



**M**ore than 70 percent of the teachers in a survey by children's publisher *Scholastic* reported that they had to miss school because of an illness they caught from their students.<sup>1</sup> Just as many or more children if surveyed probably would have reported that they, too, had caught some type of bug at school.

According to one report, students in kindergarten through 12th grade in American public schools “lost more than 164 million school days” to communicable diseases (i.e., viral and bacterial infections).<sup>2</sup>

Colds and flu are the number one reason why children and teachers miss school. Teacher absences can put an extra financial burden on educational institutions, requiring more substitute teacher salaries and more paid sick leave. For

# PREVENTING, RECOGNIZING, AND TREATING ILLNESS AT Part I

students, missing school can result in poor academic performance and behavioral problems.

Teachers and school officials are finding it more and more challenging to keep the school environment and the classroom healthy and clean for students. In the *Scholastic* survey, 90 percent of teachers reported that many students come to school sick. About 30 percent reported that their

school's custodial staff failed to disinfect the class-

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rooms on a regular basis, and said that teachers do not have the time or the tools to keep their classrooms germ-free.

There are three main ways that people contract diseases: through (1) person-to-person contact (kissing, touching, shaking hands, being sneezed or coughed on); (2) contact with surfaces that have been contaminated by sick people (drinking fountains; doorknobs; desktops, tables, and chairs; pens and pencils); bathrooms (toilets and faucets); computer keyboards; telephones; toys and playground equipment; books; dirty tissues, etc.; and (3) ingesting contaminated food and water (see Part II of this article).

What can you do to help maintain a healthier school environment and keep your students well inside—and outside—of the classroom? To prevent illness at school, it is also important to prevent illness outside of the classroom. The health habits of every student and every employee have a direct impact on the school. Everyone can create a problem or make a difference.

The purpose of this two-part article is to provide information that can help you achieve and maintain a healthier school environment. Good health habits such as frequent, proper, and consistent hand washing can ensure



# SCHOOL

healthier students and staff and less absenteeism. Part I will explain the basics of proper hand washing as well as alternatives when soap and water are unavailable. It will also address the most common communicable diseases such as colds, flu, and meningitis, which is becoming more and more a problem on college campuses. Part II will deal with infections caused by impure water

and foods, and those carried by insects and animals. Finally, the articles will also suggest school policies and procedures to include in your student handbook.

## **The Flu and the Common Cold**

*Influenza A and B (Flu)* are a problem worldwide. Influenza A and B viruses have circulated throughout the world during the past several years. In the Northern Hemisphere, the peak flu season is between December and March. In the Southern Hemisphere, the peak time is between April and September.<sup>4</sup> However, the flu can be contracted year round.

***The health habits of every student and every employee have a direct impact on the school. Everyone can create a problem or make a difference.***

Influenza annually affects approximately 25 to 50 million people in the United States, where it results in about 20,000 deaths per year.<sup>5</sup> The majority of cases are preschool and school-aged

children, with an annual incidence of 15 percent to 42 percent among these groups.

Influenza is caused by a family of viruses known as orthomyxovirus.

There are three types of influenza: A, B, and C, of which Types A and B are most often associated with illness in humans.<sup>6</sup> Each year, these viruses undergo changes in their cell makeup. As a result, people who have had the flu one year will still be susceptible to catching it again. Because of the changes in the viruses, every two to three years, there may be local outbreaks, and about every 10 to 20 years, there are likely to be global outbreaks.<sup>7</sup>

**Symptoms:** Flu strikes hard and fast with fever, headache, cough, body aches, and a runny and stuffy nose. Serious complications can ensue such as dehydration, asthma, sinus problems, ear infections, and bacterial pneumonia. If children, teachers, or other school personnel have the flu, they should stay home from school to prevent further spread of the virus.

Once a teacher recognizes the symptoms in a student, the parent or guardian should be called as quickly as possible to escort the child home. In the meantime, the child should be quarantined. The school nurse or other staff should instruct parents **not** to give their children aspirin if they have flu-like symptoms.<sup>8</sup> They should contact their doctor for further

instructions for managing symptoms.

*Avian Influenza A (Bird Flu)* has gained worldwide attention over the past few years. Recent statistics from the WHO indicate a total of 186 re-

ported cases and 105 deaths. The countries that have been affected thus far include nine Asian nations, in descending order by the number of cases: the Republic of Korea, Vietnam, Japan,

## Colds and Flu

### COLDS

#### Symptoms

- Low-grade fever (if any) and chills
- Sore throat
- Runny or stuffy nose
- Coughing
- Sneezing

#### Treatment

- Drink lots of liquids (hot or cold; i.e., one glass of fluid for every waking hour).
- Keep the mucous membranes (nose and throat) moist.
- Gargle with warm salt water.
- Use saline nose drops.
- REST.
- Call the doctor if symptoms persist or are exceptionally severe.

### FLU

- Harsher illness than a cold and can lead to dangerous complications
- *Sudden* high fever (101° F/38.3° C. or higher) and chills
- Body aches and pains
- Sore throat
- Persistent cough
- Headache
- Fatigue (tiredness)

- Reduce fever with Tylenol or ibuprofen.
- Drink lots of fluids to prevent dehydration (i.e., one glass of fluid for every waking hour).
- REST.
- Call the doctor if symptoms persist for more than a week or become more severe.
- Call the doctor if flu-like symptoms or a red rash appear four days to three weeks after a tick bite.

#### Preventing/ Retarding Transmission of Colds and Flu

- Stay at home when sick and encourage students to do so also.
- Wash your hands frequently.
- Avoid close contact with those who are or appear sick.
- Cover your nose and mouth with a tissue when you cough or sneeze.
- Use disposable tissues rather than handkerchiefs to reduce the spread of the virus.
- Wash your hands frequently throughout the day, particularly after you cough, sneeze, or blow your nose.

- Sterilize surfaces touched by sick people.
- Wash for at least 15 seconds, using plenty of soap.
- Keep your hands away from your nose, eyes, and mouth.
- Eat well, drink plenty of water (8-10 glasses a day), and exercise to keep your immune system in fighting condition.
- Get a flu shot each year.



Thailand, Cambodia, Lao People's Democratic Republic, Indonesia, China, and Malaysia. Other countries that have reported outbreaks include Iraq, Turkey, Russia, Kazakhstan, Mongolia, and Romania.<sup>9</sup>

The WHO has assessed the risk of a global outbreak of avian flu as serious.<sup>10</sup> The disease is spread primarily through the saliva, nasal secretions, and feces of infected birds and surfaces they have touched.<sup>11</sup> Other means of contracting the disease include ingesting contaminated water and coming into contact with untreated poultry feces used for fertilizer. Person-to-person transmission, thus far, is rare.<sup>12</sup>

**Symptoms:** Similar to those of regular flu although the symptoms are more aggressive, and can include fever, cough, sore throat, and muscle aches; with the addition of diarrhea, abdominal pain, bleeding from the nose, pneumonia, acute respiratory distress, and other life-threatening complications like viral pneumonia and multi-organ failure.<sup>13</sup>

**The Common Cold:** In the early stages, it is difficult to distinguish between a cold and the flu. But generally speaking, the flu strikes suddenly, producing a high fever and severe body aches, whereas a cold tends to come on gradually. Both cold and flu cause inflammation of the mucous membranes in the nose, mouth, and throat. Cold symptoms usually include runny nose and sneezing.

**Preventing colds and flu:** People with weakened immune systems are more prone to contract colds, flu, and other diseases. The first line of defense is to keep the immune system healthy and fortified. As part of your health curriculum, teach students how to maintain a healthy immune system. This includes eating a balanced diet, with plenty of fruits and vegetables. A good rule of thumb is Try-for-5 (five fruits and vegetables) a day.

The health curriculum should also include information about the need for adequate sleep (eight to nine hours per night), regular exercise or physical activity, bathing regularly, and drinking pure water (eight to 10 glasses per

day). All of these will help boost the immune system and ward off disease.

Stress can significantly impair the immune system. Research has shown that individuals who are suffering extreme stress are likely to experience more severe flu symptoms than under normal circumstances.<sup>14</sup> Therefore, the curriculum should include stress management techniques (which will also be useful for teachers!). Children can continue these practices at home and share with their parents and other family

## **Teachers and school officials are finding it more and more challenging to keep the school environment and the classroom healthy and clean for students.**

members what they have learned. Teachers can present stress management seminars and classes at school for their peers, administrators, and parents. Don't forget to practice what you teach!

Those who are in contact with children on a daily basis (teachers, classroom aides, and childcare workers) should be encouraged to get flu shots. High-risk students with chronic illness like asthma, heart conditions, and other immune deficiencies and their parents should also receive flu shots.<sup>15</sup>

**Meningitis:** An inflammation of the

membranes surrounding the brain and spinal cord. There are two types, viral and bacterial. Both are spread through the secretions of the nose and throat of an infected person.

Viral meningitis, which mostly affects older children and young adults, is milder, and its victims usually recover within seven to 10 days without treatment. Bacterial meningitis is potentially fatal and requires immediate emergency treatment.

**Symptoms** of viral meningitis re-



semble those of the flu (fever, muscle aches) and take several days to develop.<sup>16</sup> The symptoms of bacterial meningitis, which usually strike suddenly, include irritability, fever, severe headache and stiff neck, as well as nausea, vomiting, disorientation, drowsiness or lethargy, seizures, sensitivity to bright light,<sup>17</sup> and in some cases, a fast-spreading rash that starts as purple-red, pinpoint spots and becomes blotchy.<sup>18</sup>

**Prevention and treatment:** The

treatment for meningitis depends on the type of infection. For viral meningitis, no formal medical care is usually necessary. Bed rest is recommended. Fever and headache can be relieved with a mild pain reliever like Tylenol or other analgesics. Bacterial meningitis must be treated immediately with intravenous antibiotics.<sup>19</sup>

### **Other Infectious Diseases That Are Common in the School Setting:**

#### ***Pinkeye (Conjunctivitis):***

An inflammation of the membrane covering the white of the eye and the inside of the eyelids, caused by a virus or bacteria. While fairly common, it poses no long-term danger to children's eyes or vision. However, pinkeye is highly contagious.

**Symptoms** include redness, itching, and pain; clear or yellow discharge; and sensitivity to light. The eyelids may become stuck shut.<sup>20</sup>

**Treatment:** Pinkeye is normally treated with antibiotic eye drops or ointment.

**Prevention:** People can spread pink-eye from one eye to the other by rubbing their eyes with infected fingers. It can also be spread to other persons by infected fingers, or by handling contaminated surfaces (i.e., doorknobs, bathroom sinks, etc.) and then touching the nose, mouth, or eyes. Children should be encouraged to keep their hands away from their eyes, mouth, and nose. Good hand washing is essential in preventing the spread of pink-eye.<sup>21</sup> Infected students should remain at home.

**Chickenpox (Varicella):** A highly contagious disease that is transmitted by direct person-to-person contact or through the air.<sup>22</sup> The incubation period is 10-21 days. Even among children who have been vaccinated, there have been outbreaks of the disease in several schools in the United States.

**Symptoms:** Slight fever and skin rash (vesicles), which leave scabs on

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## ***What can you do to help maintain a healthier school environment and keep your students well inside—and outside—of the classroom?***

the body<sup>23</sup> that may cause scarring.

**Prevention:** The first dose of varicella vaccine is 94 percent effective against the disease; the second dose is 98 percent effective. When an outbreak occurs, students and their younger siblings should receive a booster shot. (However, doses must be spaced: for children 12 months to 12 years of age, three months apart; for older children, four weeks apart.)<sup>24</sup>

**Precautions:** Chickenpox is contagious one to two days prior to and four to five days after the rash appears.<sup>25</sup> Children and adults who have been di-

agnosed with varicella should not attend school until all vesicles are dry. If the child was in school immediately prior to diagnosis, toys and surfaces that could have been contaminated with discharge from lesions should be disinfected.<sup>26</sup>

**Mumps:** A highly contagious acute viral infection that is spread from person to person by direct contact with moist droplets from the nose and mouth (coughing and sneezing).<sup>27</sup>

In May 2006, the United States Centers for Disease Control and Prevention (CDC) had reports of 2,600 cases of mumps in 11 states, the nation's largest outbreak in more than 20 years. The same strain has been a problem in United Kingdom since 2004.<sup>28</sup>

**Symptoms:** fever, muscle aches, headache and facial pain, sore throat, tiredness and loss of appetite; and swelling of the temples and salivary glands under the ears. In rare cases, mumps can affect the central nervous system and the pancreas; in adolescent and adult males, it can cause infertility.

**Prevention and treatment:** All students should be vaccinated against mumps. The incubation period is 12 to 24 days. There is no treatment for mumps.<sup>29</sup>

**Hepatitis:** Hepatitis causes liver inflammation. The most common type is Hepatitis B (HBV). The condition can be acute (new and short-term) or chronic (ongoing and long-term). Hepatitis B is considered a blood-borne virus because it is transmitted through exposure to another person's blood or other body fluids through a break in the skin or mucous membranes (in the mouth, genitals, or rectum). An individual cannot get Hepatitis B through casual contact (shaking hands, hugging, being sneezed or coughed on, eating food, or drinking water). The most common mode of transmission is sexual contact. However, the disease

can also be spread by sharing razors or toothbrushes with an infected person.

**Symptoms:** A person may be unaware that he or she is infected with Hepatitis B because the disease often has no symptoms. Nonetheless, it is highly communicable, and a person may be a carrier throughout his or her lifetime. When there are symptoms, they generally appear within 30 to 180 days of exposure and include fatigue, itching, loss of appetite, abdominal discomfort, nausea and vomiting, joint

and electrolyte-enriched drinks. Those infected with chronic Hepatitis B should be under the care of a physician.

**Measles:** A highly communicable viral disease spread through direct contact with the secretions of the nose and throat of an infected person. It can also be spread indirectly by articles that were recently soiled with these secretions.

**Symptoms:** Fever is common, along with cough and runny eyes and

an uninfected person's mucous membranes (eyes, mouth, or nose) or cuts in the skin. The disease is not spread by casual contact such as holding hands, sitting next to a person at school, living with a roommate with HIV, etc. A person with AIDS is subject to opportunistic infections, some of which are life threatening if left untreated. A child or teacher who is HIV-positive or who has AIDS does not have to be excluded from school unless he or she has an opportunistic infec-

***Bacterial meningitis is potentially fatal and requires immediate emergency treatment.***

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aches, and a rash. In severe cases, the victim develops a yellowing of the skin, eyes, and mouth known as jaundice.<sup>30</sup>

**Prevention and treatment:** The chief preventive measure is vaccination. The safe and effective hepatitis series (which provides protection against Hepatitis A and B) is recommended for all children under age 19. Further prevention at school and at home includes discouraging children from sharing personal items with friends or classmates.

Hepatitis B does not usually require medical care and goes away without treatment. But sometimes there may be severe symptoms like vomiting and diarrhea that lead to dehydration. The treatment is rehydration with water

nose. Patches of dark-red elevated rashes appear on the skin. Serious complications can ensue.

**Intervention:** The disease can be spread from person to person from before the onset of symptoms until up to four days after the rash appears. Therefore, students must remain out of school until at least four days after the rash appears. Immunization should be required of all students.<sup>31</sup>

**Human Immunodeficiency Virus (HIV):** The cause of Acquired Immune Deficiency Syndrome (AIDS).<sup>32</sup> The virus is transmitted by sexual contact and sharing of dirty needles by intravenous drug users. It can also be spread when the bodily fluids of an infected person come into contact with

tion such as tuberculosis or pneumonia. Infected children should be allowed to participate in class activities, including playing with other children and receiving hugs from teachers.

Teachers and school nurses should take precautions (including the use of disposable latex gloves) when dealing with injured children. Any surfaces that become contaminated with blood should be cleaned with hot soapy water or with a mixture of bleach and water (about one-fourth cup bleach to one gallon of water).<sup>33</sup>

**Strep Throat:** This highly contagious disease is most common in children between the ages of 5 and 15, but can affect people of all ages. If a child has a sore throat, there's a strong possibility that she or he has strep throat. Strep bacteria can become airborne, so sneezing and/or coughing can spread it to other individuals. Some children may carry the infection without showing any symptoms.

**Symptoms:** Children with strep throat may complain that their throat hurts or feels scratchy when they swallow or eat. They may have a fever above 101° F (38.3° C.), and swollen and tender lymph nodes (glands) in the neck. Some children may have a headache, stomachache, or rash, and a

red, swollen throat with patches of pus.

**Treatment and prevention:** Strep throat is curable with antibiotics. Left untreated, it can cause serious damage to the heart and joints (rheumatic fever), and kidney problems. Prevention is the same as for pinkeye—keeping children home from school, good hand washing, and the use of tissues for sneezing and coughing.<sup>34</sup>

### Prevention—Know the “Hot Spots”

In the school environment, the hot spots for germs are in the bathroom, the cafeteria, and the classroom. Students transport germs to school after being exposed to sick people at home and in public places.

**The most important hot spot for germs is the hands:** Many people realize there are germs in hospitals, bathrooms (e.g., toilet bowls, sink), kitchen sponges, and waste containers. But many people are not aware that hands, telephones, and doorknobs also transmit germs. When people have a cold or the flu, they wipe their noses many times during the day, so the germs linger on the hands, where they can be spread through contact with other hands and a variety of surfaces.<sup>35</sup>

**Good hand washing:** To prevent the spread of germs, the most important step is proper hand washing, along with thorough cleansing of utensils and surfaces. Hands should be washed before and after eating, during and after meal preparation; after using the bathroom; and after coughing or sneezing.

Good and thorough hand washing means using soap and water vigorously for approximately 15-20 seconds and then drying the hands thoroughly with disposable towels or an electric hand dryer. If it is hard to judge how long 15-20 seconds is, silently sing the happy birthday song (or the alphabet song) through slowly twice while washing your hands. You can make hand washing a game by teaching children this simple procedure.<sup>36</sup>

Younger children need guidance about when and how to wash their hands. Teachers can use age-appropriate materials to encourage and reinforce this behavior.

## As part of your health curriculum, teach students how to maintain a healthy immune system.

Items such as desks, tables, counters, computer keyboard and mouse, lab equipment, toys and playground equipment, and other shared items should be cleaned daily with a bactericidal disinfectant. Other surfaces that need frequent disinfecting include the floor, doorknobs, bathroom sinks, toilet bowls and flushing handles, as well as all surfaces used for eating. Disinfectants kill germs that are not visible, but can nonetheless cause disease.<sup>37</sup> Schools should supply antibacterial soap or alcohol-based hand cleaner in the bathrooms and cafeteria.

If antibacterial soap and clean water are not available, use disinfectant antibacterial or alcohol wipes, or gel hand cleaner (containing at least 50 percent alcohol) for hand cleaning.<sup>38</sup> If none of the above is available, it is important to practice and teach children to keep their hands away from their eyes, nose, and mouth. Rubber gloves can serve as a temporary means of protection.

**School bathrooms:** Toilets and sinks are not the only germ havens in bathrooms; the door handles score high, too. Researchers “revealed that almost 100% of bathroom door handles have traces of staphylococcus, streptococcus, salmonella and E. coli.”<sup>39</sup> Even if people do remember to wash their hands after going to the toilet (it is estimated that a third do not), afterwards they turn off the water faucet, use a paper towel, then open the bathroom door, thus reinfected their washed hands three times. So it is important to get a paper towel without touching the container, then use the paper towel to turn off the water faucet and open the bathroom door.

If possible, schools should install dispensers that do not require people to touch them to obtain a paper towel. They can also put antibacterial soap in

the bathrooms and food preparation areas, and place a trash can by the door of the bathroom so that everyone can leave with really clean hands.

**The classroom:** Crowded classrooms and dormitories are an excellent place for the transmission of germs, especially during the winter months, when there is less air circulation. If there are screens on the windows, open the window slightly to allow fresh air into the room.

Within the classroom, germs lurk on many surfaces. Teach students to cover their nose and mouth with a tissue when they cough and sneeze and to place the used tissues in a trash can. Make sure that students wash their hands frequently throughout the day.

### School Policies

Schools should have a well-enforced policy of not allowing sick children to attend and requiring a doctor's note before children who have been seriously ill can return to the classroom.

Ideally, schools should be staffed with school nurses or other medical professionals who have responsibilities designated by school health policies and management. Such policies should include health screenings, assessments for chronic and acute illnesses, first aid for school-related injuries, immunization tracking and enforcement, managing and controlling the spread of communicable diseases and illnesses, administration of medication and treatment, and consultation with parents as needed.

An area in the school should be set aside to quarantine sick children until their parents can pick them up. In the dormitory, a room should be set aside where students with communicable diseases can reside until they have recovered.

Schools should also have policies and procedures for managing students with special health needs (i.e., those requiring monitoring and medication for diabetes, those requiring seizure prevention and management, cauterizations, gastric tube feedings, oxygen, those who are HIV-positive, and others).



Schools should also have a policy for student self-administration of medicine such as inhalers for asthmatic children and epinephrine injectors for those with severe allergies.<sup>40</sup>

Finally, schools should supply parents/guardians with a checklist for keeping their children safe and healthy at school. Items on the list should include: immunization requirements, supplying the school with emergency telephone numbers, informing the school about the child's health issues, keeping children home from school when they are sick, and how to dress and feed children for optimal health, etc. ✍

**Part II will deal with diseases spread by insects and by food and water.**



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Vanessa Jones

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### Resources

National Immunization Hotline—1-800-232-2522 [English] or 1-800-232-0233 [Spanish]

#### Flu Resources for Schools

CDC Flu Information Hotline [English and Spanish] 1-800-CDC-INFO (800) 232-4636; (888) 232-6348 (TTY) or the CDC Website [<http://www.cdc.gov>].

For state or local health departments, go to <http://www.cdc.gov/other.htm>.

For "Key Facts About the Flu," a fact sheet about the flu (symptoms, prevention, treatment), go to <http://www.cdc.gov/flu/keyfacts.htm>.

For more information about treating flu, its symptoms, and information about why children or teenagers with flu-like symptoms should NOT take aspirin, go to <http://cdc.gov/flu/about/disease.htm>.

The Center for Health and Health Care in Schools has information about the flu: "School Health Issues: Flu Season and Schools": <http://www.healthinschools.org/sh/influenza.asp>.

Questions and answers about the flu: <http://www.cdc.gov/flu/about/qa>.

"It's a Snap" offers free hand-washing materials: <http://www.itsasnap.org/index.asp>.

### CDC Resources:

Information for Schools: "Stop the Spread of Germs: Actions for Schools": <http://www.cdc.gov/flu/school>.

CDC-prepared posters for illustrating how to teach children how to stop the spread of germs: "Be a Germstopper," <http://www.cdc.gov/germstopper>.

"Get Ready for Flu" blog: <http://getreadyforflu.blogspot.com/>.

### NOTES AND REFERENCES

1. NewsUSA, "Five Ways to Keep Your Kids From Getting Sick," <http://www.Scholastic.com> (2006), p. 1; Paul Horowitz, M.D., "Classroom Health Check-Up: US Teachers Give Classrooms a Failing Grade on Cleanliness" (August 2005), p. 1 (<http://Keepmedia.com/pubs/PRNewswire/2005>); Scholastic Survey, "Clean-Up the Classroom," <http://www.ama-assn.org> (2005), pp. 1, 2; "Preventing the Spread of Germs: Help Your Child Stay Healthy Year-Round," <http://www.Scholastic.com>, p. 1; "Back to School, Back to Germs," <http://www.KeepMedia.com/pubs/HealthDay/2005>, p. 1; Cindy White, et al., "The Effect of Hand Hygiene on Illness Rate Among Students in University Residence Halls," *Association for Professionals in Infection Control and Epidemiology (AJIC)* (October 2003), pp. 364, 365.
2. White, et al., pp. 364, 365. Jennifer L. Morton and Alyce A. Schultz, "Healthy Hands: Use of Alcohol Gel as an Adjunct to Hand Washing in Elementary School Children," *Journal of School Nursing* 20:3 (June 2004), pp. 161-167.
3. "Five Ways to Keep Your Kids From Getting Sick," p. 1; Horowitz, p. 1; Scholastic Survey, "Clean-Up the Classroom," pp. 1, 2.
4. Michelle Kennedy Prisco, "Update Your Understanding of Influenza," *Nurse Practitioner* 27:6 (June 2002), pp. 32-39; Sean F. Regan and Christine Fowler, "A Past, Present, and Future," *Journal of Gerontological Nursing* (November 2002), pp. 31-37; Genevieve W. Ressel, "ACIP Releases 2002 Guidelines on the Prevention and Control of Influenza," *American Family Physician* 66:5 (September 2002), pp. 894-902; Prisco; Allan R. Handysides and Peter N. Landless, "Influenza," *Adventist World-NAD* (December 2005), p. 11.
5. Prisco.
6. Regan and Fowler, pp. 31-37.

### Here is a sample policy on how to deal with medication administration at school:

**Instructions to parents:** If possible, administer your child's medicine at home. However, if the child's condition requires around-the-clock medication, please follow these rules:

- Provide the school office with a written order from your child's doctor with the **student's name, the name of the medication, the time it should be given, the dosage, how it should be administered** (orally, injected, inhaled, etc.) **and stored, and how long it should be given** (one week, the entire school year, etc.).
- Over-the-counter medicine must be brought to school in a sealed, unopened bottle by the parent/guardian.
- The parent/guardian must sign a release form allowing the school to administer specified medications to each child in the family who is enrolled in \_\_\_\_\_ School.
- All medicine must be picked up by the parent/guardian at the end of each semester. All unused, expired, and unclaimed medicine will be discarded.



## **Hands should be washed before and after eating, during and after meal preparation; after using the bathroom; and after coughing or sneezing.**

7. Prisco, p. 33.
8. In most cases, acetaminophen (i.e., Tylenol) is recommended rather than aspirin. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), "Fact Sheet I Influenza Symptoms, Protection, and What to Do If You Get Sick" (January 2006), pp. 1, 2; U.S. Department of Health and Human Services, CDC, "Guidelines and Recommendations: Preventing the Spread of Influenza (the Flu) in Child Care Settings: Guidance for Administrators, Care Providers, and Other Staff" (February 2004), pp. 1-3.
9. World Health Organization (WHO), "Avian Influenza—Epidemiology of Human H5N1 Cases Reported to WHO" (June 30, 2006), p. 1; WHO, "Avian Influenza Frequently Asked Questions" (December 2005), p. 1-7.
10. *Ibid.*, p. 1.
11. *Ibid.*, p. 3.
12. *Ibid.*, pp. 3, 1.
13. *Ibid.*, p. 3.
14. U.S. Department of Health and Human Services, Food and Drug Administration, "Beat the Winter Bugs: How to Hold Your Own Against Colds and Flu" (November-December 2001), pp. 1-7.
15. See "Important Facts Regarding Immunizations" in the February/March 2003 issue of the *Journal of Adventist Education*: <http://circle.adventist.org/files/jae/jae200365030908.pdf>.
16. CDC, Division of Bacterial and Mycotic Diseases, "Meningococcal Disease, Frequently Asked Questions," pp. 1-4; Rob Hicks and Trisha Macnair, "Meningitis," <http://www.bbc.co.uk/health/conditions/meningitis> (2006), pp. 1, 2.
17. CDC, "Meningococcal Disease, Frequently Asked Questions," p. 1.
18. Hicks and Macnair, pp. 1, 2.
19. CDC, "Meningococcal Disease, Frequently Asked Questions," p. 1; "Infections, Pinkeye (Conjunctivitis)," <http://kidshealth.org/parent/infection/eye/conjunctivitis.html>, pp. 1-4.
20. See [http://www.emedicinehealth.com/pinkeye/page3\\_em.htm](http://www.emedicinehealth.com/pinkeye/page3_em.htm).
21. "Infections, Pinkeye," p. 3.
22. Allegheny County Health Department Division of Infectious Diseases, "Guide to Infectious Disease for Schools and Day Care Centers," <http://www.achd.net/infected/pubs/> (1998), p. 1; CDC, National Immunization Program, "Chickenpox: It's More Serious Than You Think," <http://www.cdc.gov>, pp. 1, 2.
23. Allegheny County Health Department, p. 1.
24. Maine Public Health Alert Network System, "Advisory Important Information, Varicella," <http://www.maine.gov>, p. 3.
25. Allegheny County Health Department, p. 1; CDC, "Chickenpox: It's More Serious Than You Think," pp. 1, 2.
26. Allegheny County Health Department, p. 1.
27. "Public Health Workers Tackle Multi-State Mumps Outbreak," *The Nation's Health* (June/July 2006), p. 1.

28. "Public Health Workers Tackle Multi-State Mumps Outbreak," p. 14.
29. CDC, National Immunization Program, "Mumps Key Facts," <http://www.cdc.gov/nip/diseases/mumps>, pp. 1, 2; "Public Health Workers Tackle Multi-State Mumps Outbreak," p. 14.
30. "Guide to Infectious Disease for Schools and Day Care Centers," pp. 11, 12.
31. National Immunization Program, CDC, "Frequently Asked Questions About Measles" (February 2001), pp. 1-4; see also <http://www.cdc.gov/nip/diseases/Measles/faqs/htm#General>.
32. CDC, "HIV and Its Transmission," <http://www.cdc.gov/HIV> (July 1999), pp. 1-3.
33. CDC, Divisions of HIV/AIDS Prevention, "Preventing Infections During Travel," pp. 1-4.
34. MayoClinic.com, "Strep Throat," <http://www.mayoclinic.com/health/strep-throat>, p. 1.
35. "Preventing the Spread of Germs. Help Your Child Stay Healthy Year-Round," p. 1; White, et al., pp. 1, 2; Morton and Schultz, pp. 161-167; "Guidelines and Recommendations: Preventing the Spread of Influenza (the Flu) in Child Care Settings: Guidance for Administrators, Care Providers, and Other Staff," pp. 1-3.
36. "U.S. School Teachers Give Classrooms Failing Grade on Cleanliness," pp. 1, 2.
37. "Preventing the Spread of Germs: Help Your Child Stay Healthy Year-Round," p. 1; "Back to School, Back to Germs," <http://www.KeepMedia.com/pubs/HealthyDay/2005>, p. 1.
38. White, et al., pp. 1, 2.
39. "Sick Season," *First* (2005), pp. 1, 2.
40. Student Health Services, Virginia Beach, Virginia, City Public Schools, <http://www.vbschools.com/health/tips.asp>, pp. 1-8.

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This article has been read and approved by the Health Ministries Department of the General Conference of Seventh-day Adventists.

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The information in this series represents the best of current research as compiled by the authors and verified by the JOURNAL's copy editor. However, with the passage of time, new information and recommendations may emerge. Readers should consult a health professional for information specific to their personal health status and medical history, and for recommendations relating to public health issues in Adventist schools. It is always prudent to get more than one opinion.

## editorial

Continued from page 3

Dr. Beardsley's new position is Associate Director of Education and Executive Secretary of the Adventist Accrediting Association (AAA). Her responsibilities include managing the tertiary accrediting process worldwide; serving as the General Conference liaison for higher education for five world divisions, and chairing the JOURNAL OF ADVENTIST EDUCATION advisory board.

Speaking about her new responsibilities, Dr. Beardsley says: "Having lived in Europe, the U.S., and Southeast Asia, I realized that when Jesus came as the incarnation of God's love, He did it using the cultural icons and idioms of a specific historical context. In time and over history, God continues to be Love, but He contextualizes Himself in ways that are meaningful to that time and people. Making God relevant to the lives of people today is a creative challenge worthy of our best efforts. Preparing this generation to do just that is why Adventist education matters."

In her leisure time, Dr. Beardsley enjoys cross-country skiing, rollerblading (with poles), television production, foreign films, and collecting mushrooms. We are very pleased to welcome her into the General Conference Education Department.

—C. Garland Dulan



Lisa Beardsley