Too much sugar?

Children’s researchers have found eating too much sugar, even in “common” amounts, can affect health.

THE DANGERS OF THIRDHAND SMOKE
A pediatrician’s thoughts on smoking
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Dear Friend and Neighbor,

In August, we announced that UCSF Benioff Children’s Hospital and Children’s Hospital & Research Center Oakland have signed an affiliation agreement that outlines how, together, we will create a premier children’s medical institution and build on a mutual commitment to serving the needs of all children in local communities, in this region, and across the nation.

UCSF Benioff Children’s Hospital and Children’s Oakland have worked together for decades and share a similar mission. Both institutions have a longstanding commitment to public service, and we can deliver on that commitment better jointly than we can separately.

This agreement is a significant step toward achieving the following goals:

- Maintaining our commitments to provide the highest quality of care to newborns, children, and young adults throughout Northern California—including the most vulnerable patient populations;
- Creating the leading clinical care and academic program for pediatric healthcare in the United States, with national recognition both as children’s hospitals and as pediatric training programs for residents and subspecialists;
- Integrating research activities to improve and make better use of available research funding;
- Providing leadership in adopting, measuring, and publishing quality and patient safety best-practice indicators related to pediatric care;
- Attracting and retaining outstanding faculty, physicians, and staff; and
- Improving the combined financial operating performance of both Children’s Oakland and UCSF Benioff Children’s Hospital to support state-of-the-art equipment purchases, facility expansion and upgrades, and seismic compliance; and
- Advocating for the health and well-being of all children.

During the past few months, a mutual respect for each other’s capabilities and an unwavering focus on opportunities to better serve our communities have guided our conversations. As we work toward finalizing this arrangement, we will approach this next phase of our discussions with the same sense of purpose and commitment to the children of the Bay Area and beyond.

Bertram Lubin, MD
Children’s Hospital & Research Center Oakland
President & Chief Executive Officer
A young father came into the hospital with his 13-day-old daughter. When I asked whether anyone in the home smoked cigarettes, he said openly that he did. He was quick to add that he always smoked outside, and he always changed his jacket before coming in to hold his baby. “My daughter is my world,” he said. When I told him that the best thing he could do for his daughter would be to quit smoking, he seemed surprised. I explained that as he smokes, particles from the cigarette smoke settle in his hair, on his face, on his hands—and can then be transferred to his infant daughter as he holds and rocks her. “Thanks for telling me about the smoke; I didn’t know that.”

As a pediatrician, I find most parents know about the risks of secondhand smoke, which has been definitively linked to health problems, including asthma, pneumonia, and even ADHD. Many though, don’t know about thirdhand smoke—the residue left on surfaces after a cigarette is extinguished. This thirdhand smoke is absorbed into walls and carpets. Then, for months, and even years, it is re-emitted, and it reacts with the air to form carcinogenic compounds. Although the health effects of thirdhand smoke are still under investigation, we know that they are real. Hugging someone who has been smoking can trigger an asthma attack, and a study from the Lawrence Berkeley National Laboratory showed that thirdhand smoke damages DNA.

The only way to protect children against the risks of secondhand and thirdhand smoke is to make sure no one who lives with them smokes cigarettes. We need to support families in keeping the air around their children smoke-free. That way, we can all breathe a little easier.

On May 28, 2013, KQED 88.5 FM radio’s “Perspectives” program aired Children’s pediatrician Jyothi Marbin, MD, and her thoughts on smoking.

Addressing the Dangers of Thirdhand Smoke

Jyothi Marbin, MD, is a pediatrician at Children’s Oakland.

The “Perspectives” radio series features daily listener commentaries since 1999. To hear Dr. Marbin’s commentary, go to http://bitly.com/17Qcqq0.

Bertram Lubin, MD, President and CEO of Children’s Hospital & Research Center Oakland, will be honored for his outstanding service in pediatrics by a global health nonprofit organization named KidsCareEverywhere, which is based in San Francisco and Berkeley. Dr. Lubin will receive the prestigious “It’s All About the Kids” award during the organization’s annual gala on Sunday, Oct. 27, 2013, at Rock Wall Wine Company in Alameda, California.

The gala program will also include a visual, “Report from the Front Lines,” presented by Dr. Eric Snoey, Vice Chairman of Emergency Medicine at Highland Hospital, describing his recent three-month KidsCareEverywhere trip to Senegal and Morocco. KidsCareEverywhere was founded in 2007 by Dr. Ronald Dieckmann, Professor Emeritus of Pediatrics and Emergency Medicine at University of California, San Francisco. He serves as its Chairman of the Board and Executive Director.

“We are extremely excited to have Dr. Lubin as our KidsCareEverywhere award recipient this year,” says Dr. Dieckmann. “He is a superb and visionary leader in pediatrics locally, regionally, nationally, and internationally and has an astonishing list of career accomplishments that have advanced the cause of impoverished children everywhere.”

About Dr. Lubin

Bertram Lubin, MD, grew up in Bellevue, Penn., a small town outside of Pittsburgh. He completed medical school at the University of Pittsburgh and did a pediatric residency at Children’s Hospital of Philadelphia. Drafted into the army, Dr.
Elliott Vichinsky, MD, Receives 2013 Pioneer Award from the Sickle Cell Disease Association of America

Elliott Vichinsky, MD, Medical Director of Hematology/Oncology at Children’s Hospital & Research Center Oakland, is one of two recipients of this year’s prestigious “Pioneer Award” from the Sickle Cell Disease Association of America (SCDAA). This award recognizes Dr. Vichinsky’s outstanding contributions to the research and treatment of Sickle Cell Disease, including the implementation of universal newborn screening, and his unflagging dedication to improving the lives of those affected by the disease.

Dr. Vichinsky received the award during the SCDAA’s 41st annual convention, held in Baltimore, Md., in September. Dr. Vichinsky also delivered the Clarice Reid keynote speech, titled “The Future of Sickle Cell Research.”

Sonja L. Banks, President & Chief Operating Officer of the Sickle Cell Disease Association of America says, “Dr. Vichinsky is truly deserving of this award because of the commitment he has displayed over the years to the sickle cell disease community. SCDAA could not have chosen a better and more honorable leader for this high-achieving award.”

“The courage of people with sickle cell disease and the SCDAA’s efforts to improve the lives of sickle cell patients have deeply influenced my personal life and professional career,” says Dr. Vichinsky. “Since the mid 1970s, Dr. Clarice Reid has personally mentored me and has been an inspiration to everyone in the sickle cell community. It is one of the greatest honors in my life to give the Clarice Reid keynote lecture, and receive the Pioneer Award.”

Lubin served in Vietnam as a physician in a provincial health program. When he returned home, he did a hematology/oncology fellowship at Boston Children’s Hospital. He returned to Children’s Hospital of Philadelphia, University of Pennsylvania, to become Director of the Hematology Laboratory and an assistant professor of pediatrics.

When Dr. Lubin first arrived at Children’s Hospital Oakland in 1973, he took over the small Hematology/Oncology department. Today it is recognized nationally and internationally for its research in blood diseases and its outstanding care of children with malignancies, sickle cell disease, thalassemia, and hemophilia.

Dr. Lubin developed Children’s research institute into a $50-million-a-year enterprise, Children’s Hospital Oakland Research Institute (CHORI). Among his many contributions to medical research, Dr. Lubin played a major role in cord blood banking and was part of a team demonstrating that cord blood transplantation can cure children who have sickle cell anemia. He helped establish the first not-for-profit Sibling Donor Cord Blood Program in the world.

Dr. Lubin is the first pediatrician to serve as president and chief executive officer in the 100-year history of Children’s Hospital Oakland. Dr. Lubin accepted his position after serving the medical center for 36 years.
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3. HOW TO ENTER: The Giveaway entry period begins at 5:00 p.m. on Friday, October 25, 2013 and ends at 12:00 p.m. Friday, November 8, 2013. To enter, go to http://bitly.com/cho-survey. All entries must be received during the Entry Period. Children’s Oakland will not verify receipt of entries. Entries become property of Children’s Oakland. Limit one entry per person. Incomplete and multiple entries are void. Children’s Oakland is not responsible for entries that are lost, late, misdirected, incomplete, illegible, undeliverable, or delayed. Entries generated by any automated means are void. Electronic entries will be deemed to have been submitted by the authorized account holder of the email address at the time of the entry. The authorized account holder is the person to whom the applicable internet service provider or other organization (such as a business or educational institution) has assigned the email address. Online entrants must have valid email address and it is entrant’s responsibility to update Children’s Oakland of any change in email address.

4. HOW TO WIN: One (1) winner will be selected at random by Children’s Oakland as soon as practicable after 12:00 p.m. Friday, November 8, 2013. The potential winner will be notified either by phone, email, and/or mail, within five (5) days of drawing. Winner must respond to such notification, by emailing the Giveaway coordinator provided in the notification, within forty-eight (48) hours after the notification is sent by Children’s Oakland, or the winner will be disqualified, in which case the Prize will be forfeited, and an alternate Winner will be randomly selected from among the remaining eligible entries, time permitting.

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1. Download registration forms: http://bitly.com/sportsmedform
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Everyday Implications of Auditory Neuropathy Spectrum Disorder (ANSD)
Current Perspectives and Best Practice
Presented by Children’s Oakland Audiology Dept.
Friday, November 15, 2013
8 a.m. to 5 p.m.
Walnut Creek Marriott

This event is intended for professionals involved in the care of children, including physicians, psychologists, educators, educational therapists, advocates, speech-language pathologists and audiologists, and parents

Participants will be able to:
• Appropriately list an evaluation protocol to diagnose children with ANSD.
• Describe the spectrum of ANSD.
• Identify appropriate audiological management of patients with ANSD.
• Describe the continuum of educational placements available to children diagnosed with ANSD who receive cochlear implants.
• Explain the importance of ongoing diagnostic therapy in the management of children with ANSD.

Download the brochure and registration form: http://bitly.com/audiology2013
LOGIC PUZZLE #7

Using only four 9’s, create a math equation that equals 100.

ANSWERS

99 + (9 ÷ 9)
(9° + 9) x (9° + 9)
(9x9) + 9 + 9

Thank you all for your entries!

Kadee, Kellie, and Mitchell from Alameda; Oliver from Castro Valley; Dante from El Cerrito; Drake, Felicia, Himanshu, Lindsey, Shreya, Max, and Adelina from Fremont; Maribeth and Zach from Moraga; Dhruvi, Megan, and Anthony from Pleasanton; Alyssa from San Ramon; Jru from Stockton; and Sanjim from Union City.

LOGIC PUZZLE #8

Solve this Ken Ken Puzzle using only 1s, 2s, 3s, and 4s.

How to play:
The heavily outlined groups of squares in each grid are called “cages.” In the upper left corner of each cage, there is a “target number” and a math operation (+, −, x, ÷).
The number in the upper left corner of the bolded shape made up of squares is the number you need to get by using the operation in the upper left corner.
You cannot have a number be repeated in the same row or column.
The single box shape will have a number in the corner, but no operation. This means you just write the number.

YOUR ANSWER:

Submit your answer, and if it’s correct, you’ll win a prize. Send in a photo of you holding the solution, and you might be in the next issue!

Send your answer by Nov. 15, 2013 to:
CHILDREN’S HOSPITAL OAKLAND, COMMUNICATIONS DEPT., 747 52ND ST., OAKLAND, CA 94609

NAME___________________________________________AGE _______

ADDRESS __________________________________________________

CITY _______________________________________________________

STATE________________________ZIP __________________________
Challenging “Safe” Levels of Sugar Consumption
A new study suggests that sugar in amounts commonly consumed can have adverse effects on mammalian health

New research by scientists at the University of Utah, Arizona State University, and Children’s Hospital Oakland Research Institute (CHORI) finds that the consumption of comparatively low amounts of sugar decreases the competitive performance and reproductive output of mice. The finding suggests that even low levels of sugar intake, which are commonly considered “safe,” can have negative health effects in mammals. The study appears in Nature Communications.

Says Assistant CHORI Scientist Mark Shigenaga, PhD, a collaborator on the study, “These results are particularly noteworthy because the adverse effects on mortality, behavior, and reproductive capacity occurred despite the absence of any apparent significant adverse metabolic effects.”

Animal experiments that study the detrimental health effects of sugar usually involve the consumption of sugar quantities that far exceed those consumed by humans. University of Utah scientist James Ruff, PhD, and colleagues fed mice a healthy diet with a modest amount of added sugar. According to the researchers, this amount of sugar—roughly equivalent to a human consuming a healthy diet, plus three cans of soda (354 ml each) per day—is currently consumed by 13 to 25 percent of Americans. The mice, which showed only minor metabolic defects, were then placed in semi-natural enclosures where they competed for territory, resources, and mating partners with mice previously fed a normal diet. As common strains of laboratory mice do not show natural territorial behaviors, the researchers conducted the study with wild house mice. They show that male house mice fed the sugar-enriched diet controlled 26 percent fewer territories and produced 25 percent less offspring, while female house mice experienced a twofold increase in overall mortality.

The findings represent the lowest level of sugar consumption shown to adversely affect mammalian health. The researchers caution, however, that further studies are needed to delineate the mechanisms responsible for the observed changes in fitness and mortality.

Eating too many foods with added sugar, equivalent to 3 sodas a day, can adversely affect health.
Exploring the Impacts of Media Violence on Children

Children’s Psychiatrist Andrew Giammona, MD, Serves on California State Senate Panel of Experts

The recent Boston Marathon bombing and mass shootings at an elementary school in Connecticut and at a movie theater in Colorado have focused increased attention on the causes of violence committed by young people. One particular area of interest is the possible link between such violent acts and exposure to media violence, including movies and video games.

The California Senate’s Public Safety Subcommittee on Guns, Gangs and Drugs, chaired by Senator Loni Hancock (D–Oakland, Berkeley), has taken up that question. As part of its investigations, the subcommittee held a hearing on “The Impact of Media Violence on Public Safety” on July 10. Andrew Giammona, MD, Medical Director and Division Director of the Division of Mental Health and Child Development at Children’s Hospital & Research Center Oakland, was among a panel of experts providing key testimony at the hearing.

“The senators wanted information about the latest medical research on brain development in children and teens, and whether media violence makes them more prone to violent behavior,” says Dr. Giammona. “They also were looking at whether they should—or could—do something legislatively to reduce young people’s exposure to violent movies and video games if there is a correlation with acts of violence.”

Dr. Giammona was chosen to testify, in part, because of Children’s Hospital’s advocacy for children’s mental healthcare. In addition, he has extensive clinical experience in child and adolescent mental healthcare as well as a background in behavioral health medicine research. The only MD to testify, Dr. Giammona was joined by two experts with PhDs—a professor from UC Davis and a professor from UC Riverside; an attorney and law professor at UC Davis; and a consumer advocate. He has offered to continue consulting with the subcommittee as needed.

“Research shows that brain development continues throughout childhood and adolescence and into young adulthood, and traumatic experiences such as witnessing or experiencing violence can alter the progress of brain development,” says Dr. Giammona. “Emotional trauma is cumulative, and repeated exposure to violence may result in conditions such as post-traumatic stress disorder (PTSD). We are all ‘wired’ differently, and we don’t know what level of exposure to violence will tip a given individual over the edge.

“While media violence may not be the direct cause of acts of violence among young people, research indicates that it may be a contributing factor—especially among those who already are at risk because of exposure to family or community violence,” he adds. “Interactive, violent video games may be more likely to contribute to violent behavior than other media violence.”

During a question-and-answer session, the senators asked what they might be able to do through legislation to curb children’s exposure to media violence.

“In 2008, California tried to restrict sales of violent video games to minors, but the U.S. Supreme Court struck down the law as an unconstitutional restraint on free speech,” Dr. Giammona notes. “But that doesn’t mean we couldn’t have stronger warnings for video games, with more information on the content of those games. We also need to encourage greater parental responsibility and help educate parents about the risks.

“We also talked about building children’s sense of empathy and caring for others,” Dr. Giammona says. “We already have school programs to discourage bullying, and teaching empathy could be part of that effort. The ‘Roots of Empathy’ program developed in Canada, for example, has proven effective in reducing aggressive behavior. If we work as hard on that as we do on limiting exposure to media violence, it could make a difference.”
Hayley was horrified when she first noted blackheads on her nose in seventh grade, followed a few months later by red pimples. What was wrong? Was she not washing her face enough? (No, that is a myth—see Table 1.) She didn’t even want to go to school after scrutinizing her skin with a magnifying mirror in the morning, feeling like there was a flashing red sign on her forehead: “I’m full of zits.” Meanwhile, down the hall, her brother Jack barely casted a glance at his face as he grabbed his backpack and rushed out of the house, late for high school once again. That night, while Hayley combed beauty blogs assiduously for advice on the latest miracle salve, Jack ignored the bottles and tubes of prescription products sitting on his bathroom shelf.

Most people don’t think much about a teenager with acne on her face. About 85 percent of girls and 90 percent of boys develop acne at some point during their teen years. One could even argue that it is not a disease, but a normal part of puberty. Yet this common skin problem impacts teens in many ways. While even mild acne can cause marked social distress in some children like Hayley, others like Jack, even with moderate disease, sail through adolescence minimally affected. Those with severe acne, on the other hand, may have constant pain and tenderness in their skin as well as great difficulty coping in our perfectionistic society; in these cases, acne can even lead to marked social isolation and depression.

Careful consideration of how acne affects a teen’s life is an important place to start when medical providers plan a treatment regimen. Ease of use, potential for skin irritation, and cost are all factors that determine the right agents to use. Hayley is motivated and will follow a somewhat complicated topical regimen. Her brother, on the other hand, may only comply with taking a pill and using a medicated wash once daily. Fortunately, today there are many effective options available for the treatment of acne. As a result, most acne in teens can be safely and adequately controlled even when it is severe or when the patient is willing to expend very little effort to manage their skin. If the provider first takes the time to outline the cause of acne and to dispel the many mistruths propagated by acne product marketing, social media, and the Internet (Table 1), he or she can then develop a realistic plan for acne therapy. This initial step will go far in preventing major frustration for patients, parents, and providers alike.

The range of acne treatment should be imagined as a “therapeutic ladder.” As the disease becomes more severe, stronger agents are added to those used for a milder problem (Table 2). If indicated, more potent prescription agents take the place of weaker over-the-counter (OTC) drugs.

For young children and preteens with superficial lesions, OTC low-potency benzoyl peroxide (BP 2.5-5 percent) is the best place to start. Propionobacter acne (bacteria that grows in the oil-producing hair follicles in the skin after puberty and recruits the body’s immune cells to the skin) is well controlled by this inexpensive antimicrobial agent. While a small minority of patients develop BP allergy, most tolerate it well at low strength. Higher concentration preparations (10 percent) should be avoided, as they do not kill more bacteria; they only irritate the skin more. Also, there is no need to sign up for the more pricey BP products promoted on the Internet and at mall kiosks, as the extra cost of marketing is passed on to the consumer. Better to buy less expensive drugstore products when they are needed, instead of stockpiling fancy bottles sent every month with an auto charge on the credit card. Another OTC product that helps mild surface acne is salicylic acid 2 percent. It is a mild exfoliant, and it is more effective when used in combination with benzoyl peroxide.

Both products are available in a wide range of vehicles: washes, wipes, masks, and leave-on lotions and gels. Some younger children and less compliant older teens do better with washes or wipes. If the chest and back are involved, washes are best because leave-on preparations can bleach and stain clothing. A set of white towels and linens is a good investment in a household where teens are using benzoyl peroxide. It is also important to launder these linens separately, unless one likes the tie-dye look!

As the child progresses further into his teens, acne can become deeper and more extensive, spreading from the central face (the “T-zone” of forehead, nose, and chin) to the lower face (the “U-zone” of lower jaw, temples, neck and trunk). In addition, pimples may get larger, deeper, and more inflamed, and they may leave dark-colored or pitted scars. Once pimples are more numerous, under the skin, painful or tender, or located on the neck, chest, and back, it is
time to take the teen to a primary care provider for prescription products. Topical and/or oral antibiotics can be added to the OTC benzoyl peroxide. Topical retinoids such as tretinoin or adapalene may be substituted for salicylic acid, as they are much more potent pore-unclogging agents. However, they are irritating and hard to use, so they should be introduced gradually so the skin can get used to the peeling effect. Every other day or even twice-weekly application that is gradually increased in frequency is a much better tolerated routine than starting with daily use. In less compliant teens, brand name preparations that combine benzoyl peroxide with retinoids may be worth the extra cost to simplify the regimen and enhance compliance. No matter what agents are chosen, it takes 2 to 3 months for them to work. Teens want instant improvement, so explaining the need to be patient is critical.

If the child is not helped by three months of prescription products, or if the child has dense or deep acne that is scarring, referral to a dermatologist is indicated. This skin specialist may consider more aggressive options, including systemic isotretinoin or, in girls, birth control pills. Although these options carry more risk, they may be worth the extra cost to simplify the regimen and enhance compliance. No matter what agents are chosen, it takes 2 to 3 months for them to work. Teens want instant improvement, so explaining the need to be patient is critical.

When all lifestyle factors are considered, and the nature of acne and its treatment carefully explained, the majority of adolescents are able to integrate an effective therapeutic regimen into their busy lives. The goal for all teens, whether they are like Hayley or Jack, is successful control of this normal part of puberty, and forever eliminating that agonizing look in the mirror.

**TABLE 1: ACNE MYTHS AND REALITIES**

<table>
<thead>
<tr>
<th>MYTH</th>
<th>REALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acne is caused by dirt</td>
<td>Pubertal hormones cause oil production in hair follicles on the face and trunk, leading to Propionobacter acne growth and occlusion of the hair follicle. Clogged follicles eventually rupture, leading to inflammation deeper in skin.</td>
</tr>
<tr>
<td>Milk and chocolate cause acne</td>
<td>An anti-inflammatory, Mediterranean heart-healthy diet probably helps the skin along with the heart.</td>
</tr>
<tr>
<td>Scrubs, strips, and masks unclog pores</td>
<td>Blackheads are microscopic—too small for these products to unplug. Medications such as OTC salicylic acid, Rx tretinoin, and adapalene are much more effective.</td>
</tr>
<tr>
<td>Facials clear acne</td>
<td>Facials are relaxing but expensive and not as efficacious as Rx products; some that use mild peeling agents such as glycolic acid are helpful if done regularly.</td>
</tr>
<tr>
<td>Acne only happens in teenagers</td>
<td>Young children can develop acne as the first sign of puberty.* Acne can also persist into adulthood, especially in women.</td>
</tr>
</tbody>
</table>

*Acne in younger children is now so common that it has a name: “mid-childhood acne.” At what age one needs to worry about acne and other signs of early puberty in children is controversial and can be affected by the genetic background. Most consider 7-8 years in girls and 9 years in boys the lower end of normal for the appearance of acne. If you are worried that your child is developing too early, discuss these concerns with your primary care provider.

**TABLE 2: COMMONLY USED THERAPEUTIC AGENTS FOR ACNE**

<table>
<thead>
<tr>
<th>AGENT</th>
<th>ACTION</th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
<th>COST</th>
</tr>
</thead>
</table>
| Benzoyl Peroxide               | Controls P. acnes                                                     | P. acnes can’t develop resistance | • Bleaches fabric  
• Can dry skin  
• Rare allergy                                | OTC/$      |
| Salicylic acid                 | Mild pore unclogger                                                   | Cheap, widely available     | • Can irritate  
• Minimal efficacy                             | OTC/$      |
| Topical clindamycin            | Antibiotic helps control P. acnes                                     | Comes in gels, lotions that are non-irritating | • P. acnes can become resistant; use with BP | Rx/$$      |
| Tretinoin                      | Good pore unclogger, even better at higher concentrations              | Treats primary lesion of acne: clogged pores | • Irritating  
• Slightly sun-sensitizing                        | Rx/$$$     |
| Adapalene                      | Good pore unclogger                                                   | Can be less irritating than tretinoin | • Still can be irritating  
• Mildly sun-sensitizing                            | Rx/$$$     |
| Doxycycline                    | Systemic anti-inflammatory and antibiotic for P. acnes                 | More effective than topical agents for deep, inflamed, or truncal acne | • 20% very sun-sensitive  
• Heartburn, stomach irritation  
• P. acnes resistant over time; use with BP | Rx/$$$     |
| Isotretinoin                   | • Very potent pore unclogger  
• Shuts down oil gland production so P. acnes can’t survive         | Most effective; especially indicated for deep, scarring acne | • Many adverse effects, so must be very closely monitored  
• Teratogenic; can’t use in childbearing female unless 2 methods of birth control used & documented | Rx/$$$     |

Renee Howard, MD, completed her residency at Children’s Hospital Oakland in 1988. She is a board-certified pediatric dermatologist and an Associate Clinical Professor in the Department of Dermatology at the University of California, San Francisco.
Marina and David Yoakum were overjoyed at the birth on July 7, 2010, of their identical twin sons, Chase and Grant. Weeks later, however, Marina and David were dismayed and alarmed to learn the boys both had a condition called craniosynostosis, which results in skull deformities and may present a serious risk of pressure on the brain and subsequent brain damage.

“I first noticed something was wrong with the shape of their heads in the first few days,” Marina recalls. “Their heads just didn’t look like their older brother Max’s head did when he was born. Plus, even though the boys are identical twins, they each had a different head shape. While they were in the hospital, I asked about the shape of their heads, and I was told not to worry about it.”

When the boys’ skulls didn’t acquire more normal shapes within a couple of weeks, Marina trusted her instincts and asked their family pediatrician for her opinion.

“She shared my concerns,” Marina says. “Because she had seen this condition before, she jumped right on it and referred us to Children’s Hospital in Oakland. The hospital organized a team of experts to evaluate the boys. There is no way I could have contacted all those specialists on my own and organized the care. We had a team of doctors who closely coordinated all their efforts.”

The Children’s team of experts—headed by Medical Director of Neurosurgery Peter Sun, MD, and Director of Craniofacial Surgery Bryant Toth, MD, a plastic and reconstructive surgeon—was experienced in diagnosing craniosynostosis and performing surgical corrections. The panel of experts reviewed the boys’ cases and ordered CT scans, which confirmed that both twins had craniosynostosis—but with differences between their conditions.

“A baby’s skull is made up of several large bones connected by flexible structures called sutures,” Dr. Sun explains. “These flexible sutures allow the head and brain to grow. Craniosynostosis occurs when a suture is missing or closes up too soon. That causes a deformed head shape and may prevent the brain from having enough room to grow.”

The main sutures of the skull are the sagittal, metopic, coronal, and lamboid. The types of abnormal head shapes depend on which sutures are closed. Chase and Grant had different head shapes because different sutures had closed.

“Chase had sagittal synostosis, the most common suture to close too soon,” says Dr. Sun. “In these cases, the skull shape is typically too narrow because it doesn’t allow for sideways growth. The skull compensates by growing longer in the front and back, with a large forehead and a narrow pouched-out back of the skull that looks like the keel of a boat.”

“In Grant’s case, there were two sutures involved—the sagittal and a coronal,” he continues. “His coronal suture synostosis caused a flatness of the forehead on the affected side, and the eye socket was pulled up on that side.”

Because Chase had only one suture involved, there were two options for corrective surgery: traditional invasive surgery or minimally invasive endoscopic surgery. Children’s is the only facility in northern California with extensive...
experience over the course of 10 years in minimally invasive endoscopic craniosynostosis surgery to correct certain types of this skull deformity. This procedure is not performed on a regular basis elsewhere in the region.

“The early diagnosis gave us the option to choose endoscopic surgery for Chase,” says Marina. “For Grant, though, the only option was traditional surgery because two sutures were involved. As one of those rare mothers who has had children go through both types of procedures, I can’t imagine not choosing endoscopy if that is an option.”

Endoscopic surgery for craniosynostosis involves making two small incisions and inserting tiny instruments to remove the fused suture and strips of bone. This type of surgery must be performed during the first few months of life before too much brain growth occurs—generally by the time the baby is about 3 months old.

Traditional craniosynostosis surgery requires a long incision across the skull from the top of one ear to the top of the other ear, behind the hairline. The surgeons remove major portions of the skull and rearrange the bones to achieve a normal skull shape and size. This type of surgery typically is performed when the child is 6 to 12 months old.

“Endoscopic surgery—which must be performed at an early age when the bones are thinner and easier to cut through—was the optimal approach for correcting Chase’s sagittal synostosis,” says Dr. Toth. “Chase’s surgery was performed on August 31, when he was nearly 2 months old. Grant’s larger, traditional surgery was performed on November 2, at age 4 months, because waiting any longer would have created a greater asymmetry of the skull and a larger deformity.”

For each of the boys’ surgeries, Marina stayed with them at Children’s for five days straight, while the other baby was home with David.

“With all the pre-surgery appointments, the actual surgeries, and the follow-up care, I felt like I lived at Children’s,” Marina admits. “I can’t say enough good things about the phenomenal care at Children’s. The people were all so tremendous, so caring.”

One of those people was pediatric craniofacial nurse Carole Reilly, RN, BSN, who works with Dr. Toth. She followed both boys’ progress in the hospital and has continued to provide follow-up care through the craniofacial team.

“I worked with the neurosurgery
nurses and also would check on the boys a couple of times a day in the ICU, answering any questions Marina had,” Carole explains. “Our staff also manages all their appointments with various specialists for follow-up care such as hearing tests, speech therapy, and ophthalmology exams. The boys also had frequent follow-up exams with Dr. Toth and Dr. Sun. Now they have yearly check-ups with them, and we will follow them until adulthood.”

Marina notes, “Carole was incredible—holding the babies, playing with their older brother Max, and visiting me. It felt like she was a family member. She truly helped humanize the whole experience.”

After their surgeries, both boys wore helmets that were custom-designed by Children's orthotist to help mold their skulls into a normal shape. The orthotist also adjusted the helmets as the boys grew.

“Both boys had to wear the helmets for about a year,” Marina notes. “Trish Collins in the helmet lab was wonderful. She even came to our home one time to deliver new helmets.”

At about 11 months old, Grant’s forehead began to bulge on one side and the eye on that side closed up. A CT scan showed that the coronal suture had closed up again, and an additional surgery was scheduled two weeks later. Dr. Sun notes that additional corrective surgeries are sometimes needed after the larger traditional surgery, while they have not had to perform any corrective surgeries on endoscopic surgery patients over the past 10 years with sagittal synostosis.

“I asked Dr. Toth if we really needed to do the second surgery on Grant,” says Marina. “He said, ‘Absolutely. If this was my child, this is what I’d want.’ I clung to that and appreciated his compassion. Dr. Sun told us, ‘Our ultimate goal with Grant is to have him go to a cocktail party as an adult and no one notices anything different about him.’ Now at age 3, Grant is just adorable. He still has some minor bumps, but no one notices.”

For Marina, sharing the story of her family’s experience is her way of helping other parents who may face the same situation.

“As devastating as this diagnosis can be, there is hope for these kids, and you do get through it,” she says. “Parents need to know that early diagnosis is critical. They also have to be aware that after surgery, the baby’s head will be swollen for awhile, and it changes the baby’s appearance. With Grant, the surgery was even more emotional for me, with the zigzag incision across the top of his head.”

“I asked Dr. Toth if we really needed to do the second surgery on Grant,” says Marina. “He said, ‘Absolutely. If this was my child, this is what I’d want.’ I clung to that and appreciated his compassion.”

“The boys start preschool this fall, and they are the cutest, happiest, chattiest little boys who love each other,” she adds. “Now I feel so incredibly fortunate that we live within miles of Children’s Hospital. We are lucky to live in a time and place where these procedures are available. Dr. Toth is so sweet and kind, and he always goes the extra mile. And I just felt so confident in Dr. Sun—he really knows what he is doing. They’re the ones you would want working on your newborn child’s skull.”

“I asked Dr. Toth if we really needed to do the second surgery on Grant,” says Marina. “He said, ‘Absolutely. If this was my child, this is what I’d want.’ I clung to that and appreciated his compassion.”
A Baby's Skull
A baby's skull is made up of several large bones. The places where these bones touch are flexible connections called sutures. The location where four of these large bones meet in the front of the head is called the anterior fontanelle, or soft spot (there is another one in the back of the head). This flexibility allows the head to fit through the birth canal, and permits the brain to grow. The brain quadruples in size the first two years of life, and the bones of the skull must grow and not restrict its growth. Bone growth occurs at these sutures.

Craniosynostosis
When a suture is not formed or closes too soon, it is called craniosynostosis. It is estimated that this defect occurs in one out of every 2,000 live births.

Craniosynostosis causes the head shape to be deformed and, in certain instances, can prevent the brain from having enough room to grow. The specific abnormality of the head shape depends on which suture(s) is/are closed. An abnormal head shape is noticed after birth.

Craniosynostosis is diagnosed by performing a physical exam and an X-ray or CT scan.

Surgical treatment for craniosynostosis is generally recommended to correct the head shape and reduce the chance of increased brain pressure caused by the skull’s not having enough room for the growing, developing brain. This increased pressure could cause brain damage. Surgery can help children have a normal head shape. Without surgery, the deformity of the head would continue to worsen as the head kept growing in size. Craniosynostosis surgery is performed by both a neurosurgeon and a plastic surgeon.

THERE ARE TWO BROAD CATEGORIES OF SURGERY FOR CRANIOSYNOSTOSIS:

MINIMALLY INVASIVE SURGERY
Children’s Hospital Oakland is the only facility in Northern California with extensive experience with endoscopic craniosynostosis surgery. In the 10 years we have been performing this surgery, we have not needed to perform any revision surgeries on endoscopic surgery patients with sagittal synostosis.

About the procedure:
- “Minimally invasive” or endoscopic surgery requires an early diagnosis because it can be done only during the first few months of life before too much brain growth occurs. It is generally performed when the baby is about 3 months old.
- Two small incisions are made, and a tiny endoscope or lighted retractor is inserted to remove the fused suture and strips of bone.
- Following surgery, for several months the child wears a helmet that is custom-designed by our staff orthotist to help mold the skull into a normal shape. The orthotist makes any necessary helmet adjustments at Children’s.

The advantages over invasive surgery:
- This less-invasive procedure results in less blood loss, smaller scars, and a lower risk of developing lumps and bumps on the skull.
- A shorter hospital stay is required.
- Endoscopic surgery results in less chance of having to perform revision surgeries.

INVASIVE SURGERY
The more traditional, invasive surgery is typically performed when the child is 6 to 12 months old. In this complicated surgery, the surgeons rearrange the bones in the skull to achieve a normal skull shape and size. The time spent in the operating room and the duration of the hospital stay are usually longer for this surgery than for endoscopic surgery.

In a traditional repair for older children, an incision is made across the skull from the top of one ear to the top of the other ear, behind the patient’s hairline. Major portions of the skull are removed to mechanically reconstruct the skull.

The long-term outcomes are excellent.
Like most children, Sydney Boxer complained of seemingly minor physical problems throughout her childhood. It wasn’t until her freshman year at Piedmont High School, however, that the combination of those symptoms began to point toward a serious medical condition.

Her father Mark Boxer notes, “Since she was very young, Syd had a loud, deep cough. Sometimes she would come home from school with headaches. She also complained sometimes that when she was singing in the choir at school, the noise would bother her.”

Her mother Kristin Pace adds, “Even when Syd was a baby, she didn’t like noise. She also had asthma-like symptoms. Looking back now, we realize the connections between those symptoms. I guess the fact that she was always a super-active kid was one reason the underlying condition wasn’t noticed sooner.”

In middle school, Sydney began experiencing lower back pain while playing sports—soccer, softball, and her favorite, basketball. “I had been having back pain for a couple of years, and everyone assumed it was because I was growing quickly,” she says. “But this past December during my freshman basketball season, the pain became excruciating. I told the athletic trainer at school about it, and she had me try stretching exercises. I also tried hot and cold packs and took Advil and Aleve. It got so bad, I would come home after basketball practice and just go upstairs to lie down with ice packs.”

Then the pain began spreading into her legs, and she experienced numbness, tingling, and weakness in her right leg. Her athletic trainer became alarmed.

“When Sydney initially came to see me about lower back pain, I wasn’t overly concerned,” says Lauren Small, MS, ATC. A certified athletic trainer in the Sports Medicine Program at Children’s Hospital & Research Center Oakland, she provides outreach services at Piedmont High School during most sports practices and all home games.

“It’s not uncommon for young teens who participate in sports to have some back pain if they aren’t stretching enough or don’t have core muscle strength,” Lauren explains. “It is really unusual, though, to have that pain extend into the legs—especially when there is numbness and tingling. That definitely indicates a more serious problem.”

She referred Sydney and her parents to Nirav Pandya, MD, a pediatric orthopedic surgeon and specialist in the Sports Medicine Program at Children’s.

“Lauren told me that Sydney was experiencing back and leg pain, as well as numbness and weakness in the right leg,” says Dr. Pandya, who also works with athletes at several area high schools as a public service.

“Numbness, weakness, and pain in the legs would make sense for an 80-year-old with arthritis or other spinal problems, but that didn’t make sense for a young teenager. Sydney also had been falling quite a bit, and Lauren feared she might suffer a serious injury.”

Dr. Pandya examined Sydney and reviewed an X-ray of her lower back. With no obvious structural problems showing up on the X-ray, he ordered an MRI.

Before the MRI was performed, Sydney had complained to Lauren that she was experiencing pain in her midback, too. “I noticed a slight curve to Syd’s midback,
so I let Dr. Pandya know, and I asked him if we could include that thoracic area in the MRI as well,” Lauren says.

On the Tuesday in mid January when Sydney had the MRI on her back, the radiologist came out to tell Kris that she needed to keep Sydney longer to perform MRIs on her brain, too. Although she wasn’t told why brain scans were necessary, Kris became even more concerned.

“The next morning, I took Syd to an appointment with an ophthalmologist because she had been having trouble with her peripheral vision,” Kris recalls. “That afternoon, we went to see Dr. Pandya. He told us that Sydney had Chiari malformation, a brain abnormality.”

Dr. Pandya referred the family to Children’s Medical Director of Neurosurgery, Peter Sun, MD.

“Between the time we saw Dr. Pandya and we were walking out to the parking lot, we got a call from the hospital, telling us we had an appointment the next day with Dr. Sun,” Kris says. “I couldn’t believe how quickly they coordinated that appointment.”

Chiari malformation is an abnormality in the lower back part of the brain called the cerebellum, which controls coordination and muscle movement. Sydney had Type I Chiari malformation, the most common form.

“Chiari I is a congenital condition. The lower part of the cerebellum, called the ‘tonsils,’ extends down into the upper spinal canal,” Dr. Sun explains. “That can impede the normal flow of cerebrospinal fluid that protects the brain and spinal cord. The fluid gets trapped in the spinal cord, causing pressure and pain down the legs. If it’s not diagnosed and treated early, it can stretch the spinal cord and result in permanent neurologic damage. Eventual paralysis could be a devastating and debilitating possibility.”

The midback portion of Sydney’s MRIs had shown that her spinal fluid wasn’t circulating properly, with a cavity in the spinal cord called a “syrinx.” The subsequent brain MRI pinpointed the Chiari malformation in the brain.

“If Syd hadn’t been a ‘squeaky wheel’ and complained to me, the MRI might not have included her midback, which is where they noticed the problem with the spinal fluid,” says athletic trainer Lauren. “She’s not a wimpy kid—she’s one of my tougher kids—so when she complained, I really listened. I was surprised by her diagnosis because I thought it was something musculoskeletal like a ruptured disc or other musculoskeletal injury. I had heard of her diagnosis before, but it wasn’t really on my radar.”

Dr. Sun recommended surgery to

“It’s not uncommon for young teens who participate in sports to have some back pain,” Lauren explains. “It is really unusual, though, to have that pain extend into the legs—especially when there is numbness and tingling. That definitely indicates a more serious problem.”
Neurosurgery for children is generally not performed at adult hospitals, according to Dr. Sun. At Children's Hospital Oakland, correction of Chiari malformation is a commonly performed neurosurgery, with patients coming from all over California and from out of state.

Sydney after surgery.

Dr. Sun notes: "Sydney couldn't participate in sports or do rigorous activities only for a couple of months after surgery. Now she's back to all of her normal activities. We saw dramatic improvement on her MRIs within four to six weeks."

Neurosurgery for children is generally not performed at adult hospitals, according to Dr. Sun. At Children's Hospital Oakland, correction of Chiari malformation is a commonly performed neurosurgery, with patients coming from all over California and from out of state.

“Dr. Pandya did a great job diagnosing Sydney’s condition,” Dr. Sun says. "An orthopedist who works mostly with adults might not have recognized this problem. Because we work only with children, we are more attuned to the fact that back pain in children may represent a serious problem. Plus, we are able to coordinate patients’ treatment among various departments such as Sports Medicine and Neurosurgery. We also coordinated efforts with her regular pediatrician, Dr. Myles Abbott, to ensure continuity of care. He even came to visit her in the ICU at Children’s. That was cool."

Sydney—who dreams of becoming a homicide detective when she grows up—appreciated Dr. Pandya’s expertise and skills, too. “I’m very loud, and my first impression of Dr. Pandya was that he’s very quiet,” she recalls. “He was listening carefully to me and asking lots of questions before trying to make a diagnosis.”

As for her assessment of Dr. Sun, Sydney quips, “He is the ‘rock star’ of the neurosurgery world.”

For more of the story about Sydney’s experience, visit the family’s “CaringBridge” website at www.caringbridge.org/visit/sydneyboxer/mystery.
Since 2006, Children’s Oakland’s Sports Medicine Center for Young Athletes began sending certified athletic trainers to Berkeley High School sport events, even though it was only the football championships with North Coast Section of the California Interscholastic Federation that required an ATC at the games.

The American Medical Association has stated that certified athletic trainers should be used as part of a high school’s medical team. Athletic trainers have unique education and skills that allow them to properly assess and treat acute and traumatic injuries in high school athletics. In coordination with the team physician, they routinely make decisions regarding the return-to-play status of student athletes. Other allied health professionals are not qualified to perform these tasks.

Most situations encountered by athletic trainers should not be left to a coach or layperson who does not have the necessary education and medical and emergency care training.

Children’s ATCs are present at all games for all sports for the following high schools:
• Alameda High School
• Albany High School
• Berkeley High School
• Piedmont High School
• Pittsburg High School
• Salesian High School
• McClymonds HS/Skyline HS/Oakland Tech HS/Oakland HS/Fremont HS/Castlemont HS: Football games and play-off and championship event coverage of other sports

Children’s ATCs also attend club sports such as track events, lacrosse, rugby, swim, figure skating (where Olympic-level skaters will be competing), soccer, and baseball.

Mark Your Calendar: March 2014
ANNUAL CONFERENCE
ATHLETIC TRAINING CONFERENCE FOR HIGH SCHOOL STUDENTS

TWO-DAY CONFERENCE INCLUDES:
• Careers in Sports Medicine Overview
• Ankle Injuries and Taping Techniques
• Wrist, Hand, and Thumb Injuries and Taping
• Knee Injuries and RICE Therapy
• Stretching Techniques
• Low Back Injuries and CORE Training
• Sports Concussions
• Shoulder Injuries and Rehabilitation

Get on the mailing list to get your invite. Send your request to: jherndon@mail cho.org
ANAPHYLACTIC REACTIONS

Anaphylactic reaction is a serious allergic reaction that is rapid in onset and may cause death.

Here is a guide to treating your child’s allergies that may lead to an anaphylactic reaction.

FOOD ALLERGENS
90 percent of reactivity is associated with 8 foods:
• Milk (cow, sheep, goat)
• Egg
• Wheat
• Soy
• Peanuts (20% may “outgrow”)
• Tree nuts (10% may “outgrow”)
• Fish
• Shellfish

EPINEPHRINE IS THE ONLY TREATMENT
Treatment fails when epinephrine is not administered promptly.

ADMINISTERING EPINEPHRINE

THINGS TO KEEP IN MIND
• Build a team
• Please make sure your healthcare provider shows you the right way to use it.
  If you have any questions, ask your healthcare provider.
• You can also ask your pharmacist for a shot trainer to help you and your child practice how an injection will be given. Practicing and discussing the shot with your child before an emergency can help your child be a willing participant.
• Be sure that your shot pack is always with your child.
• Teachers and caregivers should always be confident giving this shot.

STEPS TO ADMINISTERING THE SHOT
• Your child needs to hold still during the injection. If she cannot, have another adult hold your child. If you are alone with your child, lie her down and then lay down across her chest to keep her still. Use one hand to hold a leg and the other hand to give the injection.
• 1. With the injector’s tip facing down, grab it with one hand and make a fist. Do not touch the tip.
• 2. With the other hand, remove the cover from the shot.
• 3. Hold the injector close to your child’s leg and jab the shot forcefully into the thigh. The shot should be given only in the upper leg muscle of the child. The shot can and should be given through clothing.
• 4. Hold the injector in your child’s thigh for 10 seconds. You should see a red flag in the injector window, which indicates that the epinephrine has been given.
• 5. Remove the injector and hold your hand over the injection site, rubbing the area for 10 seconds. Many epinephrine packs come with an antihistamine tablet. Give your child the tablet.
• 6. Put the injector in the storage tube that came in the pack and keep it with you to give to the doctor later.
• 7. Call 911. A shot is not a cure or a complete treatment for an allergic reaction; it simply gives you more time to get your child to the hospital.
• 8. After you have given the shot, there will be liquid remaining in the injector. Do not re-inject your child. It is normal for liquid to remain.

UPKEEPING YOUR SUPPLY OF EPINEPHRINE
• The epinephrine shot can be effective only if the medicine is still potent.
• Epi shots do not need to be refrigerated, but they do need to be kept at room temperature and away from direct sunlight.
• There are three instances when the shot pack should be replaced:
  » If the liquid in the injector is no longer clear
  » If particles are floating in it
  » If the expiration date on the shot pack has passed—but don’t throw it away until you have the replacement.
  The clarity of the liquid is much more important than the expiration date.

Information by the Meredith Corporation.
### SYMPTOMS/SIGNS OF AN ANAPHYLACTIC REACTION

<table>
<thead>
<tr>
<th>Skin</th>
<th>Mouth</th>
<th>Nose/Throat</th>
<th>Gut</th>
<th>Heart</th>
<th>Neurological</th>
<th>Other</th>
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<tr>
<td>• Warm</td>
<td>• Tingling:</td>
<td>• Sneezing</td>
<td>• Nausea</td>
<td>• Dizziness</td>
<td>• Anxiety</td>
<td>• Uterine cramps</td>
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<tr>
<td>• Itchy:</td>
<td>- Lips</td>
<td>- Persistent</td>
<td>• Diarrhea</td>
<td>• Chest pain</td>
<td>• Sense of</td>
<td>• Bleeding</td>
</tr>
<tr>
<td>- Ear canals</td>
<td>- Tongue</td>
<td>watery mucus</td>
<td>• Difficulty in</td>
<td>• Irregular</td>
<td>“impending doom”</td>
<td></td>
</tr>
<tr>
<td>- Groin</td>
<td>- Palate</td>
<td>discharge from</td>
<td>swallowing</td>
<td>heartbeat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Palms</td>
<td>- Metallic</td>
<td>the nose</td>
<td>• Vomiting</td>
<td>• Tunnel vision</td>
<td></td>
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<tr>
<td>- Soles</td>
<td>taste</td>
<td>• Throat</td>
<td>(stringy mucus)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>tightness</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Hoarseness</td>
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</tbody>
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### HOW TO READ LABELS

#### PEANUT-FREE DIET
Avoid foods that contain peanuts or any of these ingredients:
- Artificial nuts
- Beer nuts
- Cold-pressed, expeller-pressed, or extruded peanut oil
- Goobers
- Ground nuts
- Mixed nuts
- Monkey nuts
- Nut pieces
- Nut meat
- Peanut butter
- Peanut flour
- Peanut protein hydrolysate

All FDA-regulated manufactured food products that contain peanuts as an ingredient are required by U.S. law to list the word “peanut” on the product label.

#### MILK-FREE DIET
Avoid foods that contain milk or any of these ingredients:
- Butter, butter fat, butter oil, butter acid, butter ester(s), ghee
- Buttermilk
- Casein, casein hydrolysate, caseinates
- Cheese, curds
- Cottage cheese
- Cream
- Custard, pudding
- Diacetyl
- Half-and-half
- Lactalbumin, lactalbumin phosphate
- Lactoferrin
- Lactose, lactulose
- Milk in all forms (including condensed, derivative, evaporated, goat’s milk, milk from other animals, lowfat, malted, milkfat, nonfat, powder, protein, skimmed, solids, whole)
- Milk protein hydrolysate
- Recaldent®
- Rennet casein
- Sour cream
- Tagatose
- Whey (all forms), whey protein hydrolysate
- Yogurt

All FDA-regulated manufactured food products that contain milk as an ingredient are required by U.S. law to list the word “milk” on the product label.

#### EGG-FREE DIET
Avoid foods that contain eggs or any of these ingredients:
- Albumin (also spelled albumen)
- Egg (dried, powdered, solids, white, yolk)
- Eggnog
- Lysozyme
- Mayonnaise
- Meringue (meringue powder)
- Ovalbumin
- Surimi

All FDA-regulated manufactured food products that contain egg as an ingredient are required by U.S. law to list the word “egg” on the product label.

#### SOY-FREE DIET
Avoid foods that contain soy or any of these ingredients:
- Edamame
- Miso
- Natto
- Shoyu
- Soy (soy albumin, soy cheese, soy fiber, soy flour, soy grits, soy ice cream, soy milk, soy nuts, soy sprouts, soy yogurt)
- Soya
- Soybean (curd, granules)
- Soy protein (concentrate, hydrolyzed, isolate)
- Soy sauce
- Tamari
- Tempeh
- Textured vegetable protein (TVP)
- Tofu

All FDA-regulated manufactured food products that contain soy as an ingredient are required by U.S. law to list the word “soy” on the product label.
EATING WHOLE GRAINS: WHAT DOES THAT MEAN?

Whole grains contain all three parts of the kernel. Refining normally removes parts of the kernel, along with some of the protein, complex carbohydrates, and many important nutrients.

TYPES OF WHOLE GRAINS

These include:
• Corn
• Oatmeal
• Whole wheat
• Brown and wild rice
• Whole rye
• Pearl barley

EATING WHOLE GRAINS IS IMPORTANT

It reduces your risk for:
• High cholesterol and heart disease
• Stroke
• Cancer
• Obesity
• Type 2 diabetes
• Bowel disorders

HOW TO KNOW IF A PRODUCT IS WHOLE GRAIN

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Look for words like “100% whole wheat”</td>
<td>• Words that may not mean whole grains:</td>
</tr>
<tr>
<td>or “whole grain” in large letters on the</td>
<td>» “unbleached wheat flour”</td>
</tr>
<tr>
<td>package.</td>
<td>» “made with whole wheat”</td>
</tr>
<tr>
<td>The ingredients should contain the word</td>
<td>» “100% wheat”</td>
</tr>
<tr>
<td>“whole” in front of the first ingredient.</td>
<td>» “enriched flour”</td>
</tr>
<tr>
<td>Check the fiber content: A true whole</td>
<td>» “Some of these products may be</td>
</tr>
<tr>
<td>grain product will have at least two</td>
<td>refined.”</td>
</tr>
<tr>
<td>grams of fiber per serving.</td>
<td>• “Multigrain,” though containing many</td>
</tr>
<tr>
<td></td>
<td>grains, may not contain whole grains.</td>
</tr>
</tbody>
</table>

EXAMPLES OF CEREALS

RECOMMENDED  | OKAY                        | DISCOURAGED                     |
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>• Cheerios</td>
<td>• Corn Chex</td>
<td>• Apple Jacks</td>
</tr>
<tr>
<td>• Frosted</td>
<td>• Corn Flakes</td>
<td>• Cap’n Crunch</td>
</tr>
<tr>
<td>Mini Wheats</td>
<td>• Honey Nut Cheerios</td>
<td>• Cocoa Krispies</td>
</tr>
<tr>
<td>• Fruit &amp;</td>
<td>• Honey Bunches of Oats</td>
<td>• Corn Pops</td>
</tr>
<tr>
<td>Fibre with</td>
<td>• Kix</td>
<td>• Froot Loops</td>
</tr>
<tr>
<td>Dates,</td>
<td>• Rice Chex</td>
<td>• Lucky Charms</td>
</tr>
<tr>
<td>Raisins &amp;</td>
<td>• Rice Krispies</td>
<td>• Trix</td>
</tr>
<tr>
<td>Nuts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Granola</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Muesli</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Life Cereal,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plain or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamon</td>
<td></td>
<td></td>
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<tr>
<td>• Oatmeal</td>
<td></td>
<td></td>
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<tr>
<td>• Raisin Bran</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Shredded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
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</tbody>
</table>

EASY WAYS TO ADD WHOLE GRAINS TO YOUR MEALS

• Try whole grain breads, cereals, pita bread, and muffins.
• Use whole corn meal to make tortillas, tamales, corn bread, and muffins.
• Add wild rice, brown rice, or barley to your favorite soup.
• Substitute part of the white flour with whole wheat flour in your favorite pancakes and baked recipes.
• Buy whole grain pasta or pasta that is a blend of part whole-grain, part white flour.
• Sprinkle corn on salads, or eat as a tasty side dish.

### QUICK healthy snack ideas using grains

#### GRAINS:
- Whole wheat bread
- Whole wheat tortilla
- Whole wheat crackers
- Whole wheat English muffin
- Brown rice
- Animal crackers
- Low-fat vanilla wafers
- Frozen whole wheat waffles
- Unbuttered popcorn
- Non-sugary cereals
- Whole wheat bagel
- Non-sugary oatmeal
- Pretzels
- Graham crackers

#### MILK / YOGURT / CHEESE
- Non-sugary dry cereal (Cheerios) on top of non-fat/low-fat yogurt
- Whole wheat English muffin or bagel with tomato sauce and mozzarella cheese (add some veggies to make your own pizza)
- Whole wheat tortilla wrapped around a string cheese (melt the cheese)
- Graham crackers, whole wheat crackers, or brown rice cakes with a cup of milk
- Whole wheat grilled cheese sandwich
- Whole wheat cheese quesadilla

#### VEGETABLES
- Whole wheat crackers or baked tortilla chips with salsa
- Small serving (½ cup) of brown rice or steamed rice with frozen or fresh veggies
- Macaroni and cheese with peas, chopped broccoli, or bell peppers

#### MEAT / NUTS / BEANS
- Whole wheat crackers, ½ English muffin, or whole wheat toast with all natural peanut butter and a touch of jelly
- Whole wheat tortilla with boiled beans (add some salsa)
- Small bowl of homemade chicken noodle soup
- ½ whole wheat egg salad sandwich
- Whole wheat scrambled egg quesadilla (add salsa)
- Dip pretzels into all natural peanut butter
BLUEBERRY CORN MUFFINS

DIRECTIONS
1. Preheat oven to 375°F.
2. Place a cupcake liner in each muffin cup. Set the muffin pan aside.
3. In a mixing bowl, combine the flour, cornmeal, sugar, baking powder, baking soda, and salt.
4. Stir the flour mixture until it is well combined.
5. In another mixing bowl, whisk the egg, buttermilk, and vegetable oil.
6. With a wooden spoon, stir the buttermilk mixture into the flour mixture until it is just moistened. Do not mix the batter too much; it should be lumpy.
7. Using the spatula, gently fold the frozen blueberries into the batter; be careful not to mash them.
8. Pour batter into muffin cups until half full.
9. Bake for 18 to 20 minutes.

WHOLE GRAIN CRACKERS OR BREAD WITH VEGGIE DIP

DIRECTIONS
1. Combine ingredients and mix well.
2. Refrigerate until serving time.
3. Serve with cut-up carrot and celery sticks, cheese, broccoli stems, sliced meat, cucumber, and/or red pepper slices.

QUESADILLA VERDE

DIRECTIONS
1. Place broccoli in a microwave oven-safe bowl with lid. Add about 1 inch of water. Microwave for 4 minutes, cover askew.
2. Drain broccoli and set aside.
3. Place tortilla on a plate, sprinkle with cheese, add drained broccoli, add hot sauce to taste, and fold in half (or roll).
4. Place in microwave for 30 seconds, remove, and serve.

Healthy after school snacks using whole grains
STAYING HEALTHY:
WASH YOUR HANDS BEFORE COOKING AND BEFORE EATING

In order to prevent catching a cold or the flu, and to avoid spreading other germs you may pick up, wash your hands for at least 20 seconds with warm water and soap.

Here are some other instances when you should wash your hands:
• Before and after visiting someone at the hospital
• After using the restroom
• After coughing or sneezing
• After being near someone sick or someone who is coughing or sneezing
• After touching trash
• After touching pets or animals
• After changing diapers

Try singing this song two times—which should last for 20 seconds—while washing your hands.

Sing this the tune of “Row, Row, Row Your Boat”:
Wash, wash, wash your hands!
Play our handy game!
Rub and scrub! Scrub and rub!
Germs go down the drain!

If your child gets a burn, follow these steps:

Step 1: If the burned area is less than 3 inches in diameter, run it under cold water.
Step 2: If there isn’t any blistering, give pain medication, such as Tylenol or Motrin, as needed. If there is blistering, this could be signs of a serious burn.
Step 3: If the burned area is smaller than the child’s hand, do not pop the blister or apply any antibiotics or ointment or cream. Wrap loosely in gauze and give pain medication as needed.
Step 4: If the area is larger than the child’s hand or involves the face, palms, soles of feet, or genitalia, seek immediate medical attention.

Watch the video:
http://bitly.com/childburns

Prevent burns
• Keep hot food and drinks away from the edges of counters and tables.
• Don’t set hot plates on a tablecloth; children can pull them off.
• Don’t hold your child while drinking hot coffee or tea.
• Keep children away from the stove.
✓ Turn pan handles in.
✓ Cook on the rear burners when possible.
• Don’t allow children to use the microwave without supervision. Some plastics, paper, and foil may catch on fire.
✓ Children may not realize how hot the bottom of a container is after it is microwaved.
✓ Steam burns to the face and hands are possible if popcorn, Hot Pockets® or other food containers are opened too soon. Cup Noodles® may spill onto the hands, scalding the child.
✓ Burns to the mouth can occur due to unevenly heated food and from food that gets hot quickly, such as peanut butter.
✓ Eggs cooked in the shell may explode.
• Make sure your water heater is set to no higher than 120°F. Children can get scalded when they turn on the faucet: If the water is 140°F, they will have a scalding burn in less than 3 seconds.
Phish Fans Band Together in Support of Music Therapy

Everyone knows that when Phish dives into the Bay Area for a concert, they bring their hip-shaking music and enthusiastic fans in their wake. But there’s something you might not know about the popular jam band: they also raise money for charities in most of the communities they visit while on tour. Phish—widely known for their creative concert antics and stylistic blend of jazz, funk, bluegrass, and pop—created the WaterWheel Foundation in 1997 to oversee their charitable activities. Over the last 16 years, the Foundation has generously donated over $900,000 to more than 400 non-profits.

For the band’s return to San Francisco in August, they chose to direct the proceeds from their pre-show event at the Bill Graham Civic Auditorium to the Jared Kurtin Music Therapy Program at Children’s Hospital Oakland. This critical program brings music into the lives and hands of hospital patients, from babies to teenagers. Trained therapists work with patients and their families to explore physical and emotional challenges associated with illness, trauma, and hospitalization. Music therapy at Children’s is 100 percent supported by philanthropy.

Pre-show event attendees enjoyed complimentary cocktails and dinner, a unique WaterWheel poster designed by Jim Pollock, early entrance to the concert venue, and a live auction featuring signed Phish memorabilia and a guitar autographed by band members and Carlos Santana.

“It’s special for us to able to have an organization that’s focused on health, music, and children. Supporting an organization that encompasses all of that, all at once, is very powerful for us,” shares Beth Montuori Rowles, Executive Director of the WaterWheel Foundation.

Vinnie’s Baby Shower

On the eve of becoming a new dad, Vinnie Hasson, of the popular Alice 97.3 morning radio show “Sarah & Vinnie,” wanted to do something that would give back to the community and benefit a cause close to his heart: the health and well-being of children and their families. In honor of baby Hasson, the station hosted a special Live Secret Show Baby Shower for Vinnie at the Surf Spot Restaurant in Pacifica on August 16. Over 300 enthusiastic Alice listeners attended this invitation-only event, earning a spot on the guest list by calling to win tickets. In lieu of gifts, Vinnie asked that all donations be made to Children’s Hospital Oakland.

(l-r) Philanthropist Laura Perloff, high-bidding Phish fan holding the guitar—signed by Phish band members and Carlos Santana—auctioned off for Children’s Hospital; Another Planet Entertainment President Gregg Perloff; WaterWheel Foundation Executive Director Beth Montuori Rowles; and Children’s Senior Vice President and Chief of Pediatrics David J. Durand, MD.
Remembering Heidi Beck

Rain or shine, for the last 50 years, Children’s Hospital Oakland volunteer Heidi Beck would begin her days with a morning swim before 6 a.m. She was convinced that, without swimming, she’d have been bound to a wheelchair. But her day didn’t stop with exercise. She spent much of her time as a volunteer at Children’s, delivering care and compassion to sick and injured children. “I just love those little people,” she once told hospital staff. “When you get them to smile, that’s worth a million dollars.”

Heidi recently passed away, at the age of 90, having logged more than 11,000 volunteer hours at Children’s over the years. She was annually invited to the Children’s Hospital & Research Center Foundation’s Legacy Luncheon in honor of her volunteer service, but when asked about her own estate plans, she told us that she planned on taking care of her family first. We were moved to learn that Children’s was truly part of her family, as Heidi generously included a gift in her estate to support the hospital’s stem cell research.

In Heidi’s memory, we encourage anyone considering a will or trust gift to Children’s Hospital not to wait. Contact us today to learn about the many ways that you can make a lasting impact on the young patients who need our specialized care. For more information on Children’s gift planning program, please contact Kevin Hughes, Director of Gift Planning, at giftplanning@mail.cho.org.

Change a child’s life now—and for decades to come. A gift to Children’s Oakland supports a community of healthy kids by providing the finest possible pediatric patient care, education, and research. To learn about the many ways to support the hospital, visit us at www.chofoundation.org.

Children’s Oakland Welcomes Walgreens

In June, local Walgreens stores rallied to raise more than $130,000 for Children’s Oakland through their first Children’s Miracle Network Hospitals’ Miracle Balloon campaign in the Bay Area. Company employees also embraced the spirit of giving, participating in bake sales, car washes, and other community fundraisers to benefit Children’s Hospital. “We are so appreciative of the give-back spirit and unwavering encouragement that Walgreens associates brought to their first campaign for Children’s,” says CMNH Director Katie Kidder. For more information on how to become a sponsor, please contact Katie at kkidder@mail.cho.org.
Children’s is Taking An “Epic” Step into the Future with Electronic Health Records

Over the past year, Children’s Oakland has taken a major step forward into the next generation of healthcare.

Working with Epic Systems, one of the most trusted medical record software development firms in the country, Children’s is creating an electronic patient health records system that will streamline hospital procedures while enhancing patient care and safety. More than 125 people—including Children’s employees, consultants, and Epic staffers—have been working on the project since February 2012.

The system design team includes a diverse group of professionals across all divisions of the hospital. Many have worked countless hours on the project in addition to their regular jobs. In addition, numerous “subject matter experts” advised the project team on various aspects of care to create a customized system that meets Children’s unique needs.

The Epic system will launch in November 2013 at Children’s inpatient facilities as well as in the Operating Room, the Emergency Department, the Day Hospital, and the Oncology/Hematology Clinic. The system launch for outpatient clinics is anticipated in March 2014. In addition, the Clinical Laboratory will “go live” with a new system, SoftLab, which integrates with Epic. After March 2014, our patients will have a fully integrated medical record for all of their visits throughout Children’s facilities.

“In addition to saving time and reducing paperwork for everyone involved in patient care, electronic patient health records will further enhance patient safety,” says Steve Yedlin, MD, Children’s Chief Medical Informatics Officer. “For example, to provide additional support to prevent medication errors, the system will help physicians choose the right medication, in the appropriate dose, to be delivered at proper time intervals and via the proper route—oral, injection, or intravenous.

In addition, the system will remind physicians about any lab tests that need to be done to ensure proper dosages and warn physicians about any patient allergies and potentially harmful drug interactions.”

Children’s is providing extensive training in using the Epic system for physicians and staff. All personnel will be tested for proficiency with the system before they are allowed to access it.

After the launch of the Epic system, Children’s plans to provide a “My Chart” feature to give our patient families direct access to their medical records, including test results and physician instructions. They also will be able to schedule appointments, renew prescriptions, and send secure emails to healthcare providers who are on the Epic system.

A “Care Everywhere” feature will allow their records to be retrieved by healthcare professionals anywhere that has Internet service, since this capability provides for transferring medical information from one facility to another, helping to ensure continuity of care.

“Since Epic is the market leader in the Bay Area, it also will be easier for us to connect with other hospitals and physician groups here to obtain a complete picture of patients’ health histories,” says Vice President and Chief Information Officer Don Livsey. “It will help avoid duplicate procedures and tests. We have built extensive safeguards into the system to protect data security and prevent unauthorized access to patients’ medical records.

“The migration from paper to electronic patient health records has been a long-term process,” Livsey adds, “but most of the country will soon be using electronic records. The Epic system gives us the platform to move into the future.”

(above) Testing the portable Epic modules; Some of the Epic staffers who are working on implementing electronic medical records at Children’s Oakland.
SUPPORT CHILDREN'S CHILD LIFE PROGRAM AND SAVE AT SPIRIT HALLOWEEN!

Use this coupon to save on your Halloween goodies and raise funds for the Child Life Program at Children's Hospital Oakland. Our Child Life specialists work directly with patients and their families to help them cope with the stressors of hospitalization and illness. While Spirit Halloween may only operate during the fall months, their donation impacts the Child Life Program at Children's year round.

CALLING ALL GAMERS: BE A HERO FOR KIDS!

Join tens of thousands of gamers for the biggest gaming charity event of the year! From mobile devices to board games, the Extra Life marathon gives people that love to play a chance to make a difference while enjoying their favorite game. All funds raised by Bay Area participants stay right here to support Children's Hospital Oakland. For more information, contact Rebecca Wilson at rwilson@mail.cho.org.

YOUR DONATION CAN GO TWICE AS FAR WITH EMPLOYER MATCHING GIFT PROGRAMS

Making your charitable gift go twice as far is easy: Many companies match their employees' charitable contributions, and some companies even match the gifts of spouses or retirees. You can double, and sometimes even triple, your impact just by filling out and sending Children's Hospital Oakland a matching gift form from your employer.

See the employment benefits page on your company's Intranet, or contact your human resources office for further information, or, to donate, go to: www.chofoundation.org/matchinggifts
Our 24/7 services include:

- Dedicated pediatric trauma center
- Pediatric emergency medicine specialists on-site
- Access to virtually all pediatric subspecialties
- Pediatric Hospitalist services
- Child-friendly environment, 100% focused on pediatrics

We provide care for:

- Acute injuries, minor to major
- Critical illnesses
- Chronic or recurrent illnesses such as asthma, sickle cell disease, cancer, hemophilia, AIDS, or seizures
- Infectious conditions such as colds, flu, acute gastroenteritis, croup, and bronchiolitis

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