Does your family need a media use plan?
Figuring out how much screen time you and your family should have

EATING DISORDERS
Pediatrician Leslie Gee, MD, addresses eating disorders in adolescents

BONE HEALTH
Children’s researcher and dietitian provide advice on keeping your family’s bones healthy
I am excited to let you know that UCSF Benioff Children’s Hospitals is ranked among the top 25 in eight of the 10 specialties and were best in the Bay Area in five practices—cancer, diabetes and endocrinology, neonatology, neurology and neurosurgery, and urology—according to U.S. News & World Report, which released the results of its best pediatric hospitals on June 21, 2016.

The rankings are based on clinical data from 183 pediatric centers and on the opinions of nearly 11,000 surveyed pediatric specialists and subspecialists. Among the factors taken into consideration are clinical outcomes, efficiency and coordination of care delivery, infection control, compliance with best practices, and resources including number of nurses and availability of programs for certain conditions.

UCSF Benioff Children’s Hospitals include campuses in San Francisco and in Oakland. The outstanding patient care and treatments at UCSF Benioff Children’s Hospitals are supported by the hospitals’ world-class research and the education of residents. Our rankings demonstrate the value of the services we provide to all children in our community, as well as nationally and globally. We also are fortunate that our generous donors, the board of directors and so many others in the community, continue to have an unwavering belief in the power of UCSF Benioff Children’s Hospitals to redefine possible for children in the Bay Area, northern California and throughout the world.

Bertram Lubin, MD
President & Chief Executive Officer, UCSF Benioff Children’s Hospital Oakland
Associate Dean of Children's Health, University of California, San Francisco
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To contact the departments and services featured in this issue:

Addressing Pediatric Sleep Disorders, page 7
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Mending a Baby’s Heart, page 10
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Being Bone-Healthy, page 12
Bone Density Clinic, 510-428-3429

Sports Nutrition, page 13
Clinical Nutrition, 510-428-3772

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Pediatric Orthopaedics, 510-428-3238

UCSF Expands Child and Adolescent Gender Center Services to UCSF Benioff Oakland, page 18
Oakland, 510-428-3654
San Francisco, 415-885-7770

Eating Disorders in Adolescents, page 20
Oakland, 510-428-3387
San Francisco/Marin/Pleasanton, 415-353-2002
Notes & Words headliner, Chris Martin of Coldplay, performing with the Oakland School for the Arts; MC Hammer spinning at the Notes & Words after party; Author Dave Eggers with Oakland Mayor Libby Schaaf, UCSF Benioff Oakland President and CEO Bertram Lubin, Notes & Words founder Kelly Corrigan, and author BJ Novak; Talented teen performer Kay Sibal moved audiences with her incredible opening act; The Stone Foxes commanded the stage with a rousing live performance.
Celebrated writers and talented musicians joined together on April 30 for the seventh annual Notes & Words benefit at Oakland’s historic Fox Theater. The inspiring event raised more than $1.5 million for UCSF Benioff Children’s Hospital Oakland, doubling our previous record.

The all-star lineup included Chris Martin, Coldplay front man and recipient of over 60 awards, including seven Grammys; BJ Novak, witty actor, comedian, screenwriter, director, and New York Times best-selling author; Dave Eggers, novelist, screenwriter, and founder of 826 Valencia and McSweeney’s publishing; The Stone Foxes, a local band known for their big sound and dynamic passion; and author Kelly Corrigan, who is also the creative mastermind behind Notes & Words.

The performances included a special collaboration with Chris Martin and Oakland School for the Arts singers. Among the songs they sang together was a show-stopping rendition of “Purple Rain,” performed as a tribute to Prince. After the main entertainment of the evening concluded, East Bay favorite MC Hammer DJ’ed a “silent disco” for guests, and local band, Crisis, performed inside the Den at the Fox.

For more event details and photos from the night, go to notesandwords.org.
It’s Time to Create a Family Media Use Plan

I have long thought about the importance of being mindful regarding our son’s media use. We have verbalized daily time limits that we try to stick to, and I monitor content of his screen time fairly closely. This does not mean we don’t have setbacks. I’m taking my own advice and writing down a family media plan:

**Quantity:** It is important for families to think about how much screen time they consider reasonable for their children. The American Academy of Pediatrics has long recommended no screen time for children under 2 and a maximum of two hours for all other children, but has recently acknowledged that this is not the reality for most families. Data from Common Sense Media (2013) tells us that kids between 8 and 10 years old have an average of eight hours of media exposure per day, and teenagers have in excess of a whopping 11 hours per day of screen time. This is more than time spent sleeping or time in school! Excess screen time has been associated with problems like obesity, disordered sleep, and behavior problems. Perhaps most importantly, any time spent in front of a screen is less time spent interacting as a family. It is helpful to set “device curfews” and to keep all devices and screens out of bedrooms.

**Quality:** We are learning that it is not only the quantity of screen time that matters, but also the quality. I use Common Sense Media as a guide to gauge the appropriateness of any videos or apps my son is viewing. Any program with adult content is off-limits. For any shows that are borderline, we watch together to provide context and share any teachable moments. Recent data suggests that certain “pro-social” media can be beneficial in teaching empathy and respect for other cultures, and in sending anti-bullying messages. Researchers are also exploring how interactive media, such as iPad use, may influence kids in different ways than more passive media exposure.

**Role-modeling:** An essential component of any family media use plan is to address parents’ media use and set limits for ourselves as well as our kids. This is important from a role-modeling perspective, but it is also important from a relationship perspective. A recent small study observed 55 parents’ behavior with their children while eating together at a restaurant. Forty of the 55 parents looked at a device during the meal. Researchers found that the more immersed a parent was with their device, the more harshly they responded to their children, even if the child’s request was simply asking for help with their food.

**Safety:** All media use plans should address safety. Do whatever you need to in order to refrain from using your phone while driving. For many of us this means placing the phone out of our reach. There are also now apps that make it impossible to text and drive. Consider installing one if the pull of the phone is just too great. For those with older children, being thoughtful about when they are allowed to enter the social media world is highly important. Having conversations about cyberbullying and being a good digital citizen are essential. For more information on these topics, go to the American Academy of Pediatrics’ excellent resource, SafetyNet (http://safetynet.aap.org).

**How this looks for our family:**

**Quantity:** We have a limit of 30 minutes of screen time for my son on weekdays. I’d rather this was zero, but frankly I really enjoy relaxing together on the couch after dinner, so I’m staying realistic on this for now. He has a two-hour max on the weekends. These limits seem realistic, but require discipline. I am going to set more timers to avoid some of the “just a few more minutes” that easily turn into an extra hour on weekend mornings.

**Quality:** We will continue to use Common Sense Media to gauge appropriateness and to co-view with our son whenever possible. I will explore more interactive, educational apps and games and try to decrease the percentage of my son’s screen time that is passive viewing.

**Role-modeling:** Perhaps the most challenging section, but here goes. I’ve installed the Moment app on my phone that lets me know how much time I’m spending looking at my phone each day. It also counts the number of times I pick it up. This has been eye-opening. I’m using this tool to help me stay under a total time goal per day. I’m also pledging to stay off my phone from the time I get home until the time my son is asleep, and he knows this and will help keep me accountable. Kids are much more likely to buy into a media plan if they see that their parents have to follow the rules as well. I’m going to take a “digital sabbath” twice a month—two days a month when I am completely offline. I will turn off all devices at least 30 minutes before my desired sleep time.

**Safety:** We have an intentional, continued commitment to no texting or looking at the phone while driving. No excuses. No exceptions. For me, this means always remembering to set my audio book or music selection prior to starting out.

Do you have a family media use plan?
Is my child getting enough sleep?
Not getting enough sleep has significant medical and behavioral consequences. The National sleep foundation recommends about 7 to 9 hours of sleep for adults and 8 to 10 hours of sleep for teens. School-aged children need about 11 to 12 hours of sleep, toddlers 13 to 14 hours, and infants anywhere from 14 to 17 hours. When children do not sleep enough, they have difficulty waking up in the morning, they are tired during the day, and they have difficulty concentrating in school. Sleep-deprived children are often hyperactive and irritable.

How can I get my child to have a regular sleep schedule?
Sleep is regulated by two main mechanisms, “Process C” and “Process S.” Process C is our circadian clock. This clock is regulated by the light/dark cycle. Bright lights signal our brain that it is daytime, and our brain shuts down the production of a substance called melatonin. This substance sets our sleep time. The opposite occurs at night: In the absence of light, our brain produces melatonin, and we start feeling sleepy. Before artificial light was invented, this cycle worked perfectly. Unfortunately, this does not happen in modern society.

Our brain receives artificial light from lamps, computers, video games, tablets, and smart phones. Children that use electronics usually stay awake until later hours of the night.

The second mechanism that regulates sleep is called Process S, also called “Homeostatic drive.” During our daily activities, our brain accumulates a substance called adenosine. The more this substance accumulates in our brain, the sleepier we are. In other words, with every hour we are awake, we get more tired. When we take a nap during the day, we deplete this substance and we do not feel sleepy until later hours of the night. Caffeine found in coffee, tea, chocolates, and soda, blocks adenosine. Drinking caffeinated products interrupts Process S and makes us stay awake longer. The effect of caffeine can last up to six hours.

The successful combination of these two processes results in a healthy sleep routine. Children need to accumulate enough sleep-producing substances during the day, avoid caffeine, avoid bright lights at bedtime, and keep a consistent bedtime routine. For healthy sleep habits, I recommend that older children and adolescents avoid taking naps during the day.

How do medical conditions affect sleep?
Parents are rightfully concerned about the effects of medical conditions on the quality of the sleep their children get. It is very important that any medical conditions are treated to promote healthy sleep. Children with eczema often itch at night; children with uncontrolled asthma often wake up through the night coughing; children with allergies may have congestion, snoring, and difficulty breathing at night. Medications can also affect sleep or have side effects that disturb sleep. Some medications produce insomnia, excessive sleepiness, night terrors, nightmares, or sleepwalking. Before starting a new medication—either prescribed or over-the-counter—familiarize yourself with the possible side effects and ask your doctor what to do if your child exhibits new behaviors, either at night or during the day, when taking new medications.

What is a sleep disorder?
There are sleep disorders that can affect children’s sleep. Snoring and gasping during sleep can suggest obstructive sleep apnea; kicking legs while asleep or having leg discomfort at bedtime can be a sign of restless leg syndrome; excessive sleepiness in spite of getting a good night’s sleep could represent narcolepsy; the inability to fall asleep can be a sign of insomnia. If you suspect that your child has a sleep disorder, talk to your primary care physician, who can make a referral to a sleep specialist.
How did you become an Infant Development Specialist?
My desire to work with young children and their families led me to begin as an Infant Development Specialist (IDS) many years ago at Children’s with Richard Umansky, MD, founder and director of Children’s Child Development Center. Dr. Umansky integrated the IDS with the Neonatal Intensive Care Unit (NICU) medical team. The IDS role grew to become an integral part of the NICU, and Children’s is well recognized as a pioneer in the field. Federal grants allowed us to teach the techniques in NICUs throughout California and collaborate with hospitals nationwide. Children’s has long been a leader in developmental care in the NICU.

What exactly does an Infant Development Specialist in the NICU do?
The NICU is a medically complex environment with highly technical equipment. This lifesaving equipment is crucial in caring for babies, but it may also cause parents to feel isolated from their infant. Our neurodevelopmental program in the NICU helps parents learn to read their baby’s behaviors—such as when the baby is stressed and needs to rest—and how to offer comfort and support to their baby. The IDS helps parents gain confidence in caring for their infant by promoting bonding. Bringing parents and infants together in natural ways under these circumstances is the focus of the IDS and staff.

What is the future for the field?
The future of neurodevelopmental support care and the IDS is bright, with so many directions of growth. Never have we been able to say, ‘Wow! Look at all we have accomplished; we are finished.’ Each day there is more to do to bring parents and infants together, to support bedside nursing and other medical staff in providing developmental supports, to work with other disciplines as part of the developmental team, and to soften the effects of the NICU environment. With the new NICU to be built, the intensity of the environment will greatly lessen, with single rooms for each baby and family. The results will be good for all. The neurodevelopmental support care will shift and change and yet always be exciting and rewarding. My vision for Children’s is to continue to be a model and resource to hospitals throughout the world.

Bette Flushman, MA, received her Masters of Arts in Education from The George Washington University. She has worked at Children’s Hospital Oakland for 40 years. Below is a photo of her in our NICU taken in the early 1990s.

An Infant Development Specialist provides information for the parent about their baby’s daily care as well as opportunities to interact and bond with the baby. Our NICU’s highly skilled Infant Development Specialist guides parents on how to touch, hold, massage, and bathe their baby—using their infant’s signs of readiness as a guide. The specialist helps parents gain confidence in caring for their infant.

Kangaroo Holding
The parent sits with the baby placed against his or her bare chest with a shirt or a blanket covering both the baby and parent. The baby will hear the parent’s heartbeat, and both baby and parent find comfort in the skin-to-skin contact.

Infant Massage
Premature infants who receive infant massage may feed better, sleep more, and have greater weight gain. The experience of mutual enjoyment and closeness promotes the feeling of attachment.

Swaddled Bathing
Swaddled bathing is a neurodevelopmentally supportive method of bathing a medically fragile infant. Supported by the Infant Development Specialist, the parent bathes the baby, who is swaddled in a cloth. The baby is gradually unwrapped during the bathing, relaxing into the warm bath.
Thank you all for your entries!

PUZZLE #15 Answer

PROBLEM: Using the hints below, correctly place the numbers 1 through 9 into the diagram.

1. 1 is in the bottom center.
2. 5 is two squares below 3.
3. 4 is directly left of 6.
4. 7 is directly right of 2.
5. 8 is diagonally opposite 3.
6. 6 is directly below 7.
7. 9 is two squares right of 4.

ANSWER:

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<thead>
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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 August 12, 2016 to:

CHILDREN’S HOSPITAL OAKLAND COMMUNICATIONS DEPT.
747 52nd St., Oakland, CA 94609

NAME __________________________ AGE _____________
ADDRESS _________________________________________________________
CITY _____________________________________________________________
STATE ________________________ ZIP _________________________________

I hereby give my consent to UCSF Benioff Children’s Hospital Oakland and its organizations, including its fundraising foundation, (“Children’s”), to do any or all of the following with respect to me/my child:

Child’s name_____________________________________________

I agree that pictures of and information about me/my child may be used in and/or shared with Children’s publication HandPrints.

I understand:
• I may cancel this consent up until a reasonable time before the picture/information is used, but I must do so in writing and submit to: UCSF Benioff Children’s Hospital Oakland, Marketing Communications, 747 52nd Street, Oakland, CA 94609.
• My cancellation will be effective when received by Children’s, except where use or sharing has already occurred in accordance with this consent.
• I will not receive any financial compensation for agreeing to this consent.
• I have a right to receive a copy of this consent.

Please make a copy of this form for your records.

Date _____________________________________________________
Parent/Guardian signature ___________________________________
Parent/Guardian printed name _______________________________
Relationship to child ________________________________________
Phone ___________________________________________________
Email _____________________________________________________
Address __________________________________________________
City_____________________________State_______Zip __________
Luis and Maria Raygoza were not anticipating any problems when their baby boy, Angel, was born on December 10, 2015. Both parents were young and healthy—Luis was 28, and Maria was 31. Maria had taken good care of herself throughout her pregnancy, and nothing unusual had shown up during her prenatal exams and ultrasounds. When the nurses presented Angel to his parents right after his birth, however, they knew something was wrong.

“It was a shock when he was born,” Luis explains. “The nurses gave him to us, and he started turning purple. Right away, they took him back for tests. Later, when they told us he had Down syndrome, and that he had two holes in his heart, it rocked my world.”

The “holes” in Angel’s heart were actually part of a birth defect called atrioventricular septal defect (AVSD), which is common in babies with Down syndrome, a genetic condition that involves having an extra chromosome 21 (also called trisomy 21). While mothers who are significantly older than Maria are more likely to have babies with Down syndrome, the condition can occur in babies regardless of the mother’s age.

With AVSD, there is a large hole in the wall of muscle, called the “septum,” that separates the two upper chambers of the heart (the atria) and a hole in the septum that separates the two lower chambers of the heart (the ventricles). These holes in the center of the heart allow blood to flow between all four chambers of the heart, instead of just between the two left chambers or the two right chambers.

Luis and Maria had been living in the small city of Minot, North Dakota, where Luis had taken a job as a mechanic in the oil and gas industry. Unfortunately, the local hospital was small and didn’t have the expertise to handle Angel’s case. Because one symptom of Angel’s AVSD was poor feeding and minimal weight gain, the doctors in Minot suggested sending him to the larger city of Fargo to put in a gastric feeding tube.

“Maria and I realized the feeding tube wouldn’t have corrected Angel’s real problem—the heart defects—so we declined that procedure,” Luis says. “So then they wanted to send him to the Children’s Hospital in Minneapolis, Minnesota. That would have been about an 8-hour drive, each way, and we couldn’t have afforded to stay in Minneapolis. I called my mom, who lives in Livermore, for advice. She suggested we come stay with her and take Angel to Children’s Hospital in Oakland.”

The Raygozas contacted UCSF Benioff Children’s Hospital Oakland, and the hospital helped them arrange to transfer Angel from the Minot hospital.

“We worked with a company called United Air Ambulance, which my aunt here in California helped us find,” Luis says. “They flew Angel and Maria to Oakland on a private jet with two nurses, and Angel was admitted to Children’s on January 9.”

Since only Maria was allowed to accompany Angel on the flight to Oakland, Maria’s mother, who had come from her home in Venezuela to see the baby, and Luis, loaded up a U-Haul truck with the family’s belongings and drove cross-country from North Dakota.

“We drove out to Oakland in only two days—through an intense snowstorm,” Luis recalls. “I was blessed to have my mother-in-law with me. It was a very long trip. Angel had been in the hospital for 10 days before we arrived on January 19.”

Angel’s pediatric cardiologist at Children’s, Medical Director of Cardiology
Hitendra Patel, MD, notes that when Angel was admitted to the hospital, they performed another echocardiogram to assess the baby’s heart defects. Children’s physicians agreed with the diagnosis.

“We also performed a bronchoscopy to evaluate Angel’s airways because he had noisy breathing,” says Dr. Patel. “When he came to us, he was struggling to breathe. His collapsing airways probably were due to his weak heart. His little heart had to work four to five times harder than normal to pump adequate blood to his body. Angel would feed well at times, but not at others. He needed to be fed by a feeding tube to ensure adequate calorie intake. We were trying to get him in good condition for surgery to repair his heart.”

Surgery to correct AVSD is most commonly performed between the ages of 3 and 4 months, once the baby is strong enough for surgery but before there is congestive heart failure or permanent damage to the lungs from too much blood being pumped to the lungs. Angel was not quite 3 months old when he underwent surgery on February 24.

“We considered placing a gastrostomy tube to help Angel gain more weight and become stronger, but we determined it would be better to fix his heart first,” Dr. Patel says. “He was younger than we prefer, but we went ahead and fixed the heart.”

Mending Angel’s heart required open-heart surgery that lasted between 3 and 4 hours, according to Chief of Pediatric Cardiac Surgery Olaf Reinhartz, MD, who performed the surgery. “This is not an unusual defect for us to operate on, and we are quite comfortable performing this surgery on babies who are Angel’s size,” says Dr. Reinhartz.

Luis and Maria learned baby massage while Angel was in our NICU!
**Being Bone-Healthy**

Since 2002, the Bone Density Clinic at UCSF Benioff Children's Hospital Oakland has been measuring and interpreting pediatric bone densitometry scans. It is the only location in the Bay Area that specializes in bone health of children with chronic illness as well as those with growth deficits, pubertal delay, and developmental disabilities. The director, Ellen Fung, PhD, CCD, is an editor of the only textbook available in the clinical assessment of bone density for children.

**Accessing bone health**

Bone health is assessed using a specialized X-ray device called Dual Energy X-ray absorptiometry (DXA). DXA is a non-invasive technology that is able to assess bone health *in vivo* or “in a living patient.” Other procedures to assess aspects of bone health—such as a bone biopsy—are painful, invasive procedures. Results from a DXA test provide a proxy measure for bone strength, and therefore will provide the referring physician information on a patient’s risk for future fracture. Results may then be used to help identify and resolve underlying etiology and modify treatment when applicable.

DXA is an instrument used to assess bone mineral content (BMC) and density (BMD) of various parts of the skeleton—including the lumbar (lower) spine, proximal femur (hip), whole body, forearm, and, in some cases, distal femur (lower part near the knee). It is an FDA-approved device that has been used for assessing bone health of post-menopausal women for the last three decades. More recently, this technology has been used to assess bone health of children, due to its rapid scan time, low-radiation dose (less than a cross-country flight), and robust reference data now available in pediatrics.

The patient does not feel anything during the 30 to 45 second procedure other than the movement of the table. The data obtained from the scan is calculated as BMC per area, or areal BMD. For most children, the lumbar spine and whole body will be scanned, and for those older than 10 years of age, the proximal femur (hip) will also be included in the examination.

**Who should get the scan?**

Good candidates for getting a DXA scan are children over the age of 5 who have a medical history significant for:

- Recurrent or low-trauma fractures
- Chronic inflammatory disease
- Hypogonadism/Amenorrhea
- Chronic immobilization disorders
- Hematological disorders
- Long-term systemic glucocorticoid therapy
- Osteogenesis imperfecta or other genetic bone disorders
- Monitoring treatment effect

Your child’s pediatrician will be provided with a one-page, detailed summary report of the scan and interpretation, as well as a copy of the scans. The child's bone mineral content (BMC) and bone mineral density (BMD) for each scan are the primary information revealed. BMD Z-scores, numbers indicating bone mass as compared to a healthy reference group of individuals of the same age and gender, are used to interpret the scans. Percentage of body fat can also be obtained from the whole-body DXA scan.

**Getting a scan from the QDR-4500 Hologic machine:** An authorization for the procedure from a referring physician is required prior to making an appointment. Providers will be asked to complete a referral form, which can be obtained from the Bone Density Clinic.

Bone Density Clinic
5700 Martin Luther King Jr. Way
HEDCO Health Science Center
Oakland, CA 94609
Phone: 510-428-3429

**Getting healthy bones**

Close to 70 percent of our bone density is determined by our genetics. We are not able to change our genetics, but you can put your child on a trajectory to reach their genetic potential for peak bone mass. It’s called building their ‘bone bank.’

**Modifiable factors to build the bone bank include optimal nutrition, exercise, and, in some cases, hormones:**

- **Calcium** is important for a child’s bone health, but also vitamin D, protein, and other essential vitamins and minerals.
- **Exercise** is a crucial aspect of bone health, especially for young children before and during puberty. It is in this period that bones grow in size but also mineralize. For an able-bodied child, the American College of Sports Medicine suggests that children get a minimum of 60 minutes of physical activity every day: Three days should be spent in bone-strengthening exercises (e.g., jumping, gymnastics), three days per week in muscle-strengthening exercises (e.g. push-ups, tug-of-war, monkey bars), and three days per week of vigorous exercises (e.g., running, swimming, bicycling).
- **Your child’s sex hormones, including estrogen and testosterone,** are also essential for the development of peak bone mass. Girls who frequently miss their menstrual periods because of poor nutrition may have lower bone density.

Optimal nutrition and exercise can build a robust bone bank from which your child will have a lifetime of healthy “withdrawals.” One of the best ways to encourage healthy habits in your children is to be a good role model yourself. Your kids are watching your habits, both good and bad, which will have a strong influence on theirs.

**Ways your child can become bone-healthy**

- **Calcium**
- **Exercise**
- **Estrogen and testosterone**
- **Optimal nutrition and exercise**
- **Your child’s sex hormones**

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- **Exercise** is a crucial aspect of bone health, especially for young children before and during puberty. It is in this period that bones grow in size but also mineralize. For an able-bodied child, the American College of Sports Medicine suggests that children get a minimum of 60 minutes of physical activity every day: Three days should be spent in bone-strengthening exercises (e.g., jumping, gymnastics), three days per week in muscle-strengthening exercises (e.g. push-ups, tug-of-war, monkey bars), and three days per week of vigorous exercises (e.g., running, swimming, bicycling).
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Optimal nutrition and exercise can build a robust bone bank from which your child will have a lifetime of healthy “withdrawals.” One of the best ways to encourage healthy habits in your children is to be a good role model yourself. Your kids are watching your habits, both good and bad, which will have a strong influence on theirs.

**Ways your child can become bone-healthy**

- **Calcium**
- **Exercise**
- **Estrogen and testosterone**
- **Optimal nutrition and exercise**
- **Your child’s sex hormones**
Bone Health for Athletes

Building strong bones is important for people of all ages, but most important for young athletes. Because a young athlete’s growing bones cannot handle as much stress as an adult’s mature bones, optimal bone health is critical. Proper eating habits and careful attention to training regimens can keep athletes growing in the healthiest way possible, while also keeping them in top shape for years to come. The time for “peak bone mass” is usually between the ages of 18 and 25. The more bone we have by this time, the less likely we are to develop osteoporosis or reduced bone mass later in life.

Be sure to include the following key nutrients into your everyday eating for building and maintaining strong and healthy bones:

<table>
<thead>
<tr>
<th>Protein</th>
<th>Vitamin D</th>
<th>Vitamin K</th>
<th>Calcium</th>
<th>Phosphorus</th>
<th>Magnesium</th>
<th>Zinc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat</td>
<td></td>
<td>Herbs</td>
<td>Dairy</td>
<td>Nuts and seeds</td>
<td>Dark leafy green vegetables</td>
<td>Oysters</td>
</tr>
<tr>
<td>Fish</td>
<td>Sunlight</td>
<td>Dark</td>
<td>Canned sardines/salmon with bones</td>
<td>Cheese</td>
<td>Fish</td>
<td>Shellfish</td>
</tr>
<tr>
<td>Poultry</td>
<td>Mushrooms that are</td>
<td>leafy green</td>
<td>Dark leafy green vegetables</td>
<td>Fish</td>
<td>Shellfish</td>
<td>Meat and poultry</td>
</tr>
<tr>
<td>Dairy</td>
<td>exposed to sunlight</td>
<td>vegetables</td>
<td>Brussels sprouts</td>
<td>Pork</td>
<td>Pork</td>
<td>Legumes</td>
</tr>
<tr>
<td>Beans</td>
<td>Fish</td>
<td>Brussels sprouts</td>
<td>Chili powder and hot spices</td>
<td>Beef</td>
<td>Pork</td>
<td>Vegetables</td>
</tr>
<tr>
<td>Legumes</td>
<td>Fortified dairy</td>
<td>Asparagus</td>
<td>Fortified cereal</td>
<td>Dairy</td>
<td>Soy</td>
<td>Nuts and seeds</td>
</tr>
<tr>
<td>Eggs</td>
<td>Eggs</td>
<td>Pickles</td>
<td>Tofu</td>
<td>Soy</td>
<td>Whole grains</td>
<td>Whole grains</td>
</tr>
<tr>
<td>Fortified cereal</td>
<td>Fortified cereal</td>
<td>Soybeans</td>
<td>Beans</td>
<td>Soy</td>
<td>Avocados</td>
<td>Fortified breakfast cereals</td>
</tr>
<tr>
<td>Meat</td>
<td>Meat</td>
<td>Olive oil</td>
<td>Oranges</td>
<td>Beans</td>
<td>Bananas</td>
<td>Dairy</td>
</tr>
<tr>
<td>Cod liver oil</td>
<td>Dried fruit</td>
<td>Calcium</td>
<td>Calcium-fortified orange juice</td>
<td>and lentils</td>
<td>Dried fruit</td>
<td>Dark chocolate</td>
</tr>
</tbody>
</table>

Quick Food Ideas for Achieving Optimal Bone Health

Snack Smoothie: Blend fruit, yogurt with calcium and vitamin D-fortified orange juice

Snack Greek yogurt and almonds

Snack Hard boiled eggs and string cheese

Meal Salmon salad sandwich and a glass of milk

Meal Spinach and egg strata made with butter and Parmesan cheese

Meal Stir-fry with mushrooms, broccoli, and sesame seeds

Look for the strata and stir fry recipes on the next page!

Adapted from the SCAN DPG of the Academy of Nutrition and Dietetics
Spinach and Egg Strata

1 (10-oz.) bag chopped frozen spinach, thawed
3 tablespoons unsalted butter
1 medium yellow onion, finely chopped
2 garlic cloves, minced
8 cups French or Italian bread, cut into 1-inch cubes
1½ cups coarsely grated Gruyère cheese
⅔ cup finely grated Parmigiano-Reggiano cheese
9 large eggs
2¼ cups milk
2 tablespoons Dijon mustard
1 teaspoon salt
½ teaspoon black pepper
¼ teaspoon ground nutmeg

DIRECTIONS
1. Preheat oven to 350°F.
2. Squeeze handfuls of spinach to remove as much liquid as possible.
3. Melt the butter in a large sauté pan over medium heat.
4. Add the onion and cook, stirring frequently, until soft and translucent (approximately 5 minutes).
5. Add the garlic, ½ teaspoon of salt, ¼ teaspoon of pepper, and drained spinach; cook 2 minutes more.
6. Remove from heat and set aside.
7. Butter (or use cooking spray) a 3-quart (or 9x13-inch) baking dish.
8. Spread one third of the bread cubes in the dish and top evenly with one third of spinach mixture. Make sure to break up large clumps of spinach.
9. Sprinkle with one third of each cheese.
10. Repeat layering twice, ending with cheeses.
11. In a large bowl, whisk together the eggs, milk, Dijon mustard, nutmeg and remaining salt and pepper until well combined.
12. Pour the mixture evenly over the strata.
13. Cover the strata with plastic wrap and chill for at least 1 hour or overnight.
14. Once chilled, remove strata from fridge and let stand for 30 minutes.
15. Bake the strata, uncovered, in the middle of the oven, until puffed, set, and golden brown all over top (45 to 55 minutes).
16. Let stand 10 to 15 minutes before serving.

Mushroom, Broccoli, Sesame Seed Stir-Fry Served over Quinoa

Quinoa
1 cup uncooked quinoa (any variety—white, golden, red, or black)
2 cups water

Stir Fry
1 tablespoon canola oil
1 tablespoon grated fresh ginger
1 cup mushrooms (vitamin D mushrooms, shiitake, baby portobellos, or button mushrooms), stems removed, sliced
1 bunch broccoli, cut into florets
1-2 cloves of garlic, minced
¼ cup hoisin sauce
¼ cup water
1 tablespoon sesame seeds, toasted

DIRECTIONS
1. Prepare quinoa according to package instructions.
2. While the quinoa is cooking, prepare all the vegetables.
3. In a large skillet, heat the oil over medium-high heat.
4. Add the ginger and cook until fragrant (30 seconds).
5. Add the mushrooms, broccoli, and garlic.
6. Toss often, until the broccoli is crisp and tender (3 to 5 minutes).
7. Add the hoisin sauce and water.
8. Toss vegetables for another 2-3 minutes.
9. Remove from heat.
10. Sprinkle with the sesame seeds.
11. Serve stir-fry over cooked quinoa.

These recipes' ingredients contain key nutrients for building and maintaining strong, healthy bones.
Eating and Living for Heart Health

If you are like most Americans, processed carbohydrates have been the foods of choice, with national trends showing increases in overall carbohydrate consumption from 40 to 50 percent over the last several decades. Marketing of processed food products as “low in fat” and “heart-healthy” has in part been responsible for their increased consumption, with serious implications for heart health. When processed foods and refined carbohydrates are consumed in excess, obesity can develop, and even when consumed within caloric balance, they can worsen blood fat and cholesterol profiles.

Children's Hospital Oakland Research Institute’s (CHORI) Director of Atherosclerosis Research and former Chair of the American Heart Association Council on Nutrition, Physical Activity, and Metabolism Dr. Ronald M. Krauss lends some insight: “For some people, eating excess carbohydrates has been worse for their cardiovascular health than eating a moderate amount of saturated fat would have been.”

With over 30 years of research, Dr. Krauss and his research team—based at CHORI since 2002—have contributed to understanding the relationships between diet, genetics, and heart disease risk. Their work has shown that the type of LDL a person has may affect cardiovascular disease risk more than his or her LDL cholesterol. The research team is working to identify the most dangerous type of LDL particles.

Although heart disease is usually thought of as an adult disease, it actually begins in childhood. The American Association for Pediatrics recommends cholesterol screenings in children 9 to 11 years old and again between 17 and 21 years.

RESEARCH VOLUNTEERS NEEDED
Help advance medical discoveries by participating in a research diet study

Mediterranean-Style Diets and Risk Factors for Heart Disease

The Cholesterol Research Center (CRC) at Children's Hospital Oakland Research Institute (CHORI) is looking for participants for a 14-week research study on risk factors for heart disease:

- Men and women
- Ages 21 and older
- Body Mass Index 25-35
- Willing to eat a variety of foods

If you qualify and complete our study, you will receive:

- Free meals for 10 weeks of the study
- Lab results
- $1,000 for completing the study

To see if you are eligible, go to: www.CRCstudy.org or MFFD.studysites.net

Questions? Email the Cholesterol Research Center at CRCinfo@chori.org, or text MFFD to 510-629-9514.
According 16-year-old Sarina Osaba’s mother, Sarina has been “dancing” since before she could walk.

“When Sarina was a baby, I propped her up in a sitting position on the bed while a friend and I were busy folding laundry, with flamenco music playing in the background,” Sara Osaba recalls. “My friend nudged me, ‘Look at Sarina!’ I turned around, and there was this tiny girl, moving her arms around in rhythm to the music as if she was dancing flamenco, and making happy noises.”

Fast-forward a few years, and 4-year-old Sarina was seated next to her mom at the Flynn Theater in Burlington, Vermont, where they had moved from Oakland when Sarina was 3, watching a performance of Swan Lake.

“Some of the audience around us stared at me with a judgmental look, no doubt wondering if this young toddler was going to disrupt their enjoyment of such a grown-up ballet,” Sara says. “But she was completely fascinated with the entire thing. At intermission, I offered to take her home because it was past her bedtime, but she insisted, ‘No! I’m staying!’ She sat on the edge of her seat for the entire performance, completely absorbed by the dancing. Some months later, I took her to see The Nutcracker. When the show was over, she told me she was mad because she wanted to be ‘up there’ and pointed to the stage, where the dancers where taking pictures with family and friends.”

After trying different ballet schools, she ended up at the Vermont Ballet Theater School, where she trained from ages 8 to 14. She started to dance en pointe (in toe shoes) when she was about 10, after an orthopedist who specialized in dance examined her and verified that her feet were strong enough to begin pointe work.

Although age is not necessarily a restriction, many ballet students do not begin to dance en pointe earlier than age 12 because of concerns regarding the development of the bones in the feet. Serious foot injuries could result from starting pointe work before the dancer has solid technique and the strength and balance needed to do pointe work.

Sarina and her family moved back to Oakland in the summer of 2014 when she was 14 years old, but her dancing continued.

“In the spring of 2015, however, Sarina was experiencing lower back pain and pain in both knees. Her pediatrician referred her to the Dance Medicine Program at UCSF Benioff Children’s Hospital Oakland, noting that the orthopaedic surgeon there was familiar with dance.

Medical Director and Chief of the Orthopaedic Division at UCSF Benioff...
In addition to Dr. Sabatini, the physical therapists and the registered dietitian in the Dance Medicine Program are all current or former dancers.

“Taking Sarina (to the Dance Medicine Program) was like hitting the Lotto,” says mom Sara. “When we met Dr. Sabatini, she spoke dance language. Dr. Sabatini took extensive notes throughout the exam to explain to the physical therapists exactly what work was needed.”

Oakland, Coleen Sabatini, MD, is a classically trained dancer who had studied and performed ballet, tap, jazz, modern and hip-hop dance. She also had taught dance for many years, beginning in high school and continuing through medical school at Harvard.

In addition to Dr. Sabatini, the physical therapists in the Dance Medicine Program—in Oakland, Walnut Creek and San Ramon—are all current or former dancers. They also are certified Pilates instructors, proficient in the exercises designed specifically for dancers by Joseph Pilates. Even the athletic trainer/physical therapy assistant and the registered dietitian in the Dance Medicine Program are dancers. The Sports Performance Laboratory in Walnut Creek features precision technology for conducting 2D and 3D motion analysis evaluations.

“Taking Sarina there was like hitting the Lotto,” Sara observes. “When we met Dr. Sabatini, she spoke dance language—‘Go into first position. Do an arabesque. Let me see a plié.’ I thought to myself, ‘This lady knows what she is talking about!’ Dr. Sabatini took extensive notes throughout the exam to explain to the physical therapists exactly what work was needed.”

For her part, Dr. Sabatini enjoys combining her knowledge of dance with her training in orthopaedics.

“I recognize the challenges of dance injuries, and I understand what the dancers go through,” she says. “I also love when the patients see that I know about dance. I don’t just perform a routine physical examination.

I have them show me their dance movements to help me identify technique issues that may be contributing to their pain. Back, knee and hip pain are common in dancers like Sarina. I had her work on building her core strength and hip abductor muscles and strengthening the quadriceps to avoid straining her lower back. Our physical therapists focus on improving dance technique to avoid muscle strain while also working on strength and flexibility.”

Dr. Sabatini notes that the Dance Medicine Program is designed for all young people who identify as dancers—recreational to professional—and for all forms of dance. In addition, the program can be useful for a wide range of performing artists such as gymnasts, figure skaters, musicians, and cheerleaders.

“Our goal is to catch problems early and correct them so patients won’t need surgery,” she says. “In fact, the vast majority of our patients don’t need surgery. We like to keep them dancing.”

Prior to opening the Dance Medicine Program in 2015, Dr. Sabatini and her colleagues met with local dance instructors, studio owners, and parents of dancers for input on how to structure the program. “We are continually working to reach out to the dance community and provide education about injury prevention and avoiding overuse injuries,” says Dr. Sabatini.

“I had physical therapy at the Dance Medicine Program for several months,” Sarina explains. “I tried to go once a week or at least every other week. The therapy featured Pilates and other exercises to build muscle and core strength. They also taught me how to exercise with foam rollers, which I never had done before. I still do those exercises today. I remember they stressed paying attention to my posture—I have to remind myself to keep everything in line.

“Some steps, like an arabesque, would hurt my back, and other movements would hurt my knees, such as going from bent knees to straight leg positions,” she adds. “I was overusing some muscles, and not using other muscles to full advantage. Each time I went, I would get new exercises to do at home. At first I had to think harder about how to move, but once you get used to using the proper muscles, it does improve your dance. The pain in my knees and back is gone, and I haven’t had an injury since I finished my therapy.”

After completing her physical therapy, she spent the spring semester at the Master Ballet Academy in Scottsdale, Arizona—one of the best training centers for ballerinas who want to become professional. Sarina’s teachers at the Master Ballet Academy have been encouraging her to enter some ballet competitions starting next year.

“The competitions would be good experience for auditioning for various ballet companies,” Sarina says. “My goal is to become a professional ballerina. I really love the American Ballet Theater in New York, but I’m also interested in other options, including ballet theater companies in Europe. I want to keep an open mind about my future, but I know it will involve dancing.”
Hair and eye color are things we take for granted. Most of us take our gender identity for granted, too. People born with male bodies generally think of themselves as male. People born with female bodies generally consider themselves female. That does not hold true for people who are transgender or gender-nonconforming.

“Transgender” and “gender-nonconforming” are umbrella terms used to describe people whose gender identity does not match the gender assigned at birth. Gender identity is not about sexual orientation. Gender identity is an inner awareness and deep conviction that the person is male, female or gender-fluid—regardless of anatomical sex. Many experts believe this awareness is firmly in place before age 5.

Unfortunately, people who identify as transgender often face discrimination in many aspects of their lives, including access to medical care. Caitlyn Jenner’s highly publicized transition from male to female was not typical of most transgender people’s experience, largely because she had financial resources to pay for medical expenses related to transition. According to the Institute of Medicine of the National Academies (IMNA), “Both private and public health care plans severely limit transgender people’s access to treatments related to transgender status.” Further, the IMNA notes, “a lack of training for health care providers may lead to less than optimal care” for transgender patients.

To address the issue of inadequate health care services for transgender children and teens in the San Francisco Bay Area, UCSF Benioff Children’s Hospital Oakland is working in collaboration with UCSF Benioff Children’s Hospital San Francisco’s Child and Adolescent Gender Center to create a Gender Clinic at UCSF Benioff Oakland.

One physician involved with developing the Gender Clinic is pediatric endocrinologist Ivy Aslan, MD, who has been at UCSF Benioff Oakland since 2010, the same year she completed her fellowship in pediatric endocrinology at the University of California, San Francisco (UCSF). She kept her clinical affiliation at UCSF in addition to her practice at the Oakland campus.

“I see many transgender patients at UCSF Benioff Children’s Hospital Oakland now, providing them with access to medical care such as injections and implants to delay onset of puberty and development of secondary sex characteristics,” she explains. “They also are started on cross-sex hormones (estrogen or testosterone), generally at about age 14, to help them begin physical transition to their true gender identity and fit in with their peers.”

Dr. Aslan says the decision to launch a Gender Clinic stemmed from an
increase in transgender patients seeking medical, psychiatric and social services at UCSF Benioff Oakland. The clinic will include a multidisciplinary staff to address these patients’ needs. In addition to members of Oakland’s staff, experts from UCSF Benioff Children’s San Francisco will see patients at the clinic. If necessary, patients can be referred to the adult UCSF Gender Program for additional services. For example, the adult program at UCSF can provide gender reassignment surgeries to further patients’ physical transition. Some surgeons may perform procedures on younger patients with parental consent.

“I now have more than 30 patients from ages 8 to 21 who identify as transgender, and several other families who come for consultations,” Dr. Aslan notes. “These young patients can face a variety of challenges, including lack of support from families or communities as well as financial or insurance constraints. Fortunately, most of my patients have supportive parents. I have had patients who had to wait until age 18 for treatment, however, because their parents would not consent.”

Child and adolescent psychiatrist Herbert Schreier, MD, is another physician involved with developing the Gender Clinic at UCSF Benioff Oakland. His experience in working with transgender patients dates back several decades.

“I came to California in 1977, and I don’t know how many young boys I saw who had what people might describe as ‘female’ behavioral characteristics,” he recalls. “But in the early to mid 1980s, I began to see a few boys who said, ‘I am a girl.’ There also were girls who identified as male, but they were more rare. Back then, psychotherapists felt it was important to help these children overcome their ‘problem’ by attempting to make them accept the gender that matched the sex they were assigned at birth.

“It was clear to me that this type of therapy was off-base,” he adds. “Various therapists claimed success, insisting that gender identity is malleable. We now know that these therapists misrepresented the outcomes of their therapies, and in some cases, patients committed suicide. Conversion therapy is now banned in California and various other states. In addition, some religious clinics that formerly practiced conversion therapy have publicly apologized. I never felt that being transgender was a mental ‘disorder.’ Parents were blamed for ‘making’ their children transgender, similar to blaming ‘refrigerator moms’ for autism. But there was precious little evidence for parents ‘causing’ this, and we saw an upsurge in the number of kids who said, ‘I am in the wrong body.’ That led to a great debate in our profession, and now the Diagnostic and Statistical Manual of Mental Disorders (DSM) calls the condition ‘gender dysphoria,’ rather than ‘gender identity disorder.’”

Dr. Schreier says there are no definitive statistics as to the prevalence of transgender people in the U.S. However, a probability sample of adults conducted by Transgender Health in Massachusetts and published in the American Journal of Public Health in January 2012 reported that 1 in 200 people said they were transgender. That study was replicated in Vermont. A 2011 survey conducted by the National Center for Transgender Equality indicated that 41 percent of transgender respondents had attempted suicide. In addition, 78 percent of those who expressed a transgender or gender-non-conforming identity while in grades K-12 reported serious harassment.

“Almost all patients’ families are supportive,” he says. “But even though the clinic is held in a space in the hospital, patients are not allowed to use the bathrooms that match their gender identity. To be honest, I feel this is a holdover from a bygone era.”

A recent study compared psychological differences between transgender patients in Amsterdam, where they do not try to change children’s gender identity, with transgender children who were treated to try to change their gender identity in a Toronto clinic headed by a leading researcher who defends conversion therapy,” Dr. Schreier says. “The patients in Toronto were twice as likely to exhibit signs of psychopathology than the patients in Amsterdam. The patients in Toronto also had three times the rate of suicidal ideation of the patients in Amsterdam. The clinic in Toronto was ordered closed in December.

“It is clear from careful studies that the psychiatric outcome is very good when children are allowed to be who they are and to follow the protocol of delaying puberty, followed by administration of hormones and surgical procedures,” he concludes.

“These kids are amazing. There’s something about having to deal with this disparity that builds strength and creativity when the kids are allowed to develop as who they are. Our knowledge of transgender issues and resources for these kids are greatly improved from 20 to 30 years ago, and now the kids are teaching and challenging us with our belief in binary genders of only male and female.”

Dr. Aslan concurs, noting, “Resources for transgender kids have improved a lot, even in the six years I have been at Children’s Oakland. There is more support from community organizations, schools and the medical community. As a physician, after treating pediatric transgender patients, I realized how important it is for them to be able to live as who they believe they are, which improves the mental state of these children. I feel I am able to help save lives. And that is truly rewarding.”

UCSF’s Child and Adolescent Gender Center in San Francisco is led by Medical Director Stephen Rosenthal, MD. The Center has an interdisciplinary team that offers medical, mental health, educational/advocacy, and legal expertise to support gender-nonconforming youth and their families.
Eating Disorders in Adolescents: What they are and what to do about them

Body image concerns and disordered eating behaviors commonly occur in adolescents. If this evolves into an eating disorder, it can result in serious medical problems and significant emotional distress for adolescents and their families. Supporting a healthy body image, increasing awareness of disordered eating behaviors and eating disorders, and appropriate treatment of eating disorders are important for raising healthy adolescents.

Adolescence is a time of many changes and transitions that can trigger body image concerns. Many adolescents question their appearance and attractiveness and compare themselves to others or to unrealistic portrayals of bodies in the media. Adolescents that are dissatisfied with their body image often try various weight-control measures that can sometimes be unhealthy. In a 2010 study of adolescent eating behaviors (http://bitly.com/1TXbtJC), 30 percent of males and 46 percent of females surveyed had gone on a diet in the prior year. Thirty-eight percent of males and 50 percent of females used unhealthy weight-control behaviors such as skipping meals or fasting, or cutting out whole groups of foods like carbohydrates. Individuals who eat too much may eat an excessively large amount at one sitting, called a binge, or overeat due to boredom or in response to emotions such as stress or anxiety. Unhealthy weight-loss strategies include purging through self-induced vomiting, excessive exercising, or laxative and diuretic use. Other individuals use diet pills, caffeine, or smoking to suppress appetite.

Eating Disorders

An eating disorder is diagnosed when disordered eating behaviors become severe and frequent and are associated with extreme emotions and attitudes related to body image and weight. Eating disorders are diagnosed based on criteria provided by the *Diagnostic and Statistical Manual of Mental Disorders, fifth edition*. Common eating disorders include anorexia nervosa, bulimia nervosa, and binge eating disorder. Many adolescents do not meet the full criteria to be diagnosed with a specific disorder but are still at risk for medical complications and suffer as much emotional distress as those that meet the full criteria.

### Symptoms of the most common eating disorders

<table>
<thead>
<tr>
<th>Anorexia nervosa</th>
<th>Bulimia nervosa</th>
<th>Binge eating disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate food intake leading to a weight that is too low</td>
<td>Frequent episodes of consuming a very large amount of food (binge eating) followed by behaviors to prevent weight gain - such as self-induced vomiting</td>
<td>Frequent episodes of consuming a very large amount of food (binge eating) without behaviors to prevent weight gain</td>
</tr>
<tr>
<td>Intense fear of weight gain; obsession with weight and persistent behavior to prevent weight gain</td>
<td>A feeling of being out of control during the binge-eating episode</td>
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</tr>
<tr>
<td>Self-esteem overly related to body image</td>
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<td>Feelings of strong shame or guilt</td>
</tr>
<tr>
<td>Inability to appreciate the severity of the situation</td>
<td>Eating when not hungry, eating to the point of discomfort, or always eating alone</td>
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### Eating disorders

#### Anorexia nervosa
- Inadequate food intake leading to a weight that is too low
- Intense fear of weight gain; obsession with weight and persistent behavior to prevent weight gain
- Self-esteem overly related to body image
- Inability to appreciate the severity of the situation
- May involve binge eating or purging behaviors

#### Bulimia nervosa
- Frequent episodes of consuming a very large amount of food (binge eating) followed by behaviors to prevent weight gain - such as self-induced vomiting
- A feeling of being out of control during the binge-eating episode
- Self-esteem overly related to body image

#### Binge eating disorder
- Frequent episodes of consuming a very large amount of food (binge eating) without behaviors to prevent weight gain
- A feeling of being out of control during the binge-eating episode
- Feelings of strong shame or guilt
- Eating when not hungry, eating to the point of discomfort, or always eating alone

Healthy vs. disordered eating

Adolescence can be a time to establish healthy eating habits—eating regular, balanced meals with a diversity of foods. Adolescents generally need three meals a day and one or two snacks. Each meal should have protein, carbohydrates, and fats along with fruit, vegetables, and dairy. Healthy adolescents are able to show some flexibility with eating habits and enjoy sweets and snack foods in moderation.

Disordered eating refers to a wide range of abnormal eating and weight-control behaviors. Individuals may eat too little, eat too much, or use unhealthy weight-loss strategies or appetite suppressants. Specific examples of eating too little include dieting, limiting the total number of calories consumed, skipping meals or fasting, or cutting out whole groups of foods like carbohydrates. Individuals who eat too much may eat an excessively large amount at one sitting, called a binge, or overeat due to boredom or in response to emotions such as stress or anxiety. Unhealthy weight-loss strategies include purging through self-induced vomiting, excessive exercising, or laxative and diuretic use. Other individuals use diet pills, caffeine, or smoking to suppress appetite.

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- A feeling of being out of control during the binge-eating episode
- Feelings of strong shame or guilt
- Eating when not hungry, eating to the point of discomfort, or always eating alone

Healthy eating behaviors:

- Eat regular meals and snacks
- Choose a variety of foods
- Include protein, carbohydrates, and fats
- Enjoy sweets and snacks in moderation

Disordered eating behaviors:

- Dieting
- Skipping meals or fasting
- Cutting out whole groups of foods
- Purging through self-induced vomiting
- Excessive exercising
- Using appetite suppressants
### Eating Disorders

**WARNING SIGNS • RISK FACTORS • SEEKING CARE • PREVENTION • RECOVERY/RELAPSE**

#### Warning signs of an eating disorder

Signs that an adolescent has an eating disorder may be subtle. Many individuals with eating disorders hide their disordered behaviors or explain their behaviors as “wanting to be healthy.” The following are warning signs that an adolescent may have an eating disorder:

- **Dramatic weight loss** (including in individuals who may be overweight or obese and lose weight)
- **Preoccupation with weight, food, calories, fat grams, and dieting**
- **Refusal to eat certain foods or whole categories of foods**
- **Evidence of binge eating**
- **Evidence of purging**
- **Frequent comments about feeling “fat” or overweight despite weight loss**
- **Anxiety about gaining weight or being “fat”**
- **Denial of hunger**
- **Development of food rituals (excessive chewing, eating foods in certain orders, etc.)**
- **Consistent excuses to avoid mealtimes or situations involving food**
- **Excessive, rigid exercise regimens**
- **Withdrawal from usual friends and activities**
- **Behaviors and attitudes indicating weight loss, dieting, and control of food are becoming primary concerns**
- **Loss of a normal menstrual cycle in females**

#### Risk factors for developing an eating disorder

Eating disorders are complex conditions that, on the surface, may appear to be primarily about food and weight concerns. However, eating disorders often arise from a combination of behavioral, biological, emotional, psychological, interpersonal, and social factors. Often individuals with eating disorders are using disordered eating behaviors as a way to cope with underlying strong feelings and emotions and to provide a sense of control over their lives.

- **Some psychological factors** that may contribute to the development of an eating disorder include low self-esteem, depression, anxiety and loneliness.
- **Interpersonal factors** include troubled personal relationships, history of being teased or ridiculed based on size or weight, and physical or sexual abuse.
- **Social factors** that can contribute to eating disorders include cultural pressures that idealize “thinness,” narrow definitions of beauty that focus on specific body types or weight, and cultural norms that value people on the basis of physical appearance.
- **There may be genetic contributors.** Many patients with eating disorders have multiple family members with eating issues.

#### When to seek care and how to manage eating disorders

Anytime there is a concern that an adolescent may be engaging in disordered eating behaviors or has an eating disorder, it is important to seek care. Serious medical complications can result from disordered eating behaviors, including unstable vital signs; life-threatening, abnormal electrolytes that may impact how well the heart functions; vitamin and mineral deficiencies; disruption of menses in girls; and decreased bone density.

- **A medical evaluation by a primary care provider** is a good place to start seeking care for an adolescent with eating concerns. However, adolescents with eating disorders are best managed with an eating disorder-experienced multidisciplinary team, including a minimum of a medical provider, dietitian, and therapist. Recovery from an eating disorder is best achieved through early and intensive intervention. The **medical provider** will screen for any underlying medical conditions and monitor for medical complications. The **dietitian** will provide education and support on appropriate nutritional intake and strategies to maintain balanced, regular eating patterns. The **therapist** will work with the adolescent and family to address the distorted thinking around body image, weight, and food that drives an eating disorder.

#### Preventing eating disorders

Many things can be done to support a healthy body image and prevent eating disorders from developing in the first place.

- **Learn all you can about eating disorders.**
- **Discourage the idea** that a particular diet, weight, or body size will automatically lead to happiness.
- **Challenge the false belief** that thinness, weight loss and/or muscularity are desirable, while body fat and weight gain are shameful.
- **Avoid categorizing foods** as “good” or “bad.”
- **Avoid body-shaming and “fat talk.”** Avoid judging others and yourself on the basis of body weight or size.
- **Become a critical viewer of** the media and its messages about self-esteem and body image.
- **Be a model** of healthy self-esteem and body image.
- **If you think** someone has an eating disorder, express your concerns in a forthright and caring manner.

#### Recovery and relapse

Recovery from an eating disorder can be a long process, with many ups and downs. Sustained recovery is best achieved through careful planning and continued support from a multidisciplinary team. Some individuals require higher levels of care, including day programs or residential programs, to more intensively work on recovery from their eating disorder. Times of stress or transition, such as going to college, can trigger a relapse of an eating disorder.
Dr. Peter Sun Named as First Recipient of the John S. and Sherry H. Chen Endowed Chair in Clinical Neurosurgery

Leading pediatric neurosurgeon Peter Sun, MD, has been named as the first recipient of the John S. and Sherry H. Chen Endowed Chair in Clinical Neurosurgery at UCSF Benioff Children’s Hospital Oakland. The newly established chair will honor excellence in the field of neurosurgery at the Hospital, and support recruitment and retention of world-class neurosurgeons.

President and CEO Bertram Lubin, MD, announced the gift at a celebration on May 9 at the Research Institute of UCSF Benioff Children’s Hospital Oakland. “We are grateful not only for what this endowed chair will enable us to accomplish clinically through the dedicated and gifted work of its chair holder, but also for the example and standard it sets,” said Dr. Lubin.

“UCSF Benioff Children’s Hospital Oakland is a very important institution,” said John Chen, BlackBerry’s Chief Executive Officer and Executive Chairman of its Board of Directors. “They help all kids in need, and I am lucky enough to be able to give back and support such a worthy cause. My wife and I are East Bay residents; it means a great deal to have a program of this caliber in our region—and that all children are cared for, regardless of ability to pay, is admirable and important.”

Neurosurgeons at UCSF Benioff Oakland perform up to 450 surgeries each year, with families coming from across the country for this care. As the only Level I Pediatric Trauma Center in the Bay Area, and one of only five in the state, the neurosurgery team works around the clock to transform and save the lives of children in northern California and beyond.

Neurosurgery at UCSF Benioff Children’s Hospitals is ranked among the best in the country.

Gala Raises Funds for New Cancer Treatment Options

Over 400 guests gathered at the India Community Center on March 12 to rejoice, celebrate and give back at the first annual gala of the Northern California Children’s Foundation. The event raised $51,000 for UCSF Benioff Children’s Hospital Oakland, with funds to support the work of Drs. Anu Agrawal and Jennifer Michlitsch in developing new treatment options for children with relapsed leukemia.

The Northern California Children’s Foundation was formed by a group of close friends who wanted to do more for their community. They reviewed over a dozen worthy causes and decided to pledge support for UCSF Benioff Oakland and the Brighter Vision Foundation in India.

“Our members often gather in times of need or disaster. We want to establish norms within the South Asian community to help whenever possible,” said event organizer Nisha Patel. “Many have been so fortunate to excel and prosper, and it is important to us and our children to show appreciation and consistent leadership in charitable efforts.”

The gala dinner featured an auction with items including tickets to the 2016 American Music Awards, a VIP experience at the 2017 Masters Golf Tournament, and a chance to attend the People’s Choice Awards.

“UCSF Benioff Children’s Hospital Oakland is a historic stalwart within the East Bay. For over 100 years, the hospital has served children in need, regardless of economic status or background. We should be so proud to have, and support, a generous, world-class facility like this, right here in our backyard,” said event organizer Bhupen Amin.
Oakland Campus Reaches Construction Milestone for New Outpatient Center

The final steel beam of the new Outpatient Center (OPC2) at UCSF Benioff Children’s Hospital Oakland—featuring signatures from hospital leadership, patient families, staff, donors, and community members—was hoisted atop the steel frame during the “Topping Out” Ceremony held on April 27.

This milestone brings the new, six-story center one step closer to completion in the fall of 2017. The 89,000-square-foot facility will adjoin the present outpatient center with clinics for cardiology, rehabilitation, neurology and other pediatric subspecialties.

Construction of the OPC2 is the first phase of a 10-year expansion project that includes rebuilding and modernizing the Hospital to meet seismic regulations and improve facilities for children, adolescents, and their families. “It has been a pleasure to work with our incredibly dedicated staff, construction crew, and contractors on this expansion project,” said Doug Nelson, Executive Director of Development & Construction at UCSF Benioff Children’s Hospital Oakland. “When completed, the new outpatient center will greatly impact how we deliver life-changing care to thousands of patients each year.”

For construction updates, go to chonext100.org/construction/updates.
10 fingers toes awards

UCSF Benioff Children’s Hospitals ranked in all U.S. News & World Report 10 Best Children’s Hospitals categories.

To learn more, go to http://bit.ly/usnew-16