

Public Health for Kids



An information newsletter for Childcare Providers

Opening Remarks

Our team continues to expand as we rise to meet the demands of the “The New Normals”, West Nile virus and Pandemic influenza, just to name a few. The Infectious Diseases Program team now consists of:

Program Manager

- ◆ Susan Shular

Public Health Inspectors

- ◆ Christina Milani
- ◆ James Reason
- ◆ Susan Anderson (will be joining the team in November)
- ◆ Bev Middleton

Public Health Nurses

- ◆ Debby Minielly
- ◆ Laura Kennedy

Program Support

- ◆ Karen Byars
- ◆ Karen Gventer

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- ◆ Immunization Poster
- ◆ Do Bugs Need Drugs

and these symptoms are much more common in children than adults.



Spread of the Flu

The main way the flu is spread is from person to person through coughs and sneezes. This can happen when droplets from the cough or sneeze of an infected person travel through the air and reach the mouth or nose of people nearby. Sometimes flu can be spread when a person touches droplets, nose drainage or saliva from an infected person, or a soiled object, and then touches their own (or someone else's) nose or mouth before washing their hands.

Vaccination against the flu each fall remains the primary way to prevent this disease. Vaccinated staff and children will decrease the spread of influenza among children and care providers. Hand washing is also an important intervention to control the spread of disease. Advise children and care providers to cover their noses and mouths with a tissue when sneezing or coughing and to put their used tissue in a waste basket.

Make sure that tissues are available in all nurseries, child care rooms, common areas such as reading rooms, classrooms and rooms where meals are provided.

Care providers and children need to wash their hands as soon as possible if they have sneezed or coughed into their hands.

Observe all infants and children closely for symptoms of respiratory illness. Notify the parent if a child develops a fever, chills, cough, sore throat, headache or muscle aches. Send the child home if possible or isolate until a parent can pick the child up.

Public Health for Kids is published twice yearly by the Infectious Disease Team of the Grey Bruce Health Unit. We encourage you to contribute articles or submit questions that we can share with your colleagues. Contact us at: 920 1st Avenue West, Owen Sound, Ontario N4K 4K5 519-376-9420 or 1-800-263-3456. Fax: 519-376-0980. www.publichealthgreybruce.on.ca

Encourage parents to keep their sick children at home and away from the child care setting until the children have been without fever for 24 hours to prevent spreading illness to others. Also, encourage sick care providers to stay away from the childcare centre.

Source: *Preventing the Spread of Influenza in Childcare Centres*, Centers for Disease Control (CDC)

Tularemia Alert

The Public Health Agency of Canada recently announced the isolation of tularemia bacteria in dwarf/pigmy hamsters from a distributor in Manitoba. Other shipments of hamsters have been distributed in BC, Alberta, Saskatchewan and northwestern Ontario.

Tularemia is a bacteria found naturally in wild animals, particularly rodents. It is a rare and usually mild disease in humans that can be treated. The majority of detected tularemia infections present with ulcers on the skin, swollen glands and painful lymph glands. Fever, chills, headache, diarrhea and muscle aches may be present. Tularemia is transmitted by contact with infected animals or their cages and immediate environment.

This means:

- being bitten or licked by the animal
- handling or cleaning the animal, its toys, cage and feed equipment
- breathing in air contaminated with the bacteria
- eating or drinking contaminated food or water

If you have purchased a hamster in the past three months and it has died or experienced illness, please contact public health. As previously mentioned, the potentially infectious hamsters were distributed in the northwestern portion of Ontario (i.e. Kenora, Thunder Bay). To date, we are not aware of any of these pets being

distributed locally to our pet stores.

How do Antibiotics Work?

To understand how antibiotics work, you have to understand the two types of germs that can make us ill: bacteria and viruses. Although certain bacteria and viruses cause disease with similar symptoms, the ways these two organisms multiply and spread illness are quite different.

Bacteria are living organisms existing as single cells. They cause illness by invading healthy human or animal cells, making toxins or multiplying into clumps that interfere with normal body processes. Antibiotics are effective against bacteria because they work to kill these living organisms by stopping their growth and reproduction. They typically do this by destroying the protective cell wall of the bacteria.

Viruses, on the other hand, are not alive and cannot exist on their own - they are collections of molecules that can "live", grow and reproduce only after they've invaded other living cells. Some viruses can be fought off by the body's own immune system before they cause illness, but others (such as certain colds, influenza and chickenpox) must simply run their course. Because they are not alive and do not contain cell walls, viruses do not respond to antibiotics at all.

Why It's Harmful to Overuse Antibiotics

Taking antibiotics for colds and other viral illnesses not only won't work, but it also has a dangerous side effect. Over time, this practice helps create super-strains of germs that are much more of a challenge to kill. This is called bacterial resistance. When a sick person takes antibiotics too often, and for the wrong reason, "good" bacteria that live naturally in the body are unintentionally wiped out along with the "bad". The resistant bacteria, capable of causing disease when present in large numbers, may survive and start overgrowing. This makes it harder for

antibiotics to work the next time when one is truly sick with a bacterial infection.

Bacteria that were once highly responsive to antibiotics have become increasingly resistant. Among those that are becoming harder to treat are the germs that cause pneumonia, urinary tract infections, many middle ear infections, skin infections, and meningitis.

Taking Antibiotics Safely

To minimize the risk of bacterial resistance, keep the following tips in mind:

- ♦ Ask your doctor whether your illness is bacterial or viral, and discuss the risks and benefits of antibiotics.
- ♦ Inquire about ways to treat the symptoms that are making you uncomfortable, such as a stuffy nose or scratchy throat, without the use of antibiotics.

Use the medication properly

Antibiotics are only effective if taken for the full amount of time prescribed by the doctor. They take time to kick in so don't expect to feel better after taking the first dose. Most people take 1 to 2 days to feel a lot better. Similarly, don't take antibiotics longer than prescribed.

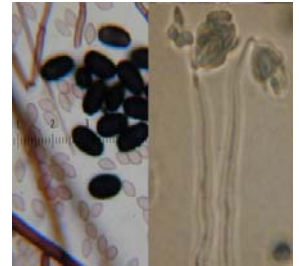
And most important, never use antibiotics that have been lying around your home - they may be expired (many liquid medicines expire after 2 weeks). Never take antibiotics that were prescribed for another

family member. Saving antibiotics "for the next time" is a bad idea as well.

Any remaining antibiotic should be thrown out.

Source: *Kids Health; Nemours Foundation, www.kidshealth.org*

Dampness, Mold and Indoor Air



Reduced natural ventilation, too much humidity, the use of chemicals and other factors can lead to unhealthy air in your home or workplace which can cause a number of health problems such as respiratory symptoms and allergies.

Background

On average, Canadians spend about 90 percent of their time indoors, so the quality of indoor air is very important. Humid or damp conditions in your home can encourage the growth of mold and dust mites. Unless you use a vacuum cleaner with high efficiency filters, floors, carpets and upholstery can build up mold spores, bacteria and other sources of allergies.

Mold can develop from too much humidity, building leaks, refrigerator drip pans, bathroom surfaces and flooding. Moldy smells from carpets, wood and gypsum board are a sign that they harbour fungi. Stale water in humidifiers and air conditioners can lead to the growth of bacteria and fungi. Air filters also collect dust and contaminants.

A major cause of poor indoor air quality is a lack of fresh air, that is, not enough exchange of air between the outside and inside. Where there is a lot of water vapor, such as in the bathroom, mechanical ventilation, such as a fan, may be needed to eliminate excess humidity.

Risks Associated with Poor Air Quality

Contaminants often found in damp buildings are associated with a number of health problems, including diseases such as asthma or allergic rhinitis and non-specific symptoms such as cough, wheezing and headaches.

Molds are filamentous fungi that grow in damp environments. Mold spores contain allergens and irritants. People living in homes where molds grow are more likely to suffer from asthma or respirator symptoms.

Viruses can also be found indoors, but they don't survive long in the air. Viral infections usually result from contact with infected people.

Minimizing Your Risk

Improving indoor air quality is fairly simple. Here are several steps you can take.

- Control the humidity and let more air into your center to prevent moisture from building up on walls and windows. Where there is a lot of water vapor, such as in the bathroom, mechanical ventilation, such as a fan, may be needed to eliminate excess humidity.
- Measure humidity, using a hygrometer, to see if you need a dehumidifier. It is advisable to keep the relative humidity below 50% in summer and 30% in winter.
- Repair leaky roofs, walls and basements.
- Clean moldy surfaces with a strong detergent.
- Keep your center clean and dust-free.
- Regularly clean and disinfect humidifiers and air conditioners.

Source: *Dampness, Mold and Air Quality*, Health Canada



Dust Mites

There are many ways to help control dust mites.

- Use only polyester-fill pillows and comforters (never feather or down). Encase pillows and mattresses in mite-proof covers (available at allergy-supply stores). Keep covers clean by vacuuming or wiping them down once a week.
- Wash sheets and blankets a child sleeps on once a week in very hot water (130 degrees Fahrenheit or higher) to kill dust mites.
- Avoid upholstered furniture, window mini-blinds and carpeting in bedrooms and playrooms. They can collect dust and harbor dust mites (especially carpets).
- Use washable throw rugs on vinyl or hardwood floors, and wash rugs in hot water weekly.
- Use washable curtains and vinyl window shades that can be wiped down. Wash curtains in hot water weekly.
- Dust and vacuum weekly. If possible, use a vacuum specially designed to collect and trap dust mites.
- Reduce the number of dust-collecting plants, books, knickknacks, and non-washable stuffed animals.
- Avoid humidifiers when possible because moist air promotes dust mite infestation.

Source: *Kids Health*; Nemours Foundation, www.kidshealth.org

Salmonella and Eggs

Foods such as homemade mayonnaise, ice cream, cake mix, egg nog, raw cookie dough and mousses can contain raw eggs and therefore carry the risk of Salmonella.



Commercial products are made using pasteurized egg, which is egg that has been heat-treated to kill bacteria including Salmonella. Commercial products may also contain an acidifying agent which will kill bacteria.

Salmonella is one of the most commonly reported agents of foodborne infection. Symptoms include diarrhoea, fever, vomiting and severe abdominal pain. You can be ill for up to three weeks and people may continue to carry the organism for up to 2 weeks or longer after the symptoms have subsided.

Normally, a large number of bacteria are required to cause illness in healthy adults but vulnerable groups such as the very young, the elderly and immuno-compromised can be infected by much lower numbers.

People should avoid eating raw eggs or uncooked foods made from eggs. Vulnerable people such as the elderly, the sick, babies and pregnant women should consume only eggs which have been cooked until the white and yolk are solid.

You can reduce the risk of food poisoning from eggs by keeping some basic rules in mind.

- Check to see that eggs are clean and not cracked when you buy them.
- Refrigerate eggs after purchase.
- Use eggs within the 'best before' date.

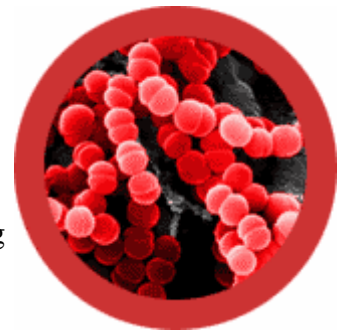
- Wash your hands, utensils and kitchen surfaces before and after contact with eggs or egg containing foods.
- Avoid eating raw or undercooked foods.
- Use pasteurized egg in either liquid or dried form can be used as an alternative.
- Keep hot foods hot and cold foods cold.

Daycares are reminded that only Grade A inspected eggs can be used in your facility. Farm fresh eggs are not allowed in a childcare centre under the Food Premises Regulation.

Source: Centre for Food, Safety & Applied Nutrition, U.S. Food & Drug Administration

Chickenpox and Group A Strep - What's the link?

This summer a daycare centre in London, Ontario reported a child attending had developed necrotizing fasciitis (also called "flesh eating disease") as a complication of a chickenpox infection.



Necrotizing fasciitis is caused by bacteria known as Group A Streptococcus (GAS). GAS is a bacterium that is commonly found on the skin and in people's noses. It usually causes uncomfortable but mild diseases such as impetigo, "strep" throat, tonsillitis, scarlet fever and ear infections. However, it is also known to cause some very serious illnesses such as pneumonia, toxic shock syndrome and necrotizing fasciitis. Invasive GAS infections occur when the bacteria get past the normal skin or mucus barriers. The bacteria produce a toxin

or poison that attacks the bloodstream and

tissues. In the case of the child in London, the GAS invasive bacteria entered the body through sores and blisters caused by chickenpox. The child scratched these blisters with fingers contaminated with GAS bacteria which caused the severe form of a GAS infection. Serious Group A Streptococcal disease can occur even if there is no chickenpox but it occurs more often with chickenpox.

The Middlesex-London Health Unit offered two measures to decrease both the chances of chickenpox and its complication at this daycare centre.

- Chickenpox vaccine was provided for all children attending the childcare centre who were over 1 year of age and had not already had chickenpox. Children who have already had chickenpox are protected and do not need to be vaccinated.
- Screening was done of all staff and children at the centre to identify those who were carrying the infection in their throats and may be at slightly higher risk of developing a serious GAS infection. Throat swabs were collected on all attendees, whether they showed symptoms of an infection or not. Even though some children did not have any symptoms, treating children with positive throat swabs ensured that they would not develop illness later and spread it to others.

Source: Middlesex London Health Unit



Influenza Hospitalizations in Children.

A pilot project by Health Canada during the 2003 influenza season.



- Over 500 children were hospitalized with laboratory confirmed influenza in 9 cities involved in the study.
- Weekly admissions ranged over the season with a peak occurring at week 52 (the week between Christmas and New Years).
- Influenza A was identified in 99% of cases
 - ♦ 86% under age of 6 years
 - ♦ 57% under 2 years of age
- One third of cases were in 6-23 month age-group.
- One third of these admissions had underlying medical conditions for which annual immunization is recommended (e.g. asthma, cystic fibrosis, chronic pulmonary or cardiac disorders, diabetes, cancer, anemia).

Study Conclusions

- Healthy children aged 6 to 23 months are at increased risk of influenza-associated hospitalization compared with healthy older children and young adults.
- Although the absolute number may vary, influenza attack rates among children < 5 years of age are as high as or higher than those in young adults.
- The spectrum of influenza in children ranges from asymptomatic infection to influenza illness with or without complications. In addition to febrile upper respiratory tract infection, common clinical presentations of influenza in children include lower respiratory tract infection (croup, bronchiolitis, primary viral, or secondary bacterial pneumonia), otitis media, diarrheal illness and febrile seizures.

- Rates for hospitalization are higher among children < 2 years of age than older children, during influenza season. These rates of hospitalization are comparable to those seen in other groups identified as being at high risk of influenza-associated complications

Source: Health Canada

Fifth Disease

Fifth Disease, also called erythema infection or “slapped-cheek disease”, is an infection caused by parvovirus B19. It is a common viral infection associated with fever and a distinctive rash.



Children

The ill child typically has a “slapped-cheek” rash on the face and a lacy red rash on the trunk and limbs. The child may have a low grade fever. The rash may come and go over the next 1 to 3 weeks and is more pronounced with heat (e.g. sunlight, bathing, exercise).

Adults

Approximately 20-25% of adults do not have any symptoms. An infected adult who becomes ill may develop a rash and/or joint pain or swelling. The joint symptoms usually resolve in a week or two.

Does a child with fifth disease need to be excluded?

The period when a person is infectious to others is during the mild illness before the rash appears. Once the rash appears a person is no longer infectious to others. There is no treatment or vaccine for fifth disease. A child who is diagnosed with fifth disease does not need to be excluded from school or childcare, as long as they are well enough to participate normally in all activities.

How is it spread?

Parvovirus B19 is most commonly transmitted by respiratory secretions or from hand to mouth contact. Therefore, proper hand washing is important. The virus can also be transmitted from an infected mother to her

When do infections/outbreaks occur?

Parvovirus B19 infection can occur any time of the year, however, outbreaks are most prevalent in the spring. Outbreaks follow a four to five year cycle with two years of high incidence followed by two years of low incidence.

Is fifth disease reportable?

No.

Fifth Disease & Pregnancy

Usually, there aren't any serious complications for a pregnant woman or her baby because of exposure to a person with fifth disease. About 50% to 60% of women are already immune to parvovirus B19. Sometimes, parvovirus B19 infection will cause the unborn baby to have severe anemia and the woman may have a miscarriage. Most fetuses infected with parvovirus B19 resolve this infection with no adverse outcomes.

Exposure at the Childcare Centre

Excluding persons with fifth disease from work, child care centres, schools, or other settings is not likely to prevent the spread of parvovirus B19, since ill persons are contagious before they develop the characteristic rash. Each pregnant woman who is exposed to the virus should discuss her individual risk, based on her risk of infection, gestational age and other obstetrical considerations, with her physician.

There is a bloodtest available to determine if the pregnant woman is immune.

Prevention

Transmission of the virus can be decreased through proper hand washing and proper disposal of tissues.

Sources: MOHLTC : Fifth Disease in Schools, July 28, 2004
MOHLTC: Parvovirus B19, June 3, 2004



The Green Gooky Nose

What is it? The child with a runny nose and stuffiness is a familiar problem in the childcare setting. The nose is lined or covered by a delicate tissue called “mucosa” which produces mucus (the sticky, slippery secretions) to protect the nose. If this tissue is irritated, it swells up, causing blockage and a lot of mucus. Sometimes children get repeated runny noses or a permanent sniff and a green nasal discharge, which is an uncomfortable condition for the child as well as the childcare provider.

What is causing the runny nose?

The *common cold* is the most common cause of a runny nose and chronic runny nose. This is generally a mild illness and the child usually gets better on his own within a week.

Allergies can also cause a runny nose. They usually occur after 2 years of age, after the child has had plenty of exposures to allergens (the substances that can produce allergic reaction in the body). With allergies the runny nose may last for weeks or months, but there is no fear of spread of disease to others.

Bacterial infection (sinus infection) may occasionally develop and contribute to the continuation of illness. The additional infection of the common cold tends to cause yellow-greenish mucus and sometimes pain that continues for more than 10 days

Yellow or green mucus does not mean that a child has a bacterial infection. It is normal for the mucus to get thick and change colour as the cold progresses.

In most cases green nasal mucus (usually found toward the end of the cold) is **not** more contagious than clear mucus and may even be **less** contagious. The runny nose usually starts with clear mucus and then becomes whitish or greenish as the cold dries up and gets better. As the body mounts its defenses against the virus, the white blood cells enter the mucus and give it the green colour. Usually the green mucus is in smaller amounts and thicker, a sign that the cold is “drying up” and ending.

Green runny nose that lasts for more than 10-14 days, and may be accompanied by a fever, headache, cough and foul-smelling breath, might be a sign of a sinus infection

When are children contagious? The amount of virus present is usually highest 2 to 3 days **before** a person develops symptoms of the illness and continues to be present for 2 to 3 days after symptoms begin. As a result, infected children already spread the virus before they begin to feel ill.

Source: Childcare Health Program, Univ. of California, School of Nursing, Dept. of Family Health care Nursing

