Thankful for Foster Parents

A foster mom brought a new child into the office the other day and I smiled picturing her with her last foster child. This thanksgiving, Two Peds in a Pod is grateful for the foster parents who open their homes for dinner today and everyday. Dr. Heather Forkey, Clinical Director of Foster Children Evaluation Service at UMass Children's Medical Center, provides a post on becoming a foster parent. –Dr. Lai with Dr. Kardos

There are approximately 400,000 children in the US foster care system, with 225,000 entering each year. Most of these children spend time with foster families who open their homes and lives to kids that need a safe nurturing environment while their own parents take the time to address issues which put

the child at risk. All types of people make great foster parents, but it is not for everyone. Foster parents must be able to meet the physical, emotional and developmental needs of a child or teen in partnership with community agencies, social workers, schools, and counselors.

If you are considering foster parenting, consider whether you can:

- Provide 24-hour care and supervision on a daily basis
- Be able to care for yourself financially without the child's stipend
- Be flexible, patient and understanding
- Have a sense of humor
- Recognize the impact of trauma
- Have a home free of fire and safety hazards
- Complete a criminal/protective services background check
- Have the ability to work as a member of a team

If interested, you need to become licensed or approved by your state or county, and that process is different in each locality. One should start by doing an internet search for "becoming a foster parent in (your state or county)". The child welfare agency for your state (Department of Children and Family Services or Department of Social Services) will also have information about how to start the process.

Children come to foster care often after adverse experiences which we know have health, emotional and developmental consequences. Foster parents who can look at the child's health and behavior from a perspective of "what happened to the child" rather than "what is wrong with the child", and observe a child's behavior through the trauma lens (and help foster and child welfare personnel to do the same) allow the child in their care to view their health and emotions as normal adaptations to unhealthy situations, rather than evidence of illness. This allows the child to go forward with a better understanding of their experience, their own

responses and, ultimately, foster health.

Heather C. Forkey, M.D.

Dr. Heather Forkey serves as the Clinical Director, Foster Children Evaluation Service (FaCES) and the Chief of the Child Protection Program at Mass Children's Medical Center

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What to do for your child's ear pain

"MY EAR HURTS!!!"

Most parents cannot diagnose their child's source of ear pain, especially in the middle of the night. Even I can't

diagnose my own children at home because my portable otoscope, the instrument used to examine ears, died from overuse several years ago. However, there are ways to treat ear pain **no matter what the cause**.

Good pain relievers such as acetaminophen (brand name Tylenol) or ibuprofen (brand names Advil and Motrin) treat pain from any source, including ear pain. Treating pain does not "mask" any physical exam findings so please go ahead and ease your child's misery before going to your child's doctor. I cringe when parents tell me, "We didn't give him any pain medicine because we wanted you to see how much his ear is hurting him."

Heat, in the form of warm wet compresses or a heating pad, can also help. Prop your child upright. If the pain is from an ear infection, the position will relieve pressure. Distraction such as a 2:00 am Elmo episode can also blunt pain.

Fewer than half of all patients seen in pediatric offices with ear pain, or "otalgia," actually have a classic middle ear infection. Sometimes kids with cold virus get ear pain that comes and goes, perhaps from the general congestion in their sinuses and nose. Pain can stem from many sources, including the outer part of the ear. Swimmer's ear, which is an outer ear infection, is treated differently than a middle ear "inside" infection. Nearby body parts can also produce pain. Throat infections (pharyngitis), from strep throat or viruses, often cause pain in the ears. Even pain from jaw joint strain and dental issues can show up as ear pain. Over the years I have sent several children straight from my office to the dentist's office for treatment of tooth ailments masquerading as ear pain.

No post on ear pain would be complete without addressing "ear tugging." Many babies by nine months of age discover their ears and then play with them simply because they stick out (I will leave to your imagination what baby boys tug on). Babies often tug on ears when they are tired. Therefore, tugging on

ears alone may not indicate an ear infection, especially if not coupled with other symptoms.

Although ear infections are one of the most common ailments of childhood, and most children have at least one ear infection by age three, remember that not all ear pain is caused by ear infections. In the middle of the night, and even in the middle of the day, it IS okay to give some pain relief before seeing your child's health care provider.

Why ear pain always seems to awaken a child in the middle of the night, I'll never know. All I know is that I have to remember to buy a new otoscope for home.

Julie Kardos, MD and Naline Lai, MD

Holiday gift ideas for children of all ages and stages

For those of you who plan ahead: It's gift-giving season! We love pop culture, but if you are tired of GameStop gift cards or feeling a bit overwhelmed by *Frozen*, *Star Wars* and *Minecraft* marketing, here's another list of ideas arranged by ages and developmental stages.

0-3 months: Babies this age have perfect hearing and enjoy looking at faces and objects with contrasting colors. Music, mobiles, and bright posters are some age appropriate gift ideas. Infants self-soothe themselves through sucking- if you can figure out what your nephew's favorite type of binkie is, wrap up a bunch-they are expensive and often mysteriously disappear.

3-6 months: Babies start to reach and grab at objects. They enjoy things big enough to hold onto and safe enough to put in their mouths- try bright colored teething rings and large plastic "keys." New cloth and vinyl books will likewise be appreciated; gnawed books don't make great hand-me-downs.

6-12 months: Around six months, babies begin to sit alone or sit propped. Intellectually, they begin to understand "cause and effect." Good choices of gifts include toys with large buttons that make things happen with light pressure. Toys which make sounds, play music, or cause Elmo to pop up will be a hit. For a nine-month-old old just starting to pull herself up to a standing position, a water or sand table will provide hours of entertainment in the upcoming year. Right now you can

bring winter inside if you fill the water table with a mound of snow. Buy some inexpensive measuring cups and later in the summer your toddler will enjoy standing outside splashing in the water.

12-18 months: This is the age kids learn to stand and walk. They enjoy things they can push while walking such as shopping carts or plastic lawn mowers. Include gifts which promote joint attention. Joint attention is the kind of attention a child shares with you during moments of mutual discovery. Joint attention starts at two months of age when you smile at your baby and your baby smiles back. Later, around 18 months, if you point at a dog in a book, she will look at the dog then look back at you and smile. Your child not only shows interest in the same object, but she acknowledges that you are both interested. Joint attention is thought to be important for social and emotional growth.

At 12 months your baby no longer needs to suck from a bottle or the breast for hydration. Although we don't believe mastery of a sippy cups is a necessary developmental milestone, Dr. Lai does admire the WOW cup because your child can drink from it like she does from a regular cup. Alternatively, you can give fun, colored actual traditional plastic cups, which difficult to break and encourage drinking from a real cup.

18-24 months: Although kids this age cannot pedal yet, they enjoy riding on toys such as "big wheels" "Fred Flintstone" style. Dexterous enough to drink out of a cup and use a spoon and fork, toddlers can always use another place setting. Toddlers are also able to manipulate shape sorters and toys where they put a plastic ball into the top and the ball goes down a short maze/slide. They also love containers to collect things, dump out, then collect again.

Yes, older toddlers are also dexterous enough to swipe an ipad, but be aware, electronics can be a double edged sword– the same device which plays karaoke music for your daddy-toddler sing-along can be transformed into a substitute parent. The other day, a toddler was frighted of my stethoscope in the office. Instead of smiling and demonstrating to her toddler how a stethoscope does not hurt, the

mother repeatedly tried to give her toddler her phone and told the child to watch a video. Fast forward a few years, and the mother will wonder why her kid fixates on her phone and does not look up at the family at the dinner table. Don’t train an addiction.

2-3 years: To encourage motor skills, offer tricycles, balls, bubbles, and boxes to crawl into and out of. Choose crayons over markers because crayons require a child to exert pressure and therefore develop hand strength. Dolls, cars, and sand boxes all foster imagination. Don’t forget those indestructible board books so kids can “read” to themselves. By now, the plastic squirting fish bath toys you bought your nephew when he was one are probably squirting out black specks of mold instead of water- get him a new set. Looking ahead, in the spring a three- year-old may start participating in team sports (although they often go the wrong way down the field) or in other classes such as dance or swimming lessons. Give your relatives the gift of a shin guards and soccer ball with a shirt. Offer to pay for swim lessons and package a gift certificate with a pair of goggles.

3-4 years: Now kids engage in elaborate imaginary play. They enjoy “dress up” clothes to create characters- super heroes, dancers, wizards, princesses, kings, queens, animals. Kids also enjoy props for their pretend play, such as plastic kitchen gadgets, magic wands, and building blocks. They become adept at pedaling tricycles or even riding small training-wheeled bikes. Other gift ideas include crayons, paint, markers, Play-doh®, or side-walk chalk. Children this age understand rules and turn-taking and can be taught simple card games such as “go fish,” “war,” and “matching.” Three-year-olds recognize colors but can’t read- so they can finally play the classic board game *Candyland*, and they can rote count in order to play the sequential numbers game *Chutes and Ladders*. Preschool kids now understand and execute the process of washing their hands independently… one problem… they can’t reach the faucets on the sink. A personalized, sturdy step stool will be appreciated for years.

5-year-olds: Since 5-year-olds can hop on one foot, games like Twister® will be fun. Kids this age start to understand time. In our

world of digital clocks, get your nephew an analog clock with numbers and a minute hand… they are hard to come by. Five-year-olds also begin to understand charts– a calendar will also cause delight. They can also work jigsaw puzzles with somewhat large pieces.

8-year-olds: Kids at this point should be able to perform self help skills such as teeth brushing. Help them out with stocking stuffers such as toothbrushes with timers. They also start to understand the value of money (here is one way to teach kids about money). The kids will appreciate gifts such as a real wallet or piggy bank. Eight-year-olds engage in rough and tumble play and can play outdoor games with rules. Think balls, balls, balls- soccer balls, kickballs, baseballs, tennis balls, footballs. Basic sports equipment of any sort will be a hit. Label makers will also appeal to this age group since they start to have a greater sense of ownership.

10-year-olds: Fine motor skills are quite developed and intricate arts and crafts such as weaving kits can be manipulated. Give a "cake making set" (no, not the plastic oven with a light bulb) with tubes of frosting and cake mix to bake over the winter break. Kids at this age love doodling on the long rolls of paper on our exam table. Get your kid a few rolls of banner paper to duplicate the fun. Buy two plastic recorders, one for you and one for your child, to play duets. The instrument is simple enough for ten-year-olds or forty-year-olds to learn on their own. Ten-year-olds value organization in their world and want to be more independent. Therefore, a watch makes a good gift at this age. And don't forget about books: reading skills are more advanced at this age. They can read chapter books or books about subjects of interest to them. In particular, kids at this age love a good joke or riddle book.

Tweens: Your child now has a longer attention span (30-40 minutes) so building projects such as K'nex models will be of interest to her. She can now also understand directions for performing magic tricks or making animal balloons. This is a time when group identity becomes more important. Sleepovers and scouting trips are common at this age so sleeping bags and camping tents make great gifts. Tweens value their privacy – consider a present of a journal with a lock or a

doorbell for her room.

Teens: If you look at factors which build a teen into a resilient adult, you will see that adult involvement in a child's life is important.
http://www.search-institute.org/research/developmental-assets

We know parents who jokingly say they renamed their teens "Door 1" and "Door 2," since they spend more time talking to their kids' bedroom doors than their kids. Create opportunities for one-on-one interaction by giving gifts such as a day of shopping with her aunt, tickets to a show with her uncle, or two hours at the rock climbing gym with dad.

Encourage physical activity. Sports equipment is always pricey for a teen to purchase- give the fancy sports bag he's been eying or give a gym membership. Cool techy trackers like Fitbit will always appreciated or treat your teen to moisture wicking work-out clothes.

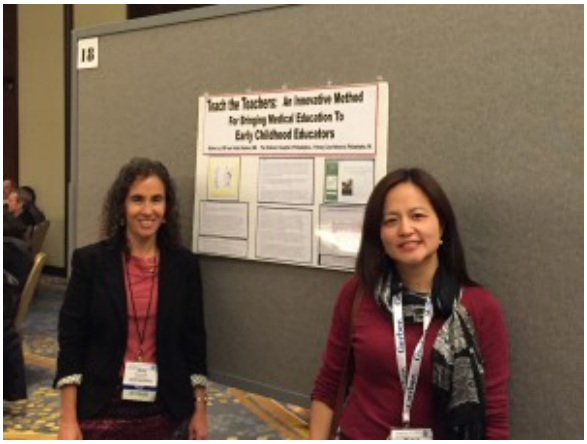
Sleep! Who doesn't need it, and teens often short change themselves on sleep and fall into poor sleep habits. Help a teen enjoy a comfortable night of rest and buy luxurious high thread count pillow cases, foam memory pillows, or even a new mattress. After all, it been nearly 20 years since you bought your teen a mattress and he probably wasn't old enough at the time to tell you if he was comfortable. Since a teen often goes to bed later than you do, a remote light control will be appreciated by all.

Adolescence is the age of abstract thinking and self awareness– Google "wall decals" and find a plethora of inexpensive ways to jazz up his or her room with inspiring quotes.

Enjoy your holiday shopping.

Naline Lai, MD and Julie Kardos, MD

How to talk to little kids- why doesn’t my kid listen to me?



Two peds in a pod presenting a poster at the 2015 AAP conference

We’re back from the 2015 American Academy of Pediatrics conference where there was a call for pediatricians to focus on ways to identify and prevent the effects of toxic stress on children. Research shows toxic stress is disruptive to the developing brain, and has lifelong health ramifications. So in the future, look for more posts on ways for you to help the children in your family and community embrace stress and promote resilience. To start off, we look to the wise words of the late Dr. Barry Ginsberg on how to talk to young children. Whether you are discussing a dinner clean-up or tackling a complex issue such as an impending divorce, keep in mind that talking to a young child is not the same as talking to a “little adult.”

Julie Kardos, MD and Naline Lai, MD

When children are young, it's important to be receptive to what we call teachable moments. Be prepared to respond when you perceive that your child is ready and then follow your child's lead. Here's such a moment:

Johnny, age three, asks Sam, his dad, "Why do I have to go to day care?"

Sam could explain that it's important to be with other children, or that he has to go to work. But instead, he realizes that he first needs to respond to Johnny's feelings. So he says, "You're not happy about going."

Johnny says, "Yes, I want to be with you."

"It makes me feel good that you want to be with me," Sam says, going to a positive feeling first. Then, he refers to his own feelings by saying, "That's important to me, too."

Only after Sam says this does he become specific and answer Johnny's question with facts: "It's important to go to day care because I feel better knowing where you are and that you are safe when I'm at work."

This was a teachable moment. Sam paid attention to Johnny's feelings, acknowledged both their feelings, and offered a reasonable explanation. This demonstrates Sam's respect for his son. As a result, Johnny truly "heard" his father.

When talking with young children, keep the following in mind:

1. Young children express themselves mostly through play.
2. Play is how they go about understanding their world and experiences.
3. Letting a young child lead you in play helps you understand the child better.
4. It may be hard to get a young child to let you know that

she understands you. Forcing her to respond may be threatening to her and frustrating for you.
5. Even though children may not seem to be showing you that they understand, they probably do.
6. Keep your comments short and simple. As much as possible, try to phrase things in children's terms, let them know you understand their feelings and use your feelings when you want to let them know what you want. For example, "You'd like to keep playing but I'm unhappy that the toys aren't picked up," and "The rule is that toys are put away before dinner."
7. If you want children to understand or do something, you need to be patient; repeat it a few times; gently convey through your movements what you want; and try not to act out of your frustration.
8. Try to be consistent, and have clear rules and expectations.
9. Pay attention to children's feelings when talking to them.

Read these nine suggestions over a few times. It takes a little practice to use them consistently. Be patient with yourself. You'll get it after a while.

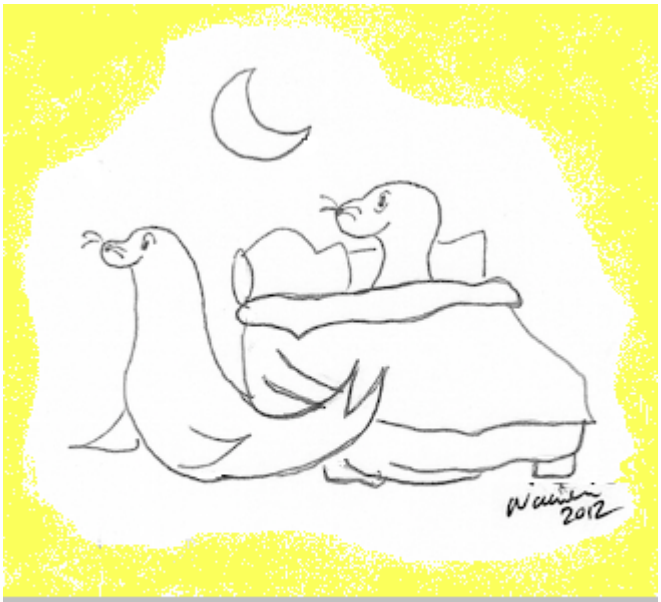
Barry G. Ginsberg, PhD, ABPP, CFLE
Posted with permission from 50 Wonderful ways to be a Single-Parent Family. Child psychologist Dr. Barry Ginsberg served as a beloved child and family psychologist in Bucks County, PA since 1969 until his recent death.

To learn more about the American Academy of Pediatrics resilience project: Theresilienceproject

For a set of skills, experiences, relationships, and behaviors that enable young people to develop into successful and contributing adults: The Search Institute

Croup’s cropping up

We can tell from this past week at the office that ***croup*** *season has started. DON’T PANIC! Read on to learn what to look for. Please also listen to our podcast on this same subject. Dr. Lai heard one mom say that she listened to the podcast three times in one night…nights with croup can be very long indeed.*



You wake up in the middle of the night to the sound of a seal barking…inside your house. More specifically, from inside a crib or toddler bed. Unless you actually have a pet seal, that sound is likely the sound of your child with croup.

“Croup” is the lay term for any viral illness causing swelling of the voice box (larynx) which produces a seal-like cough. The actual medical term is “laryngotracheobronchitis.” In adults, the same viruses may cause laryngitis and hoarseness, but minimal cough. In children the narrowest part of a child’s airway is his voice box. So not only does the child with croup sound hoarse when he talks and cries, but since he breathes through a much narrower opening, when he forces air out with a cough, he will sound like a barking seal. When a kid with croup breathes in, he may produce a weird guttural noise, called “stridor.”

Many viruses cause croup, including flu (influenza) viruses.

Therefore, a flu vaccine can protect against croup. While no antibiotic or other medicine can kill the croup causing viruses, here are some ways to help your child feel better.

What to do when your child has croup:

Stay calm. The noisy breathing and barky cough frighten children and their parents alike. It's easier for the child to breathe when he is calm rather than anxious and crying. So, even if you are scared, try to act calmly since children take their cues from their parents.

Try steam. Run the shower high and hot, close the bathroom door and sit down on the bathroom rug with your child and sing a song or read a book or just rock him gently. The steam in the bathroom can help shrink the swelling in your child's voice box and calm his breathing.

Go outside. For some reason, cool air also helps croup. The more misty the better. In fact, many a parent in the middle of the night has herded their barking, noisy breathing child outside and into the cold car (with windows slightly cracked open) to drive to the hospital. Once in the emergency room, the parents are surprised to find a happily sleeping, or wide awake, chatty child, "cured" by the cold night ride.

Run a humidifier. A cool-mist humidifier running in your child's room will also help. Make her room feel like a rain forest, or the weather on a really bad hair day, and often the croupy cough will subside. Cool-mist humidifiers in the child's room are safer than hot air vaporizers because vaporizers pose a burn risk. It's the mist that helps, not the temperature of the mist.

Offer ibuprofen or acetaminophen. Your child may cough, and then cry, because her throat is sore. Pain relief will make her more comfortable and allow her to get back to sleep.

Who needs further treatment?

Most kids, more than 95%, who come down with croup, get better

on their own at home. Typically, croup causes up to three nights of misery punctuated by trips into the cold night air or steam treatments. During the day, kids can seem quite well, with perhaps a slightly hoarse voice as the only reminder of the night's tribulations. Why croup is worse at night and much better during the daytime hours remains a medical mystery. One theory is, just like ankles swell after one is upright all day, swelling in the voice box increases when people lie down. After the three nights, your child usually just exhibits typical cold symptoms with runny nose, a regular sounding cough, watery eyes, and a possible ear infection at the end. Then brace yourself for next time—kids predisposed to croup tend to get croup the next time a croup causing virus blows into town. But take heart, most kids outgrow the disposition for croup around six years of age.

Some kids do develop severe breathing difficulties. If your child shows any of these symptoms, get emergency medical care:

Turns pale or blue with coughing. Turning red in the face with coughing is not as dangerous.

Seems unable to swallow/unable to stop drooling.

Breathing fails to improve after steam, cool air, humidity, or **breathing seems labored**– nostrils flare with every breath or chest heaves with every breath—pull up their night shirts to check for this. See this link for an example of labored breathing.

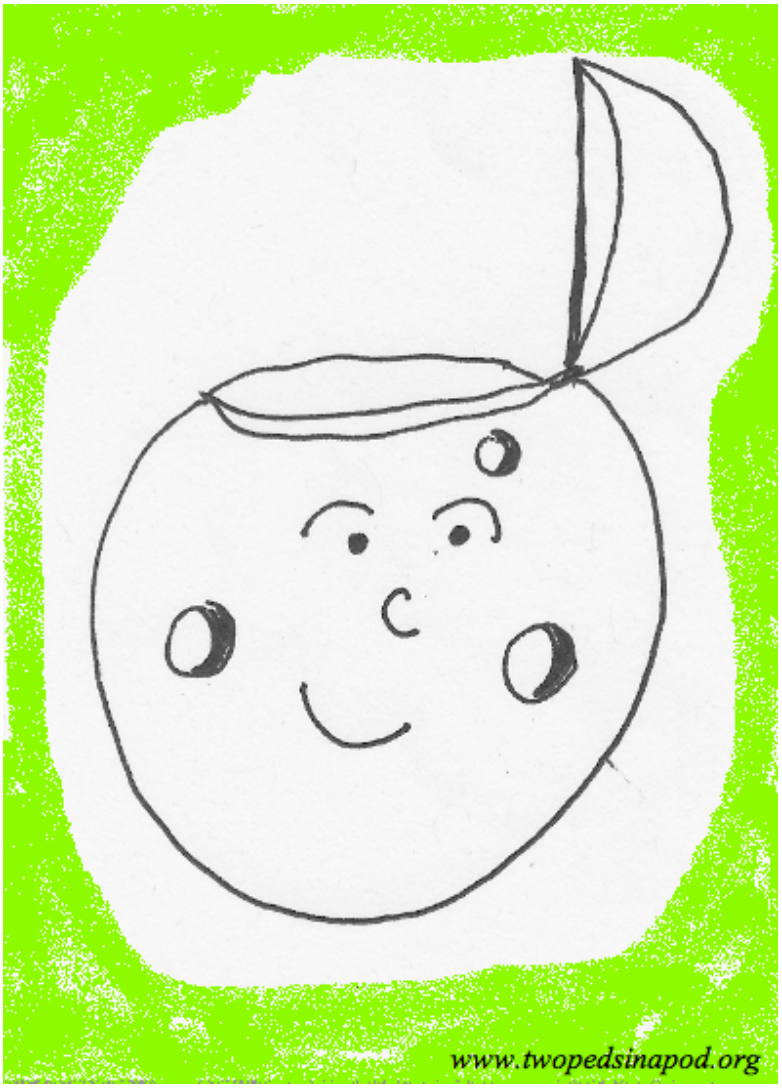
Mental state is altered: your child does not recognize you or becomes inconsolable.

Child is **unimmunized** and has a **high fever and drooling** along with his croup symptoms: he may not have croup but rather epiglottitis, most commonly caused by a vaccine-preventable bacteria. This is a different, more severe illness that can be fatal and requires airway management as well as antibiotics in a hospital.

We searched the internet for a good example of what the “seal bark” cough of croup. The best imitation we found is actually the sound of a sea lion. We will have to ask a veterinarian sometime if seals and sea lions get croup. If so, what do they sound like?

Julie Kardos, MD and Naline Lai, MD

Sinus infection or a cold?



Holes in your head – sinus infections

You have a hole in your head.
Actually, you have several.
You, your children, and everyone else.

These dratted air pockets in your skull can fill with pus and cause sinus infections. Scientists hypothesize they once helped us equilibrate in water while swimming. Now, sinuses seem only to cause headaches.

Sinuses are wedged in your cheek bones (maxillary sinuses), behind your nose (ethmoid sinuses) and in the bones over your forehead (frontal sinuses). When your child has a cold or allergies, fluid can build up in the sinuses. Normally, the sinuses drain into the back of your nose. If your child's sinuses don't drain because of unlucky anatomy, the sludge from her cold may become superinfected with bacteria and becomes too thick to move. Subsequently, pressure builds up in her sinuses and causes pain. A sinus infection of the frontal sinuses manifests itself as pressure over the forehead. The pain is exacerbated when she bends her head forward because the fluid sloshes around in the sinuses. Since frontal sinuses do not fully develop until around ten years old, young children escape frontal sinus infections.

Another sign of infection is the increased urge to brush the top row of teeth because the roots of the teeth protrude near the maxillary sinuses. Kids with sinusitis sometimes complain that their teeth hurt. Bad breath caused by bacterial infested post nasal drip can also be a sign. Occasionally kids with sinus infections develop swelling above or below the eyes, giving a puffy look to their faces.

The nasal discharge associated with bacterial sinus infections can be green/yellow and gooey. However, nasal drainage from a cold virus is often green/yellow and gooey as well. If your child has green boogies on the third or fourth day of a cold, does not have a fever, and is comfortable, have patience. The color should revert to clear. However, if the cold continues past ten days, studies have shown that a large percentage of the nasal secretions have developed into a

bacterial sinus infection. To further confuse things for parents: a child can have a really yucky thick green/yellow runny nose and have “just a cold” or they can have clear secretions and have a sinus infection. In this case, the duration of symptoms is a clue to whether your child’s runny nose is from a cold or from a sinus infection.

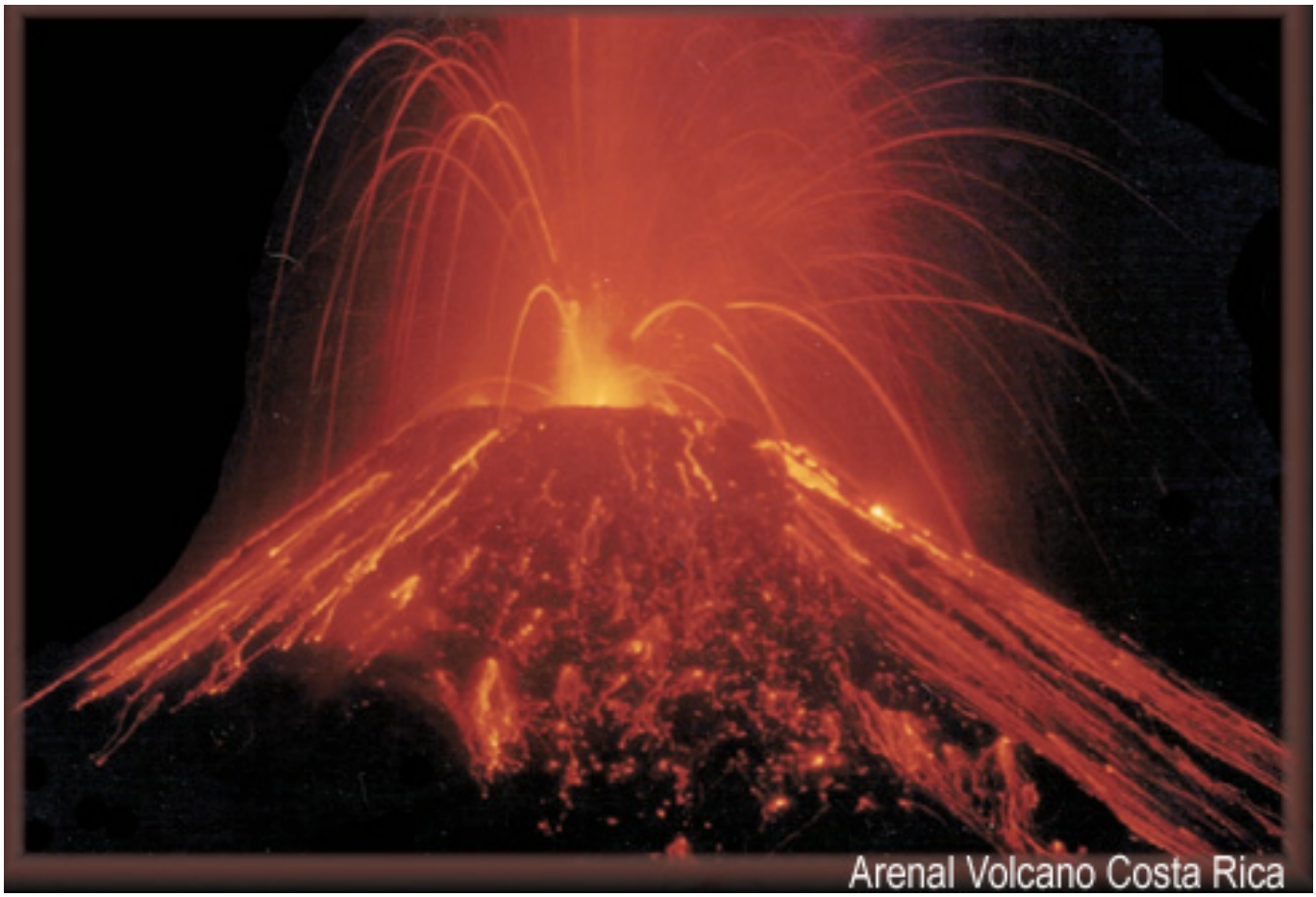
Because toddlers in group childcare often have back-to-back colds, it may seem as if he constantly has a bacterial sinus infection. However, if there is a break in symptoms, even for one day, it is a sign that a cold has ended, and the new runny nose represents a new cold virus. Pediatric trivia: the average young child gets 8-10 colds per year, and colds last up to 10-14 days, sometimes even as long as three weeks. However, a cold seems better after 10 days even if some cough or mild nasal congestion lingers. Sinusitis is the cold that seems WORSE after ten days.

Hydrate your child well when she has a sinus infection. Your child’s body will use the liquid to dilute some of the goo and the thinner goo will be easier for her body to drain. Since sinus infections are caused by bacteria, your pediatrician may recommend an antibiotic. The usual duration of the medicine is ten days, but for chronic sinus infections, two to four weeks may be necessary. Misnamed, “sinus washes” do not penetrate deep into the sinuses; however, they can give relief by mobilizing nasal secretions. When using a wash, ask the pharmacist for one with a low flow. Although the over the counter cold and sinus medicines claim to offer relief, they may have more side effects than good effects. Avoid using them in young children and infants. One safe and reliable way to soothe the nasal stuffiness of a sinus infection is to use simple saline nasal spray as often as needed.

Who knows. Someday we’ll discover a purpose to having gooey pockets in our skulls. In the meantime, you can tease your children about the holes in their heads.

Naline Lai, MD and Julie Kardos, MD

How to treat your vomiting child



“Mommy, I throwed up.”

Few words are more dreadful for parents to hear, especially at 2:00am (my children’s usual time to start with a stomach bug). In my house, I am the parent who, after the vomiting, comforts, changes pajamas and sheets, washes hands and face, and sprays the disinfectant. My husband scrubs (and scrubs, and scrubs) the rug. Little kids never throw up neatly into a toilet or into the garbage can. Sometimes even big kids can’t seem to manage to throw up conveniently.

What should you do when you have a vomiting child?

After you finish cleaning your child and her immediate environment, I suggest that you CHANGE YOUR OWN CLOTHES AND WASH YOUR HANDS! The most common cause of vomiting in kids is a stomach virus, and there are so many strains, we do not develop immunity to all of them. And trust me,

stomach viruses are extremely contagious and often spread through entire households in a matter of hours. Rotavirus, a particularly nasty strain of stomach virus, is preventable by vaccine, but only young babies can get the vaccine. The rest of us are left to fend for ourselves.

Stomach viruses usually cause several episodes of vomiting and conclude within 6-8 hours. Concurrently or very soon thereafter, the virus makes an exit out the other end in the form of diarrhea, which can last a week or so.

A hint to get through a long night: If your kid is too young to vomit into the nearest trash can, make a nice nest for her with many towels on the bathroom floor. For the older kids, put layers of towels on the pillow.

The biggest problem children face when vomiting is dehydration.

Kids need to replace fluids lost from vomiting. Pedialyte® or other oral rehydration solutions (ORS) such as Kaolectrolyte® or CeraLyte® are useful and well tolerated beverages for rehydrating kids. They contain salt, sugar, electrolytes and water, all substances that kids need when they throw up and have diarrhea.

For babies however, try to “feed through” with breast milk or formula unless otherwise directed by your child’s doctor.

Most oral rehydration guidelines are based on diarrheal illnesses such as cholera, so you will find slight variations on how to rehydrate. Basically, they all say to offer small frequent amounts of liquid. I council parents to wait until no throwing up occurs for 45 minutes to an hour and then start offering very small amounts of an ORS (we’re talking spoonfuls rather than ounces) until it seems that the vomiting has subsided.

In her house, Dr. Lai uses the two vomit rule: her kids go back to bed after the first vomit and she hopes it

doesn’t occur again. If vomiting occurs a second time, she starts to rehydrate.

Continue to offer more fluids until your child urinates- this is a sign that her body is not dangerously dehydrated. Refusing to drink? Children of all ages do better with straws, and you’d be surprised how much you can get in with a medicine syringe (available at pharmacies).

Can’t immediately get out to the store?

The World Health Organization has recommended home based oral rehydration solutions for years in third world countries. Also, while the oral rehydration solutions are ideal, any fluid is better than none for the first hours of a stomach bug. You can give older kids watered down clear juices, broth or flat ginger-ale with lots of ice. Now, some kids hate the taste of Pedialyte®. Plain, unflavored Pedialyte® splashed with juice often goes down better than the flavored varieties. For some reason, plain water tends to increase nausea in sick kids and copious amounts of plain water can lower the salt in a child’s bloodstream. So, offer a fluid other than plain water while your child is vomiting.

Even if your child drinks the Pedialyte®, once the stomach symptoms have subsided, don’t forget that Pedialyte®, while excellent at “filling the tank,” has no nutrition. The gut needs nutrition to overcome illness. Start to offer small amounts of food at this point. Easy-to-digest foods include complex carbohydrates such as rice, noodles, toast with jelly, dry cereal, crackers, and pretzels. Additionally, give protein such as bits of turkey or baked chicken or tofu.

Thicker fluids such as milk and orange juice do not sit as well in upset bellies, nor do large quantities of anything, food or drink. So offer small bits of nutrition

fairly frequently and let kids eat as their appetite dictates. Warning- just when everything blows over, toddlers in particular may go a day without vomiting, then vomit one more time as a last hurrah.

Vomiting from stomach viruses typically does not cause severe pain.

A child curled up whimpering (or yelling) on the floor with belly pain might have something more serious such as appendicitis, kidney stones, or a urinary tract infection. Call your child's doctor about your child's vomiting if you see any of the following:

- Blood in vomit or in stools
- Severe pain accompanying vomiting (belly pain, headache pain, back pain, etc.)
- No urine in more than 6 hours from the time the vomiting started (dehydration)
- Change in mental state of your child- not responding to you appropriately or inconsolable
- Vomit is yellow/green
- More fluid is going out than going in
- Illness not showing signs of letting up
- Lips and mouth are dry or eyes sunken in
- Your own gut tells you that something more is wrong with your child

Of course, when in doubt, call your child's doctor .

Hope this post wasn't too much to stomach!

Julie Kardos, MD and Naline Lai, MD

Getting back to basics: How do vaccines work?

Recent comments by politicians have brought vaccines back into the public eye. In this post, we get down to basics.

Did you ever wonder how a vaccine works?

To understand how vaccines work, I will give you a brief lesson on the immune system. Trust me, it is interesting. Let me give you an example of me. When I was eight, I had chicken pox. It was a miserable week. I started out with fever and headache, then suffered days of intense body itching from blister-like spots, and ultimately, because I scratched off some scabs, ended up with scars. During this time, my immune system cells worked to battle off the chicken pox virus. Immune cells called memory cells also formed. These cells have the unique job of remembering (hence the name “memory cells”)

what the chicken pox virus looks like. Then, if ever in my life I was to contact chicken pox again, my memory cells could multiply and fight off the virus WITHOUT MY HAVING TO GET SICK AGAIN WITH CHICKEN POX. So after I recovered, I was able to play with my neighbor even while he suffered with chicken pox. I returned to school where other children in my class had chicken pox, but I did not catch chicken pox again. Even now, as a pediatrician, I don't fear for my own safety when I diagnose a child with chicken pox, because I know I am immune to the disease.

This is an amazing feat, when you think about it.

So enter vaccines. A vaccine contains some material that really closely resembles the actual disease you will protect yourself against. Today's chicken pox vaccine contains an altered form of chicken pox that is close to but not actually the real thing. However, it is so similar to the real thing that your body's immune system believes it is, in fact, real chicken pox. Just as in the real disease, your body mounts an immune response, and makes memory cells that will remember what the disease looks like. So, if you are exposed to another person with chicken pox, your body will kill off the virus but YOU DON'T GET SICK WITH THE CHICKEN POX. What a beautiful system! Rather than thinking about a vaccine as a foreign substance, think of it as a substance that is able to strengthen your body's natural immune system.

Before chicken pox vaccine, about 100 children per year in the US died from complications of chicken pox disease. Many thousands were hospitalized with pneumonia, skin infections, and even brain damage (encephalitis) from chicken pox disease. Now a small injection into the arm can prevent a disease by creating the same kind of immunity that you would have generated from having the disease, only now you have one second of pain from the injection instead of a week of misery and possible permanent disability or death. I call that a Great Deal!

I used the example of chicken pox because the vaccine was invented during my own lifetime. However, I could have used the example of polio, which, prior to its vaccine development in 1955, paralyzed 10,000 children per year in the United States, or measles, which infected 4 million children per year and killed 3000 per year in the United States before doctors began to give children a vaccine against measles in 1963.

All vaccines operate by this principle: create a safe environment for your immune system to make memory cells against a potentially deadly disease. Then when you are exposed to someone who actually has the disease, you will not "catch" it. Your body will fight the germs, but you do not become sick. If everyone in the world were vaccinated, then the disease itself would eventually be completely eradicated. Even if MOST people were vaccinated, this disease eradication can occur, because the majority of immunized people protect the few who are too young or too ill to receive vaccines themselves. This happened with small pox, a disease that killed 50 percent of infected people. There is no longer small pox because nearly everyone on earth received the small pox vaccine. Now we do not need to give small pox vaccine because the disease no longer exists. This is a huge vaccine success story.

Friedrich Nietzsche said "What doesn't kill us makes us stronger." We pediatricians feel this is unacceptable risk for children. We would rather see your child vaccinated against a disease in order to become immune rather than risking the actual disease in order to become immune. The vaccines that we give children protect against diseases that can cause serious, lifelong disability or death.

Hopefully this blog post answers your questions about how vaccines work. For more details or more in-depth explanations, I refer you to the AAP (American Academy of Pediatrics) website www.aap.org, the Immunization Action Coalition, Children's Hospital of Philadelphia's Vaccine

Education Center, and the book *Vaccines: What You Should Know*, by pediatricians Dr. Paul Offit and Dr. Louis Bell.

Julie Kardos, MD and Naline Lai, MD

For more information about vaccines, please see our prior posts: Should I vaccinate my child?, Closure: there is no link between the MMR vaccine and autism, Fact or Fiction: a flu vaccine quiz for all teachers, babysitters, parents, and anyone else who breathes on children, Do vaccines cause autism?, Measles outbreak: would you recognize measles in your child?, A vaccine parable , and Are my teen's vaccines up to date?

Does my baby have GERD or spit-up?

Baby spew doesn't always require reflux medications

In our office, two-month-old Max smiles ear to ear, naked except for a diaper and a bib. His worried mom asks me about the large amounts of spit up Max spews forth daily. "He spits up after every feeding. It seems like everything he eats just comes back up. It even comes out of his nose!" she says. Max gained the expected amount of weight, an average of one ounce per day, since his one-month check-up. He breastfeeds well and accepts an occasional bottle from his dad. Even after spitting up and drenching everything around him, he remains comfortable and cheerful. He is well hydrated, urinates often, and poops normally.

In short, Max is a "happy spitter" Other than creating piles of laundry, he acts like any healthy baby.

Contrast this to two-month-old "Mona." She also spits up frequently. Sometimes it's right after a feed and sometimes an hour later. She seems hungry, yet she'll cry, arch her back, and pull off the nipple while feeding. She cries before and after spitting up. Her weight gain is not so good– she averaged one-half ounce of gain per day since her one-month visit. She seems more comfortable when upright and more cranky lying down.
Mona is **not** a "happy spitter."
Last story and then the lesson:
"Chloe" is a two-month-old baby who cries. Often. Loudly. Although most of the wailing occurs in the late afternoon and early evening, she also cries other times. She eats great and in fact, seems very happy while she feeds. She smiles at her parents mainly in the morning. She also smiles at her ceiling fan and the desk lamp. Movement calms her and her parents worry that she spends excessive time rocking in their arms or in her swing. Her cries pierce through walls and make her parents feel helpless. She often spits up during crying jags, and erupts with gas. She gained weight well since her last visit.
Here's the lesson:

All babies cry. All babies pee and poop. All babies sleep (at times). AND: all babies spit up. The muscle in the lower esophagus that keeps our food and drink down in our stomachs and prevents it from sloshing upwards, called the “lower esophageal sphincter,” is loose in all babies. The muscle naturally tightens up and becomes more effective over the first year of life, which is why younger babies tend to spit up more than older babies.
Max has **GER (**gastroesophageal reflux) , Chloe has **GER/ colic** and Mona has **GERD (**gastroesophageal reflux disease)**.** Max and Chloe have physiologic, or normal, reflux. Mona has reflux that interferes with her mood, her feedings, and her growth.

GER, GERD **and** colic (excessive crying in an otherwise healthy baby) improve by three to four months of age. If your baby cries often (enough to make you cry as well) then you should see your baby’s pediatrician to help determine the cause. It helps, before your visit, to think about when the crying occurs (with feedings? At certain times of the day?), what soothes the crying (feeding? walking/rocking?) and other symptoms that accompany the crying such as spitting up, fever, or coughing. Keeping a three day diary for trends can help pinpoint a diagnosis. We worry a lot when the babies are not “spitting up” but are actually “vomiting.” Spit blobs onto the ground. Vomit shoots to the ground. Vomit which is yellow, is accompanied by a hard stomach, is painful, is forceful (think Exorcist), or enough to cause dehydration, all may be signs of blockage in the belly such as pyloric stenosis or vovulus. Seek medical attention immediately.

The treatment for Max, the happy spitter with GER? Lots of bibs for baby and extra shirts for his parents.

Treatment for Chloe, the crier? Patience and tincture of time. You can’t spoil a young baby, so hold, rock and sway with her to keep her calm. Enlist a baby sitter or grandparents to help.

The treatment for Mona, the baby with GERD? **Small, frequent feedings** to prevent overload of her stomach, **adding cereal any bottle feeds** to help thicken the milk and weigh down the liquid, thus preventing some of the spit up (ask your doctor if this is appropriate for your baby), and **holding her upright** after feeds for 15-20 minutes. Physicians **no longer advocate** inclining the crib. To prevent Sudden Infant death Syndrome, she should still be placed on her back to sleep on a flat, firm surface. Sometimes, pediatricians prescribe medication that decreases the acid content of the stomach to help relieve the pain of stomach contents refluxing into the esophagus.

Treatment for parents? Knowing that someday your baby will grow up, no longer need a bib, and probably have a baby who spits up too.

Julie Kardos, MD with Naline Lai, MD

Tender red dots- spotted in the summer

What is it? Pictured below are the toes of one of my best friend’s toddler. She is happy, has no fever, and plays nearly everyday in the neighborhood pool. The round shiny pink bumps and dots on her toes appeared yesterday morning and haven’t changed much in a day. They don’t seem to bother her very much… answer below.

It’s Swimming pool pulpitis- a fancy word for a reaction of the pulp (the meaty tip) of fingers or toes. Mostly seen on the finger tips, the pulpitis is usually caused by irritation of the fingers by the rough side of the swimming pool as kids pull themselves in and out. Kids are sometimes annoyed by the dots, but they go away on their own as soon as the kids decide to use the ladder. In this case, this little swimmer irritated her toes, not her fingers, while “monkey walking” along the side of the swimming pool in the water.

Naline Lai, MD with Julie Kardos, MD