

Got little kids? One must-have number to put in your phone: Poison Control



The number to put in your phone when you have little ones? Poison Control: **1-800-222-1222**. Text "POISON" TO 797979 to save the contact information in your smartphone.

Did your toddler eat dog poop? Or a berry from your backyard bush? Did you give the wrong medication to your child? **Call Poison Control.**

Experts at Poison Control will direct your next step. They have access to extensive data on poisoning, and they can give you that information much quicker than a drug-manufacturer or pharmacist or even your own doctor. **The call is free.**

One of Dr. Lai's kids ate a mushroom from the yard when she was 20 months old—she called Poison Control. A mom asked Dr. Lai about carbon monoxide exposure—she called Poison Control.

If doctors have a question about any ingestion or poisoning—we call Poison Control. But don't wait for us to call, go ahead yourself and call.

People often jump first to the internet for information. However, a small 2013 study found that the internet is NOT the best place to research questions about toxins. Many sites fail to direct readers to the Poison Control Center, and those who do, fail to supply the proper phone number – again, that's **1-800-222-1222**. If you do want to use the internet, use www.PoisonHelp.org which is a product of the American Association of Poison Control Centers

If your child needs emergent treatment, surfing the internet for what to do next wastes precious time. Don't reach for your phone to "google it." In the case of a possible poisoning, reach for your phone and make a CALL.

It could be life-saving.

Julie Kardos, MD and Naline Lai, MD

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Pediatric tidbits-probiotics, sport burnout and more



In front of “The Bean” in Chicago

We’re back from the American Academy of Pediatrics National Conference and Exhibition in Chicago—sharing with you some tidbits from the forefront of pediatrics:

New high blood pressure guidelines are here. Starting at age 3 years, children should have their blood pressure checked annually, more often if they have certain medical conditions such as diabetes or kidney disease. The cutoff for “high blood pressure” has been lowered so more and more, you may notice your pediatrician scrutinizing your child’s blood pressure.

We’ve noticed many more over-use injuries from kids who play the same sport year round. We were reminded that most professional athletes played multiple sports in high school and some even up through college. Specialization in a particular sport leads to more injuries, burnout, depression, and anxiety. If you feel that sports rule your child’s life,

remember this good rule of thumb: for high school kids, keep training under 16 hours a week. For the younger kids, keep the total number of hours per week playing organized sports under an hour per week for each year of age. For example, an 8 year old should spend no more than 8 hours per week playing organized sports.

Probiotics are ubiquitous these days, but are they helpful? In viral diarrhea, probiotics can be mildly helpful, and may shorten the duration of diarrhea by about a day. Probiotic therapy is showing promise for treating colic, but not for treating eczema. For more information see the International Scientific Association of Probiotics and Prebiotics.

If your child scalds himself, put the burn under COLD running tap water for *20 minutes* to stop further injury. This treatment is effective for up to 3 hours after a burn.

A cautionary word about herbs: Know that herbs are not regulated by the FDA (Food and Drug Administration). Companies that supply herbs are under no obligation to show that the product works. Additionally, the company that sells the herb does not have to show that the herb is safe or effective, and cannot claim that the product can cure or prevent anything. Additionally there are no manufacturing standards to adhere to, which means you do not know how much herb or for that matter, any other contaminants, are in the herbs that you buy.

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Cell phones, routers and electromagnetic radiation



At college drop off last week, my husband noticed an object that looked suspiciously like a router in our kid's dorm room. Vaguely aware that routers emit some sort of radiation, I turned to environmental medicine expert Dr. Alan Woolf for information, here is what he shared:

Q: My daughter has a wireless router within 2 feet of where she sleeps. Is this a problem?

A: The answer to the question is unfortunately not a straightforward 'no problem'. Routers are one of a number of devices, including tablets, cell phones, and cell towers, that give off electromagnetic radiation (EMR) or radiofrequency radiation (RFR). In 2013 more than 6.8 billion mobile phones were registered.

Animal studies of EMR/RFR shows some biological effects, but it is uncertain whether these are applicable to humans. Human studies (and there have been many) have been either inconclusive or negative and are frequently confounded by problems with their design. However one well-controlled, blinded 2015 study of 31 adult females (average age: 26 years) holding 3G mobile phones near their heads for 15 minutes showed evidence of changes in their brain waves on EEG. Whether these changes were long-lasting or of any health import are unanswered questions. The International Agency for Research on Cancer (IARC), part of the United Nations' World Health Organization, said in June 2011 that a family of frequencies that includes mobile-phone emissions is "possibly carcinogenic to humans."

Federal agencies, such as the NIOSH, FCC and FDA, have set safety standards for mobile phones, routers, cell towers, etc. that are inclusive of safety factors for EMR/RFR emissions for humans; no commercial devices can be sold in the U.S. that do not comply with such standards. RFR energy levels from Wi-Fi equipment in all areas accessible to the general public, including school settings, are required to meet Federal exposure guidelines. The limits specified in the guidelines are based on an ongoing review of thousands of published scientific studies on the health impacts of RFR energy. Levels of RFR energy emitted from Wi-Fi equipment are typically well below these exposure limits. As long as exposure is below these established limits, there is no convincing scientific evidence that emissions from this equipment are dangerous to schoolchildren or to adults. There is no scientific evidence

of long-term or cumulative health effects of RFR in children.

Wireless routers in commercial use are very low energy devices and are not a safety concern. Still, It seems prudent to keep some distance away from EMR/RFR emitters when chronic exposure is likely. The strength (and therefore dose) of EMR/RFR is exponentially inversely proportional to distance from the emission. Apple Inc. itself recommends, for example, that mobile phones be held at least 5/8 inch away from the body, or that Bluetooth-type headphone devices be used to keep the head away from the phone emitter.

In reality, EMR/RFR waves are all around us (just see what happens when your cell phone is 'searching' for a signal—sometimes it finds half a dozen or more in your vicinity). Unfortunately the medical safety science has not kept up with advances in the technology and so there continue to be uncertainty and unanswered health questions concerning their safety.

Alan Woolf, MD, MPH

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We thank Dr. Woolf for his insight, and Dr. Lai is happy to report that her daughter gets great wi-fi reception. Alan Woolf, MD, MPH is Professor of Pediatrics, Harvard Medical School (HMS), attending physician at Boston Children's Hospital (BCH) and has authored over 250 original reports, scientific reviews, chapters, and other publications, many of them on topics concerning children's poisoning and toxic environmental exposures. Among other accolades he is a past-president of the American Association of Poison Control Centers (AAPCC), and immediate past-president of the American Academy of Clinical Toxicology (AACT). Dr. Woolf has also served as external consultant to the World Health Organization's International Program in Chemical Safety and as a member of the National Advisory Committee for Acute Exposure

Guideline Levels for Hazardous Substances, EPA. He was recently chosen as a member of the General Hospital & Personal Use Device Panel of the Food & Drug Administration (FDA) and also serves as a consultant to the Medical Devices Advisory Committee of the Center for Devices and Radiological Health of the FDA.

What's new with the flu vaccine 2017-2018



"What? The flu vaccine again? We JUST got it," our kids groaned when we told them it was time to get their flu vaccines. In fact, they "just got it" a year ago, which we pointed out to them. Read on to see updates on this year's flu vaccine and why it should be on your child's back to school to do list.

This year's flu vaccine is slightly different from last year's– it's been changed to cover a different strain of circulating H1N1 influenza. Several flu vaccines have been FDA approved for this year's flu season and all of them will give

similar protection for your child. Make sure your child receives a flu shot and NOT the FluMist/spray-in-the-nose kind of vaccine. Unfortunately for those who are needle phobic, the FluMist has not been shown to be effective and therefore, while still licensed, is NOT recommended for use this year.

The flu vaccine is recommended for **all kids six months of age and older**, with very few exceptions. Even pregnant moms safely can receive the flu vaccine.

Too early for flu vaccine? Nope! Older adults might lose some immunity if vaccinated “too soon” in the season, but this observation is not born out in kids. The threat of incomplete or forgotten vaccine outweighs theoretical risk of delaying flu vaccine (even for older adults), so best to get it now.

In case you forgot, the flu is a week of misery, consisting of high fevers, cough and other respiratory symptoms, body aches, and headaches. Younger kids are prone to some diarrhea or vomiting or both along with these bad cold symptoms. The flu can cause dehydration and pneumonia, and sometimes death, even in previously healthy kids. Simply limiting your child’s exposure to people showing flu symptoms is not an effective way of preventing illness because people are the most contagious right before they show any symptoms.

Booster dose As in previous years, children under nine years of age need a booster dose the first year they receive the vaccine. If your young child should have received a booster dose last year, but missed it, they will receive two doses of this year’s vaccine spaced one month apart (the primary dose plus a booster dose).

This prior post teaches you how to tell if your kid has flu vs “just” a cold. We invite you to read more about this year’s flu vaccine on the Centers for Disease Control website [here](#).

Julie Kardos, MD and Naline Lai MD

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Get your child back on a school sleep schedule



Great-horned owl, NPS Photo, Big Bend National Park

Okay, we admit it: our kids are still in their summertime sleep mode of stay up late/sleep late. With school starting soon, many of us now have to shift our children from summer to school year sleep schedules. Because school start times are constant (and early), the kids will have an easier time if you help them shift their bedtimes gradually over the period of a week or two toward the desired earlier bedtime. Remember, the average school-aged child needs 10-11 hours of sleep at night and even teenagers function optimally with 9-10 hours of slumber per night.

Here are some straight forward ways to help ensure good quality sleep for your child:

- 1. Keep sleep onset and wake up times as consistent as possible 7 days a week.** If you allow your child to “sleep in” during the weekends, she will have difficulty falling asleep earlier on Sunday night, have difficulty

waking up Monday morning, and start off her week overtired, more cranky, and less able to process new information—not good for learning. That said, you can allow your teens, who generally have a much earlier school start time than their biological clocks desire, to sleep in an hour or so on weekends to catch up on sleep.

2. **Limit or eliminate caffeine intake.** Often teens who feel too sleepy from lack of sleep drink tea, coffee, “energy drinks” or other caffeine laden beverage in attempt to self-medicate in order to concentrate better. What many people don’t realize is that caffeine stays in your body for 24 hours so it is entirely possible that the caffeine ingested in the morning can be the reason your child can’t fall asleep later that night. Know also that kids who drink “pre-work out” drinks may not realize that caffeine is one of the ingredients. Better to pre-hydrate with water. Caffeine can have side effects of jitteriness, heart palpitations, increased blood pressure, and gastro-esophageal reflux (heartburn). If your child already has a daily ice-tea, coffee, or other caffeine containing drink, let her wean down gradually—abrupt caffeine withdrawal can cause headaches.
3. **Keep a good bedtime routine.** Just as a soothing, predictable bedtime ritual can help babies and toddlers settle down for the night, so too can a bedtime routine help prepare older kids for sleep. Prevent your child from doing homework on his bed—better to associate work with a desk or the kitchen table and his bed with sleep.
4. **Avoid TV/computer/ screen time/smart phones just before bed.** Although your child may claim the contrary, watching TV is known to delay sleep onset. We highly recommend no TV in a child’s bedroom, and suggest that parents confiscate all cell phones and electronic toys, which kids may otherwise hide and use without parent knowledge, by one hour prior to bedtime. Quiet activities such as taking a bath, reading for pleasure,

and listening to music are all known to promote falling asleep. Just be sure your kids put down the book, turn off the music, and turn off the light to allow time to relax in their beds and fall asleep. Many use this time for prayer or meditation.

5. **Encourage regular exercise.** Kids who exercise daily have an easier time falling asleep at night than kids who don't exercise. Gym class counts. So does playing outside, dancing, walking, and taking a bike ride. Participating in a team sport with daily practices not only helps insure better sleep but also has the added benefit of promoting social interactions

Getting enough sleep is important for your child's academic success as well as for their mental health. We pediatricians have had parents ask about evaluating their children for attention-deficit hyperactivity disorder because of an inability to pay attention, only to find that their youngster's focusing issues stem from tiredness. Teens are often so over-involved in activities that they average 6 hours of sleep or less per night. Increasing the amount of sleep in these kids can alleviate their attention problems and resolve their hyperactivity.

Additionally, sleep deprivation can cause symptoms of depression. Just recall the first few weeks of having a newborn: maybe you didn't think you were depressed but didn't you cry from sheer exhaustion at least once? A cranky kid or sullen teen may become much more upbeat and pleasant if they get an extra hour of sleep each night.

Unfortunately for children, the older they get, their natural circadian rhythm shifts them toward the "night owl" mode of staying up later and sleeping later, and yet the higher-up years in school start earlier so that teens in high school start school earliest at a time their bodies crave sleeping late. A few school districts in the country have experimented with starting high school later and grade school earlier and

have met with good success. Unless you live in one of these districts, however, your teens need to conform until they either go to college and when they can choose classes that start later in the day or choose a job that allows them to stay up later and sleep later in the day.

For kids of all ages, a night time ritual of “tell me about your day” can help kids decompress, help them fall asleep, and keep you connected with your child.

Julie Kardos, MD and Naline Lai, MD
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Itching to know: how to treat poison ivy



Teach your child to recognize poison ivy: “leaves of three, let’em be!”

Recently we’ve had a parade of itchy children troop through our office. The culprit: poison ivy.

Myth buster: Fortunately, poison ivy is NOT contagious. You can catch poison ivy ONLY from the plant, not from another person.

Another myth buster: You can **not** spread poison ivy on yourself through scratching. However, where the poison (oil) has touched your skin, your skin can show a delayed reaction- sometimes up to two weeks later. Different areas of skin can react at different times, thus giving the illusion of a spreading rash.

Some home remedies for the itch:

Hopping into the shower and rinsing off within fifteen minutes of exposure can curtail the reaction. Warning, a bath immediately after exposure may cause the oils to simply swirl around the bathtub and touch new places on your child.

Hydrocortisone 1%- This is a mild topical steroid which decreases inflammation. We suggest the ointment- more staying power and unlike the cream will not sting on open areas, use up to four times a day

Calamine lotion – a.k.a. the pink stuff- This is an active ingredient in many of the combination creams. Apply as many times as you like.

Diphenhydramine (brand name Benadryl)- take orally up to every six hours. If this makes your child too sleepy, once a day Cetirizine (brand name Zyrtec) also has very good anti-itch properties.

Oatmeal baths – Crush oatmeal, place in old hosiery, tie it off and float in the bathtub- this will prevent oat meal from clogging up your bath tub. Alternatively buy the commercial ones (e.g. Aveeno)

Do not use alcohol or bleach– these items will irritate the rash more than help

The biggest worry with poison ivy rashes is the chance of infection. Just like with an itchy insect bite, with each scratch, your child is possibly introducing infection into an open wound. Unfortunately, it is sometimes difficult to tell the difference between an allergic reaction to poison ivy and an infection. Both are red, both can be warm, both can be swollen.

However, infections cause pain – if there is pain associated with a poison ivy rash, think infection. Allergic reactions cause itchiness- if there is itchiness associated with a rash, think allergic reaction. Because it usually takes time for an infection to “settle in,” an infection will not occur immediately after an exposure to poison ivy. Infection usually occurs on the 2nd or 3rd day of scratching. If you have any concerns take your child to her doctor.

Generally, any poison ivy rash which is in the area of the eye or genitals (difficult to apply topical remedies), appears infected, or is just plain making your child miserable needs medical attention.

When all else fails, comfort yourself with this statistic: up to 85% of people are allergic to poison ivy. If misery loves company, your child certainly has company.

Naline Lai, MD and Julie Kardos, MD

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Summertime ear pain? It might

be swimmer's ear



These lucky fish don't have to worry about swimmer's ear... they don't have any ears! –Photo by Dirk Peterson, MD

It's the type of ear pain that usually creeps up on a school-aged summer camper. One night he may notice discomfort when his ear is against his pillow. The next night, the pain gets worse. Eventually, even touching the ear is painful. The ear is probably infected, but infected with "the other kind" of ear infection—swimmer's ear.

Ear infections are divided into two main types: swimmer's ear (otitis externa) and middle ear infections (otitis media). An understanding of the anatomy of the ear is important to understanding the differences between the two types of infection. Imagine you are walking into someone's ear. When you first enter, you will be in a long tunnel. Keep walking and you will be faced with a closed door. The tunnel is called

the external ear canal and the door is called the ear drum.

Swimmer's ear occurs in the ear canal. Dampness from water, and it can be water from any source- not just the pool, sits in the ear canal and promotes bacterial infection.

Next, open the door. You will find yourself in a room with a set of three bones. Another closed door lies at the far end. Look down. In the floor of the room there is an opening to a drainage pipe. This room is called the middle ear. This is where middle ear infections occur.

During a middle ear infection, fluid, such as during a cold, can collect in the room and promote bacterial infection.

Think of the sensation of clogged ears when you have a cold. Usually the drainage pipe, called the eustachian tube, drains the fluid. But, if the drain is not working well, or is overwhelmed, fluid gets stuck in the middle ear and become infected.

Because a swimmer's ear infection occurs in the external canal, the hallmark symptom of swimmer's ear is pain produced by pulling the outside of the ear. Since middle ear infections occur farther down in the ear, pain is not reproduced by pulling on the outer ear.

Doctors treat swimmer's ear topically with prescription antibiotic drops. To avoid dizziness and discomfort when putting drops in, first bring the ear drop medicine up to body temp by holding the bottle in your hand.

Home remedies to prevent swimmer's ear:

- After immersion in the water, tilt your child's head to the side and towel dry what leaks out.
- Mix rubbing alcohol and vinegar in equal parts. After swimming, place a couple drops in the ear. Do not put these drops in if there is a hole in your child's eardrum.

- Prior to swimming put a drop of mineral oil or olive oil in each ear. This serves as a barrier protection against the water as well as an ear wax softener. Do not put in if there is a hole in your child's eardrum.

Although it's tough to remind children to dry their ears well, take heart. Dr. Lai once spent two hours trying to get a cockroach out of a child's ear canal. We suspect those parents would have been happier if instead, water had gotten into their child's ear.

Naline Lai, MD and Julie Kardos, MD

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updated from 2016

**Happy Father's Day 2017 from
your Two Peds**



A few years ago, we asked our dad readers to help us write our Father's Day post. We thought you would enjoy hearing from them again. The dads completed this thought: "Before I became a dad, I never thought I'd..."

...Learn to curl hair for cheerleading competitions

...BE RESPONSIBLE

...Become a stay at home dad AND love it so much after everything I've been through!!

...Learn all of the names of Thomas The Tank Engine's friends and the many songs associated with them.

...Have a toys r us in my house.

...Go food shopping at midnight.

...Make so many pancakes on Sunday mornings.

...Volunteer in a dunk tank and have pie thrown at me.

One of our readers summed up his thoughts on becoming a dad:

Since I've become a father, nearly seven years and two beautiful daughters later, my life has become a series of jobs that I never thought I would have to tackle. These include:

Beautician: I never thought in a million years that I would be learning how to do pony tails, side pony's, braids (not that I can braid yet), and painting little finger and toe nails.

Disney Princess Aficionado: At one point in my life I thought I was cool because I knew a lot about beer, how it was made, where it was from, where the best IPA's were being poured. Now I am "cool" because I know where Mulan lived, and because I know the story about Ariel falling in love with Prince Eric.

Doctor: I am well versed here and can cover almost everything from the simple band-aid application and boo-boo kissing, to the complex answering of why daddy is different and why he gets to go to the bathroom standing up.

Cheerleader: Both of my daughters enjoy participating in sports. It's been such a great experience to cheer them both on from the side line. I enjoy watching them grow with the sport and gain confidence game after game.

Becoming a father was one of the best choices I have made with my life. I love being a dad, and I look forward to the future dad challenges, good and bad, and being the best mentor I can be.

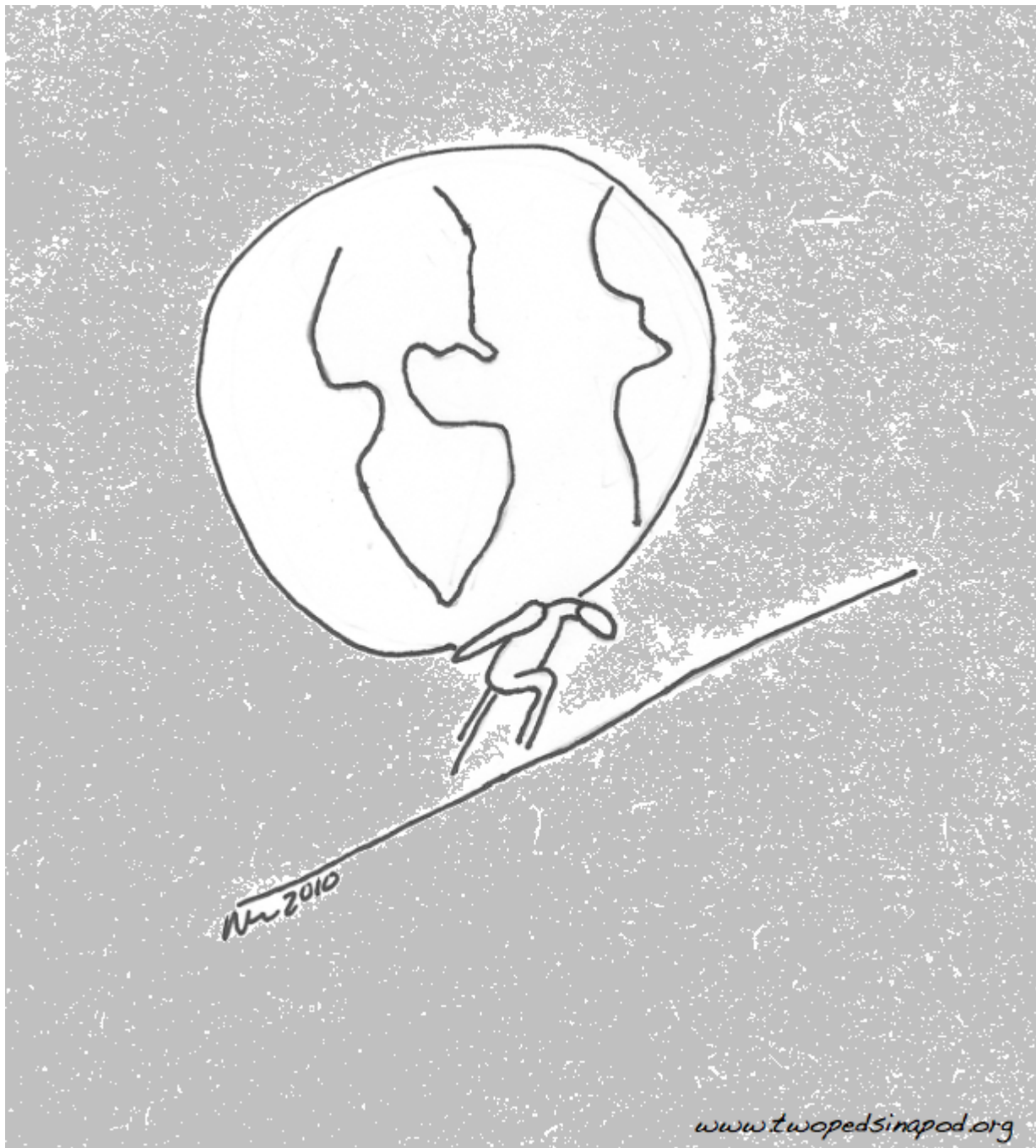
Thank you to our readers for contributing to this post.

Happy Father's Day!

Julie Kardos, MD and Naline Lai, MD

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Discussing suicide: how much should I tell my kids?



“Hi, it’s me, Hannah. Hannah Baker.” So begins the first episode of *13 Reasons Why*, a thirteen installment Netflix series that focuses on the aftermath of the suicide of a 17-year-old high school student. Based on the novel by Jay Asher, the series has sparked quite a bit of debate and concern among parents and mental health professionals. At its best, the series has served as a conversation starter; at its worst, it has glamorized suicide and the fantasy of revenge. At the end of the day, however, an important question remains: How do we talk with our kids about suicide? While

many difficult topics have become increasingly safer to discuss, suicide is one that is still shrouded in secrecy and shame. In fact, it is so difficult to talk about that I had a hard time writing this post. Finding the right words about something that often remains unspoken is not an easy task. So if circumstances require it, how are we to explain suicide to our children?

According to the American Foundation for Suicide Prevention, research has shown that over 90% of people who died by suicide had a diagnosable, though not always identified, brain illness at the time of their death. Most often this illness was depression, bipolar disorder, or schizophrenia, and was complicated by substance use and abuse. Just as people die from physical illnesses, they can die as the result of emotional ones. If we can change the narrative about suicide from talking about it as a weakness or character flaw to the unfortunate outcome of a serious, diagnosable, and treatable illness, then it will become easier for us to speak with honesty and compassion.

Telling the truth about any death is important. While it is natural for us adults to want to protect our children from pain, shielding them from the truth or outright lying will undermine their trust and can create a culture of secrecy and shame that can transcend generations. We can protect our children best by offering comfort, reassurance, and simple, honest answers to their questions. It is important to recognize that we adults typically offer more information than our children require. We should start by offering basic information, then let them take the lead on how much they actually want to know.

For young children, your statements may look something like this: "You have seen me crying, that is because I am sad because Uncle Joe has died." They may not even ask how the death occurred, but if they do, you can say "He died by suicide. That means he killed himself." The rest of the

conversation will depend on the child's response. With older children, the narrative can follow a similar theme yet use more sophisticated language. The older the child, the more likely they are to ask direct questions. Some examples of honest answers are "Do you know how people have illness in their bodies, like when Grandma had a heart attack and our neighbor had cancer? People can get illness in their brains too, and when that happens, they feel confused, hopeless, and make bad decisions. Uncle Joe didn't know how to get himself help to stop the pain." If they ask how the suicide occurred, you can say "With a gun" or "She cut herself." Sometimes you will have to say "I don't know. I wish I knew the answer." Whatever the age of your child, do your best to use simple, truthful language.

Regardless of age, children converse about and process death differently than adults. If you tell your child about a suicide, it is likely that he/she will want to talk about multiple times over the course of days, weeks, or even years. Keep the dialogue open, and check in with them periodically if they have questions. If you find that you or your family is in need of the support of a professional, you might want to consider a bereavement group or a trained professional who specializes in grief. These resources are available through online directories, local hospitals, and the Psychology Today therapist finder. Overall, be aware that providing truthful information, encouraging questions, and offering loving reassurance to your children can allow your family to find the strength to cope with terrible loss.

(Excerpts taken from The American Foundation for Suicide Prevention's "Talking to Children about Suicide", www.afsp.org.)

Links:

Sesame Street Workshop's When Families Grieve
The Dougy Center for Grieving Children and Families

The American Foundation for Suicide Prevention
Hands Holding Hearts (Bucks County, PA)
The Jed Foundation

Dina Ricciardi, LSW, ACSW

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Guest blogger Dina Ricciardi is a psychotherapist in [private practice](#) treating children, adolescents, and adults in Doylestown, PA. She specializes in disordered eating and pediatric and adult anxiety, and is also trained in Sandtray Therapy. Ricciardi is a Licensed Social Worker and a member of the Academy of Certified Social Workers. She can be reached at dina@nourishcounseling.com.

Lyme Disease...it's back



The classic bullseye rash of Lyme

Just like last year, experts are predicting more Lyme disease. While it used to be a pesky disease only in our midatlantic/Lyme Connecticut area of the world, Lyme continues to appear across the northeast and has been reported on the west coast of the United States. According to the American Academy of Pediatric's Redbook, about fifty percent of reported Lyme disease is during June and July. We've already had children come to our office with tick bites concerns, so here's an update:

Lyme disease is spread to people by blacklegged ticks. Take heart- even in areas where a high percentage of blacklegged ticks carry the bacteria that causes Lyme disease, the risk of getting Lyme from any one infected tick is low. Most of the little critters **DON'T** carry Lyme disease... but there are an

awful lot of ticks out there. Blacklegged ticks are tiny and easy to miss on ourselves and our kids. In the spring, the ticks are in a baby stage (nymph) and can be as small as a poppy seed or sesame seed. To spread disease, the tick has to be attached and feeding on human blood for more than 36 hours, and engorged.

In areas in the United States where Lyme disease is prevalent (New England and Mid-Atlantic states, upper Midwest states such as Minnesota and Wisconsin, and California), parents should be vigilant about searching their children's bodies daily for ticks and for the rash of early Lyme disease. Tick bites, and therefore the rash as well, especially like to show up on the head, in belt lines, groins, and armpits, but can occur anywhere. When my kids were young, I showered them daily in summer time not just to wash off pool water, sunscreen, and dirt, but also for the opportunity to check them for ticks and rashes. Now that they are older I call through the bathroom door periodically when they shower: "Remember to check for ticks!" Read our post on [how to remove ticks](#) from your kids.

"I thought that Lyme is spread by deer ticks and deer are all over my yard." Nope, it's not just Bambi that the ticks love. Actually, there are two main types of blacklegged ticks, *Ixodes Scapularis* and *Ixodes Pacificus*, which both carry Lyme and feed not only on deer, but on small animals such as mice. (Fun fact: *Ixodes Scapularis* is known as a deer tick or a bear tick.)

Most kids get the classic rash of Lyme disease at the site of a tick bite. The rash most commonly occurs by 1-2 weeks after the tick bite and is round, flat, and red or pink. It can have some central clearing. The rash typically does not itch or hurt. **The key is that the rash expands to more than 5 cm**, and can become quite large as seen in the above photo. This finding is helpful because if you think you are seeing a rash of Lyme disease on your child, you can safely wait a few days before bringing your child to the pediatrician because

the rash will continue to grow. The Lyme disease rash does not come and then fade in the same day, and the small (a few millimeters) red bump that forms at the tick site within a day of removing a tick is not the Lyme disease rash. Knowing that a rash has been enlarging over a few days helps us diagnose the disease. Some kids have fever, headache, or muscle aches at the same time that the rash appears.

If your child has early localized Lyme disease (just the enlarging red round rash), the diagnosis is made by having a doctor examine your child. Your child does not need blood work because it takes several weeks for a person's body to make antibodies to the disease, and blood work checks for antibodies against Lyme disease, not actual disease germs. In other words, the test can be negative (normal) when a child does in fact have early localized Lyme disease.

Other symptoms of early Lyme disease may accompany the rash or can occur even in the absence of the rash. This stage is called Early Disseminated disease. Within about one month from the time of the tick bite, some children with Lyme develop a rash that appears in multiple body sites all at once, not just at the site of the tick bite. Each circular lesion of rash looks like the rash described above, but usually is smaller. Additional symptoms include fever, body aches, headaches, and fatigue without other viral symptoms such as sore throat, runny nose, and cough. Some kids get one-sided facial weakness. Blood testing at this point is more likely to be positive.

The treatment of early Lyme disease is straightforward. The child takes 2-3 weeks of an antibiotic that is known to treat Lyme disease effectively such as amoxicillin or doxycycline. Your pediatrician needs to see the rash and evaluate other symptoms to make the diagnosis. Treatment prevents later complications of the disease. Treated children fortunately do not get "chronic Lyme disease." Once treatment is started, the rash fades over several days and other symptoms, if present,

resolve. Sometimes at the beginning of treatment the child experiences chills, aches, or fever for a day or two. This reaction is normal but you should contact your child's doctor if it persists for longer.

Later stages of Lyme disease may be treated with the same oral antibiotic as for early Lyme but for 4 weeks instead of 2-3 weeks. The most common symptom of late stage Lyme disease is arthritis (red, swollen, mildly painful joint) of a large joint such as a knee, hip, or shoulder. Some kids just develop joint swelling without pain and the arthritis can come and go.

For some manifestations, IV antibiotics are used. The longest course of treatment is 4 weeks for any stage. Again, children do not develop "chronic Lyme" disease. If symptoms persist despite adequate treatment, sometimes one more course of antibiotics is prescribed, but if symptoms continue, the diagnosis should be questioned. No advantage is shown by longer treatments. Some adults have lingering symptoms of fatigue and aches years after treatment for Lyme disease. While the cause of the symptoms is not understood, we do know that prolonged courses of antibiotics do not affect symptoms.

For kids eight years old or older, if a blacklegged tick has been attached for well over 36 hours and is clearly engorged, and if you live in an area of high rates of Lyme disease-carrying ticks, your pediatrician may in some instances choose to prescribe a one time dose of the antibiotic doxycycline to prevent Lyme disease. The study that this strategy was based on and a few other criteria that are considered in this situation are described [here](#). Your pediatrician can discuss the pros and cons of this treatment.

Bug checks and insect repellent. Protect kids with [DEET containing insect repellents](#). The Centers for Disease Control recommends 10 to 30 percent DEET- higher percent stays on longer. Spray on clothing and exposed areas and do not apply to babies under two months of age. Grab your kids and

perform daily bug checks- in particular look in crevices where ticks like to hide such as the groin, armpits, between the toes and check the hair. Ticks can be tough to spot. Dr. Lai once had a elementary school patient who had a blacklegged tick in the middle of his forehead. The mother noticed it at breakfast, tried to brush it off, thought it was a scab and sent the boy to school. Later that day the teacher called saying, "I think your son has a bug on his face."

Misinformation about this disease abounds, and self proclaimed "Lyme disease experts" play into people's fears. While pediatricians who practice in Lyme disease endemic areas are usually well versed in Lyme disease, if you feel that you need another opinion about your child's Lyme disease, the "expert" that you should consult would be a pediatric infectious disease specialist.

For a more detailed discussion of Lyme disease, look to the Center for Disease Control website: www.cdc.gov.

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