sharing, needle sticks or sharps exposure, and blood transfusions. It can also be passed from a pregnant mother to her baby during birth. Rarely spread through sexual contact.

## 6. How can infection with hepatitis A, B, or C be prevented?

**Hepatitis A**: A vaccine is available for persons 2 years of age and older. Major methods of prevention include general sanitation and personal hygiene. There is an immune globulin for exposed individuals who meet specific criteria.

**Hepatitis B**: A vaccine is available for all ages. Other methods of prevention include sanitation, universal precautions and the use of latex condoms.

**Hepatitis C**: There is no vaccine to prevent hepatitis C available at this time. Avoidance of needle sharing by injection drug users or people receiving tattoos or body piercing is a helpful preventative measure, as is using latex condoms during sexual contact.

**Note:** Students with Hepatitis B, Hepatitis C or HIV are generally not required to be identified to school personnel. Universal precautions should be taken when handling any blood or body fluids in school settings to acknowledge the risk of exposure to all types of unrecognized disease.

## 7. Is there a treatment for hepatitis A, B, or C?

Treatment is generally supportive. No cure exists at this time for hepatitis A or B, but medication for chronic hepatitis B infection is available. For hepatitis C, a combination of drug therapy is available to treat chronic infection.

**8. What are the circumstances in which hepatitis A, B, or C could be significant?**

**Hepatitis A**: There is no long-term infection risk associated with hepatitis A, and one cannot get the disease again after having it once, although upon initial infection prolonged or relapsing symptoms may occur for 6 - 9 months.

**Hepatitis B** has more serious implications for chronic infection in infants, children, and adults. Persons who have hepatitis B are at risk for developing chronic hepatitis with its complications at advancing age, including liver cancer.

**Hepatitis C**: Persons who have hepatitis C are at risk for developing chronic hepatitis with its complications at advancing age, including liver cancer.

**9. Exclusion:**

**Hepatitis A: Yes**,

- children should be excluded for 1 week after onset of illness; refer to health professional
- staff with the illness, especially food handlers, should also be excluded for 1 week after onset of illness

**Hepatitis B: Yes,** if the child with known Hepatitis B exhibits any of the following:

- weeping sores that cannot be covered
- biting or scratching behavior
- a bleeding problem
- generalized dermatitis that may produce wounds or weepy tissue fluid that cannot be covered

**Hepatitis C:** (Same as Hepatitis B)

**10. Readmission:**

**Hepatitis A:** One week after the onset of illness and upon recovery from symptoms

**Hepatitis B:** When skin lesions are dry or covered; when the child is clear to return by a health professional

**Hepatitis C:** When skin lesions are dry or covered; when the child is clear to return by a health professional

**11. Contacts and reporting:** Reportable to the County (only acute cases are investigated); outbreaks of Hepatitis A may require immune globulin shots given by the health department. Call Nursing Services Communicable Disease Unit if there is a need to report a **confirmed** case of viral hepatitis.

# Herpes (Oral and Genital)

## 1. What is herpes?

Herpes is an infection caused by two different but closely related viruses– herpes simplex virus type 1 and herpes simplex virus type 2. Both can cause sores in the mouth (oral herpes), genitals (genital herpes), or skin that comes in contact with these areas. Genital herpes is considered to be a sexually transmitted disease. More serious complication of herpes infection can occur in the newborn and when there is involvement of the eyes.

## 2. What are the signs and symptoms of herpes?

Symptoms of oral herpes include "cold sores" or "fever blisters" that appear on the lips or inside of the mouth. They are common in young children, and harmless in children and adults. Symptoms of genital herpes include blistery sores that appear on the genitalia and buttocks that can be accompanied by pain in the infected area and flu-like symptoms. Sores can also be found on the skin, as in the case of wrestlers (herpes gladiatorum) or those with eczema (eczema herpeticum). After the primary infection, the virus persists for life and can result in occasional "flare- ups" or recurrence.

**3. Incubation period:** 2 days to 2 weeks

**4. Contagious period:** The primary infection is generally communicable for 1 to 2 weeks after signs or symptoms appear. In recurrent infections the largest amount of virus is shed for 3 to 4 days after signs or symptoms appear. There may be a low level of viral shedding when infected individuals have no signs or symptoms

## 5. How does infection with herpes occur?

Herpes is spread by touching, kissing, and sexual contact. It can be passed from one person to another, or from one part of the body to another, even when sores are not present.

## 6. How can infection with herpes be prevented?

Sores in the mouth or genital area should not be touched, and if they are, prompt hand washing should follow. People with sores in the mouth should avoid kissing and sharing food or drink with other people, especially infants, children, and pregnant women. Covering open herpes skin lesions is advisable. Wrestlers may need to have mats washed/disinfected between matches if there is suspicion or known herpes gladiatorum.

## 7. Is there a treatment for herpes?

Antiviral medications, such as acyclovir, can be prescribed to help speed up the healing of sores and weaken the virus. Individuals with more than six episodes a year may be advised to take daily antiviral medications to prevent episodes.

## 8. What are the circumstances in which herpes could be significant?

Herpes infections are much more serious in newborns. It is possible for a mother to pass herpes to her baby during birth, but the risk is much higher with primary infection of the mother.

**9. Exclusion: No**, unless the child has mouth ulcers and blisters and does not have control of drooling, or the child meets other exclusion criteria (see "General Exclusion Criteria").

**Note:** Athletes with exposed herpes lesions participating in close contact sport (e.g., wrestling) may need to be excluded from practice or competition until lesions heal or clearance from a physician declaring the condition noninfectious.

**10. Readmission:** Upon recovery and exclusion criteria resolved (no drooling or exposed open sores).

# HIV/AIDS

## 1. What are HIV and AIDS?

Human immunodeficiency virus (HIV) is an infection that destroys the body's immune system and can cause a broad spectrum of disease. Acquired immunodeficiency syndrome (AIDS) represents the most severe end of the clinical spectrum of HIV infection.

## 2. What are the signs and symptoms of HIV and AIDS?

**HIV:** While many HIV-infected people may not have any symptoms, they may experience rapid weight loss, dry cough, recurring fever or profuse night sweats, profound and unexplained fatigue, and swollen lymph glands. HIV infected persons can also have diarrhea that can last for more than a week, white spots on the tongue, and pneumonia. However, no one should assume that they are infected if they have any of these symptoms. The only way to determine whether one is infected is to be tested for HIV.

**AIDS**: HIV destroys certain blood cells (T-cells) that are crucial to immune system function, and this damage can lead to the development of AIDS. Signs of AIDS include certain opportunistic infections that are generally rare, such as *Pneumocystis carinii* pneumonia and Kaposi's sarcoma**.** Diagnosis of AIDS requires a T-cell count below a certain level, which may or may not be accompanied by the presence of an opportunistic infection.

**3. Incubation period:** Clinical symptoms after HIV infection have appeared in less than 1 year to longer than 10 years. Average is 2 – 4 years. The incubation period is shorter in children.

**4. Contagious period:** Lifelong in infected persons who may or may not be symptomatic

## 5. How does infection with HIV occur?

HIV is passed from one person to another by having sexual intercourse (anal, vaginal, or oral) with an HIV-infected person, by sharing needles with an injection drug user who is infected with HIV, or by having blood or bodily fluid contact with a person infected with HIV. In addition, the virus can be passed from an HIV-infected mother to her baby before or during birth and through breast-feeding. HIV is **not** transmitted by casual contact such as handshaking, hugging, sneezing, or sharing toilet seats and is not acquired from saliva, tears, or urine.

## 6. How can infection with HIV be prevented?

Education on the methods of transmission of HIV is an important component of prevention. Prevention of HIV transmission by sexual contact can be accomplished by abstinence and safe sex practices such as the use of latex condoms. Universal precautions and standard procedures should be followed in the handing of potentially infectious material (see LAUSD Bulletin No 1645.2, "Preventing the Spread of Communicable Diseases," Nov, 2014 and LAUSD "Bloodborne Pathogens—Exposure Control Plan," July 2005)

## 7. Is there a treatment for HIV or AIDS?

There is no cure or vaccine for HIV or AIDS at this time. However, early intervention and treatment with antiretroviral drugs can slow the disease progression and prolong and improve the quality of life.

## 8. What are the policies surrounding HIV/AIDS and school attendance?

A child or adult infected with HIV should not be isolated or excluded from any activity that their health status permits them to participate in. **Their diagnosis of HIV/AIDS must remain confidential by law. Students and/or families are not required to disclose HIV infection status to anyone in the education system. No information regarding a person's HIV status will be divulged to any individual or organization without a Court Order or informed written, signed, and dated consent of the person with HIV infection (or the parent or guardian of a legal minor).** For more information, see LAUSD Bulletin No. BUL-4088 "Students with HIV/AIDS Infection."

**9. Exclusion: No,** unless the child meets other exclusion criteria (see "General Exclusion Criteria") or has bleeding problems or weeping skin lesions that cannot be covered. In such cases, school attendance will be decided on an individual basis with consideration given to any risk for the infected person and any possible risk to others. Age, maturity level, physical condition, neurological development, behavior, psychological needs and requirement for special environment or physical care will be considered.

**10. Readmission:** Children who are known to be infected with HIV and have been excluded because of risk of exposure to infections posed by group settings may return to school upon clearance from the child's health professional who is knowledgeable about HIV infection. Skin lesions must be dry and covered and bleeding must be controlled. Complex cases of admission/readmission will be evaluated on an individual basis involving a collaborative decision making process, which should include the school principal, family and medical personnel.

**11. Contacts and reporting:** AIDS (cases meeting the criteria) is a reportable condition, but school personnel will generally **not** be involved with disease surveillance. Remember confidentiality of HIV/AIDS status is a legal requirement and any questions regarding students with HIV/AIDS should be directed to Student Medical Services or Nursing Services Communicable Disease Unit (see Bul-4088, Jan 2008).

# Impetigo

## 1. What is impetigo?

Impetigo is a skin infection caused by bacteria (Group A *streptococci* or *Staphylococcus aureus*). Impetigo typically affects school-aged children, most often during the hot and humid summer months. It has a preference for skin that has already been injured by other skin problems, such as eczema or poison ivy. A potentially more serious strain of the bacterium *S. aureus* has emerged in recent years that is resistant to certain antibiotics (Methicillin-resistant *S. aureus*, or MRSA). Community-associated MRSA can be confused with impetigo, but they are clinically distinct entities.

## 2. What are the signs and symptoms of impetigo?

Impetigo can affect skin anywhere on the body, but it most often affects the face. It causes itchy skin with tiny blisters especially around the mouth and nose. Blisters will eventually burst to reveal areas of red skin that may weep fluid. Gradually, a tan or yellowish-brown crust will cover the infected area.

**3. Incubation period:** Skin sores develop in 7 – 10 days after bacteria attach to the skin.

**4. Contagious period:** Until the skin sores are treated with antibiotic for at least 24 hours or the crusting lesions are no longer present.

## 5. How does infection with impetigo occur?

Impetigo can be passed from person to person. When someone in a household has impetigo, the infection can be passed to other family members on clothing, towels, and bed linens that have touched the infected person's skin. Impetigo can also be spread from one area of the skin to another by scratching. On the face, the infection usually spreads along the edges of an affected area, but it may also spread to more distant parts of the body on contaminated fingers.

## 6. How can infection with impetigo be prevented?

Good general hygiene practices, such as a daily bathing with soap and water can help prevent impetigo. Areas of skin that have been injured should be kept clean and covered. Covering sores with gauze, loosely to allow airflow, can help prevent spreading the bacteria in group settings. If a family member is infected, all family members should use different towels.

## 7. Is there a treatment for impetigo?

Impetigo is usually treated with antibiotics, which may be given by the mouth. In very mild cases, a topical antibiotic may be used.

**8. Exclusion: Yes**, if the lesion is draining or cannot be covered. Exclusion for Impetigo is only recommended if the student is unable to cover skin lesion and/or control body fluids.

**9. Readmission:** After 24 hours of appropriate (antibiotic) treatment for impetigo or when lesions are covered/ healed, by school principal or principal's designee. (Reference No. REF-4035.1, *Management of Skin Infections (including MRSA) in School Settings*, Oct. 2015).

# Influenza (Flu)

**1. What is the flu?**
The flu is a contagious disease caused by the influenza virus that attacks the nose, throat, and lungs. Most people recover in 1-2 weeks, but some develop serious complications.

**2. What are the signs and symptoms of the flu?**
Fever, chills, headache, tiredness, dry cough, sore throat, nasal congestion, and body aches are all common flu symptoms. Children can have nausea, vomiting and diarrhea.

**3. Incubation period:** 1 – 4 days

**4. Contagious period:** From the day before signs or symptoms appear until 7 days after the onset of flu. Children can be contagious longer.

**5. How does infection with the flu occur?**
The flu is spread when an infected person coughs, sneezes, or speaks and another person inhales this virus. The flu can also be spread when a person touches a surface that has the flu virus on it, such as a door handle, and then touches his or her nose or mouth.

**6. How can infection with the flu be prevented?**
A flu shot can be obtained each fall, before flu season, for prevention. The elderly, people with chronic medical conditions or who are immunocompromised, and very young children (6 – 23 months) are recommended to get the flu shot as they are more likely to develop complications. Persons who care or work with these high-risk groups may also be eligible for the flu shot. Please check with a school/CD nurse or the Department of Public Health regarding current indications for the immunization. Good personal hygiene such as hand washing can also help prevent infection.

**7. Is there a treatment for the flu?**
The flu cannot be cured by medication, although some antiviral drugs taken within the first two days of illness can reduce the duration of the disease. Rest, drinking plenty of liquids, avoiding alcohol and tobacco use, and taking nonprescription medication to relieve symptoms can help. A child or teenager with flu-like symptoms, particularly fever***, should not*** be given aspirin without first consulting a physician, as a rare but serious illness called Reye's syndrome can result.

**8. What are the circumstances in which the flu could be significant?** While most people recover from the flu in 1-2 weeks, some people develop life-threatening complications. People ages 65 years and older, people of any age with chronic conditions, and very young children are more likely to get complications from the flu such as sinus and ear infections, bronchitis, and pneumonia. The flu can also make chronic health problems worse; for example, people with asthma may experience asthma attacks while they have the flu, and people with chronic congestive heart failure may experience a worsening of their condition. Unusual strains of flu (avian flu) may pose greater risk to populations. The management, exclusion and readmission of students and/or staff with avian flu may be different than the guidelines below.

**9. Exclusion: None**, unless the child meets other exclusion criteria such as fever with behavior changes, or if the child appears to be severely ill and also when the child is unable to participate comfortably in activities as determined by the school staff (see "General Exclusion Criteria").

**10. Readmission:** Upon recovery, by school principal or principal's designee.

# Measles (Rubeola)

## 1. What is measles?

Measles is an acute, highly contagious viral disease. The disease can be severe with complications such as pneumonia and inflammation of the brain leading to death in about two of every thousand cases.

## 2. What are the signs and symptoms of measles?

The infected person first experiences a fever lasting about 2-4 days that can peak as high as 103-105 degrees Fahrenheit. This is followed by the onset of a cough, runny nose, conjunctivitis (pink eye) and Koplik spots (small red spots in the mouth). The rash (dusky, red blotchy) usually begins at the hairline, and then involves the face and upper neck. Over the next 3 days, the rash gradually proceeds downward on the body, reaching the hands and feet. Diagnostic testing for measles should be undertaken by a qualified health professional and the state public health laboratory.

**3. Incubation period:** 8 – 12 days from exposure to onset of signs and symptoms.

**4. Contagious period:** From 1 – 2 days before the first signs or symptoms appear until 4 days after the appearance of the rash.

## 5. How does infection with measles occur?

The disease is highly contagious, and can be transmitted prior to and after the appearance of the rash. The virus resides in the mucus in the nose and throat of the infected person. When the infected person sneezes, coughs, or speaks another person can inhale this virus from the air and become ill. Touching an infected surface can also spread the virus, which remains active and contagious on infected surfaces for up to 2 hours. Measles spreads so easily that anyone who is not immunized may get it.

## 6. How can infection with measles be prevented?

The measles vaccine can prevent this disease. The vaccine is usually given as part of a combination vaccine, called MMR that protects against measles, mumps, and rubella. There is an immune globulin that can be given after exposure to measles, usually for immunocompromised and unimmunized patients.

## 7. Is there a treatment for measles?

There is no cure or treatment for measles; only its symptoms can be treated.

**8. What are the circumstances in which measles could be significant?** Complications of measles are more common among children under 5 years of age and adults over 20 years old, and can include ear infection, pneumonia, encephalitis (brain inflammation), and death. Measles in pregnant women can result in miscarriage, premature birth, or a low-birth-weight baby.

**9. Exclusion: Yes,** measles is highly communicable illness for which routine exclusion of infected children is warranted. Unimmunized children (exempted from measles immunization for medical, religious, or other reasons) if not immunized within 72 hours of exposure, should be excluded from school until at least 2 weeks after the onset of rash in the last case of measles.

**10. Readmission:** Four days after beginning of rash and with clearance from County of the Los Angeles, Department of Health or other treating physician.

**11. Contacts and reporting:** Measles is reportable to the County. Call Nursing Services Communicable Disease Unit if there is a need to report a **confirmed** case of measles.

# Meningitis

## 1. What is meningitis?

Meningitis is an infectious disease causing swelling and inflammation of the membranes and the fluid surrounding the brain and spinal cord. Meningitis can be caused by a bacterium or a virus. Knowing whether meningitis is caused by a virus or bacterium is important because the severity of illness and the treatment differ. Viral meningitis is generally less severe and resolves without specific treatment, while bacterial meningitis caused by meningococcal bacteria is a serious disease and can be fatal. Unlike viral meningitis, bacterial meningitis must be treated with antibiotics.

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

Often, the symptoms of viral meningitis and bacterial meningitis are the same. High fever, headache, and stiff neck are common symptoms of meningitis in anyone over the age of 2 years. These symptoms can develop over several hours, or they may take 1-2 days. Other symptoms may include nausea, vomiting, discomfort looking into bright lights, confusion, and sleepiness. As the disease progresses, patients may have seizures. Children infected with the meningococcal bacteria can have a quickly progressing course that includes a dusky-purple rash and shock or coma.

## 3. Incubation period:

**Viral Meningitis:** 3 – 6 days
**Bacterial Meningitis:** Less than 4 days

## 4. Contagious period:

**Viral Meningitis:** Varies with causative organism
**Bacterial Meningitis:** Until after 24 hours of antibiotics

## 5. How does infection with meningitis occur?

Most viruses and bacteria that cause meningitis spread through person to person contact and respiratory secretions. Some viruses are spread through fecal-oral routes.

## 6. How can infection with meningitis be prevented?

There are safe and effective vaccines against some of the bacteria that cause meningitis. One effective method of prevention both viral and bacterial infections is to wash hands thoroughly and often. In institutional settings such as schools and child care centers, washing objects and surfaces with a District-approved disinfectant (e.g., dilute bleach solution) can be a very effective way to inactivate a virus. In some cases of bacterial meningitis, antibiotic prophylaxis may be indicated for close contacts to the infected individual.

## 7. Is there a treatment for meningitis?

Bacterial meningitis can be treated with a number of effective antibiotics, but no specific treatment exists for viral meningitis at this time. Individuals with meningitis may be managed in the hospital based on their general condition and the severity of their disease.

**8. Exclusion: Yes**, as soon as it is suspected.

**9. Readmission:** When the child is cleared in writing to return by a licensed health professional.

**10. Contacts and reporting:** Meningitis is a reportable condition. Call Nursing Services Communicable Disease Unit before any reporting and to discuss if there is a need for notification to parents or staff.

# Molluscum Contagiosum

**1. What is molluscum contagiosum?**
Molluscum is a benign skin disease caused by a virus, somewhat similar to warts. Humans are the only known source of the virus. While infectivity is generally low, there are occasional outbreaks that have been reported, including in child care centers.

**2. What are the signs and symptoms of molluscum contagiosum?**
Molluscum only affects the skin and not other parts of the body. It is characterized by small, flesh- colored bumps on the skin, often with a tiny, hard, indented, seed-like center. Lesions commonly occur on the trunk, face, arms and legs, but rarely are generalized over the entire body. The exceptions are with eczema or immunocompromised people, who tend to have more intense and widespread eruptions.

**3. Incubation period:** Usually between 2 and 7 weeks, but may be as long as 6 months.

**4. Contagious period:** Unknown

**5. How does infection with molluscum contagiosum occur?**
The virus is spread person-to-person through close contact or through inanimate objects such as towels. Infectivity is generally considered low.

**6. How can infection with molluscum contagiosum be prevented?**
Although molluscum contagiosum bumps represent a viral infection, they are very mildly contagious and most often are spread to other areas of the affected child's body, rather than to other children. Children should avoid scratching the bumps, as they can become infected with bacteria or further spread the virus to another site. As with other communicable disease, hand washing is important and not sharing personal objects (towels) with infected individuals. Molluscum contagiosum bumps do not need to be covered like shingles or other oozing sores.

**7. Is there a treatment for molluscum contagiosum?**
Treatment is a personal choice and not an infection control issue for a group care setting. The bumps usually go away on their own in a few months as the person develops antibodies to the virus. Alternatively, treatments may be used; however, there is little agreement on effective treatments.

**8. Exclusion: No**

**9. Readmission:** No restrictions

# Mononucleosis

**1. What is mononucleosis?**
Mononucleosis is an infectious disease caused by the Epstein-Barr Virus (EBV) commonly known among the general public as "mono." Most people become infected with EBV some time during their lives, but do not necessarily develop mononucleosis.

**2. What are the signs and symptoms of mononucleosis?**
Symptoms of infectious mononucleosis include fever, sore throat, swollen lymph glands, and fatigue. Sometimes, a swollen spleen or liver involvement may develop. Heart problems or involvement of the central nervous system occur only rarely.

**3. Incubation period:** Estimated to be 30 – 50 days

**4. Contagious period:** Unknown, but probably before symptoms appear and many months after infection symptoms.

**5. How does infection with mononucleosis occur?**
Most individuals exposed to people with infectious mononucleosis have previously been infected with the virus and are not at risk for infectious mononucleosis. Transmission of the virus requires intimate contact with the saliva of an infected person; transmission through the air or blood does not normally occur, although infection has been reported through blood transfusion.

**6. How can infection with mononucleosis be prevented?**
Avoiding direct contact with the saliva of an infected person may help prevent transmission. However the fact that many healthy people can carry and spread the virus intermittently for life, and that they are usually the primary reservoir for person-to-person transmission, makes the transmission of the virus almost impossible to prevent. As a general measure, people with signs and symptoms of mononucleosis should not donate blood or prepare food for others.

**7. Is there a treatment for mononucleosis?**
Only the symptoms of mononucleosis may be treated. No vaccine or antiviral drugs are available at this time.

**8. What are the circumstances in which mononucleosis could be significant?** Rupture of an organ is a risk in patients with an enlarged spleen or liver who plays contact sports. In rare instances bleeding disorders or testicular or cardiac inflammation can lead to more severe complications of EBV infection. EBV has also been associated with distinct types of cancer.

**9. Exclusion: No**, unless they meet other exclusion criteria (see "General Exclusion Criteria"). However, contact sports should be avoided until patient has fully recovered and the spleen is no longer enlarged/palpable.

**10. Readmission:** Upon recovery, by school principal or principal's designee.

# MRSA

**1. What is MRSA?**

MRSA caused by a skin infection caused by methicillin-resistant *Staphylococcus aureus*, a type of staph bacteria that is resistant to several antibiotics. In the general community, MRSA can cause skin and other infections.

**2. What are the signs and symptoms of MRSA?** Community–associated MRSA usually presents as pimples, boils or abscesses. They may be painful and may be misdiagnosed as "spider bites." School personnel will generally only know that a student is infected with MRSA if given the diagnosis by a health care provider as it may be difficult to distinguish from other common skin infections. Most staph skin infections, including MRSA, appear as a bump or infected area on the skin that might be:

- Red
- Swollen
- Painful
- Warm to the touch
- Full of pus or other drainage
- Accompanied by a fever

**3. Incubation period:** Skin sores develop in 7 – 10 days after bacteria attach to the skin.

**4. Contagious period:** Until the skin sores are treated with antibiotic for at least 24 hours or the crusting lesions are no longer present.

**5. How does infection with MRSA occur?**

MRSA can be passed from person to person. When someone in a household has MRSA, the infection can be passed to other family members on clothing, towels, and bed linens that have touched the infected person's skin. MRSA can also be spread from one area of the skin to another by scratching. On the face, the infection usually spreads along the edges of an affected area, but it may also spread to more distant parts of the body on contaminated fingers.

**6. How can infection with MRSA be prevented?**

Good general hygiene practices, such as a daily bathing with soap and water can help prevent MRSA. Areas of skin that have been infected should be kept clean and covered. Covering sores with gauze, loosely to allow airflow, can help prevent spreading the bacteria in group settings. If a family member is infected, all family members should use different towels.

**7. Is there a treatment for MRSA?**

MRSA is usually treated with antibiotics, which may be given by the mouth. In very mild cases, a topical antibiotic may be used.

**8. Exclusion: Yes**, if the lesion is draining or cannot be covered. Exclusion for MRSA is only recommended if the student is unable to cover skin lesion and control body fluids.

**9. Readmission:** After 24 hours of appropriate (antibiotic) treatment for MRSA or when lesions are covered/ healed, by school principal or principal's designee. (Reference No. REF-4035.1, *Management of Skin Infections (including MRSA) in School Settings, November 2015*)

# Mumps

## 1. What is mumps?

Mumps is an acute illness caused by the mumps virus. After a vaccine was introduced in 1967, the incidence of mumps decreased rapidly. In 1986 and 1987 there was a relative resurgence of mumps in young adults, indicating a need for two doses of the vaccine to confer immunity. Since 1989, there has been a steady decline in reported mumps cases as a result of implementation of the second dose recommendation for the mumps vaccine.

## 2. What are the signs and symptoms of mumps?

Mumps begins with a low-grade fever, headache, loss of appetite, muscle aches, and a generalized sick feeling. Mumps most commonly affects the parotids glands in front and below the ear or under the jaw. Within 2 days, the infection in the salivary glands begins to be marked with an earache and/or jaw pain. Symptoms tend to decrease after one week and usually resolve in 10 days. Some infections show no symptoms, while others may show only non-specific or respiratory symptoms. In teenage boys, painful swelling of the testicles may appear; girls may have swelling of the ovaries which may cause abdominal pain.

**3. Incubation period:** 16 – 18 days

**4. Contagious period:** From 1 – 2 days before, to 5 days after the swelling of glands.

## 5. How does infection with mumps occur?

Transmission of mumps virus occurs when a healthy person comes in contact with an infected person's saliva, or when an infected person spews airborne droplets containing the virus by coughing, sneezing, or talking, and a healthy person breathes them in.

## 6. How can infection with mumps be prevented?

The mumps vaccine can prevent this disease. The vaccine is usually given as part of a combination vaccine, called MMR that protects against measles, mumps, and rubella.

## 7. What are the circumstances in which mumps could be significant?

Mumps can cause complications in the central nervous system, including meningitis. Testicular, ovarian, and heart inflammation, as well as pancreatic infection, can also occur. Deafness caused by mumps was significant in children in the pre-vaccine era.

**8. Exclusion: Yes,** mumps is highly communicable illness for which routine exclusion of infected children is warranted. For outbreaks, exclude exposed children who have not been immunized until they become immunized; or if they are not immunized because of an accepted exemption, continue to exclude them until the health department determines it is safe for them to return.

**9. Readmission:** Nine days after onset of symptoms (swelling of glands) and with clearance from County of the Los Angeles, Department of Health or other treating physician.

**10. Contacts and reporting:** Mumps is reportable to the County. Call Nursing Services Communicable Disease Unit if there is a need to report a **confirmed** case of mumps.

# Noroviruses (Norwalk Viruses)

## 1. What is a Norovirus?

Noroviruses (or Norwalk) belong to a family of viruses that cause the "stomach flu". Stomach flu is also called gastroenteritis, food infection, food poisoning and nonbacterial gastroenteritis.

## 2. What causes the Norovirus?

Noroviruses generally spread through contaminated water and foods, although they can also pass from person to person. You may become infected by:

1. Eating food or drinking liquids that are contaminated with norovirus. Shellfish and salad ingredients are most often infected with the viruses. Food other than shellfish may be contaminated by food handlers.
2. Touching surfaces or objects contaminated with norovirus and then placing your hand in your mouth.
3. Having direct contact with someone who is contaminated.

**3. Incubation period:** 24 to 48 hours after exposure

**4. Contagious period:** A mild and brief illness usually lasts 24 to 60 hours. During this time you may be contagious.

## 5. How is infection with noroviruses diagnosed?

## 6. How can infection be prevented?

Avoid cross contamination by washing hands, utensils and cutting boards before and after contact with raw vegetables. Rinsing raw vegetables before food preparation may also help

## 7. Is there a treatment for Noroviruses?

You treat gastroenteritis caused by noroviruses by managing any complications until it passes. Dehydration caused by diarrhea and vomiting is the most common complication. Do not use medicines, unless your health care provider recommends them. Caution parents to avoid OTC meds like adult Pepto Bismol (there is a children's version that is aspirin free) which may cause Reyes Syndrome.

**8. Exclusion:** Yes, if the person is symptomatic or meets other exclusion criteria (see "General Exclusion Criteria")

**9. Readmission:** Upon recovery, by school principal or principal's designee.

**10. Contacts and reporting:** Non reportable, but if >10% of school/classroom, should call Nursing Services Communicable Disease desk.

# Pinworms

## 1. What are pinworms?

Pinworm refers to an infection caused by small, white, threadlike worms ( 0.25" – 0.5" long ) that live in the large intestine. It has been estimated that 5%-15% of the U.S. population is infected, and higher rates are seen in pre- school and school aged children.

## 2. What are the signs and symptoms of pinworms?

Children with pinworm infections have itching and irritation around the anal or vaginal area. Worms may be seen, especially after the child has been sleeping for a few hours, around the anus

**3. Incubation period:** 1 to 2 months or longer from the time of ingesting the pinworm egg until an adult worm migrates to the anal area.

**4. Contagious period:** As long as the female worms are discharging eggs to the skin around the anus.

## 5. How does infection with pinworms occur?

The transmission of pinworm eggs occurs by the fecal-oral route. This may occur directly or indirectly by coming in contact with contaminated toys, bedding, clothing, toilet sheets, or baths. Pinworm eggs remain infective for 2 to 3 weeks in indoor environments and infestation with pinworms commonly cluster within families.

## 6. How can infection with pinworms be prevented?

Good hand hygiene is the most effective method of prevention. Parents may bathe the child in the morning to remove a large proportion of eggs that are laid at night and frequently change underwear, bedclothes, and bed sheets to decrease egg contamination. Wash toys frequently and clean and sanitize surfaces used for eating, toileting, food preparation, and diapering.

## 7. Is there a treatment for pinworms?

Treatment with oral medication once or repeated in 2 weeks may be necessary for the whole family and the group of children who share common environment.

**8. Exclusion: No**

**9. Readmission:** No restrictions

# Pertussis (Whooping Cough)

## 1. What is pertussis or whooping cough?

Whooping cough is an acute infection caused by the bacterium *Bordetella pertussis*. It is one of the most common childhood diseases involving the throat and lungs, especially encountered in unimmunized populations. Whooping cough is a serious illness in children and may result in complications and death. Adolescents and adults who become infected with whooping cough, although contagious, usually have a milder illness.

## 2. What are the signs and symptoms of whooping cough?

The initial stage is characterized by a runny nose, sneezing, low-grade fever, and a mild cough. The second stage begins with bursts of numerous, rapid coughs followed by a characteristic, long, high- pitched inspiratory whoop. During such an attack, a patient may turn blue, especially children and young infants. Vomiting and exhaustion commonly follow the episode, but the individual usually appears normal between attacks. The second stage lasts for 1-6 weeks, but may persist for up to 10 weeks. In the last stage, the cough begins to subside and disappears over a period of 2-3 weeks.

**3. Incubation period:** 6 – 21 days, usually 7 – 10 days

**4. Contagious period:** From the beginning of symptoms until 2 weeks after the cough begins depending on age immunization status. An infant who has no pertussis immunization may remain infectious for 6 weeks or more after the cough starts.

## 5. How does infection with whooping cough occur?

Transmission of the whooping cough bacteria from one person to another usually occurs through direct contact with or inhalation of airborne droplets of respiratory secretions. Less commonly, transmission can occur through contact with freshly contaminated objects touched by an infected person.

## 6. How can infection with whooping cough be prevented?

The pertussis vaccine can prevent whooping cough. The immunization for pertussis is usually given with one for diphtheria and tetanus (DTaP/Tdap). Other measures include hand washing and prophylactic antibiotics for exposed close contacts.

## 7. Is there a treatment for whooping cough?

Antibiotics can be used to treat whooping cough.

## 8. What are circumstances in which whooping cough could be significant?

Young infants are at highest risk for developing complications from whooping cough. The most common complication is bacterial pneumonia. Neurologic complications such as seizures, etc. may also occur as a result of a reduced oxygen supply to the brain due to coughing.

**9. Exclusion: Yes**, pertussis is highly communicable illness for which routine exclusion of infected children is warranted. Exclude close contacts who are coughing until they receive appropriate evaluation and treatment.

**10. Readmission:** After 5 days of appropriate antibiotic treatment (some treatments may be given for a total of 14 days) and with clearance from County of the Los Angeles, Department of Health or other treating physician. People who do not receive appropriate antibiotic therapy should be excluded from school for 21 days after the onset of symptoms.

**11. Contacts and reporting:** Whooping cough (pertussis) is a reportable disease. Call Nursing Services and complete Pertussis protocol (see appendix) if you have a confirmed case.

# Ringworm (Tinea)

## 1. What is ringworm?

Ringworm is a contagious fungal infection of the skin (tinea corporis), scalp (tinea capitis), feet (tinea pedis), and the nails (tinea unguium). Despite its name, it has nothing to do with worms. The name comes from the characteristic red ring that can appear on an infected person's skin.

## 2. What are the signs and symptoms of ringworm?

Ringworm of the body shows up as a flat, round patch anywhere on the skin except for the scalp and feet. The groin is a common area of infection. As the rash gradually expands, its center clears to produce a ring and there may be scales on the edges. More than one patch might appear, and the patches can overlap. The area is sometimes itchy.

Ringworm of the scalp begins with a small pimple that becomes larger, leaving scaly patches of temporary baldness. Infected hairs become brittle. Yellowish crusty areas sometimes develop.

Ringworm of the foot is also called "athlete's foot." It appears as a scaling or cracking of the skin, especially between the toes.

Ringworm of the nails causes the infected nails to become thicker, discolored, and brittle, or to become chalky and disintegrate.

## 3. Incubation period: Approximately 10 – 14 days

## 4. Contagious period: Unknown, but likely infectious as long as lesions are present with viable fungus.

## 5. How does infection with ringworm occur?

People can get ringworm by direct skin-to-skin contact with an infected person or pet. People can also get ringworm indirectly by contact with objects or surfaces that an infected person or pet has touched, such as hats, combs, brushes, bed linens, stuffed animals, gym mats, and shower stalls. In rare cases, ringworm can be spread by contact with soil.

## 6. How can infection with ringworm be prevented?

The fungus is very common and it is contagious even before symptoms appear. Steps to prevent infection include the following: educating the public about the risk of ringworm from infected persons and pets; keeping common-use areas clean, especially in schools, day-care centers, gyms, and locker rooms; using District-approved disinfecting solutions on sleeping mats and gym mats; and, avoiding the sharing of clothing, towels, hair brushes, or other personal items. Infected persons can prevent infection from spreading by: completing treatment as instructed even after symptoms disappear; avoiding sharing personal items with others; and, minimizing contact with others by covering lesions.

## 7. Is there a treatment for ringworm?

Ringworm can be treated with an anti-fungal medicine. The medicine can be in tablet or liquid form taken by mouth, or as a cream applied directly to the infected area. Anti-fungal creams can be purchased in a pharmacy, without a prescription, for ringworm of the skin and foot. More extensive infections and ringworm of the scalp and nails usually require a prescription medication.

## 8. What are the circumstances in which ringworm could be significant?

Lack of or inadequate treatment can result in an infection that will not clear up.

## 9. Exclusion: **Yes**, at the end of the school day for treatment.

## 10. Readmission: Once treatment is started, reasonable effort should be made to cover exposed skin lesions. Readmission may be granted by school staff or private physician.

# Rubella (German Measles)

## 1. What is rubella?

Rubella, also called German measles, is an infectious disease caused by a virus. Although mild in children, rubella can be associated with significant disease in adults. If a pregnant woman gets rubella during the first 3 months of pregnancy, her baby is at risk of dying or of having serious birth defects.

## 2. What are the signs and symptoms of rubella?

Symptoms of rubella may include a rash, slight fever, aching joints, headaches, discomfort, runny nose, and redness of eyes. A red or pink rash first appears on the face and spreads from head to toe. The lymph nodes just behind the ears and at the back of the neck may swell, causing soreness and pain. Many people with rubella have few or no symptoms, and only about half of the people who have the disease get a rash.

**3. Incubation period:** 16 – 18 days

**4. Contagious period:** May be spread 7 days before to 14 days after the appearance of the rash

## 5. How does infection with rubella occur?

Rubella is spread from person to person when an infected person coughs or sneezes and an uninfected person comes in direct contact with these respiratory and throat secretions. In addition, a mother can pass rubella to her fetus.

## 6. How can infection with rubella be prevented?

There is a safe and effective vaccine to protect against rubella. The vaccine is usually given as part of a combination vaccine, called the MMR vaccine that protects against measles, mumps, and rubella.

## 7. Is there a treatment for rubella?

Only the symptoms of rubella can be treated.

## 8. What are the circumstances in which rubella could be significant?

If rubella is contracted in the early months of pregnancy it is associated with a high rate of serious birth defects such as deafness, cataracts, heart defects, and liver or spleen damage.

**9. Exclusion: Yes,** rubella is highly communicable illness for which routine exclusion of infected children is warranted. For outbreaks, exclude exposed children who have not been immunized until they become immunized; or if they are not immunized because of an accepted exemption, continue to exclude them until the health department determines it is safe for them to return.

**10. Readmission:** Six days after onset of rash and with clearance from County of the Los Angeles, Department of Health or other treating physician.

**11. Contacts and reporting:** Rubella is reportable disease. Call Nursing Services Communicable Disease Unit if there is a need to report a **confirmed** case of rubella.

# Scabies

**1. What is scabies?**
Scabies is an infestation of the skin with a microscopic mite. Scabies spreads rapidly under crowded conditions where there is frequent skin-to-skin contact between people, such as in childcare facilities.

**2. What are the signs and symptoms of scabies?**
Symptoms of scabies include pimple-like irritations, burrows, or rash of the skin, especially in the webbing between the fingers; the skin folds on the wrist, elbow, or knee; the penis; the breast; or the shoulder blades. Intense itching is common, especially at night. Sores can result due to scratching and can sometimes become infected by bacteria.

**3. Incubation period:** 4 – 6 weeks for those who have never been infected; 1 – 4 days for those who have been previously infested.

**4. Contagious period:** Until insect infestation is treated.

**5. How does infestation with scabies occur?**
Scabies is spread to a healthy person by direct, prolonged, skin-to-skin contact with a person already infested with scabies. Infestation may also occur by sharing clothing, towels, and bedding. Infestation is easily spread to sexual partners and household members.

**6. How can infestation with scabies be prevented?**
Health education regarding cleanliness of person, garments, and bedclothes, and the need to be selective of intimate contacts can help prevent the spread of scabies. Having scabies once does not prevent one from becoming infected again since the body does not build up an immune response to scabies.

**7. Is there a treatment for scabies?**
Several topical treatments, such as creams and lotions, are available to treat scabies. Even when treatment has eliminated the mites, itching may continue for 2-3 weeks and does not mean that one is still infested. No new burrows or rashes should appear 24-48 hours after effective treatment. Close contacts with the patient should be treated at the same time. Infested bedding and clothing should be laundered (in hot water) and items that cannot be laundered should be stored in a sealed plastic bag for at least 4 days.

**8. What are the circumstances in which scabies could be significant?**
People with weakened immune systems, infants and the elderly are at risk for a more severe form of scabies called Norwegian or crusted scabies.

**9. Exclusion: Yes**, until after treatment is completed.

**10. Readmission:** After treatment has been completed (usually complete overnight).

**11. Contacts and reporting:** Family members and close contacts to the infected individual should be treated at the same time, even if they have no signs or symptoms are present. Scabies is only reportable to the County in *atypical cases.* An atypical presentation, involves heavy infestation with hundreds to thousands of mites causing a crusted appearance. Crusted scabies is highly contagious because thousands of mites are imbedded in the thick crusts and easily shed in scales and flakes from affected skin. Call Nursing Services Communicable Disease Unit if there is a need to report an atypical (crusted) case.

# Scarlet Fever

## 1. What is scarlet fever?

Scarlet fever is a rash that sometimes occurs in people with strep throat. Both scarlet fever and strep throat are caused by the same bacteria called group A streptococcus. The rash of scarlet fever is usually seen in children under the age of 18.

## 2. What are the signs and symptoms of scarlet fever?

A rash first appears as tiny red bumps on the chest and abdomen. This rash may then spread all over the body. It looks like a sunburn and feels like a rough piece of sandpaper. It is usually redder in the armpits and groin areas. The rash lasts about 2-5 days. After the rash is gone, the skin on the tips of the fingers and toes often begins to peel. The face is flushed with a pale area around the lips. The throat is very red and sore, and can have white or yellow patches. Fever, chills, swollen lymph nodes and "strawberry tongue" can be seen. Other, less common, symptoms include nausea, vomiting, headache, and body aches.

**3. Incubation period:** 2 – 5 days

**4. Contagious period:** Approximately 10 days if untreated. Uncomplicated cases are communicable during incubation and clinical illness. Adequate treatment with antibiotic will decrease the probability of transmission from patients or carriers within 24 hours.

## 5. How does infection with scarlet fever occur?

The illness can be spread to an uninfected person through contact with throat, mouth and nasal fluids of an infected person. Also, drinking from the same glass or sharing utensils with an infected person can spread the illness.

## 6. How can infection with scarlet fever be prevented?

There is no vaccine against the bacteria that causes scarlet fever available at this time. Thorough handwashing and avoidance of contact with an infected person's throat, mouth, or nasal secretions are helpful prevention measures.

## 7. Is there a treatment for scarlet fever?

Scarlet fever can be treated with antibiotics. It is very important to finish the prescribed medication, even when symptoms subside in order to prevent the development of complications or antibiotic- resistance bacteria.

## 8. What are the circumstances in which scarlet fever can be significant?

If scarlet fever is not treated, or if prescribed antibiotics are not completed, rheumatic fever can occur in a small percentage of people. Rheumatic fever is a disease characterized by pain and swelling of tissues in various parts of the body and kidney problems.

**9. Exclusion: Yes,** until treatment has been initiated for 24 hours.

**10. Readmission:** After a minimum of 24 hours of antibiotic treatment.

# Strep Throat

**1. What is strep throat?**

Strep throat is an infectious disease characterized by a sore throat. It is called "strep" after the bacterium that causes the infection (group A streptococcus).

**2. What are the signs and symptoms of strep throat?**

Signs and symptoms of strep throat include: a sore throat that is red from inflammation, white patches on the tonsils or back of throat, swollen lymph nodes in the neck, fever, and headache. Children may also experience stomach pain, nausea, or vomiting. Strep throat is usually not accompanied by a stuffy nose or cough.

**3. Incubation period:** From 2 – 5 days

**4. Contagious period:** Same as Scarlet Fever

**5. How does infection with strep throat occur?**

The bacteria that cause strep throat are spread through direct contact with mucus from the nose or throat of persons who are infected or through contact with infected wounds or sores on the skin. Ill persons, such as those who have strep throat or skin infections, are most likely to spread the infection. Persons who carry the bacteria but have no symptoms are much less contagious. Treating an infected person with an antibiotic for 24 hours or longer greatly decreases their ability to spread the bacteria.

**6. How can infection with strep throat be prevented?**

Good hygienic measures, such as frequent hand washing and avoiding contact with mucus from an infected person are the best prevention methods.

**7. Is there a treatment for strep throat?**

Strep throat can be treated with antibiotics. A throat swab is usually needed to test for the infection and make the diagnosis. It is very important to finish the prescribed medication, even when symptoms subside in order to prevent the development of complications or antibiotic-resistant bacteria.

**8. What are the circumstances in which strep throat could be significant?**

If strep throat is not treated, or if the prescribed course of antibiotics is not completed, rheumatic fever can occur in a small percentage of people. Rheumatic fever is a disease characterized by pain and swelling of tissues in various parts of the body and kidney problems. Other complication of strep throat can include ear infections, sinusitis and abscess in the tonsils.

**9. Exclusion: Yes,** until treatment has been initiated for 24 hours

**10. Readmission:** After a minimum of 24 hours of antibiotic treatment. The untreated cases are excluded until clinical recovery, not less than 7 days.

# Tetanus

## 1. What is tetanus?

Tetanus is an acute, often fatal, disease caused by a toxin produced by *Clostridium tetani*. The spores that produce the tetanus toxin usually enter the body through a wound. Although the incidence of tetanus has declined since the introduction of a vaccine, the late 1990s saw an increase in tetanus cases among young injection drug users in California.

## 2. What are the signs and symptoms of tetanus?

The most common form of tetanus is generalized tetanus. Symptoms of generalized tetanus usually descend throughout the body; first there is a stiff jaw, then neck, and then problems swallowing followed by rigidity of abdominal muscles. Other symptoms include fever, sweating, elevated blood pressure, and rapid heart rate. Spasms may occur frequently and last for several minutes, and continue for 3-4 weeks. Complete recovery may take months.

Another form of generalized tetanus is neonatal tetanus which occurs in newborn infants, often through an infection of an unhealed umbilical stump. Neonatal tetanus is common in some developing countries but is very rare in the United States.

**3. Incubation period:** 3 – 21 days

**4. Contagious period:** Not directly transmitted from person to person.

## 5. How does infection with tetanus occur?

Tetanus is not contagious from person to person. Transmission is usually by contaminated wounds. In addition, tetanus may follow surgery, burns, animal bites, etc.

## 6. How can infection with tetanus be prevented?

The tetanus vaccine can prevent this disease. Primary immunization is commonly given to infants and toddlers as a combined vaccine of diphtheria, tetanus and pertussis (DTaP /Tdap). However, tetanus immunity decreases 10 years after receiving the vaccine. Thus, additional booster doses of tetanus vaccines are required every 10 years to maintain immunity. If a person experiences a major or unclean wound, it may be necessary for them to receive a vaccine or immune globulin to protect them from tetanus, even if they were vaccinated as an infant. A physician should be consulted in the event of injury to determine what steps are necessary to prevent tetanus.

## 7. What are the circumstances in which tetanus could be significant?

Tetanus can cause spasms of respiratory muscles, which result in difficulty breathing. Pneumonia is a common complication of tetanus. Elevated blood pressure and heart rate can also occur. In recent years, tetanus has been fatal in approximately 11% of reported cases, with death occurring more frequently in persons over 60 years of age and in unvaccinated individuals.

**8. Exclusion: Yes**, for the duration of illness

**9. Readmission:** Upon recovery, with clearance by the County of Los Angeles, Department of Public Health or other licensed physician.

**10. Contacts and reporting:** Tetanus is reportable disease. Call Nursing Services Communicable Disease Unit if there is a need to report a **confirmed** case of tetanus.

# Tuberculosis

## 1. What is tuberculosis?

Tuberculosis (TB) is a disease caused by the bacterium *Mycobacterium tuberculosis* that classically affects the lungs. TB *infection* ("inactive" or "latent") is when a person has a positive TB skin test, but no signs or symptoms of disease and a negative chest x-ray. Infected individuals are not contagious, but they may develop active TB disease at some time in the future. TB *disease* refers to those that have a positive TB skin test, an abnormal chest x-ray, and may spread TB to others.

## 2. What are the signs and symptoms of TB?

TB *infection* is without signs or symptoms. TB *disease* may cause a bad cough that lasts longer than 2 weeks, chest pain, coughing up blood or phlegm, weakness or fatigue, weight loss, poor appetite, chills, fever, and night sweats.

**3. Incubation period:** TB can be carried in the body for many years without active disease.

## 4. Contagious period:

- Persons with latent TB infection are **not** contagious.
- While adolescents and adults with active TB disease are usually contagious, infants and young children are generally not. This is due to their unique disease process and the decreased ability to expel bacterium when they cough.

## 5. How does infection with TB occur?

The bacteria that cause TB are spewed into the air when a person with active TB disease coughs or sneezes. People nearby may breathe in these bacteria and become infected.

## 6. How can infection with TB be prevented?

There is a vaccine for TB called BCG that is administered to infants and small children in countries where TB is common. The BCG vaccine does not always protect people from TB and is not recommended for routine use in the United States. Prevention of the progression from latent TB infection to active TB disease is usually accomplished through a course of an anti-tuberculosis drug. General public health measures are also instituted to prevent the spread of TB.

## 7. Is there a treatment for TB?

Various anti-tuberculosis drugs are available for the treatment of TB disease. The entire course of drug treatment must be completed in order to prevent bacteria from becoming drug-resistant.

## 8. What are the circumstances in which infection with TB could be significant?

TB can be fatal if left untreated. However, it can be prevented and controlled once contracted. It is important that the condition is diagnosed early in individuals with risk factors (i.e., HIV infection).

**9. Exclusion: Yes**, for persons with active TB *disease* who have not started appropriate therapy.
**No,** for persons with latent TB *infection*, whether or not they are receiving treatment.

**10. Readmission:** Upon starting and adherence to effective therapy for TB disease, the student is approved to return by local health professionals and considered non-infectious to others. Students seeking readmission after exclusion for TB disease should be referred to the LAUSD Nursing Services Communicable Disease Unit for readmission.

**11. Contacts and reporting:** Active Tuberculosis is reportable to the County by the diagnosing health care provider. Contact investigation of TB disease will be performed according to County of the Los Angeles, Department of Public Health policy.

# Warts (Genital and Non-Genital)

## 1. What are warts?

Warts are non-cancerous skin growths caused by a viral infection in the top layer of the skin. Viruses that cause warts are called human papillomavirus (HPV). Common warts usually appear on the hands and feet, while genital warts appear in the genital area and are considered to be a sexually transmitted disease.

## 2. What are the signs and symptoms of warts?

Warts are usually skin-colored and feel rough to the touch, but they can be dark, flat, and smooth. There are a variety of types:

- **Common warts** usually appear on the fingers and hands and are most frequently found where skin has been broken. These are often called "seed" warts because the blood vessels to the wart produce black dots that look like seeds. Most often are seen in young children.
- **Plantar warts** are found on the soles of the feet. Most do not stick up and they can be painful. Plantar warts are most commonly seen in school age children and teenagers.
- **Flat warts** are smaller and smoother than other warts. They tend to grow in large numbers (20-100 at a time) and are common on the face. Most often are seen in young children.
- **Genital warts** are clusters of wart-like lesions in the genital area (vulva, vagina, anus, cervix, penis, scrotum, groin, or thigh). They usually occur as soft, moist, pink or red swellings. They can be raised or flat, single or multiple, small or large. They can take weeks to months to appear after contact with an infected person.

## 3. Incubation period: Unknown, but estimated at 3 months to several years

## 4. Contagious period: As long as visible lesions are present. (Warts are only mildly contagious).

## 5. How does infection with warts occur?

Warts are spread person-to-person through direct or, sometimes, indirect contact. Many HPV infections show no signs or symptoms, so people can pass the virus unknowingly to another person. This is frequently the case in the spread of genital warts, when people unaware of their infection pass HPV to a sex partner. Rarely, pregnant women can pass HPV to their babies during vaginal delivery.

## 6. How can infection with warts be prevented?

Avoidance of direct contact with another person's warts is the best mode of prevention. Wash hands after touching a wart and do not share towels. Genital warts can be prevented by abstinence and safe sex practices. Use of condoms can reduce but not eliminate the risk of infection. Sexually active women should have regular Pap smears to screen for cervical cancer.

## 7. Is there a treatment for warts?

Many warts disappear on their own over months or years. The lesions can be removed by a dermatologist, with daily application of duct tape, or by over-the-counter treatments with salicylic acid. (Note: salicylic acid is not to be used on genital warts). Many viruses that cause warts can be prevented by the use of the HPV vaccine which is available to all children over the age of 9.

## 8. What are the circumstances in which infection with warts could be significant?

Genital warts can cause cancer in the cervix, anus, and penis. Regular health check-ups, including Pap smears in women, are important to screen for pre-cancerous conditions and cervical cancers.

## 9. Exclusion: None, unless they meet other exclusion criteria (see "General Exclusion Criteria")

## 10. Readmission: No restrictions

# PART IV - UN-COMMON COMMUNICABLE DISEASES IN SCHOOLS

# Ebola

**1. What is Ebola?**

Ebola is a rare and deadly viral disease. Symptoms include: fever, fatigue, severe headache, stomach pain, vomiting, diarrhea, muscle aches, and unexplained bleeding. Symptoms usually appear in 8-10 days, but this incubation period can range from 2-21 days after exposure. There is no specific treatment for Ebola, and a vaccine against the virus has not been tested or approved.

**2. Incubation period**: Symptoms usually appear in 8-10 days, but this incubation period can range from 2 - 21 days after exposure.

**3. Contagious period:** People can spread the disease when they are symptomatic, i.e., have a fever or vomiting.

**4. How does infection with Ebola occur?**

Ebola is spread through direct contact with blood or body fluids of a person who is sick with Ebola. Body fluids include urine, saliva, sweat, diarrhea, vomit, semen and other fluids that may come in contact through broken skin or the mucous membranes of the eyes, mouth or nose. Blood can also be transmitted through needle sticks or punctures. Ebola is not spread through the air (like influenza virus) or by water, or in general, by food. Healthcare workers and family members caring for an Ebola patient are at higher risk of getting sick because they come in direct contact with the patient's blood and body fluids. Children are at less risk of getting the disease because they are usually not caring for sick patients. Ebola is not transmitted through casual contact in settings like schools.

**5. How can infection with Ebola be prevented?** There is very low to no risk of spread to the public. The key is to avoid contact with anyone who is sick with Ebola. The Centers for Disease Control (CDC) and Prevention ask that the U.S. public avoid unnecessary travel to countries in West Africa that are currently affected by Ebola, since travelers may not have access to the health care they need if they get sick. If you recently visited one of these countries, and had contact with someone who had Ebola, see your doctor and mention your recent travel. Even if you did not have contact with someone who had Ebola, take your temperature two times each day. If you get a fever or other symptoms within 21 days of your return to the U.S., call your doctor and mention your recent travel.

**6. Is there a treatment for Ebola?** There is no specific medicine or vaccine for Ebola. Instead treatment focuses on keeping the patient alive by giving fluids and managing the serious health problems that can happen.

**7. Exclusion:** Yes, if meets general criteria for exclusion.

**8. Readmission:** if confirmed, upon recovery, with clearance by the County of Los Angeles, Department of Public Health and licensed physician.

**9. Contacts and Reporting:** Ebola is a reportable condition. (see REF-6418.0, November 17, 2014 in appendix for more information) Call Nursing Services Communicable Disease Unit before any reporting and to discuss if there is a need for notification to parents or staff.

# Lyme Disease

**1. What is Lyme disease?**
Lyme disease is an infection caused by the bite of ticks infected with Lyme disease spirochetes (a type of bacteria). There are other tick-borne diseases, but the discussion will focus on Lyme disease since it serves as a general model for tick-borne disease prevention, exclusion, and readmission in school settings.

**2. What are the signs and symptoms of Lyme disease?**
Lyme disease can produce a wide range of symptoms, depending on the state of infection. These include fever, rash, facial paralysis, and arthritis.

**4. Contagious period:** Lyme disease is not contagious except through blood transfusion.

**5. How does infection with Lyme disease occur?**
Infection occurs after a bite by a tick infected with Lyme disease bacteria (the tick usually has to be attached for greater than 36 hours). Lyme disease cannot be spread from person to person (i.e. one cannot become infected from touching or kissing a person who has Lyme disease, from a health care worker who has treated someone with the disease, or by sexual contact).

**6. How can infection with Lyme disease be prevented?**
Avoiding a tick bite is the most effective measure of prevention. This can be aided by wearing appropriate clothing when in tick-infested areas (e.g., tall grassy, bushes, wooded areas), daily tick checks, and quick removal of attached ticks. The use of insect repellants should be used on children only as directed by the manufacturer and according to Center for Disease Control (CDC) instructions.

**7. Can a person be reinfected with Lyme disease?**
Yes. Having had Lyme disease once does not protect against reinfection.

**8. Is there a treatment for Lyme disease?**
Antibiotic treatment for 3-4 weeks is generally effective in early disease. Later disease may require intravenous antibiotics. In later disease, treatment failures may occur and retreatment may be necessary.

**9. What are the circumstances in which Lyme disease could be significant?**
If Lyme disease is untreated, weeks to months after infection some patients may develop arthritis including intermittent episodes of swelling and pain in the large joints and neurologic abnormalities such as meningitis and facial palsy may occur. Rarely, heart problems, including an enlarged heart, can result.

**10. Exclusion: None**, unless they meet other exclusion criteria (see "General Exclusion Criteria")

**11. Readmission:** Upon recovery, by school principal or principal's designee.

**12. Contacts and reporting:** Lyme disease is reportable to the County. Call Nursing Services Communicable Disease Unit if there is a need to report a **confirmed** case of Lyme disease.

# West Nile Virus

## 1. What is West Nile virus?

The West Nile virus is one of several viral diseases spread by infected mosquitoes. Other examples of such viruses include eastern and western equine encephalomyelitis, and St. Louis and La Crosse encephalitis. West Nile Virus will be discussed in more detail as it has received the most media attention in recent years. West Nile virus is established as a seasonal epidemic in North America with flares in months with more mosquitoes (summer-fall).

## 2. What are the signs and symptoms of West Nile virus?

The majority of people (80%) who are infected with West Nile virus will show no signs of illness. Up to 20% of people who become infected will develop West Nile fever and will experience mild symptoms, including fever, headache, and body aches, with an occasional skin rash on the trunk of the body and swollen lymph glands. The most serious symptoms occur in the small percentage with West Nile encephalitis and meningitis: headache, high fever, neck stiffness, disorientation, coma, tremors, convulsions, muscle weakness, and paralysis.

**3. Incubation period:** 5 - 15 days (West Nile); 2 - 15 days (others) after infected mosquito bite.

**4. Contagious period:** Not contagious to other persons through regular contact

## 5. How does infection with West Nile virus occur?

West Nile virus occurs through the bite of an infected mosquito. Mosquitoes become infected after biting an infected bird (usually a crow or jay). West Nile virus may be transmitted rarely through transplanted organs or blood transfusion, and from a mother to her fetus. There is no evidence that West Nile virus can be spread from person to person under normal causal contact.

## 6. What can be done to reduce the risk of being infected with West Nile Virus?

Protective measures to prevent West Nile virus exposure include:

Avoid activity outside when mosquitoes are most active, especially at dawn and dusk.
When outdoors, wear long pants, long sleeve shirts, and other protective clothing.
Fit doors and windows have tight fitting screens; repair or replace torn screens.
Eliminate all sources of standing water that can support mosquito breeding.
Contact your local mosquito and vector control agency if there is a significant mosquito problem (for school sites, please contact the Pest Management Unit at 213-745-1435).

## 7. Is there a treatment for West Nile virus?

There is no specific treatment for West Nile virus infection. In more severe cases, intensive supportive therapy is indicated, often involving hospitalization.

## 8. What are the circumstances in which West Nile Virus could be significant?

Persons over 50 years of age have the highest risk of severe disease, i.e. developing encephalitis.

**9. Exclusion: No**, unless they meet other exclusion criteria (see "General Exclusion Criteria").

**10. Readmission:** Upon recovery, by school principal or principal's designee.

**11. Contacts and reporting:** Dead birds may be a sign of West Nile virus disease, and they should not be handled with bare hands. Contact the California Department of Health Services West Nile Virus Hotline for information on disposal and reporting. See Reference Guide 1304 West Nile Virus Precautions" (September 16, 2004).

# PART V - BIOTERRORISM AND COMMUNICABLE DISEASE IN SCHOOLS

# Bioterrorism

Since the September 11th attacks, there has been a heightened concern and awareness of the use of biological agents in terrorist activities. Some of the agents have already been described in this reference guide (e.g., food-borne illness, influenza), but there are other, more rare agents that are classified as high priority by the Center for Disease Control and Prevention (CDC) in the table below.

| **Category A (easily disseminated; high rates of mortality; may cause panic)** | **Category B (moderately easy to disseminate; moderate rates of morbidity and low mortality)** |
|---|---|
| Anthrax | Q fever |
| Smallpox | Brucellosis |
| Plague | Eastern/western equine encephalitis |
| Tularemia | Ricin toxin |
| Botulism | Clostridia toxin |
| Viral Hemorrhagic Fevers (e.g., Ebola) | Food and water-borne illness (e.g., Salmonella, Shigella, E. Coli O157:H7) |

Children may be particularly vulnerable to a bioterrorist attack compared to adults. This is due to their higher respiratory rate, increased skin absorption, high surface (skin) to volume (weight) ratio, and the general crowded conditions of schools and child care centers. The symptoms of illness caused by bioterrorism agents are similar to symptoms of other common infectious diseases (e.g., fever, headache, vomiting, and diarrhea). Furthermore, the symptoms may not be evident immediately upon exposure to the infectious agent. It may be very difficult to distinguish between intentional infection and a naturally occurring outbreak.

Schools are where many children spend a good portion of their day, supervised by teachers, administrators, and health professionals. This makes the school setting a good place to monitor unusual signs and symptoms, or recognize patterns of illness that may be occurring in a greater than average number of students (or staff). Schools have become increasingly prepared for disasters and there are policies to guide schools in crisis intervention (*See LAUSD Bulletin 962 "Organizing for Crisis Intervention" May 3, 2004*). In acting as part of the many first-line responders, school staff and District health professionals should have a basic understanding of bioterrorism and the agents that may cause immediate and significant harm. LAUSD Bulletin Z-72 "Bioterrorism Preparedness Response: Health Perspective" (September 3, 2002) describes the roles and responsibilities of district personnel in the unlikely event of a bioterrorism attack directed at schools and school children.

The following table describes some of the early signs and symptoms that may help distinguish the CDC's Category A and B biologic agents. More complete descriptions of each agent can be found using the links to CDC fact sheets available the CDC website (www.bt.cdc.gov ).

**Prominent Early Clinical Manifestations after Exposure to Bioterrorist Agents**

| Early Clinical Manifestations | Agents/Disease | Links to more information |
|---|---|---|
| ***Respiratory*** | | |
| Flu-like illness with or without atypical pneumonia (seen on chest radiograph) | Tularemia<br>Brucellosis<br>Q fever | www.bt.cdc.gov/agent/tularemia/pdf/tularemiafacts.pdf<br>http://www.cdc.gov/brucellosis/<br>www.cdc.gov/ncidod/dvrd/qfever/index.htm |
| Flu-like illness with cough and difficulty breathing | Anthrax (inhalational)<br>Plague (pneumonic)<br>Tularemia (inhalational)<br>Ricin<br>Hantavirus | www.bt.cdc.gov/agent/anthrax<br>www.bt.cdc.gov/agent/plague/plaguefaq.pdf<br>http://www.cdc.gov/tularemia/faq/index.html<br>www.bt.cdc.gov/agent/ricin/pdf/ricinfacts.pdf<br>http://www.cdc.gov/hantavirus/index.html |
| Sore throat (with pus) and swollen lymph nodes (neck) | Tularemia (oropharyngeal) | http://www.cdc.gov/tularemia/faq/index.html |
| ***Dermatologic*** | | |
| Small red spots in the mouth, progressing to vesicular rash (fluid filled bubbles); fever, headache and malaise | Smallpox | www.bt.cdc.gov/agent/smallpox/overview/overview.pdf |
| Small sore that develops into blister, then a black ulcer (all are painless) | Anthrax (cutaneous) | www.bt.cdc.gov/agent/anthrax |
| Ulcers to the skin and mouth; painful, swollen glands and flu-like illness | Tularemia (ulceroglandular) | www.bt.cdc.gov/agent/tularemia/pdf/tularemiafacts.pdf |
| Small purple spots (petechiae) with fever and weakness | Viral hemorrhagic fever | http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/Fact_Sheets/Viral_Hemorrhagic_Fevers_Fact_Sheet.pdf |
| ***Cardiovascular*** | | |
| Shock and difficulty breathing | Anthrax (inhalational)<br>Ricin<br>Viral hemorrhagic fever | www.bt.cdc.gov/agent/anthrax<br>www.bt.cdc.gov/agent/ricin/pdf/ricinfacts.pdf<br>http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/Fact_Sheets/Viral_Hemorrhagic_Fevers_Fact_Sheet.pdf |
| ***Neurologic*** | | |
| Blurred vision; slurred speech; (descending) muscle weakness progressing to flaccid paralysis | Botulism | www.cdc.gov/nczved/divisions/dfbmd/diseases/botulism/ |
| Headache, dizziness, nervous system malfunction; seizures; coma | Anthrax (inhalational)<br>Plague (septicemic and pneumonic) | www.cdc.gov/anthrax<br><br>http://emergency.cdc.gov/agent/plague/factsheet.pdf |

| Early Clinical Manifestations | Agents/Disease | Links to more information |
|---|---|---|
| ***Gastrointestinal*** | | |
| Diarrhea | *Salmonella* species<br>*Shigella dysenteriae*<br>*E. Coli* O157:H7<br>*Vibrio cholerae*<br>Cryptosporidium | www.cdc.gov/salmonella/<br>www.cdc.gov/shigella/<br>www.cdc.gov/ecoli/<br>www.cdc.gov/vibrio/<br>www.cdc.gov/parasites/crypto/ |
| Vomiting, abdominal pain, bloody diarrhea | Anthrax (gastrointestinal) | www.cdc.gov/anthrax |
| ***Renal/Kidneys*** | | |
| Blood clotting problem; renal failure | *E. Coli* O157:H7<br>*Shigella dysenteriae* | www.cdc.gov/ecoli/<br>www.cdc.gov/shigella/ |
| Renal failure, no urine output | Viral hemorrhagic fever<br><br>Hantavirus | http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/Fact_Sheets/Viral_Hemorrhagic_Fevers_Fact_Sheet.pdf<br>http://www.cdc.gov/hantavirus/index.html |
| Other | | |
| Painful, swollen glands (lymph nodes) | Plague (bubonic) | http://www.cdc.gov/plague/resources/Plague_Facts.pdf |
| Red and inflamed eyes with pus (conjunctivitis); swollen glands in neck and in front of the ears | Tularemia (oropharyngeal) | www.cdc.gov/tularemia |

Adapted from CDC Website, 09-24-2015

# PART VI - APPENDICES

# Appendix A - County of Los Angeles Reportable Diseases and Conditions

(Revised 5/15)

*Please Post*

County of Los Angeles • Department of Public Health

County of Los Angeles Public Health

## REPORTABLE DISEASES AND CONDITIONS

Title 17, California Code of Regulations (CCR), § 2500

It is the duty of every health care provider, knowing of or in attendance on a case or suspected case of any diseases or conditions listed below, to report to the local health officer for the jurisdiction where the patient resides. "Health care provider" encompasses physicians (surgeons, osteopaths, oriental medicine practitioners), veterinarians, podiatrists, physician assistants, registered nurses (nurse practitioners, nurse midwives, school nurses), infection control professionals, medical examiners/coroners, dentists, and chiropractors, as well as any other person with knowledge of a case or suspected case.

**Urgency Reporting Requirements**

☎ = Report immediately by telephone ✉ = Report within 1 working day of identification ✆ = Report within 7 calendar days from time of identification

### REPORTABLE DISEASES

- ✆ Acquired Immune Deficiency Syndrome (AIDS) ■
- ✉ Amebiasis
- ✆ Anaplasmosis/Ehrlichiosis
- ☎ Anthrax, human or animal ✚
- ✉ Babesiosis
- ☎ Botulism: infant, foodborne, or wound
- ✆ Brucellosis, animal; except infection due to *Brucella canis* ✚
- ☎ Brucellosis, human ✚
- ✉ Campylobacteriosis
- ✆ Chancroid ■
- ☎ Chickenpox (Varicella), only hospitalized and fatal cases, do not report cases of herpes zoster or shingles
- ✆ Chikungunya virus
- ✆ *Chlamydia trachomatis* infection, including lymphogranuloma venereum (LGV) ■
- ☎ Cholera ✚
- ☎ Ciguatera Fish Poisoning
- ✆ Coccidioidomycosis
- ✆ Creutzfeldt-Jakob Disease (CJD) and other Transmissible Spongiform Encephalopathies (TSE)
- ✉ Cryptosporidiosis
- ✆ Cyclosporiasis
- ✆ Cysticercosis or Taeniasis
- ☎ Dengue
- ☎ Diphtheria ✚
- ☎ Domoic Acid (Amnesic Shellfish) Poisoning
- ✆ Ehrlichiosis/Anaplasmosis
- ✉ Encephalitis, specify etiology: viral, bacterial, fungal or parasitic
- ☎ *Escherichia coli*, shiga toxin producing (STEC) including *E. coli* O157 ✚
- ✉ Foodborne Disease
- ☎ Foodborne Outbreak; 2 or more suspected cases from separate households with same assumed source
- ✆ Giardiasis
- ✆ Gonococcal Infection ■
- ✉ *Haemophilus influenzae*, invasive disease only, less than 15 years of age
- ☎ Hantavirus Infection
- ☎ Hemolytic Uremic Syndrome
- ✉ Hepatitis A, acute infection
- ✆ Hepatitis B, specify acute or chronic
- ✆ Hepatitis C, specify acute or chronic
- ✆ Hepatitis D (Delta), specify acute or chronic
- ✆ Hepatitis E, acute infection
- ✆ Human Immunodeficiency Virus (HIV) ■ (§2641-2643)
- ✆ Influenza deaths, laboratory confirmed cases only, all ages ★
- ☎ Influenza, novel strains, human
- ✆ Legionellosis
- ✆ Leprosy (Hansen's Disease)
- ✆ Leptospirosis
- ✉ Listeriosis ✚
- ✆ Lyme Disease
- ✉ Malaria ✚
- ☎ Measles (Rubeola)
- ✉ Meningitis, specify etiology: viral, bacterial, fungal, or parasitic
- ☎ Meningococcal Infection
- ✆ Mumps
- ☎ Paralytic Shellfish Poisoning
- ✆ Pelvic Inflammatory Disease (PID) ■
- ✉ Pertussis (Whooping Cough)
- ☎ Plague, human or animal ✚
- ✉ Poliovirus Infection
- ✉ Psittacosis
- ✉ Q Fever
- ☎ Rabies, human or animal
- ✉ Relapsing Fever
- ✆ Respiratory syncytial virus, ICU or fatal cases, and <5 years only ★
- ✆ Rickettsial Diseases (non-Rocky Mountain Spotted Fever), including Typhus and Typhus-like Illnesses
- ✆ Rocky Mountain Spotted Fever
- ✆ Rubella (German Measles)
- ✆ Rubella Syndrome, Congenital
- ✉ Salmonellosis, other than Typhoid Fever ✚
- ☎ SARS (Severe Acute Respiratory Syndrome)
- ☎ Scabies, atypical or crusted ★
- ☎ Scombroid Fish Poisoning
- ☎ Shiga Toxin, detected in feces
- ✉ Shigellosis
- ☎ Smallpox (Variola)
- ✉ *Staphylococcus aureus* Infection; deaths only or admission to an intensive care unit of a person who: has not had surgery or dialysis or been hospitalized, or resided in a long-term care facility in the past year, and did not have an indwelling catheter or percutaneous medical device at the time of culture.
- ☎ Streptococcal Infection, outbreaks of any type
- ✉ Streptococcal Infection, individual case in a food handler or dairy worker
- ✉ Streptococcal Infection, Invasive Group A, including Streptococcal Toxic Shock Syndrome and Necrotizing Fasciitis; do not report individual cases of pharyngitis or scarlet fever. ★
- ✆ *Streptococcus pneumoniae*, Invasive★
- ✉ Syphilis ■
- ✆ Tetanus
- ✆ Toxic Shock Syndrome
- ✉ Trichinosis
- ✉ Tuberculosis ✚ ■
- ✆ Tularemia, animal
- ☎ Tularemia, human ✚
- ✉ Typhoid Fever, cases and carriers ✚
- ✉ *Vibrio* Infection ✚
- ☎ Viral Hemorrhagic Fevers, human or animal (e.g., Crimean-Congo, Ebola, Lassa and Marburg viruses)
- ✉ West Nile Virus (WNV) Infection
- ☎ **Yellow Fever**
- ✉ Yersiniosis

☎ **OCCURRENCE OF ANY UNUSUAL DISEASE**

☎ **OUTBREAKS OF ANY DISEASE**, including diseases not listed above. Specify if occurring in an institution and/or the open community.

### Reportable Non-Communicable Diseases or Conditions

- ✆ Alzheimer's Disease and Related Conditions (CCR § 2802, § 2806, § 2810)
- ✆ Disorders Characterized by Lapses of Consciousness (CCR § 2806, § 2810)
- ✉ Pesticide-Related Illnesses (Health and Safety Code §105200)

★ Reportable to the Los Angeles County Department of Public Health.

✚ Bacterial isolates and malarial slides must be forwarded to Los Angeles County Public Health Laboratory for confirmation. Health care providers must still report all such cases separately. *Public Health Laboratory (562) 658-1300*

■ For questions regarding the reporting of HIV/AIDS, STDs or TB, contact the respective program:

| *HIV Epidemiology Program* | *STD Program* | *TB Control Program* |
|---|---|---|
| (213) 351-8516 | (213) 744-3070 | (213) 745-0800 |
| www.publichealth.lacounty.gov/hiv/index.htm | www.publichealth.lacounty.gov/std/index.htm | www.publichealth.lacounty.gov/tb/index.htm |

**To report a case or outbreak of any disease, contact the Communicable Disease Reporting System**
**Tel: (888) 397-3993 • Fax: (888) 397-3778**

# Appendix B - Guide to Immunizations Required for School Entry

## GUIDE TO IMMUNIZATIONS REQUIRED FOR SCHOOL ENTRY

# GRADES TK/K–12

CDPH

**Requirements by Age and Grade Before Entering:**

| Vaccine | 4-6 Years Old<br>Elementary School at Transitional-Kindergarten/ Kindergarten and Above | 7-17 Years Old<br>Elementary or Secondary School | 7th Grade* |
|---|---|---|---|
| **Polio (OPV or IPV)** | **4 doses**<br>(3 doses OK if one was given on or after 4th birthday) | **4 doses**<br>(3 doses OK if one was given on or after 2nd birthday) | |
| **Diphtheria, Tetanus, and Pertussis** | **5 doses of DTaP, DTP, or DT**<br>(4 doses OK if one was given on or after 4th birthday) | **4 doses of DTaP, DTP, DT, Tdap, or Td**<br>(3 doses ok if last dose was given on or after 2nd birthday. At least one dose must be Tdap or DTaP/DTP given on or after 7th birthday for all 7th-12th graders.) | **1 dose of Tdap**<br>(Or DTP/DTaP given on or after the 7th birthday.) |
| **Measles, Mumps, and Rubella (MMR or MMR-V)** | **2 doses**<br>(Both given on or after 1st birthday. Only one dose of mumps and rubella vaccines are required if given separately.) | **1 dose**<br>(Dose given on or after 1st birthday. Mumps vaccine is not required if given separately.) | **2 doses of MMR** or any measles-containing vaccine<br>(Both doses given on or after 1st birthday.) |
| **Hepatitis B (Hep B or HBV)** | **3 doses** | | |
| **Varicella (chickenpox, VAR, MMR-V, or VZV)** | **1 dose** | **1 dose** for ages 7-12 years.<br>**2 doses** for ages 13-17 years. | |

*New admissions to 7th grade should also meet the requirements for ages 7-17 years.

**INSTRUCTIONS:**

California schools are required to check immunization records for all new student admissions at Kindergarten/TK through 12th grade and all students advancing to 7th grade before entry.

1. Notify parents of required immunizations and collect immunization records.
2. Copy the date of each vaccine from the child's immunization record to the California School Immunization Record (Blue Card, CDPH-286) and/or supplemental Tdap sticker [PM 286 S (01/11)] or enter into an approved electronic system that prints a Blue Card.
3. Compare number of doses on the Blue Card to the requirements above.
4. Determine whether child can be admitted.

**Questions?**
**Visit ShotsForSchool.org**
**or**
**Contact your local health department**
(bit.do/immunization)

Continued on next page.

## ADMIT A CHILD WHO:

- Has all immunizations required for their age or grade, or
- Submits a **personal beliefs exemption** (before January 1, 2016) for missing shot(s) and immunization records with dates for all required shots not exempted, or
- Submits a physician's written statement of a **medical exemption** for missing shot(s) and immunization records with dates for all required shots not exempted.

## ADMIT A CHILD CONDITIONALLY IF:

- He/she is missing a dose(s) in a series, but the next dose is not due yet. (This means the child has received at least one dose in a series and the deadline for the next dose has **not** passed.) The child may not be admitted if the deadline has passed or has not yet received the 1st dose.
- Has a temporary medical exemption to certain vaccine(s) and has submitted an immunization record for vaccines not exempted.

### When Missing Doses Can Be Given:

| Vaccine | Age (Years) | Missing Dose | Earliest Date After Previous Dose | Deadline After Previous Dose |
|---|---|---|---|---|
| Polio | | 2nd | 6 weeks | 10 weeks |
| | | 3rd | 6 weeks | 12 months |
| | 4–6 | 4th | If the 3rd dose was given before the 4th birthday, one more dose is required before admission. | |
| | 7–17 | 4th | If the 3rd dose was given before the 2nd birthday, one more dose is required before admission. | |
| DTaP, DTP, or DT | Under 7 | 2nd or 3rd | 4 weeks | 8 weeks |
| | | 4th | 6 months | 12 months |
| | | 5th | If the 4th dose was given before the 4th birthday, one more dose is required before admission. | |
| DTaP, DTP, DT, Tdap, or Td | 7 & Older | 2nd | 4 weeks | 8 weeks |
| | | 3rd | 6 months | 12 months |
| | | 4th | If the 3rd dose was given before the 2nd birthday, one more dose is required before admission. | |
| MMR | | 2nd | 1 month | 3 months |
| Hep B | 4–6 | 2nd | 1 month | 2 months |
| | | 3rd | 2 months after 2nd dose and at least 4 months after 1st dose | 6 months after 2nd dose and at least 4 months after 1st dose |
| Varicella | 13–17 | 2nd | 4 weeks | 3 months |

## DO NOT ADMIT A CHILD WHO:

Does not fit one of the previous categories. Refer parents to their physician with a written notice indicating which doses are needed.

## FOLLOW-UP IS REQUIRED AFTER ADMISSION IF:

- Child has a temporary medical exemption.
- Awaiting records for transfers from within California or another state. School may allow up to 30 school days before exclusion.

Maintain a list of unimmunized children (exempted or admitted conditionally), so they can be excluded quickly if an outbreak occurs.

Notify parents of the deadline for missing doses. Review records every 30 days until all required doses are received.

# Appendix C – LAUSD Policies and Bulletins

Bulletin No. BUL-1645.2, dated July 13, 2015, Student Health and Human Services, *Infection Control Guidelines for Preventing the Spread of Communicable Disease*

Bulletin No. BUL-1660.7, dated April 13, 2015, Student Health and Human Services, *Immunization Guidelines for School Admission*

Bulletin No. BUL-1937.2, dated August 31, 2015, Student Health and Human Services, *Reporting Communicable Disease*

Bulletin No. BUL-4088, dated January 15, 2008, Student Health and Human Services, *Students with HIV Infection*

Memorandum No. MEM-5718, dated February 12, 2012, Student Health and Human Services, *Updated Policy Regarding Tuberculosis (TB) Testing for School Entry*

Reference Guide No. REF-1034, dated September 16, 2004, Office of Environmental Health and Safety, *West Nile Virus Precautions*

Reference Guide No. REF-4035.1, dated November 2, 2015, *Management of Skin Infections (including MRSA) in School Settings*