



The Children's Hospital



A PARENT'S GUIDE TO HEALTHY, HAPPY KIDS

Preparing for This Year's

Flu Season

As influenza (flu) season approaches once again, the best thing you can do to help protect your family from the virus is to receive the flu vaccine. However, you also can take a number of other preventive steps to decrease your family's risk of infection.

The flu is a virus that causes an infection in the respiratory system, which includes the nose, throat, bronchi and windpipe. Symptoms of the flu are very similar to those associated with the common cold but typically develop more quickly and include more muscle pain, chills and headaches.

“Aside from receiving a flu vaccine, the best ways to prevent the seasonal flu virus are to be vigilant about washing your hands and covering coughs and sneezes with a tissue or the inside of your arm rather than your hands,” said Roberta Smith, RN, MSPH, Infection Control Nurse in the department of epidemiology at The Children's Hospital. “Keeping your child home from school if he or she exhibits flu symptoms also will help control the spread of the virus. Children should not return to school until a fever has been absent for at least 24 hours.”

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Congestion Cleared

If your child experiences the sniffing, sneezing and coughing associated with colds and influenza (flu) this winter, you may turn to Vicks® VapoRub® to relieve the symptoms. However, misuse of the product can lead to more severe illness, especially in young children.

“Vicks VapoRub is a Vaseline-like solution,” said Monica J. Federico, MD, Director of the Asthma Management Program at The Children’s Hospital. “If your child eats or inhales the solution, it could lead to pneumonia. Never use VapoRub around the mouth or nose.”

VapoRub is recommended for use on children older than age two. Follow the directions on the label, which are approved by the U.S. Food and Drug Administration. Dr. Federico advises using nasal saline to help clear any nasal congestion for children younger than age two.

For more information about respiratory conditions, visit www.thechildrenshospital.org, search for “pulmonary” and click on “Pulmonary Conditions We Treat.”



Recognizing the Symptoms

Symptoms of seasonal flu include:

- Dry cough
- Extreme tiredness
- Fever (often high)
- Headache
- Muscle aches
- Runny or stuffy nose
- Sore throat

“If your child contracts the flu virus this season, be sure to immediately contact your pediatrician or family doctor if your child’s breathing changes. These changes may include difficulty breathing, rapid breathing and wheezing,” said Joan Bothner, MD, Chief Medical Officer at The Children’s Hospital.

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Further preventive measures include avoiding touching your eyes, mouth and nose whenever possible and keeping your home clean and sanitized. The flu virus is spread through droplets expelled from the airway, so cleanliness will help combat transmission of the virus.

H1N1 CONCERNS

Many parents have lingering concerns about the H1N1 virus — or swine flu — and its effects. However, monitoring of the new virus suggests that its overall impact does not appear to be severe as long as patients receive effective treatment, and safeguards against it are much like those recommended for seasonal flu. If your child begins having flu-like symptoms, talk with a physician to develop an appropriate treatment plan for your child. (See page 3 for more information.)

FLU VACCINATIONS

Vaccinations are available for both seasonal flu and the H1N1 virus. Discuss what is best for your family with your pediatrician or family physician.

For more information about preparing for this year’s flu season, watch an interview with one of The Children’s Hospital’s infection control nurses. Visit www.thechildrenshospital.org and click on “Children’s Expert Answers Your H1N1 Questions.”



Understanding the H1N1 Virus

The H1N1 virus, or swine flu, is a viral infection characterized by coughing, sore throat, runny nose, fever, muscle pain, headache and chills. Symptoms usually begin four to six days after exposure to the virus.

TREATING THE H1N1 VIRUS

Appropriate treatment depends on the symptoms. As with other viral respiratory infections, make sure to keep your child hydrated and use the following guide to help alleviate symptoms:

- **Fever or aches** — Give acetaminophen or ibuprofen for pain or fever higher than 102°F. Children and adolescents with influenza should never take aspirin, and antibiotics are not helpful. Fever should subside within three days.
- **Cough** — Children older than age six can have cough drops. If your child is older than one year, give honey or corn syrup (1/2 to 1 teaspoon) as needed (never give honey to babies). Cough medicines are not as helpful as honey and are not approved by the U.S. Food and Drug Administration (FDA) for children under age four. Coughing should not last longer than three weeks.
- **Sore throat** — Tylenol or ibuprofen is very helpful for throat pain. Children over age six can have hard candy. Children older than one year old can sip warm chicken broth.
- **Stuffy nose** — Saline or warm water nose drops followed by suction or nose blowing often relieve congestion. You can buy saline spray without a prescription or make saline nose drops by adding 1/2 teaspoon of table salt to one cup of warm water. The congestion should clear up within two weeks.
- **Antiviral medicine (such as Tamiflu)** — The American Academy of Pediatrics and the Centers for Disease Control and Prevention recommend prescription antiviral

medicines for high-risk children (see below) with H1N1 symptoms. Antiviral medicines must be taken within 48 hours of the start of flu symptoms to provide relief.

- **High-risk children** — Children are considered at high risk for complications if they have lung disease, heart disease, diabetes, sickle cell disease, kidney disease, cancer, weakened immune system or diseases requiring long-term aspirin therapy. Pregnant teens and healthy children under age two also are at high risk.

PREVENTING H1N1

The best way to protect your family from the H1N1 virus is to receive the vaccination. Since the virus is highly contagious, frequent hand washing, covering coughs and sneezes with a tissue or your arm and staying home if you have a fever can help prevent the spread of the virus.

To learn the top 10 questions parents are asking about the H1N1 virus, visit www.thechildrenshospital.org.



When to Call the Doctor

Call your child's pediatrician or family physician immediately (night or day) if:

- Your child looks or acts very sick.
- Breathing becomes difficult or fast.
- Dehydration occurs (signs are no urination within 12 hours, dry mouth and no tears).

Call your child's doctor during the day if:

- You think your child needs to be seen.
- Your child is in the high-risk group.
- Earache or sinus pain occurs.
- Fever lasts longer than three days.
- Cough lasts longer than three weeks.
- Symptoms worsen.



Barton Schmitt, MD, FAAP, is a board-certified pediatrician at The Children's Hospital. He has been practicing medicine for 40 years and has received two distinguished awards from the American Academy of Pediatrics, including the Child Development Award in 1994, followed by the Education Award in 2004. A father of four and grandfather of eight, he most recently completed the third edition of *Your Child's Health*, now available in bookstores.

Written by Barton D. Schmitt, MD. Revised November 2009.





Learning to Live With Lactose Intolerance

When your daughter complains of stomach pain after eating certain foods, you may believe it is indigestion. However, if milk, pizza, ice cream and other foods containing dairy products are causing the pain, your child may suffer from lactose intolerance.

According to the National Institutes of Health, approximately 30 million Americans have some level of lactose intolerance by age 20, and the condition can develop as early as age two. Lactose intolerance is caused by the body's inability to produce enough lactase, the enzyme required to break down the lactose present in most dairy products. As a result, the undigested lactose remains in the colon and begins to ferment, causing uncomfortable symptoms that include:

- Abdominal bloating
- Abdominal pain
- Diarrhea
- Gas
- Nausea

"The good news is unlike other digestive conditions, lactose intolerance does no physical harm to the body if left undiagnosed," said Deborah Neigut, MD, Associate Professor of Pediatrics in the division of gastroenterology, hepatology and nutrition at The Children's Hospital. "However, once

an assessment is made, a pediatric gastroenterologist can gauge the severity of your child's intolerance and begin creating a solution to help control his or her symptoms."

MAKING A DIAGNOSIS

The most common way to diagnose lactose intolerance is by administering a hydrogen breath test. This test detects if the body produces hydrogen gas after the patient drinks a lactose solution since undigested lactose causes this gas to form. Lactose intolerance also can be diagnosed through endoscopy, a more invasive procedure.

"It can be especially tricky to diagnose young children with lactose intolerance as they often have a difficult time describing their symptoms," Dr. Neigut said. "However, because lactose intolerance may run in some families, there is an increased likelihood that if you have the condition, your child will have it as well."

HELPING YOUR LITTLE ONE ADJUST

Here are some tips for helping your child learn to live with lactose intolerance:

- Choose reduced-lactose or lactose-free milk.
- Purchase dairy-free foods that are rich in calcium, such as broccoli, beans, tofu, soymilk and calcium-fortified juices for added nutrition.
- Give your child a lactase enzyme supplement just before he or she consumes dairy.
- Select yogurts with active cultures because they are easier to digest.
- Teach your child to read food labels carefully before making food choices.

"Your child should not have to completely avoid foods containing lactose," Dr. Neigut said. "A few simple lifestyle adjustments can help your child enjoy his or her favorite foods without discomfort."

For more information about lactose intolerance, visit www.thechildrenshospital.org.

Electronic Health Records: Keeping Your Child

CONNECTED

Whether your child is seeing his or her physician for a routine check-up or making an unanticipated visit to the emergency department, his or her physicians need immediate access to your child's medical records to make the most informed decisions regarding care.

The Children's Hospital is proud to offer a pediatric electronic health records (EHR) system that allows physicians and other healthcare providers throughout the community to access patient data. Enabling pediatricians and other healthcare providers throughout our community to efficiently access and share clinical patient data at the point of care helps ensure that every child receives the most effective and immediate care where and when they need it.

A UNIFIED APPROACH

Children's began integrating its hard-copy files into the EHR database in 2001. Pediatricians, nurses and our specialists can access records via the Internet whenever necessary, so your child's medical records are easily available to physicians to review past medical consultations and any test results. For parents, this means that diagnosis and treatment may occur much more quickly and with better overall outcomes so children often can return to their normal activities sooner.

Did You Know?

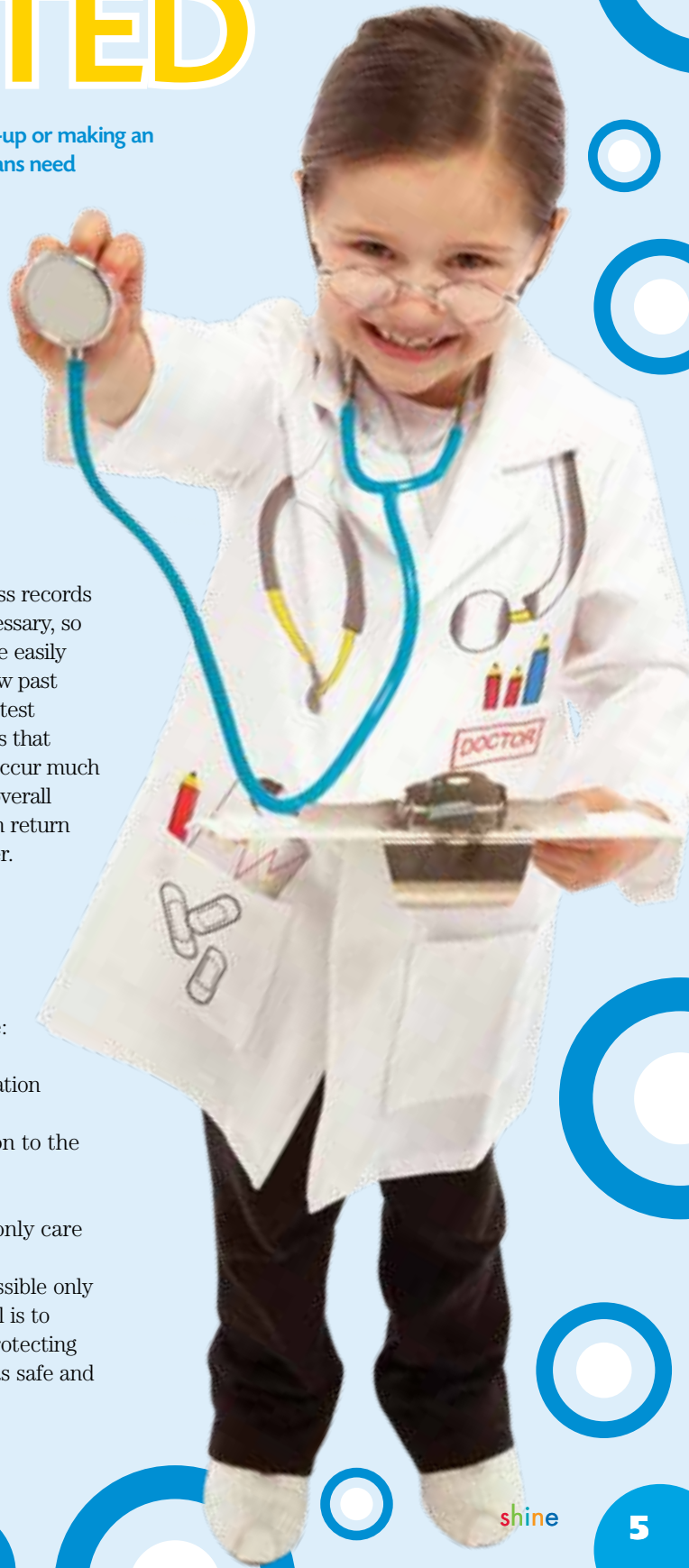
Only two to five percent of U.S. hospitals currently use electronic health records.

IS MY CHILD'S INFORMATION SAFE?

Unlike nationally based systems, our system is specifically designed to connect Colorado's pediatric community and incorporates a multi-layered security system to help keep your child's health information safe. Some of these safeguards include:

- Data access logs to show who logs on and when
- Firewalls that block any unauthorized attempts to access information
- Fully encrypted data to protect all medical information
- Two levels of user authentication that require the user to log on to the server as well as the application's site
- Regular audits to identify any unusual patterns of activity
- Specific levels of access for those using the system to ensure only care providers can access medical information about your child

This added protection allows records to remain private and accessible only to healthcare providers caring for your child. At Children's, our goal is to ensure your child receives a high level of care, and updating and protecting his or her information are keys to making sure your child remains as safe and healthy as possible.



Kids and Kidney Stones: A Growing Problem

Kidney stones once seemed like an adult-only concern, but as people consume more salt-laden foods and drink less water, increasing numbers of children are affected by the painful condition.

Kidney stones form when crystallized salts and minerals build up in the urinary tract. Kidney stones are commonly associated with severe back or abdominal pain, but patients also may experience nausea, vomiting and blood in the urine.

A computed tomography (CT) scan typically is used to diagnose kidney stones. If a stone won't pass on its own, several surgical options are available to break up the stone.

"It's important for a child with kidney stones to be seen by a pediatric urologist," said Jeff Campbell, MD, Pediatric Urologist at The Children's Hospital. "Children require a more aggressive evaluation and smaller, more specialized equipment than is typically used in the care of adult patients."

EXPLAINING THE INCREASE

Kidney stones can form as a result of an underlying metabolic condition or from dehydration and a salty diet. Parents should make sure their children drink plenty of water — not cola or tea — and limit the amount of processed foods in their diets. Calcium-rich foods are fine to consume, but avoid giving them too much as excess calcium in the diet can lead to the formation of kidney stones.

"Boys and girls are equally susceptible to kidney stones, and if a child develops a stone, he or she is more likely to develop another one later," Dr. Campbell said. "The best thing parents can do is closely monitor their kids' diet and keep them hydrated."



If you think your child may have a kidney stone, speak with your family physician or pediatrician about a referral to a pediatric urologist at The Children's Hospital.

Should You Ditch the Dye?

Cherry Kool-Aid®, strawberry Pop-Tarts® and other red, flavored foods get their bright color from an additive known as Red Dye 40. Over the years, this and other artificial dyes have come under fire for potentially causing adverse reactions in children.

Red Dye 40 has been rumored to cause a number of problems, from hyperactivity, aggression and nervousness to uncontrollable emotions. According to a 2007 study published in *The Lancet*, a mixture of the preservative sodium benzoate and several artificial colorants can cause heightened symptoms of anxiety in children. However, this study and others do not reveal which particular colorant or preservative is responsible. Matthew Haemer, MD, Pediatric Nutrition Fellow at The Children's Hospital, cautions parents to consider additional factors found in artificially colored foods that also may be linked to hyperactivity and poor nutrition or excess weight gain.

"Foods containing artificial dyes are, by definition, processed foods, which means they contain a significant amount of preservatives and sugar," said Dr. Haemer. "Each child differs in how he or she reacts to these food additives."

KEEPING TRACK

If you notice your child acting differently or especially hyperactive after eating a certain food, check the nutrition label for ingredients such as sugar, high-fructose corn syrup (especially if it is listed within the first few ingredients), caffeine, preservatives and artificial food dyes.

In addition to the potential link with hyperactivity, there are many important health reasons to avoid processed foods. These foods contain high amounts of hidden salt, sugar and fat, which can lead to health complications. The additional amounts of salt and sugar also dull the taste buds, so natural foods seem to contain less flavor. To help ensure your child develops a taste for healthy foods, give him or her plenty of fruits, vegetables, whole grains and lean proteins, such as chicken or fish.

A non-processed diet also includes fewer calories, a wide variety of nutrients, low amounts of saturated and trans fats and plenty of fiber. A nutritional expert, such as a dietitian or nutrition specialist at Children's, can guide families toward a healthy diet that avoids most processed foods.

For more information on safe foods for your child, visit www.thechildrenshospital.org and click on "Wellness & Safety."

Parents may be surprised to learn that common packaged foods that are popular with children — including macaroni and cheese — contain artificial food dyes.



Energy Drinks Pack an Unhealthy Punch

Shine recently spoke with Matthew Haemer, MD, Pediatric Nutrition Fellow at The Children's Hospital, about the health risks of energy drinks.

Shine: Should parents allow their children to drink energy drinks?

Dr. Haemer: While these drinks have become increasingly popular with older kids and athletes seeking a competitive edge, most energy drinks are loaded with caffeine. Too much caffeine can cause children to experience jitteriness, nervousness, upset stomach, headache and difficulty concentrating or sleeping. In addition, the added sugar and caffeine may pose a risk for obesity and spikes in blood pressure.

While the U.S. does not have guidelines for caffeine consumption in kids, exercise caution before purchasing an energy drink for your child by comparing nutrition labels and choosing a product that contains a smaller amount of caffeine.

Shine: If a teenager is participating in a triathlon, should he drink a power drink, such

as Gatorade®, to stay hydrated during the race?

Dr. Haemer: Your teen can benefit from drinking sports drinks if he or she participates in endurance sports that last longer than an hour, such as a triathlon, soccer or long-distance running. Because these drinks contain carbohydrates or sugar, they can provide an immediate source of energy when the body's stores become depleted.

However, most young athletes do not need sports drinks or energy drinks. In fact, the average child athlete can get all of the required nutrients and hydration by eating healthy foods and drinking plenty of water prior to, during and after physical activity.

If you have a question about your child's health that you would like answered, e-mail us at mychildshhealth@thechildrenshospital.org.



Getting Kids Moving

In the past, assessing a child's movement was based on simple observation. However, the Center for Gait and Movement Analysis (Gait Lab) at The Children's Hospital utilizes advanced technologies to measure movement and determine proper treatment for gait and movement disorders.

“We videotape patients from the front and side simultaneously and couple this with computerized digital motion capture,” said Frank Chang, MD, Co-Medical Director of the Center for Gait and Movement Analysis, Professor of Orthopedic Surgery, Rehabilitation Medicine and Pediatrics at the University of Colorado Denver School of Medicine, and Children's Miracle Network / Helpie Family Chair in Orthopedic Movement Analysis. “We know how a child should look while walking at any age, and we compare that knowledge to the digital camera video and a computerized model of the child to determine if he or she is moving abnormally.”

In addition to the high-definition video and computerized digital motion capture system that tracks a child's movements, technology at the Gait Lab also allows physicians to analyze electrical activity in the muscles.

“We place electrodes on the skin over specific muscles, and the data tells us whether or not the muscles are firing properly,” Dr. Chang said. “The results allow us to understand what muscles are doing at any given time.”

YOUR CHILD'S MOVEMENT

If you're concerned about your child's movement, he or she will first be screened to determine whether or not a full gait analysis is necessary.

“The majority of children without congenital deformities or neurologic conditions like spina bifida and cerebral palsy don't need a full gait analysis,” said Dr. Chang. “But we're happy to assist parents who want to know what's going on with their child's movement and intervene, if necessary.”

For more information, please call (720) 777-5805 or visit www.thechildrenshospital.org, click “Conditions We Treat” and then select “Gait & Movement.”





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Take a Deep Breath— and Make a Plan

As your kids get ready to return to school after the holidays, follow these asthma guidelines to make sure they are prepared for emergencies.



Creating a plan for combating potential asthma emergencies is one of the best ways to help children manage this chronic disorder. Make the following preparations to keep your child safe in case an emergency arises.

- ✓ **Schedule an appointment with your child's asthma specialist.** Regular check-ups ensure your child's medication and monitoring are effective. Mention any new concerns or questions regarding seasonal allergies or environmental irritants.
- ✓ **Understand prescriptions.** If your child is prescribed a new medication, ask your physician about potential side effects or changes he or she may experience.
- ✓ **Have an Asthma Action Plan.** This document — which can be found at www.thechildrenshospital.org — should detail all of your child's medications, symptoms that indicate an emergency and what to do in case an asthma-related emergency arises.
- ✓ **Talk with teachers and school nurses.** Provide your child's school with his or her Asthma Action Plan, and make sure all teachers and coaches have a copy so they'll be prepared to act quickly if an asthma-related emergency arises.
- ✓ **Advocate for your child.** Ask school officials if your child is allowed to carry and administer his or her asthma medication. If the school requires written permission or paperwork from a physician, obtain that information before classes start.
- ✓ **And in case of emergency...** Talk with school staff members about how asthma emergencies have been handled in the past and confirm that the school knows the best way to get in touch with you.

For more information about controlling your child's asthma or to download an Asthma Action Plan form, visit www.thechildrenshospital.org, search for and then choose "Asthma" and go to "What is asthma?"