



Communicable Disease Control Handbook

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Introduction

Communicable disease control in the school setting is important. The prevention of the spread of infection is often addressed by attempting to exclude sick students from attending school when they are ill, but it should be remembered that many infections remain undiagnosed because they are mild and cause few symptoms. Also, many infections can be passed on before symptoms appear. Students who appear healthy may be chronic carriers of infection.

For this reason, school staff must be vigilant in taking precautions to prevent the spread of disease. School staff has a leadership role in ensuring that precautions are taken to prevent the spread of infection. Following the guidelines outlined in this handbook and ongoing communication with supervisors regarding prevention and intervention are of primary importance in reducing communicable diseases.

All staff and students are to approach infection control using universally recognized precautions. Each student and staff member is to assume that direct contact with human blood and bodily fluids is considered a potentially contagious situation.

Exposures to Infectious Material

Certain jobs may put employees at risk of contracting an infectious disease. Such employees as teachers, caretakers, educational assistants, school librarians, secretaries or school bus drivers may come in direct contact with persons in emergency/other situations or due to the nature of their job be exposed to germs or viruses.

Control Measures

How Infections Are Spread

Three steps are required for the spread of infection from one person to another:

Stage 1 Excretion Organisms must be excreted by the infected person

Stage II Transfer Organisms must be transferred to the well persons

Stage III Incubation Organisms must reach susceptible sites in a well person

If infection is to be controlled, it is important to try to ensure that a break occurs between each of the above stages.

Infectious Material or Organisms

In a school setting the nature of infectious material or organisms risks are:

- Airborne (Colds, flu, Norwalk virus, West Nile via mosquitoes)
- Blood Borne (Risk is greater if there is a puncture wound) (HIV, AIDS, Hepatitis B & C)
- Direct Physical Contact (Head lice, Pinkeye/Conjunctivitis)

Disease	Transmission	Signs & Symptoms
<p>Norwalk</p> <p>Gastrointestinal disease caused by the Norwalk or Norwalk-like virus.</p>	<p>Spread by:</p> <ul style="list-style-type: none"> • Person-to-person contact if hands are not washed thoroughly • Drinking water or eating food contaminated with the virus • Contact with contaminated surfaces such as door knobs, railings, taps, and/or • Contact with infected stool 	<ul style="list-style-type: none"> • Abdominal cramps • Nausea • Vomiting • Diarrhea • Headaches • Low grade fever
<p>West Nile</p> <p>Virus transmitted to people through the bite of an infected mosquito.</p>	<p>Spread by:</p> <ul style="list-style-type: none"> • Bite of an infected mosquito 	<ul style="list-style-type: none"> • Flu-like symptoms, such as fever, headache, body aches and fatigue. • The virus can sometimes cause severe illness, including meningitis and encephalitis.
<p>Hepatitis B</p> <p>An infectious virus carried in the blood.</p>	<p>Spread by:</p> <ul style="list-style-type: none"> • Body fluids including blood, blood products of an infected person enters the body of a person who is not protected against the virus • Sexual contact with an infected person • Exposure to needlesticks and other “sharps” which have been contaminated with HBV • Mother to newborn infant at the time of birth 	<ul style="list-style-type: none"> • Jaundice (yellowing of the skin and eyes) • Tiredness • Loss of appetite • Joint pain • Pain in the stomach area • Feelings of sickness
<p>Hepatitis C</p> <p>An infectious virus that is carried in the blood and affects the liver.</p>	<p>Spread by:</p> <ul style="list-style-type: none"> • Contact with the blood of infected people • Shared needles, straws for snorting drugs, pipes, spoons and other drug-related equipment • Tattoos, body piercing or acupuncture where the operator used unsterile or homemade equipment or unsterile techniques • Being pricked by a needle that had infected blood on it • Sharing personal household articles such as a razor or toothbrush with an infected person • People who had blood transfusions before 1992 are also at risk for developing the disease 	<ul style="list-style-type: none"> • Begins almost like a ‘flu’ with fatigue • Fever • Body aches and pains • Nausea and vomiting • Urine may become dark • Skin or eyes may turn yellow (jaundice)

Disease	Transmission	Signs & Symptoms
<p>HIV/AIDS</p> <p>A virus that attacks the immune system, resulting in a chronic, progressive illness that leaves people vulnerable to opportunistic infections and cancers.</p>	<p>Spread by:</p> <ul style="list-style-type: none"> • Unprotected sexual intercourse (vaginal, anal or oral) • Shared needles or equipment for injecting drugs • Unsterilized needles for tattooing, skin piercing or acupuncture • Pregnancy, delivery and breast feeding (ie: from an HIV-infected mother to her infant) • Occupational exposure in health care settings 	<ul style="list-style-type: none"> • Vulnerable to infections and cancers • Body can no longer fight infections
<p>Influenza (Seasonal, H1N1 and others)</p> <p>A virus that attacks the respiratory system through breathing in or contact with something recently contaminated.</p>	<p>Spread by:</p> <ul style="list-style-type: none"> • Breathing in infected droplets when close to someone sneezing or coughing • Contact with something recently contaminated (shaking hands, etc.) 	<ul style="list-style-type: none"> • Fever • Runny nose • Cough with sore throat • Headache and/or body aches • Fatigue and lack of appetite • Children occasionally experience vomiting and diarrhea
<p>Pinkeye (Conjunctivitis)</p> <p>An irritation of the inner eyelid and the surface of the white part of the eye. Infections and allergies are the most common causes. Air pollution, smoke, dust, and pollen may also be at fault.</p>	<p>Spread by:</p> <ul style="list-style-type: none"> • If caused by an infection, the disease spreads easily from person to person • Can be spread by sharing towels or washcloths • To keep from spreading infection, wash your hands often with soap and use paper towels to dry 	<ul style="list-style-type: none"> • Painful red eyes, puffy eyelids, or a gritty feeling in the eyes • Clear, yellow, or green-colored eye discharge that may form crusts and cause the eyelids to stick together, especially in the morning

Infection Control Measures

Wellness in the workplace is important for all parties. Precautionary measures - maintain good health and prevent the spread of germ and illness by:

- Using good hand hygiene (wash hands after direct contact with individuals or use alcohol-based hand gel)
- Use cough and sneeze hygiene (cover nose and mouth with disposable tissue or use sleeve/arm and wash hands or use hand gel after coughing/sneezing)
- Frequently clean surfaces (counters, door knobs, etc.)

Other precautionary measures may include:

- Tetanus vaccine
- Annual flu shot
- Hepatitis B vaccine (for employees who work daily with students requiring personal care duties). Cost of Hepatitis B vaccine to be covered by the Division upon request for personnel who regularly complete tasks involving infection risks.

Safe Work Practices

Protect yourself and others by practicing good health measures:

- People who are sick should stay home and limit contact with others as much as possible until feeling better
- Model preventative measures for reducing the spread of germs (hand washing, coughing/sneezing, stay at least a meter away from sick people)
- Talk to your doctor if you have flu-like symptoms that worsen

The assumption when dealing with all blood and other identified body fluids is that they are infectious.

- Gloves should be available in each room/area where students and staff work
- All staff need to use gloves when dealing with cuts/abrasions involving blood/bodily fluids

General Precautions

The Care of “High Risk” Students

High risk students include the following groups:

- Students requiring personal care or those with health related challenges
- Students with low resistance to infection, i.e. immuno-compromised students
- Students with cardiac or chronic lung disease
- Potentially infectious students (including HIV/Hepatitis B)

General Considerations

- Staff must be conversant with the basic practical principles of control of infection, such as, correct hand washing, correct disposal of soiled material, and management of blood spills.
- Staff will be updated regarding student’s health as necessary and such information will be confidential.
- Staff should have an understanding of the student’s health status and issues, all of its associated complications and the signs and symptoms of infection.

Exclusion of High-Risk Students from the Group Setting

Students with health challenges may be excluded for the following reasons:

- The child has a potential communicable disease. (Similar precautions would be applied to healthy children).
- There is an outbreak of infection in the group that poses a special risk to the student, i.e. measles, chicken pox, shingles.
- The student appears to be chronically ill.
- Where there is an increase of respiratory illness within the community which may be more easily transmitted to an immuno-compromised student.
- The student requires medical attention.

Illness Involving Staff Members

Lack of immunity, poor hygienic practices, and frequent interaction make student communities high-risk areas for infections. Staff members must be diligent in not bringing infection to an already susceptible environment. If staff members are ill, they should not be in contact with students and other staff members. Staff members should not return to work until they no longer pose a threat to the school environment.

Techniques for Reducing Standard Blood and Bodily Fluid Contamination

Hand Washing

Hand washing is the single most important procedure for preventing the transmission of infection in the school setting. The importance of performing hand washing correctly and frequently must be taught and reinforced.

The components of good hand washing include:

- Adequate amount of soap
- Rubbing hands together to create friction
- Rinsing under running water

Hand Washing Procedures

- Dispense paper towel
- Use continuously running water of moderate temperature
- Use a generous amount of soap
- Apply with vigorous contact on all surfaces of hands
- Wash for a minimum of 10 seconds
- Clean under and around fingernails
- Keeping your hands down rinse them well with warm running water
- Avoid splashing
- Dry well with paper towels
- Use a towel to turn the water off and open door so as not to re-contaminate hands.

It should be routine practice that everyone (staff and students) wash their hands using soap and water. Hand washing is important:

- When any visible contamination or soiling occurs
- After handling any body fluids (blood, secretions, contaminated items)
- Tending children with cuts or abrasions or suspected infections
- After wiping a child's nose or your own nose
- After using the toilet
- After removing gloves

Note:

- Any cuts or abrasions must be adequately covered with a waterproof dressing.
- Single use latex or vinyl gloves should be worn when contamination of the hands is anticipated. (Gloves do not remove the need for hand washing.)

Hand Lotion

- Is recommended to ease the dryness resulting from frequent hand cleaning and to prevent dermatitis resulting from glove use
- Application can reduce the dispersal of bacteria
- Single use containers should be disposed of when empty (to avoid contamination do not “top up”)
- Should not be petroleum or other oil emollients based as it may affect the integrity of gloves

Protective Clothing

- All protective clothing is a school level budget purchase.

Gloves are worn to provide an additional protective barrier:

- To reduce the risk of exposure to blood, body fluids, mucous membranes, non-intact skin and contaminated environmental equipment
- To protect the wearer from harmful chemicals and disinfectants
- Clean non-sterile disposable gloves:
 - Are one-use only
 - Synthetic exam glove, powder free
 - Are removed promptly after use, before touching clean items and environmental surfaces
 - Should not be washed, cleansed with an alcohol-based rub or used with petroleum-based hand creams

Gowns/aprons should be worn to protect the skin and prevent the soiling of clothing during procedures and activities (feeding, toileting, diapering) that are likely to generate splashes or sprays of body fluids.

Long sleeved shirts, pants and/or insect repellent should be worn to protect against insect bites for employees working outside (playground supervisor, yard maintenance, etc.)

Waste/Garbage

School/washroom garbage that contains articles contaminated with a large amount of blood and/or body fluids must be double-bagged, and clearly marked biohazard before disposing.

Cleaning

Disinfecting is effective only if surfaces are thoroughly washed first.

General Cleaning

- Vacuuming, dusting and washing are all essential elements in the prevention of the spread of infection.
- Standard cleaning materials are adequate for most surfaces, but care must be taken to ensure proper dilution of solutions.
- Special care will be needed in certain areas (i.e. food preparation and toilet areas).
- Respiratory viruses will persist for hours on surfaces. Some common germs/viruses causing diarrhea or illness may live for days or weeks on surfaces or equipment, therefore, cleaning on a regular basis is important.

Disinfectant to be Used

Bleach (hypochlorite) is the most effective disinfectant. Use ordinary household bleach or an approved disinfectant.

Dilution of bleach solution = 1 part bleach in 100 parts of water/50 ml bleach in 4 liters of water/1/4 cup bleach in 1 gallon of water. (Spray bottles and solution must be clearly marked.)

- Please reference the Material Safety Data Sheet (MSDS) document when using bleach or other approved disinfectant.

Note: The dangers of bleach solutions and spillages include:

- Accidental ingestion
- Irritation of eyes, mucosa, and skin
- Release of chlorine gas when added to acid cleaner

Methods/Frequencies of Routine Cleaning:

- Wear gloves during cleaning
- Surfaces in the toilet areas, such as flush handles, toilet seats, and door handles, should be disinfected once per day.
- Floors, low shelves and other surfaces should be cleaned once per week.
- Clean mops with soap and water and rinse in a bleach solution, wring as dry as possible and then hang to dry.

Cleaning of a Contaminated Surface:

- Surfaces contaminated with any body fluid should be flooded with bleach solution (1:10) that is stronger than that recommended under routine cleaning.
- After thorough soaking, the mixture (contaminated material plus bleach solution) should be carefully removed with paper towels.
- The area then should be thoroughly washed and finally disinfected with a further application of bleach solution (1:10), which should be left on the surface for at least 10 minutes. Wipe with paper towels soaked in tap water. Allow to dry.
- Be sure to mark area with a wet surface sign to prevent people from slipping.
- Towels should be discarded in a biohazard marked bag.
- Wash hands thoroughly after removing gloves.

Note: Bleach remains the disinfectant most effective for blood spills

Cleaning Blood/Body Fluid Spills from Carpeted Area:

- Excess blood and fluid capable of transmitting infection should be removed with disposable towels.
- Appropriate personal protective clothing must be worn for cleaning a blood spill.
- Gloves must be worn during the cleaning and disinfecting procedure as above. If the possibility of splashing exists, the worker must wear a face shield and gown.
- A carpet stain remover can be used with a brush and disinfectant/water mixture. (Make sure you wear gloves.)

Special Situations

Response to Incidents Involving Blood in Schools

All incidents involving blood should be treated as potentially contagious situations.

Examples of injuries involving blood include:

- Cuts and abrasions resulting in bleeding
- Nosebleeds
- Any injury where the skin is broken

Cleaning of Blood Spills

- **Wear gloves!**
- Minimize the number of staff and students who are exposed to the blood.

HIV infection has highlighted the risk of transmission of infectious disease by contact with contaminated blood. Other blood borne viruses including Hepatitis B and Hepatitis C can also be spread this way. In the event of bleeding, the following guidelines should be followed:

- Use disposable wipes (paper towel) to clean the students and to control bleeding. Discard wipes after use.
- Use water to clean mouth, nose or eyes.
- Remove bloodstained clothes from student, pack in plastic bag and return to parents for cleaning.
- Inspect clothing of first-aider for bloodstains. All stained clothing should be removed and bagged.
- Before disposal, double-bag blood stained clean-up materials and gloves in plastic bags marked biohazard.
- Wear rubber gloves and, if possible, a plastic apron.
- Soak up as much of the spillage as possible with paper tissue, paper towels or newspaper.
- Thoroughly clean the area with a bleach solution (1:10), leave for 5-10 minutes and wipe up with paper towels.
- Double-bag towels and gloves and mark biohazard on the outer bag.
- **Wash hands!**
- Refer to Administrative Procedures 163 HIV/AIDS

Note: Bleach remains the disinfectant most effective for blood spills.

Pandemic Response

A pandemic means an epidemic of any disease over a wide geographic area affecting a large proportion of the population. Pandemic influenza occurs when a major new subtype of influenza virus appears against which the entire human population has little or no immunity. It spreads rapidly and widely, and causes more severe disease and more deaths than a seasonal influenza. Refer to Administrative 162 Pandemic Preparedness.

Orientation and Training of Employees

- Orientation with the employee's supervisor needs to occur prior to an employee commencing work with regards to safety measures in the workplace.
- Information regarding MSDS information and WHMIS will be provided by the supervisor.
- Employees will be informed of the possible risks regarding exposure to communicable diseases in the workplace.
- Information will be provided regarding recommended vaccines, such as tetanus, flu shot or Hepatitis B vaccine, as related to the nature of the employee's job.
- Employees will be informed regarding procedures to follow in reporting situations that may have increased their exposure to communicable disease. Please refer to Administrative Procedures 161 Pandemic Preparedness found at www.sunwestsd.ca.
- Review of the Communicable Disease Handbook will occur and a copy provided to the employee at the start of employment.
- Employees will be provided with the protective clothing/equipment to do their job.

Communicable Disease Notification

In the event of a potential occupational exposure to blood borne infections the incident is to be reported to the employee's supervisor by completing Form 315-2 Employee Exposure Incident. The employee's supervisor will investigate the incident through the completion of Form 315-3 Incident Assessment and advise the employee of health supports.

Head Lice – Prevention and Control Measures

Characteristics

- Lice are small, tan colored, wingless insects that live on the human scalp and other hairy areas of the human body. They survive by sucking the blood of the host, which causes the persistent itch that is characteristic of lice.
- The eggs (nits) appear as small silvery/white ovals and are very firmly attached to the hair shafts. Lice rarely survive off the body for longer than 36 hours.
- Lice do not fly or jump and therefore need to be directly transported from one person to another. Transport can occur on any object that comes in contact with infected body hair and can include clothing, hats, combs, brushes and bedding.

How Do You Get Head Lice?

Contrary to popular belief, uncleanliness does **not** cause head lice. Head lice cannot jump or fly and you cannot get them from animals or pets. You get lice by:

- Having close head-to-head contact with someone who has head lice;
- Sharing things that come into contact with a person's head, such as combs, brushes, barrettes, ribbons, caps, scarves, helmets and coats;
- Head lice can also spread when personal items such as coats and caps come into contact with personal items belonging to a person who has head lice; for example, clothing hanging in a closet or cloakroom.

Prevention

If your child scratches his or her head frequently or if you hear that one of your child's friends or classmates has head lice; check your child's hair for:

- **Nits** attached to individual hairs; and
- **Lice** on the scalp
- Parents need to develop a weekly routine of checking their child's head for lice and nits
- Teachers, support staff and coaches need to also watch for signs of head lice in children
- School staff will not physically check students for lice due to the risk of spreading the contamination.
- Children should learn how head lice are spread and how to avoid them.
- If head lice, or nits are found in the household and there is a school-aged child in the family you should:
 - Notify the school immediately
 - Check all household members
 - Avoid all close head to head contact with people until treatment has been carried out and treat all household members who have head lice promptly at the same time

Treatment for Head Lice

Treat all household head lice using a special cream rinse, lotion or shampoo. To treat head lice, a permethrin cream rinse, malathion lotion, pyrethrin shampoos and lindane-based shampoos can be used. These and other products are available at most drugstores.

- **Washing the hair with regular shampoo or rinsing with vinegar is not effective against head lice.**
- **Use of kerosene on the hair is not safe and is not recommended**
- **Shaving the head to get rid of lice is not necessary**
- Remove **all** the nits by using a fine-tooth (nit) comb, tweezers, or by sliding them off the end of the hair strand by strand.
- Soak all personal hair care items such as brushes, combs, barrettes, pins and clips in very hot water (53.5°C) for 10 minutes, to kill any lice that may be clinging to these items.
- Washable clothing and bedding should be washed in very hot water and dried for about 30 minutes using the hot setting on the dryer. All non-washable clothing should be dry cleaned or placed in a sealed plastic bag for 2 weeks at 15°C or for 48 hours at -10°C.
- Vacuum the household thoroughly, especially carpets, furniture, floors and beds.
- Re-treat all affected persons with the special cream rinse, lotion or shampoo exactly one week after the first treatment to kill any remaining lice or nits.
- Examine hair of all household members for lice and nits every day for three weeks after the first treatment.

To Remove Nits

- Comb hair with a fine-toothed comb one small section at a time.
- Position comb as close as possible to the scalp and pull through to the end of the hair.
- Wipe nits from comb frequently using tissues and dispose of tissues in a plastic or paper bag; seal and discard.
- When hair is dry, check entire head for remaining nits; or
- Pull off individual nits by grasping nits between the finger tips and sliding off the end of hair strand.
- Place in bag and dispose.

Pinkeye (Conjunctivitis) – Prevention and Control Measures

Characteristics

- Pinkeye is an irritation of the inner eyelid and the surface of the white part of the eye.
- If caused by an infection, the disease spreads easily from person to person.
- Painful red eyes, puffy eyelids, or a gritty feeling in the eyes.
- Clear, yellow, or green-colored eye discharge that may form crusts and cause the eyelids to stick together, especially in the morning.

Causes

- Infections and allergies are the most common causes.
- Air pollution, smoke, dust, and pollen may also be at fault.
- Easily spread from person to person by direct contact, use of towels, facecloths, etc.

Care and Prevention

- See your doctor. If a bacterial infection is the culprit, the doctor may prescribe antibiotic medication. You may also use nonprescription eyedrops to help the pain. With care, should clear up in 7 days.
- To ease discomfort, apply a clean, warm or cool washcloth to your eye several times a day for 10 to 20 minutes.
- Do not touch or rub your eyes with your hands.
- Gently wipe away any discharge from the eyes with tissues.
- To keep from spreading infection, wash your hands often with soap and use paper towels to dry.
- Do not share towels or washcloths.
- Sunglasses may be helpful if light bothers your eyes.
- Do not use eye makeup. Keep contact lenses out of eyes until the irritation is gone.
- Keep children home from school or daycare until the eye is no longer pink.

References

Refer to Sun West School Division Website www.sunwestsd.ca for documents listed below.

Form 315-2	Employee Exposure Incident
Form 315-3	Incident Assessment
AP 162	Pandemic Preparedness Procedures
AP 163	HIV/AIDS

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