

What Families Can Do to Reduce Illness from Infection in Early Education/Child Care and Schools

Germs are everywhere—on every surface that people touch and in the air that people breathe. Some of them are helpful. Some are harmless. Some can cause disease. Many illnesses are caused by viruses.

Viruses do not respond to antibiotics used to treat bacterial infections. Families can work with teachers/caregivers and health professionals to protect children and family members against infectious illnesses. There are three key things families can do:

1. Keep the number of potentially harmful germs that enter the body down to a level that the body can manage.
2. Keep children healthy with routine preventive health visits (check-ups). At these checkups the child's health care professionals should keep the child up to date with nationally recommended preventive health care. This care includes giving vaccines and doing screening tests. At these visits, families should talk with the health care provider about how to keep the child well. The health care provider should suggest ways the family can help the child grow physically and behaviorally.
3. Manage the environment to reduce the likelihood that children will be challenged by an overwhelming number of disease-causing germs or be weakened by exposure to harmful substances.

Here are some suggestions for how to do these three things.

How to Keep the Number of Disease-Causing Germs Down to a Manageable Level

Germs like warm, moist places. They can live in body fluids, in foods, and on a variety of surfaces. Germs can live on surfaces that are touched, such as toilets, door handles, tables, toys, moist play materials, and floors where children crawl and people walk with their shoes. Some germs can survive in an inactive state on dry surfaces for quite a long time. They become active when they come in contact with a moist surface like the lining of a child's nose.

Hand Hygiene

Cleaning hands (hand hygiene) is one of the most important measures to prevent the spread of germs. Use sinks with warm water, soap, and disposable or single-person-use cloth towels. In group child care settings, cloth towels should be used only once, and then laundered. At home, wash cloth towels when they have been soiled or used often. Be sure all family members wash their hands. Infants and toddlers

need to have someone wash their hands. Someone needs to show them how to wet their hands and then lather all surfaces with soap. All young children need to be taught and supervised to be sure they wash their hands consistently at the appropriate times and in the appropriate way.

Only adults or children who are older than 24 months of age can use hand sanitizer product. They do not work if there is visible soil on the skin. Choose products that contain at least 60% alcohol. If you use a hand sanitizer be sure to follow the manufacturer's instructions. Use the amount and contact time with the skin indicated on the product label. Hand sanitizers do not kill all types of germs, are more expensive than soap and water, are flammable and are toxic if ingested. If possible, wash with soap and water instead of using hand sanitizers. The times when all family members should practice hand hygiene are:

- When coming inside from outdoors
- Before and after
 - Food handling and eating
 - Giving medication
 - Diaper changing (It is not necessary to wash before diaper changing if hand hygiene was recently performed for another purpose and no new contamination has occurred since.)
- After
 - Diapering (even if gloves were worn to do the change)
 - Using the toilet (In a public restroom, use a disposable paper towel to handle the sink faucet tap if it does not automatically turn on and off. Use a paper towel again if a door needs to be touched to be opened or closed after hand washing.)
 - Handling any body fluid such as blood, mucus, vomit, wiping a child's nose, touching open sores or coming into contact with tissues, bandages, or other items contaminated with body fluids
 - Having contact with animals or cleaning the cages or litter boxes of pets and other animals, including tropical fish
 - Playing in sandboxes or at playgrounds
 - Contact with water used by more than one person or water that doesn't come from a safe supply (e.g., swimming, wading, playing in a fountain, touching wet surfaces)
 - Handling trash or garbage

Food Handling

Every year, one in 6 Americans get sick from food poisoning. This is called food-borne illness. Usually failure to observe food safety rules causes this type of illness. Prepare food at home following the food

safety recommendations at <http://www.foodsafety.gov/>. Some of the most important food safety practices are:

- **Clean** foods and food surfaces
- **Separate** uncooked foods that can carry harmful germs from fresh foods that you can eat without cooking.
- **Cook** foods that need cooking. Do not eat them raw. For example, do not eat uncooked eggs or anything that has uncooked eggs in it. Be sure to cook these foods until they reach safe food temperatures in the deepest part of the food. The necessary final temperature varies by the type of food involved. Charts that list safe food storage and cooked temperatures are at <http://www.foodsafety.gov/keep/charts/index.html>. Inexpensive food thermometers are widely available. After cooking, either keep the food at the safe hot temperature, at least 140 degrees F., or quickly chill the food and keep it chilled at safe cold food temperatures, at or below 40 degrees F.
- **Chill** perishable foods that will be served or stored cold. Chill foods quickly to keep them out of the danger zone where bacteria grow easily. Resist the temptation to bring served food home from restaurants. Usually, from the time it was prepared and served and is brought home, it has been in the danger zone for more than two hours. The danger zone is over 40 degrees F. and less than 140 degrees F. It's not worth having food poisoning to have a next meal of any food that has not been kept hot enough or cold enough for two hours or more. For details, see the Partnership for Food Safety Education at www.befoodsafe.org.

Avoid Unnecessary Use of Antibiotics.

Antibiotics can kill harmless germs. Killing the harmless germs can make it easier for harmful bacteria to grow and to become resistant to antibiotics. Experts no longer recommend using antibiotics for illnesses usually caused by viruses. These include the common cold, non-specific cough, ear infections and most sore throats. Treatment of viral illnesses with antibiotics does not help.

How to Keep Children Healthy

Use Preventive Pediatric Care Provided by a "Medical Home"

Families should seek pediatric care that is accessible, continuous, comprehensive, coordinated, compassionate, culturally effective, and family centered. This type of health care is known as a *medical home*. To learn more about how to find and use a medical home, see the section for families and

caregivers at <http://www.medicalhomeinfo.org>. A medical home provides care using a team-based approach. The team should be led by a physician who works with other health professionals. The other team members may include medical assistants, nurse practitioners, nurses, physician assistants, laboratory personnel, community health coordinators and others. The people who work in a pediatric medical home help families promote the child's well-being and success in life. While available health care may not meet all the criteria of a medical home, families should seek care from a source in their community that most closely meets the medical home concept.

There are national guidelines for routine preventive child health services that every child should receive at specific ages. These services include vaccines and screening assessments provided in "checkups." Licensed and certified child health care providers should work with families to be sure every child gets the recommended preventive services on time. Go to <https://brightfutures.aap.org/families/Pages/default.aspx> to view the information for families.

The recommended schedule of "checkup" services involves a series of 32 well-child visits. The first visit should be for prenatal counseling of families about their baby. The next visits are at birth, during infancy, toddlerhood, the preschool age period, the school age period and adolescence -- until the children reach adulthood.

Vaccinate

Nationally recommended vaccines are required for attendance in most early education/child care programs and K-12 schools. Medical or legally-permitted non-medical exemptions exist. The schedules for recommended vaccines are on the website of the Centers for Disease Control and Prevention (CDC) at www.cdc.gov/vaccines/schedules. The CDC publishes an updated set of recommendations on an annual basis, typically in January or February.

Children who have not received all of the age-appropriate immunizations before enrollment should catch up as soon as possible. When children and adults who care for them are missing some of the nationally recommended vaccines, they put themselves at risk for infections. Also, they increase the risk for others. Under-vaccinated individuals can spread infections to children who are too young to have received enough vaccine doses to be protected and to those who have a medical condition that precludes their receipt of some vaccines.

It is easy for people who are not vaccine experts to get media attention for misconceptions. The media reports intentionally grab attention and often give undue credibility to the mistaken beliefs. Commonly quoted misconceptions about vaccines mislead families who then fail to immunize their children. Families who have these concerns should talk with their child’s primary care provider. Ask for an appointment with enough time on the health care provider’s schedule to properly discuss any concerns. Focus the discussion with the child health care provider on the evidence. Do not credit claims of vaccine harm because something occurred in the same time period as a vaccine was given. Two things that happen at the same time are not necessarily causally related. Recommended vaccines have been tested on large populations, comparing outcomes for those who received and those who did not receive the vaccine.

In 2011, the Institute of Medicine (IOM) reviewed evidence on the safety of 8 individual vaccines (<http://nationalacademies.org/HMD/Reports/2011/Adverse-Effects-of-Vaccines-Evidence-and-Causality.aspx>) and, in 2013, the immunization schedule (<https://www.cdc.gov/vaccinesafety/research/iomreports/index.html>). The IOM concluded that: (1) few health problems are caused by or clearly associated with individual vaccines; (2) there is no evidence that the immunization schedule is unsafe; and 3) there are no links between the immunization schedule and autoimmune diseases, asthma, hypersensitivity, seizures, child developmental disorders, learning or developmental disorders, or attention deficit or disruptive disorders. The following table lists some of the common misconceptions about immunizations and the corresponding facts.

Common Misconceptions/Myths About Immunizations

(Adapted from AAP 2015 Red Book Table 1.5, in turn taken from: Myers MG, Pineda D. *Do Vaccines Cause That? A Guide for Evaluating Vaccine Safety Concerns*. Galveston, TX: Immunizations for Public Health; 2008:79..^a. Other common misconceptions are detailed online (<https://www.cdc.gov/vaccines/parents/tools/parents-guide/parents-guide-part4.html>)

Claims	Facts
Natural methods of enhancing immunity are better than vaccinations.	The only “natural way” to be immune is to have the disease. Immunity from a preventive vaccine provides protection against disease when a person is exposed to it in the future.
Epidemiology—often used to establish vaccine safety—is not science but number crunching.	Epidemiology uses valid methods to identify the risk of getting a disease instead of relying on an opinion about a cause and effect relationship between two things happening at the same time in a few individuals.

<p>Giving multiple vaccines at the same time causes an “overload” of the immune system.</p>	<p>The recommended vaccines use a very small portion of the immune system’s “memory.” The Institute of Medicine (IOM) has concluded that there is no evidence that the immunization schedule is unsafe.</p>
<p>Vaccines are ineffective.</p>	<p>The measured benefits of vaccines show that immunization has spared millions of people the effects of devastating diseases.</p>
<p>Prior to the use of vaccinations, these diseases had begun to decline because of improved nutrition and hygiene.</p>	<p>In the 19th and 20th centuries, some infectious diseases began to be better controlled because of improvements in sanitation, clean water, pasteurized milk, and pest control. However, the numbers of people with vaccine-preventable diseases decreased dramatically after the vaccines were given to large numbers of children and adults.</p>
<p>Vaccines cause poorly understood illnesses or disorders, such as autism, sudden infant death syndrome (SIDS), immune dysfunction, diabetes, neurologic disorders, allergic rhinitis, eczema, and asthma.</p>	<p>Scientific evidence does not support these claims. See IOM reports.</p>
<p>Vaccines weaken the immune system.</p>	<p>Natural infections like influenza, measles, and chickenpox, weaken and divert the resources of the immune system, increasing the risk of other infections. Properly immunized children are not at increased risk for other infections.</p>
<p>Giving many vaccines at the same time is untested.</p>	<p>Before a vaccine is approved to be given at the same time with other vaccines, studies are performed to ensure that this simultaneous use of vaccines does not affect the safety or effectiveness of the vaccines involved.</p>
<p>Vaccines can be delayed, separated, and spaced out without causing problems.</p>	<p>Many vaccine-preventable diseases occur in early infancy. Optimal vaccine-induced immunity may require that the child receive a series of vaccines over time. Any delay in receiving age-appropriate immunization increases the risk of diseases that vaccines are administered to prevent.</p>

Nutrition, Physical Activity and Sleep Routines

As children move through infancy and beyond, families need to adjust their approach for feeding, exercising and offering sleep routines that keep children healthy.

- ***Choose Breast Milk as the Best Food for Infants:***

Research shows that breast milk (human milk), with its unique mixture of ingredients (fatty acids, lactose, amino acids, vitamins, minerals, enzymes, and other components), helps protect infants from illness. Feeding breast milk to infants reduces the risk of infection from exposure of infants to group care. Health professionals can help mothers establish successful breast feeding. Use a good breast pump for milk to feed the baby when feeding directly from the breast is not possible. Sustain infant feedings of human milk to any extent possible. No amount is too little to offer some benefits.

Exclusive use of human milk for feedings for the first six months of life offers the greatest protection. Ask the infant's health care provider for information about how mothers should safely express, store, and transport milk for times when mother and baby cannot be together for feedings. Easy to understand articles about how to make breastfeeding successful are posted in English and in Spanish on an American Academy of Pediatrics website. They can be read aloud by a narrator with or without reading the written article. These articles are available at - <https://www.healthychildren.org/English/ages-stages/baby/breastfeeding/Pages/default.aspx> to sustain breastfeeding. Another resource is in-person help from a lactation consultant who can offer one-on-one coaching. Usually, a health care professional can help locate a qualified lactation consultant for a family.

Be sure that appropriate storage and handling of breast milk is practiced at home and at the early education/ child care program to preserve its benefits, avoid wasting it, and ensure that children receive only their own mother's milk. See D. Infant/Toddler Feeding and Appendix R in *Model Child Care Health Policies*, 5th edition for guidelines about use of stored human milk. This publication is accessible at www.ecels-healthychildcarepa.org. See [Caring for Our Children](#) Standard 4.3.1.4 for what to do if human milk is accidentally fed to the wrong infant, other than to a same age sibling. This publication is accessible at <http://nrckids.org>.

- ***Good Nutrition at all ages:***

Good nutrition helps the body's ability to fight off infectious diseases. To learn about what to feed, how much to feed and when to feed children, go to <http://www.choosemyplate.gov/>. This website is maintained by the U. S. Department of Agriculture. It offers appropriate nutrition advice for people of all ages – and helpful recipes too.

- ***Physical Activity:***

In conjunction with good nutrition, physical activity helps the body function as intended. Working together, families and educators can promote developmentally appropriate physical activities and exercise. To learn about a program that fosters this collaboration, go to <https://healthykidshealthyfuture.org/>

- ***Sleep Routines:***

Having enough sleep helps to keep the body healthy and able to fight off germs that can cause disease. Family members all need enough sleep. To learn about healthful sleep for children, read, listen to and view the information about sleep on the HealthyChildren.org website of the American Academy of Pediatrics. Many of the articles are available in English and Spanish and can be read aloud by a narrator with or without the viewer reading along. Go to <https://www.healthychildren.org> and put “sleep” in the search box.

Manage Illness

- Families should communicate with teachers/caregivers in their child's group care facility or school about signs of illness in their child or among family members. This may enable the educators to watch the child closely for signs of illness and observe the others in the group for symptoms too.
- Ask teachers/caregivers whether other children in their child's group are having symptoms that families should watch for in their own child.
- Families should have a plan for picking up their children promptly if the children become too ill to remain in the group setting. The plan should include how families will care for the ill child in a comfortable place. Educators make decisions about excluding children from child care or school based on a variety of factors. Children with certain types of infections must be excluded from care, while children with other infections might be able to attend. The criteria for whether the child can stay or leave always start with whether the child feels well enough to participate in regular activities

and if, with the current staffing situation, teachers/caregivers can care for the child without compromising care of the other children in the program. These decisions might vary depending on the assessment by staff members of circumstances at the time. Certain types of symptoms and some diagnoses require exclusion. These are listed in *Managing Infectious Diseases in Child Care and Schools*, a publication of the American Academy of Pediatrics.

- Teachers/caregivers and staff who are not health professionals should not diagnose diseases. They may have experience to raise appropriate concerns about a new symptom, but not to determine what type of disease is causing the symptom. Families should tell their child's teacher/caregiver when a health professional has made a diagnosis of a particular type of infectious disease. This information is necessary so the educators can make proper decisions about whether it is necessary to exclude the ill child or notify other families about their child's exposure to a particular type of infection.
- At routine health visits (checkups) and visits for illness, families should inform their child's health care provider about the group care settings where their child is enrolled. This will enable the health care provider to offer advice about what should be done for the child and to protect the others in the group. Health care providers are legally required to obtain the parent's/legal guardian's written consent before sharing any information about a child with anyone other than the parent/legal guardian. The parent/legal guardian should authorize the child's health professional to share information directly with appropriate members of the child's education program about potentially communicable diseases. Staff members need firsthand information from the child's healthcare provider to provide appropriate care for the child and others in the child's group. Even if family members understand what a health professional tells them, they may not be able to convey that information accurately or address the educator's questions as well as the health care provides can with direct communication.

Manage the Environment

Clean Air

Do not allow smoking at any time in areas where children occupy. Provide healthful ventilation, temperature, and humidity of indoor air. When having the heating and cooling equipment serviced in the family home, ask the technician how often to change any filters on air handling equipment and how to do it. Catch sneezes and coughs with a disposable tissue or use an elbow to keep from spreading germs onto surfaces and into the air. Throw away the tissue after one use and then have anyone who touched the tissue perform hand hygiene. Ventilate with fresh, healthful outdoor air as often as you can to reduce the concentration of germs in the air you breathe indoors.

Clean and Sanitize Surfaces

Germs can get inside the body by touching contaminated surfaces with hands and then touching the eyes, nose, or mouth. Germs can be passed by sharing glasses, forks, and spoons that have not been properly cleaned. Regularly clean food preparation and eating surfaces and everywhere else that people touch. An easy way to clean washable hard surface toys is to put them in the dishwasher. Choose soft toys that can go in the washer and be either hot air dried or dried in direct sunlight. They should be cleaned that way whenever they are soiled.

Hand Washing Sinks and Supplies

Put soap, water and clean towels within arm reach of the sinks so they are easily accessible for hand washing.