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Under the Rainbow is published by UH Rainbow Babies & Children's Hospital. Articles in this publication are written by professional journalists or physicians who strive to present reliable, up-to-date information. But no publication can replace the care and advice of medical professionals, and readers are cautioned to seek such help for personal problems. (WI19)



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Parents

HOSPITALS

2018 -

ST INNOVATIVE CHILDREN'S

Named one of the nation's top 20 most innovative children's hospitals by Parents magazine

University Hospitals Rainbow Babies & Children's Hospital is proud to be recognized among the top 20 children's hospitals in the country that rose to the top of an exclusive Parents survey. The survey, developed with medical advisors, sought to identify hospitals with a proven track record of medical advancements, research, family support, and adoption of the latest technologies and innovations related to kids' health care.

Two UH Rainbow innovations were featured in the magazine's October issue:

- A patented EpiPen alternative for babies and children with a push button design
- The RainbowFlex surgical bed specially designed for the NICU that keeps temperature-sensitive preemies warm during surgery

) The Most Innovative Children's Hospitals list can be found at Parents.com/hospitals.



Experts update car seat safety guidelines

Every time you click your baby or toddler into his or her car seat, you significantly reduce the risk for injury and death should an accident occur. Recently, the American Academy of Pediatrics (AAP) updated its guidelines regarding car seat safety. Now, the AAP recommends that children remain rear-facing for as long as possible — until they reach the maximum weight or height that the car seat manufacturer allows.

Previously, the AAP recommended that children remain rear-facing until age 2. Most car seats' weight limit for rear-facing is up to 35 to 40 pounds, which means many children can now continue to ride rear-facing well beyond age 2.



Infant walkers cause preventable injuries

Infant walkers may seem like a cute idea — your baby can zoom around the house before he or she is

able to walk – but they're actually a major danger on wheels. More than 200,000 U.S. babies were treated for infant walker–related injuries between 1990 and 2014, according to a new report in Pediatrics. The most frequent injuries were due to falling down the stairs. Walkers also give babies access to hazardous items they wouldn't otherwise be able to reach. If you have a baby at home, opt for a stationary activity center instead; it still offers the freedom to bounce, rock and turn, but without the risks associated with walkers with wheels.

'Tis the season to remember ...

Tiny batteries pose a big threat to kids. Keep these small batteries — often found in toys, musical greeting cards, remote controls and small electronics — away from young kids.







MEET OUR DOC SHIVANI JOSHI, MD Pediatrician, University Premier Pediatricians

Tour child's eyes and ears are windows to the world. Untreated vision and hearing problems can get in the way of learning. But when problems are found early, the right treatment can help your child thrive.

"Hearing and vision screenings are part of many wellness visits with your child's health care provider," explains Shivani Joshi, MD, a University Hospitals Rainbow Babies & Children's pediatrician at University Premier Pediatricians. "If an issue is found, your child may need further testing by a specialist."

You play a key role in early detection, too. If you see any signs of a problem, do not delay. Tell your child's health care provider promptly.

HEARING AND EAR PROBLEMS

Hearing loss can be due to problems with:

- The outer or middle part of the ear
- The inner part of the ear
- Both of the above
- The process of sending sound from the ear to the brain

What to watch for

"Babies and toddlers with hearing loss may not respond to sounds," says Dr. Joshi. "They may be late to talk and understand language. Older kids may have trouble making friends and doing their best in school." The sooner a hearing problem is found, the better. Treatments and services can help children with hearing loss reach their full potential.

VISION AND EYE PROBLEMS

Vision problems in kids include:

- A "lazy eye" that does not work properly with the brain
- Nearsightedness, farsightedness and other focus problems
- "Crossed eyes" and other problems with how the eyes line up

What to watch for

"After 3 months old, babies should be able to follow an object with their eyes," says Dr. Joshi. "After 4 months old, their eyes should usually line up properly. At any age, painful, itchy, red or watery eyes can also be signs of a problem. So can droopy or crusty eyelids. Many parents may also note eye changes or differences in their child's eyes in pictures."

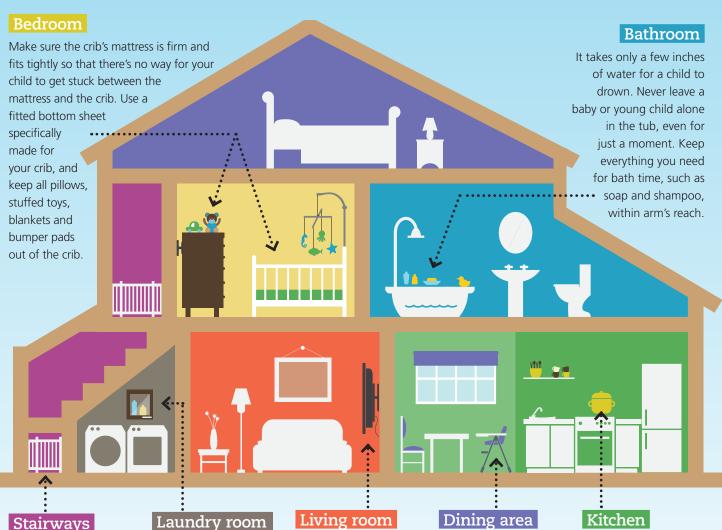
Finding an eye problem early increases the chance for successful treatment. Options may include glasses, eye exercises or surgery. •

>> Schedule on appointment today with a UH Rainbow pediatrician at 216-815-0059 or UHRainbow.org.

YOUR ROOM-BY-ROOM GUIDE TO

CHILDPROOFING

With potential dangers lurking around every corner, childproofing your home can be a challenge. This guide is a good start to keeping your little ones safe.



Look for safety gates that can be screwed into the wall and meet current safety standards.

Kids might mistake brightly colored detergent pods for candy. Keep the container stored in a locked cabinet.

Mount flat-screen TVs on the wall and keep top-heavy furniture like bookshelves secured to the wall with screws. Use outlet covers and outlet plates to protect kids from electrocution. Keep your child's high chair far enough away from other surfaces so that a baby can't touch them with his or her feet and tip over. Use the safety straps – yes, all of them – every time.

Use your stove's back burners only and keep pot handles turned in. Know where your child is when you're walking with hot liquids so that you don't trip. Install safety latches or locks on all cabinets and drawers.

To learn more about our pediatric services or find a doctor, visit UHRainbow.org.



Solutions for your newborn's stuffy nose

Then you have a baby, there are many sounds you can't get enough of like those adorable squeaks, coos and grunts. But if your baby has a stuffy nose and sounds like he or she is having trouble breathing, it can make even the most experienced parent worry. Fortunately, there are a variety of steps you can take to help clear up your baby's congestion so you can all breathe easy again. Try these tips from Naser Danan, MD, a University Hospitals Rainbow Babies & Children's pediatrician at Northeast Pediatrics.

Nose drops and suction

Squeeze one to two drops of saline nose drops in each nostril to help loosen up any dried mucus and then use a rubber suction bulb. To use it, first squeeze the bulb. Next, gently stick the tip of the bulb into a nostril. Finally, slowly release the bulb and it will pull out clogged mucus. Repeat on the other nostril. Dr. Danan suggests, "You may want to use saline nose drops before each feeding to help your baby breathe more easily while eating."

Raise the humidity

Adding moisture to the air can keep mucus from drying up inside your baby's nose. One way to add humidity is with a humidifier. Set up a cool-mist humidifier in your baby's room near the crib, but out of the baby's reach. Regularly clean and dry it to keep bacteria or mold from growing inside. "You could also try running a warm shower and sitting in the bathroom with your baby while he or she breathes in the warm, misty air," adds Dr. Danan.

Wipe it away

Use a wet cotton swab to wipe away sticky mucus that may be blocking your baby's nostrils.

When to call the doctor

If you have any concerns about your baby's congestion or he or she has any other signs of illness, such as a fever or cough, contact your pediatrician. "Sometimes it can be difficult to tell when a newborn is sick," says Dr. Danan. "A simple cold can become something more serious such as croup or pneumonia. If your baby is struggling to breathe or seems to be breathing rapidly, contact your pediatrician right away."



MEET OUR DOC NASER DANAN, MD Pediatrician, Northeast Pediatrics Clinical Instructor, Case Western Reserve University School of Medicine

>> Virtual care, anywhere

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s every new mom or dad discovers, babies don't come with instruction manuals. "If you have a lot of questions about your recently arrived bundle of joy, that's totally normal," says Megan Delp, MD, a University Hospitals Rainbow Babies & Children's pediatrician at University Premier Pediatricians. "Similarly to how your baby is trying to make sense of the world, you might be trying to make sense of everything about this new little person." Here are answers from Dr. Delp to some common questions that are likely to cross a new parent's (probably sleep-deprived) mind:

Will I spoil my baby by comforting her every time she cries?

Some people worry that rushing to pick up a crying baby reinforces crying, but this is not the case. In fact, when a child knows she has someone there to calm her, she'll often learn to calm herself. So go ahead and comfort away. Try holding your baby close to your chest and quietly singing or talking. Gentle rocking can help, as can swaddling – wrapping your baby tightly in a blanket. Basically, it's soothing to create an environment that reminds your baby of the womb: cozy, quiet and tight.

Just how much can my baby see?
Not a whole lot at first – infants can only see about 6 to 10 inches away. That doesn't mean he doesn't want to look at you. Babies love faces! But he'll have trouble

tracking your face if you're far away, so get up close. It's also nice to give babies fun things to look at, like bull's-eye patterns, checkerboards and bright, contrasting colors. Your baby's vision is just one of many things that will rapidly change, and he'll soon know the difference in colors (3 to 4 months), develop depth perception (4 months) and see at adult resolution (by 12 months).

Should I bathe my baby every day?

Newborns should only be given occasional sponge baths until their umbilical cord falls off. After that point, a bath about three times a week is enough. Just make sure you're keeping the diaper area clean during changes. More frequent baths can dry out skin, especially if you use soap. Plain water is fine for washing, but you can use baby-specific soaps and shampoos if you prefer. Keep skin soft by patting baby dry (instead of rubbing).

Is what I see in the diaper normal? Your newborn should pass her first stool within 24 hours of birth. It will be black or dark green and odorless, but don't get too excited – from here on out, poop will smell like poop. Stools that are earth tones, like yellow, tan, green and brown, are all normal. Until solid food begins, they will be soft or even runny. Hard or dry stools could mean your baby is dehydrated. If you see white or red, contact a doctor, as these colors can indicate that something may be wrong. •



MEET OUR DOC MEGAN DELP, MD Pediatrician, University Premier Pediatricians

>> Have a question? Ask Rainbow

Staffed by registered pediatric nurses, UH Rainbow Babies & Children's advice line can be accessed 24/7 to assist parents when the pediatrician's office is closed. Call 216-815-0059 or ask a question online at UHRainbow.org/



One of the conditions associated with VATER syndrome is scoliosis (a curvature of the spine). For most of her life, Noel visited Christina Hardesty, MD, a pediatric orthopedic surgeon at UH Rainbow Babies & Children's Hospital, every six months for X-rays to see if her scoliosis was worsening.

About two years ago, the curves in Noel's spine started becoming more severe. Dr. Hardesty wanted to give Noel more time to grow before performing surgery so she prescribed a custom-fit brace that Noel wore for 23 hours a day. After several months, when the brace didn't keep her condition from getting worse, Noel wore a cast for six months. Finally, Dr. Hardesty determined that it was time for Noel to undergo spinal fusion surgery, in which she'd use rods and screws to fuse Noel's vertebrae together to make her spine straight.

Incorporating 3-D printed technology in surgery

Although Dr. Hardesty had performed the procedure countless times before, this was the first time she planned to use a brand-new approach. "About a year prior, I became aware of Firefly® Technology and followed physicians in other states who were using it and having successful outcomes,"

Dr. Hardesty says.

Firefly involves taking a CT scan of a patient's spine, creating a 3-D printed replica and mapping out exactly where the screws should be placed. "During a typical spine surgery, I can clearly see

where I need to put the screws in the patient's vertebrae," Dr. Hardesty says. "But Noel's vertebrae were so misshapen that I wouldn't have been able to do this based on sight alone. Instead, I'd need to bring an X-ray machine into the operating room and use it over and over again while putting in each screw." This would take much longer than a typical spinal fusion surgery and expose Noel to a

significant amount of radiation. "Even then, the placement using X-rays may not have been 100 percent accurate," Dr. Hardesty says.

With Firefly, however, the surgery is one to two hours faster than a typical spinal fusion, safer because it helps ensure the screws are placed in locations that won't affect the spinal cord or nerves, and results in less time under anesthesia and decreased blood loss. When Dr. Hardesty presented the idea of using Firefly to Noel's family, they were all in. "I already had a lot of trust in Dr. Hardesty's skill and judgment, and felt really good about using this approach because it could help make the surgery even safer and more precise," says Noel's mom, Connie.



MEET OUR DOC CHRISTINA HARDESTY, MD Pediatric Orthopedic Surgeon, UH Rainbow Babies & Children's Hospital Assistant Professor, Case Western Reserve University School of Medicine

On to new activities

Noel's a dynamo. Thanks to the

successful surgery, she can run and

play just like other kids her age. ""

- Connie Hughes

On December 6, 2017, Dr. Hardesty performed Noel's spinal fusion surgery using Firefly. Noel stayed in the

hospital for four days and continued recovering at home.

The X-rays from before and after her surgery show a remarkable difference. Before, Noel's spine had a distinct S-shape, which caused her to hunch over and tilt to

one side. After the surgery, her spine was completely straight. "With a straighter spine, Noel is 2 inches taller than before," Connie says. "Her posture is beautiful – like a ballerina. She used to experience back pain, but that's completely gone. She has much more confidence now, too."

Noel's surgery was the first time Dr. Hardesty used Firefly. In the year since her procedure, she's used it 10 more times. "Firefly takes a risky surgery and makes it easier and safer to complete," Dr. Hardesty says.

Just a few months after the surgery, Dr. Hardesty cleared Noel to participate in any activities she wishes, which include horseback riding and softball. "Noel's a dynamo," Connie says. "Thanks to the successful surgery, she can run and play just like other kids her age." •

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\) Making spine surgery safer with 3-D printing

Firefly provides 3-D printed guides that help surgeons achieve extremely accurate screw placement in the patient's spine. It also makes spine surgery faster and safer, and leads to a quicker recovery. For more information on Firefly Technology, call **216-844-8350**.



Pre-op X-ray of spine (left), Firefly 3-D printed device (middle), Post-op X-ray (right)

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Mamen,

work with your OB-GYN to

PROTECT YOUR HEART





MEET OUR DOC BRETT ADAIR, DO OB-GYN, University Hospitals Samaritan Women's Care

id you know that heart disease is the number one killer of women? In fact, it kills more women than all types of cancer combined. If this is news to you, rest assured – you're not alone. Research shows only 45 percent of women know that heart disease is their leading cause of death.

To ensure that more women receive the care they need to help keep heart disease at bay, the American Heart Association and the American College of Obstetricians and Gynecologists recently issued a joint advisory encouraging OB-GYNs to screen and counsel women about heart health during annual well-woman exams. Teaming up with your OB-GYN to assess and treat any heart disease risk factors you may have could protect your ticker for many years to come.

Many women think of their OB-GYN as their primary care provider (PCP), especially during their childbearing years. According to the advisory, OB-GYNs should use the annual well-woman exam as an opportunity to provide a heart-health screening. This includes:

- Taking a thorough family history
- Screening for heart disease risk factors such as smoking, high blood pressure, diabetes and abnormal cholesterol levels
- Counseling women about healthy lifestyle changes, such as improving their diet and increasing their physical activity, if needed

According to Brett Adair, DO, an OB-GYN at University Hospitals Samaritan Women's Care, "OB-GYNs are a key resource for protecting women's heart health because there are several heart disease risk factors that are unique to women." They include:

- Pregnancy complications such as preeclampsia, gestational diabetes, gestational hypertension, preterm delivery and having a low birth weight baby
- Polycystic ovarian syndrome
- Autoimmune disorders that occur more often in women such as rheumatoid arthritis, lupus erythematosus and scleroderma
- Breast cancer treatments

"Along with traditional risk factors, it's crucial for us to consider these factors, too, in order to gain a more comprehensive assessment of your heart health," says Dr. Adair. "This information may also guide decisions about treatments we recommend, such as using medications to manage blood pressure or prevent blood clots."

It's estimated that 90 percent of women have at least one risk factor for heart disease. Dr. Adair says, "During your next visit with your PCP or OB-GYN, be sure to ask about your heart health. Find out whether you have any risk factors and what you can start doing to control them. Partnering with your health care provider to protect your heart health can mean a longer, healthier life." •

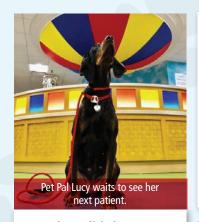
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Pet Pals provides 'paw-some' will report for our patients

Learn all about the Pet Pals program at UH Rainbow Babies & Children's Hospital

Barb Nalette,
Director of Volunteer
Services at UH Rainbow
Babies & Children's Hospital
and Coordinator of Pet Pals,



Q: How does Pet Pals work?

A: With Pet Pals, our goal is to make the hospital experience feel as normal as possible for each child. Kids and their families benefit both socially and psychologically from interaction with animal companions. We have over 100 dogs making patient visits throughout the health system. Only therapy dogs who have undergone stringent screening and been approved to visit with children are permitted to visit patients in UH Rainbow Babies & Children's Hospital.



Q: When did the Pet Pals program start?

A: In 1989, one of our child life specialists unofficially began Pet Pals with a lop-eared rabbit named Bo (short for Rainbow). She saw the positive impact Bo had on patients and began to research the possibilities of having an official animalassisted activity program at Rainbow. The program was implemented in 1992 after significant research and policy development - it began with three dedicated pet therapy dogs and their owners.



FUN FACTS

- Pet Pals has over 100 dogs and one cat. This year, we welcomed pony Willie Nelson.
- Our longest-serving dog was in the program for 16 years before retiring.
- The community loves Pet Pals! We participate in a number of community events, host a summer reading program with the Cuyahoga County Public Library System, and visit local colleges and universities for de-stress sessions.

Q: How has the program expanded to what it is today?

A: With our child life specialists' hard work, dedication and research plus the support of our multidisciplinary staff and attending physicians, the program thrived. Pet Pals became so popular that it grew to other areas outside of UH Rainbow as staff realized the benefits of animal-assisted activity and began requesting visits for their patients. Today, the program is run by our Volunteer Services department.





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To learn how to access health records for your child under the age of 18, visit UHhospitals.org/ParentGuardianAccess.



Submit a question at **UHRainbow.org/AskRainbow** and get an answer from one of our pediatric experts within 48 hours. Or call our pediatric nurse line 24/7 at 216-815-0059.



child's first years





>>> To register or for more information, contact Michele Rothstein at 216-286-6553 or Michele.Rothstein@UHhospitals.org.