

PediaNews

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Pediatric Advocates

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Nosebleeds: Where They Come From and How to Treat Them

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Spontaneous nosebleeds, or epistaxis, are very common this time of year when the air is dry, heaters are running, and the humidity is low. The inner lining of the nose can dry out and crack because of the differences in outdoor and indoor humidity and temperature.

Because the nose is rich in blood vessels, cracked nasal membranes can cause the nose to bleed easily. Children are more susceptible to nose bleeds due to digital trauma ("nose picking"), which can cause damage to the lining of the nasal passages. Nosebleeds are also more common in the winter since upper respiratory tract infections are more prevalent this time of the year. These infections cause inflammation of nasal membranes, which can cause the tissue to bleed. Other risk factors for epistaxis include: infections, trauma, allergic and non-allergic rhinitis, and use of anticoagulant and antiplatelet medications such as aspirin.

Fortunately, most nosebleeds can be addressed at home by following simple first aid techniques. First, sit upright and pinch all soft areas of the nose using the thumb and index finger. Sitting upright keeps the nose above the heart, reducing the blood pressure in the veins of the nose.

Firmly press the pinched part of the nose against the bones of the face. Pinching the nose creates pressure, which causes the blood to stop circulating to the nose. While the nose is pinched and compressed, lean forward and tilt the head forward. Tilting the head backwards allows blood to run back into the sinuses



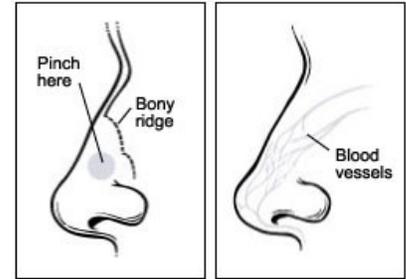
ADAM
<https://www.schoolhealth.com/blog/5-products-that-control-nosebleeds/>



Nosebleeds: Where They Come From and How to Treat Them (cont.)

and down the throat, which can cause inhalation or swallowing of blood and can irritate the stomach. Continue to pinch the nose for five to ten minutes, and repeat as necessary until the bleeding stops. Applying ice packs to the nose and cheeks can also aid in stopping blood flow.

Once the bleeding has stopped, it is important to prevent subsequent nosebleeds. This can be accomplished by avoiding blowing the nose and sneezing with an open mouth. This will reduce the pressure through the nose and prevent the membranes from reopening. Other tips include avoid hot beverages for 24 hours, keeping the head elevated, avoiding bending down and heavy lifting, and keeping the nasal membranes lubricated with ointment.



<http://www.ohentallergy.com/>

If re-bleeding occurs, forcefully blow out through the nose to clear the passages of any blood clots. Then, spray both nostrils with a nasal decongestant such as Afrin® or Mucinex Moisture Smart® to constrict the blood vessels. Consult a physician before using these products in children less than six years old. For children ages six through twelve, administer 2-3 sprays every 10-12 hours, without exceeding two doses in 24 hours. Note that these products are only indicated for short-term use, typically no more than three days in a row. After using the decongestant, resume pinching and leaning forward. Call a physician if nosebleeds occur frequently. The nasal blood vessel might require cauterization, where it is burned with an electric current, silver nitrate, or a laser. The nose can also be packed with a balloon to put pressure on the blood vessel and stop it from bleeding. If the nosebleed lasts more than 20 minutes, causes large blood loss, is accompanied by a fever or headache, or causes blurry vision, go to an emergency room as this could be from another medical issue.

Prevention Tips

Keep the house at a cooler temperature, especially in bedrooms

Use humidifiers in the home to keep moisture in the air and prevent the nose from becoming too dry

Use saline nasal sprays (Ocean® or another brand) and water soluble jellies (Vaseline® or Ayr®), especially in the winter months

Avoid picking the nose or blowing the nose vigorously

Do not strain to bend over or lift heavy objects

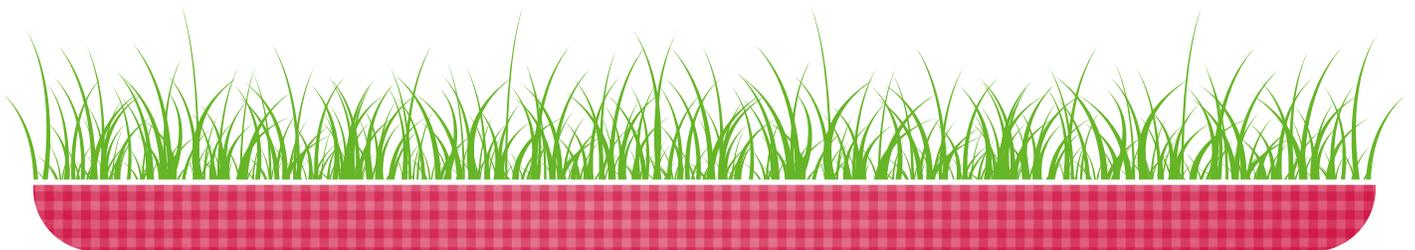
Chadha, Parveen Kumar. "Epistaxis." Slide Share. Other Other, 29 Sept. 2014. Web. 5 Jan. 2016.

Nosebleeds are very common, particularly in the upcoming cold winter months. It is important to remember to keep the nasal passages lubricated with saline nasal sprays or gels and avoid drastic changes in temperature to prevent a nosebleed from occurring. In the event that it does occur, follow the simple pinch and lean forward method to stop the bleed. Watch for signs of severe nosebleeds that warrant a trip to the emergency room. All other minor nosebleeds should subside shortly and can be completely controlled in the comfort of one's own home.

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Diaper Rash in Small Children: Causes and Treatment Options

Written By: Emily Murray, PharmD Candidate 2017

Type	Appearance	Cause/Comments
Diaper Related Rash		
Irritant Dermatitis	Red, inflamed skin	Most common type of rash, due to irritation from urine or feces
Yeast (Candida) Infection	Dark red areas of skin, may have yellow fluid-filled pustules, usually in skin folds	Due to untreated irritant dermatitis
Allergic Reaction	Itchy red, raised, scaly skin	Less common, often due to diaper or wipes
Non-Diaper Related Rash		
Seborrhea	Patches of redness and greasy yellow scaly skin often in the folds	
Atopic Dermatitis (eczema)	Signs of frequent scratching (scratch marks and scabs)	Uncommon
Bacterial Infection (Impetigo)	Tiny raised yellow fluid-filled areas and honey-colored crusted lesions, may be itchy and painful	See a healthcare provider
Psoriasis	Red and silver scaly patches	
Scabies	Intensely itchy, red, raised areas, also on abdomen	Caused by mites under the skin, often affects family members

<http://www.uptodate.com/contents/diaper-rash-in-infants-and-children-beyond-the-basics/>

Diaper rashes are a common childhood ailment that often manifest as bumps, redness and scaly patches that do not improve over two to three days and can make the baby irritable (Kassir, 2014). Parents are eager to find ways to combat their children's rashes quickly and effectively. It is common for children to have at least one diaper rash by the time they are toilet-trained and most frequently occur at nine to twelve months of age (Horri et. al., 2013).

Causes

Diaper rashes are divided into two different categories: diaper-related and non-diaper related rash. Rashes that are diaper related are often caused by irritation, a yeast infection, or an allergic reaction and may be more likely in children with diarrhea or on antibiotics. Rashes that are non-diaper related are often caused by skin conditions such as seborrhea, atopic dermatitis, bacterial infections, psoriasis, or scabies (Horri 2013).

Prevention and Counseling

Counseling patients on common practices is key to decreasing the likelihood of their child getting a diaper rash again (Horri, 2013).

A great mnemonic to help remember important counseling points for parents with children experiencing diaper rash is ABCDE:

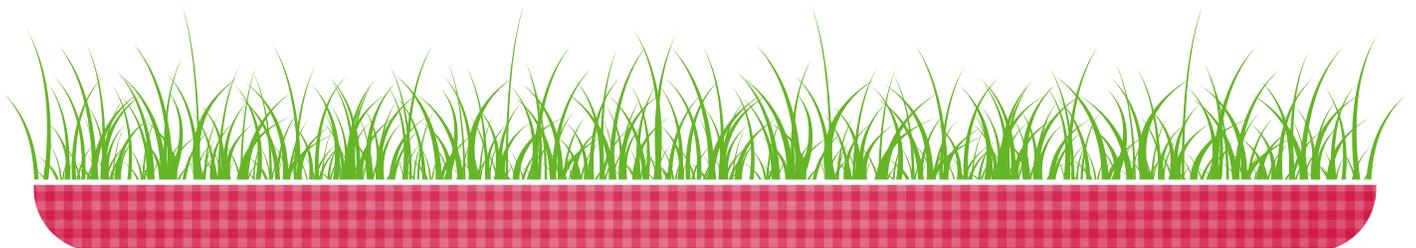
Air out the skin

Barrier of a paste or ointment to protect skin

Clean the skin

Disposable diapers in place of cloth during an episode of diaper rash

Educate on prevention



Diaper Rash in Small Children: Causes and Treatment Options (Cont.)

Treatment

As you can see, rashes result from a combination of many factors including moisture, friction, urine and feces, and the presence of microorganisms. Thus, treatment of diaper rashes is dependent upon the cause (Dib, 2014). We will focus here on the most common causes of diaper rashes.

Typical irritant contact dermatitis is typically asymptomatic and can be resolved within 3 days of changing diapering practices and without any medicinal intervention. If needed, however, it can be treated under the direction of a physician with a low-potency corticosteroid ointment or cream (1% hydrocortisone) twice a day for no longer than 1 week (Horri, 2013). While corticosteroids are available over-the-counter, it is important that parents use them only under the supervision of a physician as it can disrupt the body's adrenal hormone balance in small children resulting in a disease known as Cushing syndrome (Fisher, 1995).

Diaper rashes that result from yeast infections caused by *Candida* may be treated with topical ointments or creams, such as nystatin (Rx only), clotrimazole (Rx and OTC), miconazole (Rx and OTC), or ketoconazole (RX only) that are to be applied two to three times a day beneath a skin ointment until the rash is gone. Treatment is not recommended, however, without first consulting a doctor (Horri, 2013).

Bacterial diaper rashes (impetigo) should be evaluated by a physician and should not be self-treated with over-the-counter antibacterial creams as many children are allergic to the ingredients. The physician may decide to prescribe an antibiotic topical and/or oral medica-

tion (Horri, 2013).

Regardless of the aforementioned symptoms, a doctor should be contacted if the child develops the following: a fever >100°F, bloody stools, change in the pattern of wet/dirty diapers, worsening symptoms, a rash that does not improve in a few days, or if blisters or pus-filled sores develop (Horri, 2013).

With small changes in diapering practices, diaper rash can oftentimes be easily prevented. If diaper rash further develops, pharmacists can recommend appropriate treatment options to alleviate the irritation and discomfort associated with diaper rash.

Common Practices Counseling Points

DO	DON'T
<ul style="list-style-type: none">- Choose mild wipes; a soft, clean washcloth is a viable option- Pat dry- Use a barrier cream containing zinc oxide or petroleum jelly- Clean the skin gently and carefully- Change diapers frequently	<ul style="list-style-type: none">- Use wipes with fragrances or alcohol- Rub dry- Use baby powder as fine particles may cause breathing issues

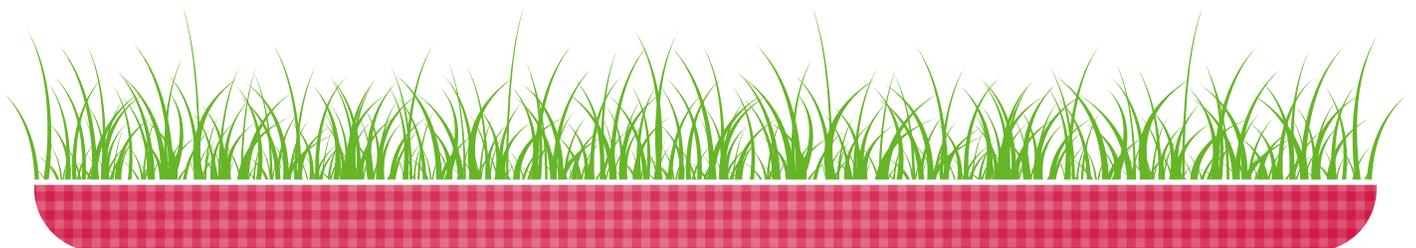
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Vitamin Supplementation in Children: The Hype About the “Vites”

Written By: Cayla Sinnemon, PharmD Candidate 2017

In the midst of cold and influenza season, many Americans ramp up their intake of daily vitamins, especially vitamin C, more than any time of the year. This is especially true of concerned parents who give their children daily vitamins to prevent them from catching a cold from other children at school. Other parents give their children daily vitamins with the intent of improving their overall health. While vitamins are necessary to maintain good health and normal body function, are they appropriate for children?

For years, parents have given their children high-dose vitamin supplements (megavitamin therapy) as an alternative to prescription medications to treat conditions ranging from mental retardation to attention deficit hyperactivity disorder (ADHD). Many parents give their children high doses of Vitamin C to prevent or treat a cold. However, there is no scientific evidence that concentrated vitamin administration treats any of these conditions or acute illnesses. In fact, high doses of Vitamin C may do more harm than good for children, resulting in headaches, gastrointestinal cramping, nausea, and diarrhea.¹

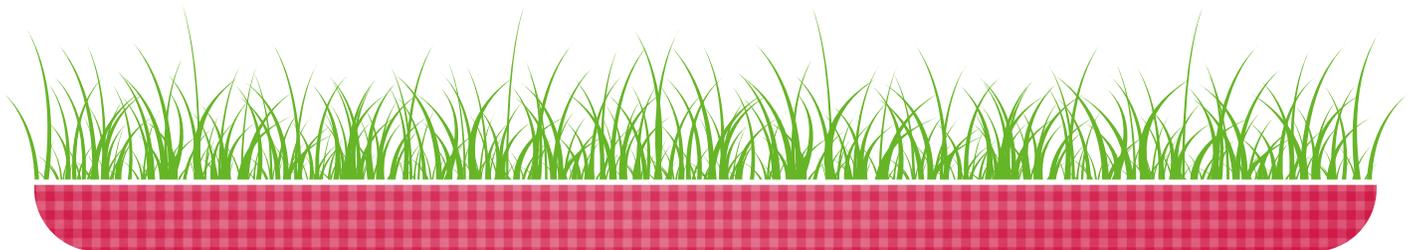
With the widely-dispersed knowledge of all the benefits vitamins provide to one’s health, several vitamins can have toxic effects in sufficiently high doses. This is especially true of the fat-soluble vitamins A, D, E, and K. When these vitamins are consumed, they are either used up or the excess is deposited in the liver and fatty tissue and, therefore, do not need to be consumed every day to maintain normal levels. When taken in excess, toxic effects can result, such as dry skin in Vitamin A overdose or liver damage in Vitamin K overdose.² See Figure 1 below for examples of vitamin-specific toxicities. These toxicities have the potential to be more deleterious in children. For example, parents could be giving their children adult doses of these vitamins, which build up to toxic levels due to their smaller body masses and differences in how their bodies process exogenous substances.

Most of these vitamins are sufficiently absorbed through diet alone. Excessive supplementation may put the levels above the upper tolerable limit, enhancing the toxic effects. As a result, the American Academy of Pediatrics (AAP) does not recommend vitamin supplementation in healthy children over 1 year of age.³ Supplementation may be used with caution in children who are underweight or suffer certain nutritional deficiencies under the supervision of a physician. Parents should focus on ensuring their children are eating a balanced diet rich in the vitamins and minerals (especially iron and calcium) they need, rather than supplementing with a daily multi-vitamin. Recommendations for achieving a balanced diet for all age groups can be found on MyPlate.gov

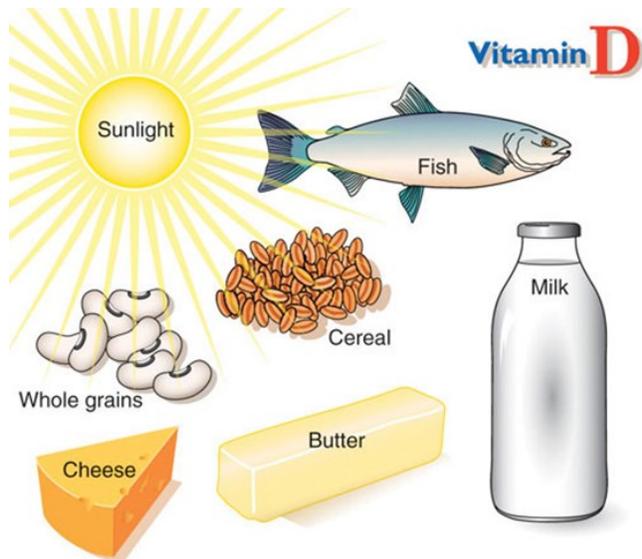
The AAP does recommend supplementing one vitamin in all children: Vitamin D. This vitamin is responsible for the formation of bones and teeth and the regulation of calcium absorption, and it is found in dairy products, fish oils, and egg yolks. See Figure 2 for major sources of Vitamin D. It is also made in the body if the skin is exposed to sunlight. The American Academy of Family Physicians reports that 12-24% of infants, children, and adolescents have a vitamin D deficiency.

Vitamin	Recommended Daily Allowance	Effects of Overdose
Water Soluble		
B1	1.5 mg (milligrams)	gastric upset and severe allergic reactions
B2	1.7 mg	none reported in humans
B3	20 mg	dizziness, nausea, staggering gait
B12	6 mcg (micrograms)	iron absorption affected
C	60 mg	nausea, diarrhea, kidney stones
Fat Soluble		
A	5000 IU (International Units)	headache, vomiting, hair loss, anemia, enlarged liver, birth defects, miscarriage
D	400 IU	nausea; vomiting; joint pain; calcification of heart, lungs, and kidneys; birth defects
E	30 IU	blood-clotting defects, acne, nausea, vomiting
K	80 mcg	hemolytic anemia, liver damage

<https://s-media-cache-ako.pinimg.com/originals/df/a5/bf/dfa5bf7d83a9d1d354118a15f47ac51b.jpg>



Vitamin Supplementation in Children: The Hype About the “Vites” (Cont.)



<http://www.dradianahoppe.com/does-vitamin-d3-decrease-breast-cancer-risk/>

This is likely due to a low intake of dairy and fish and insufficient exposure to sunlight. In addition to ensuring that children receive a balanced diet and spend a sufficient amount of time outside exercising, the AAP recommends that children over 2 months old receive 200 international units of vitamin D supplements daily. Breastfed infants require 400 international units of vitamin D daily since serum vitamin D concentrations are typically lower in these infants. This will prevent the development of rickets (soft, bowed legs and flattening of the back of the skull) due to insufficient bone formation. All children, infants, and adolescents should receive 400 international units of vitamin D daily from diet, supplements, or a combination of both. 10-15 minutes of direct sunlight daily is also recommended for children over 6 months.⁴ The AAP’s specific recommendations are listed in Figure 3 below.

Finally, parents who elect to give their child supplements must be aware of two things. First, parents should consult their child’s pediatrician before any supplements are given. This will help parents make the best decision regarding their child’s healthcare. Sec-

ondly, vitamins and supplements are not regulated by the US Food and Drug Administration. While the companies that manufacture these supplements must be registered by the FDA, their products do not have to be approved before they are manufactured and sold.⁵ The FDA only ensures that the company is not mislabeling its products. However, some manufacturers get their products approved by a third party, such as by the United States Pharmacopeia, which sets standards for product purity and quality.

Parents must research the products they intend to buy in order to ensure whether or not their products are examined for quality and purity, allowing them to make an informed decision.

While vitamins are crucial to maintaining optimal health, more is not necessarily better. Making the

decision to give a child a dietary supplement depends on a variety of factors. This decision is best made in

SORT: KEY RECOMMENDATIONS FOR PRACTICE

CLINICAL RECOMMENDATION	EVIDENCE RATING	REFERENCES	COMMENTS
Infants ingesting less than 1 L (33.8 fl oz) of formula per day, as well as all breastfed or partially breastfed infants, should receive 400 IU of supplemental vitamin D daily.	C	13, 19, 20	Based on disease-oriented evidence and expert opinion
Children and adolescents consuming less than 1 L of vitamin D–fortified milk per day should receive 400 IU of supplemental vitamin D daily.	C	21, 22	Based on disease-oriented evidence and case series
Limiting sunlight exposure may predispose children to vitamin D deficiency.	C	23, 25–27	Based on disease-oriented evidence and expert opinion
The best available biomarker of vitamin D status is serum 25-hydroxyvitamin D levels.	C	28, 29	Based on consensus and disease-oriented evidence
Children at increased risk of vitamin D deficiency may require higher dosages of supplemental vitamin D.	C	32–34	Based on disease-oriented evidence

<http://www.healthychildren.org/English/ages-stages/gradeschool/nutrition/Pages/Vitamin-Supplements-and-Children.aspx>



Vitamin Supplementation in Children: The Hype About the "Vites" (Cont.)

consultation with the child's pediatrician and by doing as much research on the particular supplement as possible. Pharmacists play a crucial role in educating parents on the appropriate use of supplements in children, as patients often rely on pharmacists' recommendations for various over-the-counter products, including vitamins. Pharmacists should encourage parents to

concentrate on ensuring their child is receiving a balanced diet and adequate exercise to ensure optimal health. This, in combination with an up-to-date vaccination schedule, is the best method of health maintenance and illness prevention throughout the year.

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Student Society of Pediatric Advocates

The Student Society of Pediatric Advocates is a student organization affiliated with the University of Georgia College of Pharmacy. We are a student group associated with the Pediatric Pharmacy Advocacy Group. The Mission of the SSPA is to bring awareness to the proper use of medication therapy in pediatric populations through various service and education-based initiatives. Service activities center around lending our medication-based knowledge to pediatric patients and their parents in our community. Educational activities are directed toward student members in an effort to safely and effectively extend pharmacy practice to pediatric populations by building relationships with mentors and professionals in the health care community, as well as supplementing didactic coursework with lectures by specialists and our peers. Overall, SSPA advocates for the safety and happiness of young patients while learning and having fun along the way.

