

Infectious Disease Control

Authorization

Code of Virginia. The following sections of the *Code of Virginia* **include** information related to infectious disease control:

Section 32.1-39, Surveillance and Investigation of Reportable Diseases.

Excerpt: See Appendix A for *Code of Virginia*, § 32.1-39.

Section 22.1-272, Contagious and Infectious Diseases.

Excerpt: See Appendix A for *Code of Virginia*, § 22.1-272,

Sections 22.1-271.1 Definitions and 271.2, Immunization Requirements.

Excerpt: See Appendix A for *Code of Virginia*, § 22.1-271.1 and 271.2.

Section 32.1-47, Exclusion From School of Children Not Immunized.

Excerpt: See Appendix A for *Code of Virginia*, §32.1-47.

Section 22.1-271.3 Guidelines for School Attendance for Children Infected with Human Immunodeficiency Virus; School Personnel Training Required; Notification of School Personnel in Certain Cases.

Excerpt: See Appendix A for *Code of Virginia*, § 22.1-271.3.

Note: A list of reportable diseases, which are subject to control under isolation and quarantine regulations and general reporting duties, is provided in Appendix A.

Overview

Communicable disease is an illness due to a specific infectious agent or its toxic products that arises through transmission of that agent or its products from an infected person, animal, or inanimate reservoir to a susceptible host. Communicable diseases are one of the major problems that school health programs face, causing both staff and student absences, as well as discomfort, all of which can interfere with academic performance.

While this section of the manual is intended to provide school health services personnel with a ready source of information on managing the control of communicable diseases in the school setting, it should be used for guidance purposes only. It is not intended to replace more inclusive textbooks, regulations and legal requirements, or state and local policies, or be

a therapeutic guide, but to be a source of basic information on which initial action can be taken.

Definitions

The following are technical meanings of terms used in this section. The sources of definitions are taken from the following resources:

- ◆ Benenson, A.S. (Ed.). (1995). *Control of Communicable Diseases Manual* (16th edition). Washington D.C.: American Public Health Association.
- ◆ Thomas, C.L. (Ed.). (1993). *Tabor's Cyclopedia Medical Dictionary* (17th edition). Philadelphia: F.A. Davis Company.

Carrier: A person or animal that harbors a specific infectious agent in the absence of discernible clinical disease and serves as a potential source of infection.

Case: Individuals that have the disease or illness.

Communicable disease: An illness due to a specific infectious agent or its toxic products that arises through the transmission of that agent or its products from an infected person, animal, or inanimate reservoir to a susceptible host; either directly or indirectly through an intermediate plant or animal host, vector, or the inanimate environment. (Synonym: infectious disease.)

Communicable period: The time or times during which an infectious agent may be transferred directly or indirectly from an infected person to another person, from an infected animal to man, or from an infected person to an animal, including arthropods.

Contact: A person or animal that has been in such association with an infected person or animal or a contaminated environment as to have had an opportunity to acquire the infection.

Contagious: Transmitted readily from one person to another either directly or indirectly (i.e., communicable).

Contamination: The presence of an infectious agent on a body surface, in clothes, bedding, toys, surgical instruments or dressings, or other inanimate articles or substances including water and food. **Pollution** is distinct from contamination and implies the presence of offensive, but not necessarily infectious, matter in the environment. Contamination of body surfaces does not imply a carrier state.

Epidemic: The occurrence in a community or region of excess of an illness (or an outbreak) with a frequency clearly in excess of normal expectancy.

Host: A person or other living animal, including birds and arthropods, that affords subsistence or lodgment to an infectious agent under natural (as opposed to experimental) conditions.

Inapparent infection: The presence of an infection in a host without recognizable clinical signs or symptoms. Inapparent infections are identifiable only by laboratory means, such as a blood test or by the development of positive reactivity to specific skin tests.

Incubation period: The time interval between initial contact with an infectious agent and the first appearance of symptoms associated with the infection.

Infected individual: A person or animal that harbors an infectious agent and who has either manifest disease (see Patient or sick person) or inapparent infection (see Carrier). An **infectious person** or animal is one from whom the infectious agent can be naturally acquired.

Infection: The entry and development (of many parasites) or multiplication of an infectious agent in the body of persons or animals. Infection is not synonymous with infectious disease; the result may be inapparent (see Inapparent infection) or manifest (see Infectious disease). The presence of living infectious agents on exterior surfaces of the body, or on articles of apparel or soiled articles, is not an infection, but represents contamination of such surfaces and articles. (See Infestation and Contamination.)

Infectious agent: An organism (virus, a minute organism that needs a living cell in order to reproduce; rickettsia, occupies an intermediate position between viruses and bacterium; bacteria, a unicellular microorganism; fungus, a plant-like organism that includes molds and yeasts; protozoan, includes simplest animals; or helminth, a worm-like animal) that is capable of producing infection or infectious disease.

Infectious disease: A clinically manifest disease of humans or animals resulting from an infection. (See Infection.)

Infestation: For persons or animals, the lodgment, development, and reproduction of arthropods (e.g., lice, fleas, ticks, mites) on the surface of the body or in the clothing. Infested articles or premises are those that harbor or give shelter to animal forms, especially arthropods and rodents.

Organism: Any living thing, plant, or animal. The principal causes of infection are organisms (i.e., infectious agents) belonging to the following groups.

- ◆ **Viruses:** Minute organisms that require a living cell for reproduction and growth.
- ◆ **Rickettsia:** Intermediate microorganisms (between virus and bacteria) that require living cells for growth.
- ◆ **Bacteria:** Unicellular microorganisms.
- ◆ **Fungi:** Plant-like organisms that include molds and yeasts.
- ◆ **Animal Parasites:** Live within, upon, or at expense of another organism, known as the host, without contributing to the survival of the host.

Patient or sick person: A person who is ill.

Report of a disease: An official report notifying an appropriate authority of the occurrence of specified communicable or other disease in humans or animals.

Reservoir (of infectious agents): Any person, animal, arthropod, plant, soil or substance (or combination of these) in which an infectious agent normally lives and multiplies, on which it depends primarily for survival, and where it reproduces itself in such manner that it can be transmitted to a susceptible host.

Transmission of infectious agents: Any mechanism by which an infectious agent is spread from a source or reservoir to a person. These mechanisms are as follows:

1. **Direct Transmission:** Direct and essentially immediate transfer of infectious agents to a receptive portal of entry through which human or animal infection may take place. This may be by **direct contact** (e.g., touching, biting, kissing, sexual intercourse) or by **direct projection** (droplet spread) of droplet spray onto the conjunctiva or onto the mucous membranes of the eye, nose, or mouth during sneezing, coughing, spitting, singing, or talking (usually limited to a distance of about 1 meter or less).
2. **Indirect Transmission:** Indirect transfer of infectious agents through contaminated inanimate materials or objects (e.g., toys, handkerchief, soiled clothing, bedding, or cooking or eating utensils); substances (e.g., water, food, and biological products such as blood); and mechanical (e.g., carriage by crawling or flying insects).
3. **Airborne:** The dissemination of microbial aerosols to a suitable portal of entry, usually the respiratory tract. Microbial aerosols are suspensions of particles in the air consisting partially or wholly of microorganisms. They may be suspended in the air for long periods of time, some retaining and others losing infectivity or virulence. Particles in the 1 to 5 μ m range are easily drawn into the alveoli of lungs and may be retained there. Not considered as airborne are droplets and other large particles that promptly settle out (see Direct Transmission).

Infectious Disease Control Measures

Infectious disease control measures in school include:

- ◆ Requiring certain immunizations.
- ◆ Identifying children who have communicable diseases.
- ◆ Preventing illnesses from spreading.
- ◆ Temporarily excluding some children who are ill.
- ◆ Reporting illnesses regulated by Virginia Department of Health.
- ◆ Being prepared by having policies, procedures, and trained personnel.

Resources

- ◆ *Virginia Department of Health
Office of Epidemiology
P.O. Box 2448
Richmond, VA 23218
Telephone (804) 786-6029
Web site: <http://www.vdh.state.va.us/epi/newhome.htm>*
- *Division of Surveillance and Investigation
Telephone: (804) 786-6261*
- *Division of Immunization Telephone:
(804) 786-6246*
- *Division of Tuberculosis Control
Telephone: (804) 786-6251*
- *Division of STD/AIDS
Telephone: (804) 786-6267*
- ◆ *Fact Sheets: Prepared by Virginia Department of Health, Office of Epidemiology.
Web site: <http://www.vdh.state.va.us/epi/epifacts.htm>*
- ◆ *Wall Chart: Communicable Disease Reference Chart for School Personnel, Revised 9/98.
Virginia Department of Health, Office of Epidemiology
To order, call (804) 786-6261*
 - ◆ *List of Reportable Diseases in Virginia
Web site: <http://www.vdh.state.va.us/epi/list.htm>
(List is reprinted in Appendix A.)*
- ◆ *Virginia STD/AIDS Hotline: 1-800-533-4148
(Voice/TTD Accessible)
In Spanish: 1-800-344-7432*
 - ◆ *Regulations for Disease Reporting and Control
Commonwealth of Virginia
State Board of Health
January 1999
Virginia Department of Health
To order, call (804) 786-6261*
- ◆ *Control of Communicable Diseases Manual
Abram S. Benenson, Editor
Sixteenth Edition, 1995
American Public Health Association
1015 Fifteenth Street, NW
Washington, DC 2005
To order, call ANA Publication Sales at (301) 893-1894 or order online at <http://www.apha.org>*

Subsections

The following subsections contain prevention guidelines for control of infectious diseases in the school setting and a description of selected infectious diseases.

- ◆ Prevention Guidelines for Diseases Spread Through Direct Skin Contact
- ◆ Prevention Guidelines for Diseases Spread Through the Intestinal Tract
- ◆ Prevention Guidelines for Diseases Spread Through the Respiratory Tract
- ◆ Prevention Guidelines for Diseases Spread During Sexual Activity
- ◆ Prevention Guidelines for Sports-Related Infectious Diseases
- ◆ Selected Infectious Diseases

Note: The information presented in the following subsections is a composite of information from the following references.

American Academy of Otolaryngology-Head and Neck Surgery. Public Service Brochure. Web site: <http://www.netdoor.com/entinfo/omaa.html>.

American Academy of Pediatrics. (1997). *1997 Red Book, Report of the Committee on Infectious Diseases* (24th Edition). Elk Grove Village, Ill.: American Academy of Pediatrics.

Berkow, R. (Editor-in-Chief). (1992). *The Merck Manual of Diagnosis and Therapy*. Merck & Co., Inc. Web site: <http://www.merck.com>.

Benenson, A.S., Editor. (1995). *Control of Communicable Diseases Manual* (16th edition). Washington, D.C.: American Public Health Association.

Boynton, R.W., Dunn, E.S., Stephens, G.R. (1994). *Manual of Ambulatory Pediatrics* (3rd Edition). Philadelphia: J.B. Lippincott Company.

Donowitz, L.G. (1996). *Infection Control in the Child Care Center and Preschool* (3rd edition). Baltimore, Md.: Williams & Wilkins.

Massachusetts Department of Public Health. (1995). *Comprehensive School Health Manual*. Boston, Mass.: Author.

Merensteing, G.B. (1997). *Handbook of Pediatrics* (18th edition). Stamford, Conn.: Appleton & Lange.

National Center for Infectious Diseases, Center for Infectious Disease Control and Prevention. Web site: <http://www.cdc.gov/ncidod/>.

Virginia Department of Health. *Sexually Transmitted Diseases*. (October, 1994). Richmond, Va.: Virginia Department of Health.

Virginia Department of Health, Office of Epidemiology. (1997). *Virginia Disease Control Manual*. Richmond, Va.: Virginia Department of Health.

Taber's Cyclopedic Medical Dictionary (17th edition). (1997) Philadelphia, Pa.: F.A. Davis Company.

Prevention Guidelines for Diseases Spread Through Direct Skin Contact

Overview

Communicable infectious diseases that are usually spread through direct skin contact—including those commonly known as head lice, impetigo, pink-eye, scabies, and ringworm—can be spread from person to person by direct or indirect transfer of the disease-causing organism (infectious agent). Organisms that cause such diseases include bacteria, parasites, and fungi.

Direct transmission of the organisms can occur by direct contact with an infected or infested person (e.g., direct skin-to-skin contact, immediate contact with infected lesions or discharges). Indirect transmission of the organism can occur, though usually to a lesser extent, through contaminated inanimate materials or objects (e.g., shared clothing, headgear, or shower stalls). For some of the diseases, it is possible to transmit the organism through other modes (e.g., autoinfection, airborne spread).

These diseases are common and, when treated, are not serious. Because students constantly touch the people around them and their surroundings, these diseases are easily spread among students and staff.

Listed below are some examples of how the disease-causing organisms can be transmitted.

- ◆ A student's arm has sores with discharge. During interaction, this discharge gets on another individual's arm and into a cut or scratch.
- ◆ A hat belonging to a student with head lice is used by another student. A louse from the hat crawls onto the head of the second student.
- ◆ A student with runny eyes rubs them with his or her hands before picking up a book, pen, or pencil, contaminating them with eye discharge. Other students become infected by picking up those objects and then rubbing their own eyes with contaminated hands.

School Exclusion Guidelines

See Appendix C for specific disease.

Prevention Guidelines for Diseases Spread Through Direct Skin Contact

1. Follow hand washing and cleanliness guidelines that include:

- ◆ Making sure staff and students thoroughly wash their hands after contact with any possible infected areas.
 - ◆ Using liquid soap dispensers whenever possible.
 - ◆ Always using disposable tissues or towels for wiping and washing.
 - ◆ Never using the same tissue or towel from more than one student.
 - ◆ Disposing of used tissues and paper towels in a lined and covered container that is kept away from food and materials.
 - ◆ Washing or vacuuming frequently-used surfaces (e.g., tables, counters, furniture, and floors) daily.
2. Do not permit students to share personal items, such as combs, brushes, hats, or clothing.
 3. Provide adequate individual areas for students to keep their outer clothing items, such as coats, hats, scarves, and mittens.
 4. Wash and cover sores, cuts, and scrapes promptly, and keep infected eyes wiped dry.
 5. Report rashes, sores, runny eyes, and severe itching to a student's parents so they may contact their health care provider for diagnosis and appropriate treatment.

Prevention Guidelines for Diseases Spread Through the Intestinal Tract

Overview

Communicable infectious diseases that are usually spread through the intestinal tract—including those commonly known as campylobacteria, giardia, hepatitis A, hepatitis E, pinworms, rotavirus, salmonella, and shigella—can be spread from person to person by direct or indirect transfer of the disease-causing organism (infectious agent). Organisms that cause such diseases include bacteria, viruses, and parasites.

Direct transmission of the organisms, for most of the diseases, can occur by hand-to-mouth transfer of the organism from the stool of an infected person (i.e., fecal-oral route), especially in institutions and day care centers. Indirect transmission of the organisms can occur, though usually to a lesser extent for some of the diseases, through contaminated inanimate materials or objects (e.g., ingestion of organism in food, unpasteurized milk, water). For some of the diseases, it is possible to transfer the organisms through other modes (e.g., contact with an infected pet, possibly fecal-respiratory route). Some organisms, such as *Campylobacter* and *Salmonella* bacteria, must be ingested in large quantities to cause illness.

Students or staff who have hand-stool contact may facilitate transmission of these organisms. Students or staff with disease-causing organisms in their stool may not act or feel sick or have diarrhea. Laboratory tests are the only means of confirming the presence of this type of organism in a particular stool and may be performed as part of an effort to control an outbreak of disease.

Because students and staff who have intestinal tract diseases do not always feel sick or have diarrhea, the best method for preventing spread of disease is to have a constant prevention program in place. In the school setting, this program should include hand washing before preparing or eating food and after using the bathroom. All school bathrooms should have adequate supplies of soap, running water, paper towels, and toilet paper.

School Exclusion Guidelines

- ◆ When students or staff have uncontrolled diarrhea and fever or vomiting (or have severe or bloody diarrhea) or if diarrhea cannot be contained by diapers (in those students using them), they should be excluded from school until their fever or diarrhea are gone and they have been treated as determined by a health care provider.
- ◆ When students or staff have mild diarrhea but are not sick, special precautions should be taken or they should be excluded from school.

- ◆ When students or staff who do not prepare food or feed students are found to have infectious diarrheal germs in their stool (positive stool cultures) but have no diarrhea or illness symptoms, special precautions should be taken but they should not be excluded from school. (If necessary, make sure they receive appropriate management from a health care provider.) During outbreaks a negative stool culture may be required before returning to school.
- ◆ When staff who normally prepare food or feed children have positive stool cultures, do not permit them to prepare food or feed students until they have one negative stool culture taken 48 hours after medication is completed, if antibiotics are used. During outbreaks, two consecutive negative stool cultures may be required.

See Appendix C for specific disease.

Return Guidelines

Excluded students and staff may come back to school after treatment and when severe diarrhea is gone. During outbreaks, negative stool cultures may be required before excluded students and staff may come back to school.

Prevention Guidelines for Diseases Spread Through the Intestinal Tract

1. Strictly enforce proper handwashing after using the bathroom, diapering, and before preparing or eating food. **Handwashing is the best way to prevent spread of infectious diseases caused by organisms that are transmitted by the fecal-oral route.**
2. Pay attention to environmental cleaning and sanitation.
3. Keep track of the number of cases of diarrhea.
4. If there is an increase in the number of cases expected in the school, call the local health department for guidelines on additional precautionary measures to be taken to ensure the protection of students and staff from further spread of illness.

Prevention Guidelines for Diseases Spread Through the Respiratory Tract

Overview

Communicable infectious diseases that are usually spread through the respiratory tract—including those commonly known as chickenpox, common cold, flu, measles, bacterial meningitis, tuberculosis, and whooping cough—can be spread from person to person by direct, indirect, or airborne transfer of the disease-causing organism (infectious agent). Organisms that cause such diseases include bacteria and viruses. When a person infected with such a disease coughs, sneezes, blows their nose, sings, or talks (usually limited to about 1 yard) they can produce infected droplets (large infected particles that settle out of the air) or infected airborne particles (microbial aerosols that do not settle out of the air for a long time).

Direct transmission of the organisms can occur by direct contact with the mucous membranes of the infected person (e.g. touching or kissing) or direct projection (spray) of the droplets onto the eye, nose, or mouth. Indirect transmission of the organisms can occur, for most of the diseases, by hands and articles (e.g., handkerchiefs, toys, pencils, books, desks) freshly soiled by droplets, discharges from nose and throat, or secretions from lesions of an infected person—the organisms are transmitted by contaminated hands carrying organisms to the mucous membranes of the eye or nose. Furthermore, transmission of the organisms can occur by inhalation of airborne particles.

Diseases spread through the respiratory tract can be mild (e.g., viral colds) or life-threatening (e.g., bacterial meningitis). People who are infected with such diseases and do not wash their hands after touching their eyes, nose, or mouth increase the likelihood of spreading the disease by contaminating articles with discharges from their respiratory tract. The organisms can easily be transferred to others through those contaminated articles. In addition, people who are infected with respiratory disease and do not cover their mouths and nose when coughing or sneezing can increase the likelihood of airborne spread, which can predominate among crowded populations in enclosed spaces (e.g., school buses).

School Exclusion Guidelines

- ◆ Most children will not need to be excluded from school for mild respiratory tract illnesses, because transmission is likely to have occurred before symptoms developed in the child or is a result of contact with children with asymptomatic infection.
- ◆ Exclusion from school of children with respiratory tract symptoms that are due to common cold, croup, bronchitis, pneumonia, sinusitis, and/or otitis media probably will not decrease the spread of infection.

- ◆ Separation from other children is indicated when one or more of the following conditions exist:
 1. The illness has a specific cause that requires exclusion or treatment prior to returning to school as outlined under the discussion of the specific illness.
 2. It interferes with the child's ability to concentrate and limits the child's comfortable participation in school activities.
 3. Results in a need for care from staff members that compromises the health and safety of other children.

See Appendix C for specific disease.

Prevention Guidelines for Diseases Spread Through the Respiratory Tract

1. Hand washing and other hygiene practices are essential to decreasing the spread of all respiratory tract diseases. Students and staff should be encouraged to wash their hands after wiping or blowing their noses; after contact with any nose, throat, or eye secretions; and before preparing or eating food.
2. A supply of tissues should be available in each classroom. Encourage children to cough or sneeze into a tissue and away from other people. Tissues should be properly disposed of and hand washing should follow.
3. Dispose of tissues contaminated with nose, throat, or eye discharges in a step-can with a plastic liner. Keep soiled tissues away from food and other classroom materials.
4. Discourage the sharing of food.
5. Surface areas, toys, and other inanimate materials and objects shared by children in the classroom should be properly cleaned

Note: Aspirin (or products containing salicylate) should *never* be administered to children for fever control of any viral illness, but particularly if influenza or chickenpox is suspected. There is an association with Reye's syndrome (vomiting, liver problems, and/or coma) and the use of aspirin in the treatment of these types of illnesses.

Prevention Guidelines for Diseases Spread During Sexual Activity

Overview

Sexually Transmitted Diseases (STDs) refer to a group of diseases that are spread from person to person during sexual activity. This term includes such conditions as AIDS and HIV infection, chlamydia, crabs (pubic lice), genital warts, gonorrhea, hepatitis B (HBV), genital herpes, syphilis, and vaginitis (yeast infections, trichomoniasis).

The organisms that cause an STD can be spread during oral (mouth), anal, or vaginal sexual activity. Some STDs are spread from skin-to-skin contact with an infected partner's genital area—not just through intercourse.

STDs are very common in the United States and some are increasing. All STDs are preventable. Left untreated, some STDs can cause serious long-term health problems. A pregnant woman can pass an infection to her baby.

Symptoms. *The symptoms, transmission, and treatment of STDs are specific for each disease. However, listed below are some of the symptoms that might indicate that a person is infected with an STD.*

Females

- ◆ *Any odor or unusual discharge (fluid) that comes from vagina.*
- ◆ *Itching or burning around vagina.*
- ◆ *Pain during sex.*
- ◆ *Bleeding other than during menstrual period.*
- ◆ *Pain in the lower abdominal area that does not go away.*
- ◆ *Left untreated, some STDs can cause Pelvic Inflammatory Disease (PID)—a very serious condition. PID can develop when untreated infections spread further into the reproductive organs. Symptoms are usually serious and, left untreated, can cause sterility.*

Males

- ◆ *A discharge or drip (fluid) from penis.*
- ◆ *Pain or soreness in the area of testicles.*

Males and Females

- ◆ *Pain or burning with urination.*
- ◆ *Any blisters, sores, ulcers, bumps, or warts on or around sex organs or anus.*
- ◆ *Any burning, itching, swelling, or redness on or around sex organs.*

- ◆ *Persistent flu-like symptoms, such as tiredness, fever, aches, chills, night sweats, weight loss, or diarrhea.*

Note: Sometimes a person may not have ANY symptoms whatsoever but might still have an STD.

Treatment

Physicians can identify and treat STDs. In addition, most local health departments have special clinics just for STDs.

School Exclusion Guidelines

See Appendix C for specific disease.

Prevention Guidelines

The only sure way to avoid getting an STD is to not have sex. The following is a summary of how to prevent getting an STD.

- ◆ *Abstain from sex.*
- ◆ *Having a faithful (monogamous) relationship with one uninfected partner is the next best thing. However, if the partner is having sex with other people, the other partner can get an STD.*
- ◆ *The best protection for a sexually active person is to use a latex condom every time that person has sex. This means for vaginal, anal, and oral sex. Condom use has been proven to reduce the risk of getting HIV, hepatitis B, herpes, gonorrhea, genital ulcers, pelvic inflammatory disease, chlamydia, syphilis, and other infections.*

Prevention Guidelines for Sports-Related Infectious Diseases

Overview

The spread of communicable infectious diseases among students in the school setting is a problem shared by all educational institutions. Contact in the classroom, cafeteria, or school yard can facilitate the spread of infectious diseases. In addition to the exposures that students face in these common situations, student athletes may contract or spread infectious diseases while participating in sporting activities. Teachers, coaches, and athletic staff, school/team physicians, school nurses, and others responsible for the health and safety of athletes need to be aware of the infectious disease spread that can occur during training, competition, or even during physical education class activities.

Risk of Exposure

There may be risk of exposure for the individual athlete, the team, and spectators. Transmission of infectious diseases in sports settings usually occurs via direct contact, the fecal-oral route, common-source exposure, or airborne and/or droplet spread. In some cases, disease transmission is unavoidable due to infectiousness before symptoms become apparent. In other cases, the spread of disease occurs as a result of many people congregating together or sharing water bottles or other eating/drinking utensils. The following chart lists some infectious diseases that have occurred due to sports-related activities.

Sports-Related Infectious Diseases		
Disease	Mode of Transmission	Sports Involved
Herpes simplex virus (HSV), (<i>herpes gladiatorum</i>) <i>Staphylococcus aureus</i> Group A streptococci, fungi	Direct contact	Wrestling, rugby, basketball, football
Enteroviruses (coxsackievirus, echoviruses)	Common-source or fecal-oral	Team sports
<i>Pseudomonas aeruginosa</i>	Common-source	Swimming
Meningococcal illnesses	Saliva exchange	Team sports
Measles	Airborne or droplet	Tournaments involving gymnastics, basketball, wrestling, other indoor sports

School Exclusion Guidelines

See Appendix C for specific disease.

Prevention Guidelines

Some concern has been raised about the possibility of sports-related transmission of blood-borne pathogens. Team physicians, trainers, school nurses, physical education teachers, and others involved with the health of the student athlete should not only be able to recognize and manage acute problems but should also institute policies for the prevention of disease transmission. These policies should include, but not be limited to, the following, which are taken from Goodman, et. al. (1994).⁹²

⁹² Goodman, R.A., et al. (1994). Diseases in Competitive Sports. *JAMA*, 271(11): pp.862-867.

1. In order to decrease transmission of diseases spread by mucous membrane contact or the fecal-oral route, coaches, trainers, and physical education instructors should be educated about the need to prevent exposures of athletes sharing water bottles and pails during sports-related activities.
2. Students diagnosed with skin infections should be cautioned about their participation in sports involving close physical contact. Players with open lesions that cannot be covered should not be permitted to participate in sports where they could transmit disease to others.
3. All athletic equipment in contact with student's skin or secretions should be routinely cleaned after use. This would include, but not be limited to, gymnastic and wrestling mats, mouth guards, and other protective equipment. Sanitizing of mats with a dilute bleach solution (1 tablespoon bleach to 1 quart of water) and airing of mats is also recommended as a standard precaution.
4. All students must be vaccinated against communicable diseases as described in Chapter III, Immunization Requirements.
5. When airborne diseases occur, a mechanism should be in place to inform everyone exposed, including athletes, staff, and spectators.
6. Athletes with symptoms of an infectious disease should not be permitted to participate in sports activities until they have been evaluated by their health care provider and are no longer infectious.
7. Public health officials should be immediately notified of a case or suspected case of a reportable disease in an athlete. Timely reporting of even a suspected case of an infectious disease may help to prevent further spread among athletes, spectators, and the community.

Selected Infectious Diseases

Please refer to Appendix C for a description of selected infectious diseases that may occur in the school setting and measures to prevent their spread. Responsibility for the care of the individual student rests with the family and his/ her health care provider.