Clean ‘Green’? What About UV Light?

Cleaning and sanitation help keep children and adults healthy in child care. Have you wondered what products to use? Have you noticed the recent explosion of products that claim to be “green” or “environmentally friendly?”

Cleaners and Sanitizers
Cleaners remove soil. They generally contain detergents. Sanitizers contain chemicals that reduce the number of organisms to a level that is unlikely to cause disease. Usually, you must apply a sanitizer to a visibly clean surface. Some sanitizers leave a residue that you must rinse off. Others evaporate into the air as they dry, so you do not need to rinse. A number of state and federal agencies oversee practices related to use of cleaners and sanitizers. These agencies provide oversight to help protect the public with testing and labeling requirements for manufacturers of products, and practices that do not pose a risk to people when the products are used.

The US Department of Labor’s Occupational Safety and Health Administration (OSHA) sets and enforces standards, provides education, and encourages continual improvement in workplace safety and health. OSHA standards cover worker exposure to potentially infectious or other hazardous materials in any workplace. OSHA requires education of all staff prior to employment and then annually regarding routine precautions to prevent transmission of infectious agents in the facility. This education includes use of any products that the workers are expected to use for cleaning and sanitizing.

Sanitizers are regulated in interstate commerce by the Environmental Protection Agency (EPA). Federal law requires any substance intended to prevent any pest (including microorganisms) to be registered with the EPA before sale or distribution. To obtain a registration, a manufacturer must submit information about the safety and effectiveness of each product, including intended labeling. The EPA requires manufacturers of sanitizers to test their formulations using accepted methods for antibacterial activity and toxicity to animals and humans. If the EPA concludes the product can be used without causing “unreasonable adverse effects” then the product and its labeling are registered. Only EPA registered sanitizer products can be legally sold and distributed as “sanitizers” in the United States. Remember that most sanitizers require that the surface is visibly clean before the sanitizer is applied. Although some combination products are available that both clean and sanitize, this combined function must be clearly stated on the EPA registered label. Do not buy products that manufacturers sell illegally. Look for the EPA registration information on product labels.

A popular, helpful and inexpensive brochure, Keeping Healthy, is available from the National Association for the Education of Young Children (NAEYC) at www.naeyc.org. The brochure has information about cleaning and sanitizing that is consistent with the national health and safety standards in Caring for Our Children and with the NAEYC Accreditation standards. In child care facilities, DO NOT substitute household products for EPA-registered sanitizers. Keeping Healthy is in the free health and safety resource kit available to Keystone STARS programs.

The Center for Disease Control and Prevention offers advice about how to prevent and respond to infectious diseases in occupational settings and at home. The CDC informs the public about current scientific evidence on the safety and efficacy of sanitizers, and recommends which chemicals might be most appropriate or effective for specific microorganisms and settings.

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BPA in Plastic Bottles, Containers & Lined Cans for Liquids

In the October 2007, an independent U.S. Food and Drug Administration (FDA) advisory group issued a report raising concerns about the safety of bisphenol A (BPA). BPA is a chemical used in many hard plastic products. BPA is in the plastic of some baby bottles and in the lining of metal cans, including infant formula cans. Manufacturers use epoxy containing BPA to harden plastics and prevent cans from rusting. Many food and liquid containers have BPA containing materials.

The American Academy of Pediatrics (AAP) asked pediatricians to remind the public that the controversy over the possible harmful effects of BPA on humans is based on animal studies that show effects on hormone functions related to exposure to BPA. The concern about the possible effect on infants and children is related to the sensitivity of humans during rapid developmental phases. However, there is no evidence about an effect of current levels of BPA exposure through food packaging on humans.

For infants, the AAP recommends reducing BPA exposure by exclusively breastfeeding infants for at least 4 months and preferably for 6 months, and continuing breastfeeding with the addition of complimentary foods through the first 12 months of age. For infants on formula, use powdered formula mixed with safe water.

Other measures to reduce exposure to BPA:

- Avoid clear plastic bottles or containers with the number “7” imprinted on them
- Use certified BPA-free plastic containers
- Use bottles made of opaque plastic. These are made of polyethylene or polypropylene which do not contain BPA. Glass bottles could be used, but broken glass is another problem.
- Do not heat polycarbonate plastic containers to warm foods or during dishwashing as heating may increase the release of BPA from the plastic.

Ultra Violet (UV) Light

Recently, an Early Learning Practitioner asked ECELS about using Ultra Violet (UV) Light for sanitizing. According to the CDC’s document, Guideline for Disinfection and Sterilization in Healthcare Facilities 2008, UV radiation has several potential applications. Unfortunately the germicidal effectiveness of UV radiation is quite variable. The effectiveness is influenced by organic matter (i.e., the presence of dirt), the wavelength of the light, temperature, type of bacteria or virus and the intensity of the light. The intensity of the light is affected by distance and the cleanliness of the UV tubes.

Available data do not support the use of UV lamps where they have been tested -- in isolation rooms in healthcare settings. The use of UV lamps in a study caused at least one epidemic of UV-induced skin irritation and eye injury in hospital patients and visitors. UV lamps are not EPA registered for sanitizing.

UV lights are considered to be pesticide control devices. To be sold, they do not have to meet the same strict tests of effectiveness for bacterial elimination or toxic effect to humans as sanitizers. In Pennsylvania, the Department of Agriculture is the state’s pesticide regulatory agency. The PA Department of Agriculture provides a pesticide registration data base, but ultraviolet light is not listed.

The bottom line is sanitize with products labeled to show they are registered as sanitizers with the EPA. Based on currently available evidence and a review of expert opinion, ECELS does not recommend the use of “green” products that are not EPA registered or ultraviolet light as alternative sanitation practices. Follow the practices recommended in Caring for Our Children and in NAEYC’s brochure Keeping Healthy.

Contributed by Beth DelConte, MD, FAAP — ECELS Pediatric Advisor
**2008-09 Influenza Prevention UPDATE**

Nearly 400 Received Free Vaccine at the Early Childhood Education Summit

The best time for influenza immunization is October and November. It takes some time for the vaccine to build immunity. The influenza season starts in late fall and usually peaks in February with cases occurring into March. While influenza vaccine campaigns aim for the fall, those who lag behind can still benefit from flu vaccine in December, January or even early February.

The Pennsylvania Department of Health gave nearly 400 early learning practitioners free flu vaccine at the 2008 Early Childhood Education Summit in October at the Penn Stater Conference Center, State College, PA. If you are an early childhood educator who didn’t get the free vaccine, get the vaccine from your doctor, a local clinic or pharmacy. The cost of vaccine is small compared with flu illness, lost wages, and medical care. To find a place to get flu vaccine, go to [http://www.flucliniclocator.org/](http://www.flucliniclocator.org/)

Continue to promote influenza vaccination for all children, for adults who work in child care settings, for family members of infants under 6 months of age, and for people of any age who have medical conditions that are associated with increased risk of complications from influenza.

Remember, to keep well during flu season, follow these guidelines adapted from the Fall 2008 issue of *HEALTH LINK ONLINE*:

**SNEEZE AND COUGH ETIQUETTE**

Send those coughs and sneezes where they will do the least harm. Having a disposable tissue handy at the right moment is best, but hard to manage. Teach everyone how to give those coughs and sneezes a “cold shoulder” — covering the nose and mouth with a part of the sleeve that is unlikely to be in contact with someone else’s hands, nose or mouth. Cough or sneeze away from the group, not into it. For proper technique, view the video at [http://www.coughsafe.com/index.html](http://www.coughsafe.com/index.html).

**GET FLU VACCINE!!!**

It is late, but not too late to get some protection from influenza by getting the vaccine. Two kinds of vaccine are available: a shot and a nasal spray.

**WASH YOUR HANDS**

Washing hands with soap and water is always best. Using an alcohol-based hand rub is OK when hands are not visibly soiled and soap and water are not available. You must apply enough of the alcohol-based hand rub to keep the hands wet with the chemical the time recommended by the manufacturer, usually 15 seconds. Remember that alcohol-based hand rubs must be stored and handled as toxic and flammable chemicals. Wash hands upon arrival at the program, when moving from one group to another, before contact with food and after feeding, after wiping noses or mouths, and after touching objects that are likely to be soiled with body fluids. Make sure everyone uses good hand washing technique: Wet the hands, then use liquid soap to lather the fronts and backs of the hands for at least 10 seconds (Bubble 1, Bubble 2, etc.). Then rinse the hands with the fingertips pointed down to send the germs down the drain. Dry hands with a disposable or single use towel. Use a towel to turn off the water if the faucet is not a hands-free type.

**ENVIRONMENTAL HYGIENE**

Follow Standard 3.028 in *Caring for Our Children*, found at [http://nrckids.org](http://nrckids.org). This standard describes the routine frequency of cleaning and sanitation in child care facilities. Increase the frequency of cleaning and sanitation for surfaces touched most often and whenever the risk of infection increases. The guidelines from this standard are in the current edition of the NAEYC brochure, *Keeping Healthy* and in both the first and the new (2nd) edition of *Managing Infectious Diseases in Child Care and Schools*.

For information from the Centers for Disease Control and Prevention on Influenza for early education and child care providers go to [www.cdc.gov/flu/professionals/infectioncontrol/childcaresettings.htm](http://www.cdc.gov/flu/professionals/infectioncontrol/childcaresettings.htm).
Tooth-Saving Teamwork
For Early Learning and Health Professionals

Many people who care for young children have seen some whose smiles show so much decay that their mouth looks like a train wreck. Early Childhood Caries is the only problem in the ten-year progress report for dentistry in the state of Pennsylvania that WORSENED over the past ten years! That is the bad news.

The good news is that many of these damaged smiles can be prevented, even if decay has begun -- if it is discovered early. Early detection involves noticing white spots on teeth before they become brown spots. Once the brown spots appear, the decay has spread deeply into the tooth and the child will need expensive dental restoration or may lose the tooth. Health professionals can apply fluoride varnish to young children's teeth to prevent decay. Early preventive treatment and referral to dentists who can deal with Early Childhood Caries saves teeth and smiles.

The American Dental Association partnered with the American Academy of Pediatrics to teach pediatricians to perform oral health assessments and apply fluoride varnish at 12, 15, 18, 24, 30, and 36-month checkups. The Pediatrician or Family Practitioner is in an ideal position to monitor oral health of young children. More than half of the states in the US have implemented payment to pediatricians and family practitioners for applying fluoride varnish at checkups for children who have Medical Assistance (Medicaid) as their health insurance. For children who are not eligible for Medicaid, the charge for the varnish treatment is reasonable - about $20-25. By three years of age, children should see a pediatric or general dentist twice a year to be sure that their teeth stay healthy. All teeth are worth keeping.

Early Learning Practitioners are equally important in the fight against early dental caries. Good oral health habits should be part of care for children every day, including during hours while children are away from their parents. Early Learning Practitioners can be good role models and provide wise counsel to young parents.

- Give plain drinking water from a public health approved source (preferably fluoridated tap water) frequently throughout the day to the children. Drinking water throughout the day that contains fluoride is perhaps the MOST helpful source of preventive doses of fluoride. Give plain fluoridated drinking water as the supplemental beverage throughout the child's day. Do not allow children to lie down or walk around with a bottle or sippy cup. Always hold them or have them sit if they are able. Make sure that no child drinks juice, sweetened beverage, or milk over a prolonged period of time. These sugary beverages are the worst culprits in promoting Early Childhood Caries.

- Avoid sticky foods like gummies, raisins or fruit roll-ups unless teeth can be brushed soon after the child eats these foods.

- Children should drink the right amount of milk for their age, but allow 2-3 hours between milk feedings. Milk in the mouth encourages the growth of bacteria that cause cavities.

- Encourage tooth brushing. Brushing after meals is best, at least after breakfast and before bedtime. Use a smear of fluoride toothpaste the size of the child's pinky fingernail (5th finger). It can be put on the edge of a paper cup for the child to put on the tooth brush. Children under 6 years old need to be taught how to brush and may need adult help to brush all their teeth properly.

- Observe the teeth of the children in your care carefully. If half moon shape white spots appear on any of the teeth – especially the back chewing teeth (molars) and the front biting teeth (incisors), encourage the family to take the child to a dentist immediately. Teeth can be lost in 2 weeks to 2 months! The disease progresses rapidly once established and treatment is REALLY expensive.

- Find out which dentists in your area are willing to see children. Make a list for parents to use. When you are calling dentists about whether they see children, ask them how they want referrals made when children have problems. Making these calls paves the way for families.

- Local pediatricians or family practitioners may be able to help with urgent referrals. They may have fluoride varnish to apply to help slow the progression of the caries. The fluoride in the varnish converts the molecules of hydroxyapatite in the tooth structure to fluoroapatite. Fluoroapatite is a much stronger substance and stays in place for the life of the tooth.

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Be Food Safe

Food-borne illness has been in the news recently. Foods that are contaminated at any point before being eaten can cause serious illness. A recent outbreak of salmonella food poisoning in southern California threatened to close down many child care centers that used a food catering service there. While some problems require better quality control by food producers, you can do a lot to make food safe.

- Choose the right foods. Do not buy bruised or damaged produce.
- Serve only freshly cut produce, preferably produce you have cut yourself as soon as possible before eating it.
- Transport fresh fruits and vegetables separated from other foods, keeping them cool with ice packs if the weather is warm.
- Keep all fresh foods at refrigerator temperature of 40 degrees F. or below. Do not pack the refrigerator tightly. Allow enough space for air to circulate around the food to keep the temperature safe around them. Store fruits and vegetables separate from and above other foods to keep them safe.
- Be sure to wash hands carefully before and after preparing produce.
- Everything that touches produce and other raw foods must be washed and sanitized between food types to avoid contamination of one food with germs from another food. Use dilute bleach or another EPA registered kitchen utensil sanitizer. Follow the label directions for all kitchen devices and utensils.
- Scrub the hard surfaces of foods such as melons and cucumbers. Rinse all foods under running water even if they will be peeled so germs from the outside do not get into the food to be eaten.
- Once foods have been served or touched by anyone other than the food service staff, throw out any leftovers. Refrigerate or freeze leftovers that were not served within 2 hours of cooking or preparation. Keep frozen food at 0 degrees F.
- Disposable towels or reusable cloths are better than sponges because sponges grow germs. Reusable cloths should be washed separately from other laundry in a washing machine or washed and sanitized by hand between uses. (Caring for Our Children, Standard 3.031)

For more information on food safety and related activities, go to these websites:

- [www.fightbac.org](http://www.fightbac.org) – website that educates consumers about safe food handling
- [www.foodsafety.gov](http://www.foodsafety.gov) – portal for government food safety information
- [www.fsis.usda.gov/help/FAQs_Food_Safety/index.asp](http://www.fsis.usda.gov/help/FAQs_Food_Safety/index.asp) - U.S Department of Agriculture (USDA) answers general and specialized food safety questions
- [www.fsis.usda.gov/Fact_Sheets/Safe_Food_Handling_Fact_Sheets/](http://www.fsis.usda.gov/Fact_Sheets/Safe_Food_Handling_Fact_Sheets/) - USDA list of advice on handling foods safely
- [www.fda.gov/opacom/lowlit/foodsfe.html](http://www.fda.gov/opacom/lowlit/foodsfe.html) - U.S. Food and Drug Administration (FDA) information page on buying, preparing and storing food safely
- [http://hgic.clemson.edu/factsheets/HGIC3607.htm](http://hgic.clemson.edu/factsheets/HGIC3607.htm) - teaching children about food safety with fun facts, prepared by Clemson University

Contributed by C. Eve J. Kimball, MD, Member of the ECELS Oral Health Advisory Committee
Safer Active Play

To make play areas safer, the Centers for Disease Control and Prevention (CDC) established The National Program for Playground Safety (NPPS) in 1995. Its purpose is to help make play areas safe. NPPS has two, one hour, on-line courses specifically designed to help child care staff keep children safe on playgrounds. The first course provides practical supervision techniques for child care staff. The second course focuses on the maintenance of the play area and prepares workers to identify equipment and surfacing hazards before they cause injuries. In addition, NPPS has a comprehensive outdoor play area course for inspectors that will help programs meet NAEYC Accreditation Criteria.

NPPS offers many educational products. Some of those appropriate for early learning programs are:

- S.A.F.E. Play Areas: Creation, Maintenance, Renovation — a book with 2 chapters each about Supervision, Age appropriate design, Fall surfacing and Equipment maintenance
- Assessment Kit for child care
- Supervision Kit. The Supervision Kit (for both child care and schools) provides a 64 page manual with a power point disk keyed to the manual, a 14 minute video emphasizing important ideas in the manual and a complimentary fanny pack that the supervisors should use on the playground
- Building Playgrounds: A Guide to the Planning Process

For further details, including cost of courses and materials, go to www.playgroundsafty.org or call: 1-800-554-7529

Adapted from an article by Donna Thompson, Ph.D., Executive Director, National Program for Playground Safety (NPPS)

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- 2009 Vaccine Schedule Released

2009 Vaccine Schedule Released

The annually updated recommended immunization schedules for 0 to 18 year old children were posted on the website of the Centers for Disease Control & Prevention, on January 2, 2009. Find them in printable format at http://www.cdc.gov/vaccines/recs/schedules/child-schedule.htm.

All three of the nationally credentialed body of experts approved these recommendations: The Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP). The two most relevant changes for early learning practitioners in the 2009 recommendations are:

- Recommendations for rotavirus vaccines change the maximum age for the first dose (14 weeks 6 days) and the maximum age for any dose (8 months 0 days). If RV1 (Rotarix®) is administered at ages 2 and 4 months, a dose at 6 months is not indicated.
- Routine annual influenza vaccination is recommended for all children aged 6 months through 18 years. Children aged younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time during the previous season but only received 1 dose should receive 2 doses of influenza vaccine at least 4 weeks apart.

Vaccine schedules are complex. Sign up for WellCareTracker™ from ECELS to use pediatrician-developed software to check the dates on each child’s health record easily for up-to-date preventive health services, including vaccines. Go to www.wellcaretracker.org.