

# A Lot on Their Plates

Kids today struggle with health issues. Don't turn the top concerns that

various food-related a blind eye to many of affect their future.

**S**ince the inception of the National School Lunch Program in 1946, our vision for the children we serve as school food and nutrition experts hasn't wavered: We want to raise generations of well-nourished students who are prepared for lifelong success. SNA's charge, to educate and empower its members to provide healthy meals and foster an environment encouraging wellness, also has changed little in the last 67 years. But many factors that affect that undertaking *have* changed and continue to evolve with time. These include sources of our food supply, processing and preparation practices, nutrition science, safety and sanitation, applied technologies and many other societal advances. Most important, your customers are facing a volatile mix of time-honored and 21st-century challenges that complicate your mission.





## SNAPSHOT

- Kids face the same rites of passage as their parents and grandparents, but these are complicated by some unique 21st-century challenges.
- Eating disorders, food allergies and overweight top the list of increasingly common health-related concerns for America's youth.
- Further research is needed to fully understand the rise in certain medical conditions among children.

## Look Who's Talking...

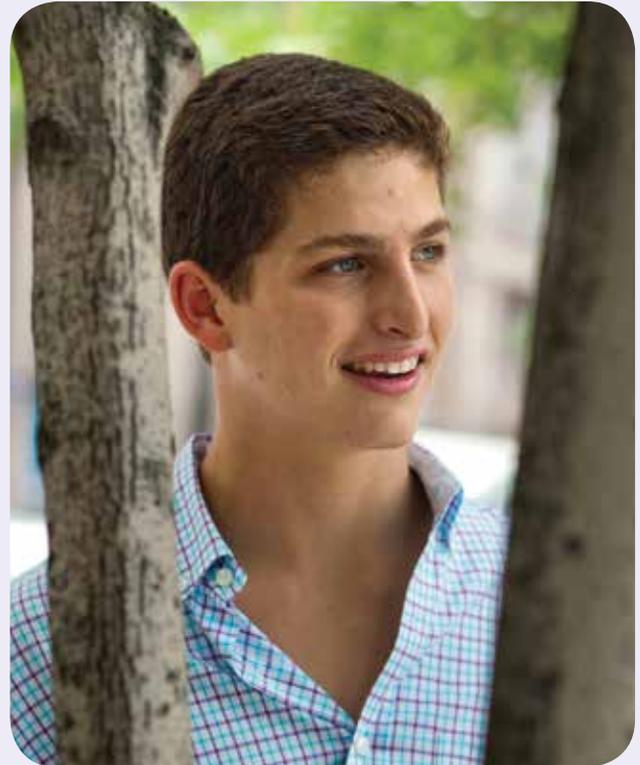
## ...about the importance of physical activity

Physical activity has always been a huge part of my life. From five years of organized sports to backyard football and weekly pick-up basketball, sports have always been at the forefront of my weekly routine. From an early age, I saw “exercise” as a fun game of soccer with my friends or a walk with Mom and Dad before dinner.

When most people approach weight loss or simply make a decision to be “healthier,” they decide they need to increase their time spent exercising. So, they go to the gym and sit on a spin bike or walk on the treadmill. Not that these methods aren’t effective, but how much do you enjoy trekking out to the gym to run on a machine? If we can make physical activity fun, people will *want* to partake in it.

Why not suggest that students in your cafeteria set up a game of pickup basketball with friends after school, or go on a walk with their family in the evening? Setting up activities with friends is easy, and before the kids know it, they might have a weekly tradition. I encourage you and your students to go out of your way to help improve the well-being of those in your community. Try setting up a 3-on-3 basketball tournament at the local gym or even a soccer game at a local park.

If we can make physical activity more of a recreation and less of a chore, we will start to see our younger generations’ view of “exercise” change drastically. So I encourage other kids to get outside, get active and help inspire your community. Let’s make exercise more of a game and less of a chore.



### Zach Dell, 16, St. Andrew's Episcopal School, Austin, Texas

School Nutrition thanks our youth authors, representatives of the Alliance for a Healthier Generation's Youth Advisory Board, for sharing their insights and enthusiasm with readers.

To begin, American kids today are empowered with unprecedented access to information and choice. There’s *more* of virtually everything—from products to decisions—than there was 5, 10, 20, 67 years ago. Keeping up and struggling to draw ever-blurring distinctions between “want” and “need” is no easy task at any age. Managing these complications while grappling with those school-age challenges that *haven’t* changed over time (navigating academics, peer pressure, bullying and “fitting in”) presents new tests to helping youth to maintain both physical and emotional health.

The K-12 school years—and especially the “twens” and teens—represent a time of intense physical, psychosocial and cognitive development. Children are experiencing many changes in their bodies, emotions, preoccupations and interests. Many of these manifest themselves in complex food-related behaviors—and their often-destructive consequences.

Kids today contend with the “want/need” dilemma. Media images of what it means to look “good”—or even “acceptable.” Easy, inexpensive access to less-nutritious food choices. Time-pressured, day-long grazing replacing traditional mealtimes. Intense marketing techniques lauding both taste and volume.

As school nutrition professionals, you are encountering food- and nutrition-related challenges in your students that the pioneers in this business never imagined back in the Forties and Fifties. Sure, your predecessors likely were challenged to help girls overcome eating disorders—but they didn’t see as many boys suffering from these maladies. Back then, malnutrition manifested itself in rickets or stunted growth—today, too many kids suffer from obesity-linked early-onset medical conditions like diabetes and high blood pressure. Add in a greater prevalence of food allergies and intolerances and perception of a

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possible trend in early-onset puberty, and it's clear that kids today are presenting a wide range of concerns for any professional working to advance their health and well-being.

That's why this article offers a look at a few of these issues. *School Nutrition* wants to help you gain a better understanding of some of the current health and nutrition challenges you and your student customers must work together to overcome.

### **Eating Disorders**

Often, children are too worried about their physical appearance to pay adequate attention to their body's requirements. Many are in desperate need of accurate nutrition and physical activity messages to help counter dangerous myths and misperceptions. In recent years, eating disorders definitely have been on the rise, for both girls *and* boys, beginning sometimes as young as 8 years old. Indeed, "our culture supports the development of a negative body image from a very young age," says Dr. Katie Erreca, a clinical psycholo-

gist at Healthy Within in San Diego. Research indicates that 86% of all people with eating disorders experienced onset before age 20. Following is a quick overview of the most common eating disorders.

- **Anorexia nervosa** is classified as the deadliest eating disorder; 10% of all patients diagnosed will die from the disease, suffering from a potential host of medical conditions, such as anemia, heart failure, bone loss and kidney-related problems, as a consequence of starvation. Some experts contend that between 0.5-1% of *all* young people suffer from anorexia nervosa.

- **Bulimia nervosa** is most common among young women but also afflicts boys. It is characterized by a craving for food, where the sufferer rapidly wolfs down much more food than her or his body needs. Bulimics have difficulty stopping themselves from eating more and more and often use vomiting and other measures to purge the food they have ingested to prevent an increase in weight. Those suffering from bulimia can be underweight, normal weight or overweight.

- **Binge eating disorder (BED)** is a term used for those who go through recurring episodes of compulsive overeating. They eat far too much, but don't get rid of the extra calories in the same way as those with bulimia. They typically eat large quantities of food quickly, even when they are not physically hungry. Feelings of shame and guilt are common. BED usually leads to overweight. About one-fifth of those who seek medical help for overweight have typical symptoms.

- **Disordered eating and dysfunctional eating** are used to describe problematic behaviors that don't meet the specific criteria for a clinical diagnosis of an eating disorder. These might include restrictive dieting, overeating, over-exercising, occasional vomiting or infrequent use of laxatives, diuretics or other weight-control products. Often, children who practice disordered or dysfunctional eating habits later move into a full-blown eating disorder, so it's important to address such behaviors as soon as possible.

In addition, "There has been an increase seen in what we call 'orthorexia,' which is not an official diagnosis, but rather an eating pattern of following a very strict diet (i.e., Paleo diet, raw diet, gluten-free, Atkins, etc.), along with rigidity around exercise," details Erreca. Inevitably, such "diets" often exclude important foods that provide important vitamins and minerals, as well as avoiding complete macronutrients. "People with orthorexia tend to go unnoticed, because as a society we have accepted such behavior as 'normal' or even 'healthy.' We have a culturally accepted obsession with body criticism, and as part of this, diets often are passed down from mother to

The number of children developing food-related allergies is on the rise. Food allergies in children increased from 3.4% in 1997 to 5.1% in 2011.



daughter as a ‘rite of passage,’” she observes.

Eating disorders also have increased in boys. A decade ago, clinicians believed that 5% of boys and men experienced eating disorders, but current estimates suggest this number is closer to 20% and rising. They often go unnoticed in males, as they can be hidden behind athletics, and our general lack of awareness of this issue in boys leads us to miss some of the signs.

“Eating disorders are complex,” says Erreca, noting that many elements play a role in their development, including genetics, personality, dieting, life events, hormones/puberty and societal pressure. “Eating disorders work in the brain as an addiction. There is a feeling in both boys and girls of ‘If it works, I’m going to do it again! I’ll do it just one more time.’ So, they end up in a vicious cycle,” she continues, explaining that while the behavior may start out as a reasonable diet or a reaction to anxiety, it can lead to euphoria once desired results are achieved. Eventually, this cycle turns into something destructive, she warns.

Erreca points to the ongoing role of mass marketing: “We have accepted, as a culture, that hating our bodies is normal. Girls are constantly exposed to emaciated women on television and in ads—women who say they need to diet to get into that dress and messages that tell them if they do not look a certain way, they will not be accepted by their peers.” Perpetuating the problem, she notes, is the fact that boys see the same images about women and messages that tell them that image is valued over personality and physique is more important than character.

Adults need to improve their own self-acceptance of body issues and stop perpetuating critical messages, Erreca warns. Mothers, in particular, are powerful role models. Avoiding self-criticism about appearance

is important. Statements like “I feel fat,” “I need to lose a few pounds” and “I can’t eat that because if I gain weight, then your dad won’t like it” tie appearance to acceptance.

Erreca feels that schools can play an important role in intervention. “When teaching about healthy choices with food, the focus should be on nourishing the body, respecting the body and valuing it for the wonderful things it does for us. We need to be careful about labeling certain foods as ‘good’ or ‘bad.’ For example, if we label chocolate as ‘bad,’ then we are sending the message that we cannot enjoy sweets in moderation. If weight is the focus when teaching our children about nutrition, we are sending the wrong message,” she emphasizes.

Children struggling with disordered eating or full-fledged eating disorders can be very vulnerable when it comes to the messages they take in, and deciphering nutrition misinformation behind advertised nutrition and health claims and promotions can be tricky. As adults, we can steer them in the right direction in learning how to discern credible claims or where to go for information (*visit [www.schoolnutrition.org/snmagazinebonuscontent](http://www.schoolnutrition.org/snmagazinebonuscontent) for advice on using the Internet to find trustworthy nutrition-related research*).

What can you do if you observe a child in the cafeteria who seems to be experiencing an eating disorder? You are in a unique position to help, as you have the chance to observe eating behaviors and to listen to student conversations and concerns about food. You can play an important role in eating disorder prevention and intervention in your school and community. This is not to say that you should talk directly with the student in question, as she or he may be upset that you discovered this “secret,” and the cafeteria may not be the most appropriate setting to address the issue. Instead, talk to the school nurse or principal about your concerns. Here are some specific behaviors to watch for in the cafeteria:

- Making repeated, intense references to being fat.
- Being overly concerned or fearful about the calorie, fat or carbohydrate content of foods.
- Requesting numerous or large servings, or consistently throwing out full plates of food.
- Regularly eating alone or disappearing quickly after eating.

### Food Allergies

As most *School Nutrition* readers know, there is a difference between an allergy and an intolerance. An **intolerance** is an adverse, food-induced reaction that does not involve the immune system. Lactose and gluten intolerances are good examples. A food **allergy** occurs when the immune system reacts to a certain food, as with a peanut allergy or celiac disease,

Celiac disease now is estimated to affect 1% of the population. Researchers found a three-fold increase in the incidence of celiac disease in children between 1997 and 2007. Celiac disease is caused by a sensitivity to gluten, found primarily in wheat-based products.

“defending” itself in ways that cause a range of symptoms that range from discomfort to life-threatening. Some food allergies are temporary, while others are lifelong.

Allergies in children have been a longstanding challenge for kids, their parents and school nutrition professionals. But the number of children developing food-related allergies is on the rise. According to SNA research, a startling 80% of districts reported in 2012 an increase in the number of students with special diet requests; of these, 25% identified it as a “significant” increase. The most prevalent requests are for peanut- or other nut-free diets, milk allergies and gluten-free diets (as well as diabetic diets with carbohydrate monitoring).

These observations are affirmed by federal research. Food allergies in children increased from 3.4% in 1997 to 5.1% in 2011, according to a new report from the U.S. National Center for Health Statistics, part of the U.S. Centers for Disease Control and Prevention. A study in the October 2012 issue of the *Journal of Allergy and Clinical Immunology* found that female children were less likely to be diagnosed with allergies than male children, and children under to 2 years olds were significantly more likely to be diagnosed than older children aged 3-17 years old.

What’s behind this increase in allergies in children? “That’s the million-dollar question,” acknowledges Dr. Susan S. Laubach of the Allergy & Asthma Medical Group and Research Center in San Diego. “No one really knows.” She notes that some suggest that the “hygiene hypothesis” may extend to food allergy, as well as asthma. (This theory contends that since we no longer live on farms and have access to vaccines and antibiotics, the immune system has nothing better to do than to start attacking benign substances such as peanuts or dust mites.) Advocates also point to other potential causes, among them insufficient vitamin D intake and the consumption of unhealthy fats and obesity, but none of these have been confirmed with hard science.

Laubach cites emerging data that indicate that the timing of the introduction of certain allergenic foods to infants may be a critical factor. “After pediatricians saw that the rates of food allergy to certain foods were high, they started to recommend that parents delay introduction of egg, nuts and shellfish in high-risk babies,” she details. That strategy seemed to have backfired, however, when after just 5 to 10 years, data showed a three-fold *increase* in food allergy prevalence. Now, the American Academy of Pediatrics no longer recommends delaying the introduction of these foods, she explains.

In the meantime, new research shows a lower incidence of food allergy and celiac disease when

foods such as eggs, peanuts or wheat are introduced *early*, between 4 and 6 months of age. “There are ongoing prospective clinical trials looking at the effect of introducing peanuts into infants’ diets; that data should be available as early as 2014 and may provide more answers,” Laubach previews.

While some districts have acceded to banning certain foods in response to a student or students with life-threatening food allergies, most choose to manage the needs of affected children with policies and procedures. Laubach confirms the need to find a “balance between risk and common sense,” advocating pragmatic solutions, such as a peanut-free classroom or eating area for affected children. “This decreases the incidence and exposure of accidental ingestion,” Laubach explains, going on to note that “a 504 plan, or a diet prescription for the nutrition department, can be written to clarify ways to keep the child safe in school.”

While children, especially older ones, can be their own first line of defense in avoiding off-limit foods, trained school nutrition staff members are essential. Not only do cafeteria personnel need to be aware of cross-contamination procedures and actions to take in case of an allergic reaction, but their awareness and intervention is required to address bullies trying to evoke an allergic reaction in affected students. All school personnel need to keep an eye out for such behavior, and administrators must take a tough stand in response.

### Gluten-Related Disorders

Another food-related condition increasingly affecting school nutrition programs is celiac disease. Once thought of as a rare childhood disease, celiac disease now is estimated to affect 1% of the population; the autoimmune disorder can strike at any age. Nonetheless, researchers found a three-fold increase in the incidence of celiac disease in children between 1997 and 2007.

Celiac disease is caused by a sensitivity to gluten, found primarily in wheat-based products. But as awareness of celiac disease has increased, it’s given rise to the discovery of “non-celiac gluten sensitivity” and a growing spectrum of gluten-related disorders that researchers are continuing to explore.

As with the increase in allergies, the question as to what has caused an increase in celiac cases is a tricky one to answer. Celiac disease diagnosis rates are up partly because of the increased awareness and education about this health concern. For example, the National Foundation for Celiac Awareness (NFCA) has developed an online Celiac Disease Symptoms Checklist ([www.celiaccentral.org/checklist](http://www.celiaccentral.org/checklist)), which has helped make people more aware of their symp-

## Look Who's Talking...

## ...about changing the world

The thing that worries me the most about the future is the childhood obesity epidemic. Over the past three years, I've learned a lot about childhood obesity, and just how much our generation is affected by unhealthy cooking and eating habits; a lack of sufficient physical activity; inadequate rest and hydration; and too much screen time. I also learned just how important it is for kids to embrace healthy habits in order to do well in school and sports and maintain a healthy body. Childhood obesity statistics are a constant motivator behind my desire and efforts to inspire and motivate my peers to learn cooking skills and embrace healthy habits.

I am also motivated by the fact that too many youth who are affected by obesity often don't have the resources or skills to help themselves live healthier lives. Some live in food deserts that prevent them from getting fresh fruits and vegetables, and too many don't have access to safe playgrounds, PE in school and affordable, fun physical activities. These youth and their families need community support to help with their health challenges, and they need to have facilities to turn to when wanting to improve their health. Unfortunately, many cities in our nation are lacking that kind of support for youth and their families—but things are changing.

It's changing because my generation is being activated to help with this epidemic. Organizations and initiatives like the Alliance for a Healthier Generation, Let's Move! and many others are working to engage and empower youth to help make a difference in our communities and beyond. This change is amazing, because youth [can] help by getting involved with health initiatives such as community gardens, health fairs, school wellness councils, becoming health ambassadors, doing healthy cooking demonstrations and encouraging our peers to get moving!



While I am worried about the future enough to do all I can to help inspire healthier generations, I am also very encouraged and proud to be counted as one youth doing all I can to engage, inspire and motivate my peers to become active in the fight against childhood obesity. I am also very proud of all the other amazing youth across the United States that are doing all they can to help, as well. Together we all can and will make a difference.

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toms so they can initiate a conversation with their doctors. NFCA's free primary care continuing medical education program ([www.celiaccmecentral.com](http://www.celiaccmecentral.com)) also helps doctors recognize the signs and symptoms of celiac disease. But as far as why celiac disease is on the rise overall, more research is needed.

Fortunately, along with the increasing number of kids (and adults) who need to be on a gluten-free diet, a robust set of resources has emerged, including gluten-free training for restaurants and schools. For example, the NFCA runs the GREAT Kitchens program, which teaches foodservice teams how to

verify gluten-free products and avoid cross contamination. [Editors' Note: For more on how school nutrition operations are addressing with this issue, see "Grappling With Gluten-Free," January 2011.]

### **Early Onset Puberty**

Puberty is another element of a child's health under increased scrutiny by researchers and medical professionals. In particular, there is speculation that it may begin earlier today than in the past, potentially jumpstarted by environmental or other factors. Puberty refers to the physical and psychological



In addition to being foodservice professionals, we have roles as educators, caregivers and healthcare providers—and we have the responsibility to help create a sustainable environment that prioritizes child health.



## BONUS WEB CONTENT

The Internet is a wonderland full of useful and useless information. How can you find credible sources? Visit [www.schoolnutrition.org/snmagazinebonuscontent](http://www.schoolnutrition.org/snmagazinebonuscontent) for some basic tips, as well as a comprehensive list of health-related resources.



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changes that mark the beginning of sexual maturity. The process typically begins in females between ages 9 and 16 and in males between ages 13 and 15; its duration, or “tempo,” and termination vary from one individual to the next.

There are a number of variables that may influence directly or indirectly when and how quickly one moves through puberty. Among these are genetics, nutrition, health and well-being, metabolism, physical activity and fitness, gender, socioeconomic conditions, ethnicity, possible exposure to environmental toxins, hormonal levels and social stressors. Some of the same influences are associated with overweight and obesity.

Since the start of puberty varies from child to child, is early onset puberty a legitimate concern? Or is it a misperception based on children’s seeming maturation in certain societal regards? One expert in the field weighs in: “I have not seen a significant change in either boys or girls. Some of the reports that have come out about early onset puberty were done by observation, so there is question about the true validity of the studies,” asserts Dr.

Michael Gottschalk, clinical professor of pediatrics, vice chair of education and chief of pediatric endocrinology, University of California, San Diego/Rady Children’s Hospital.

Gottschalk continues, “For example, one of the true signs of puberty in a girl is breast development. When a girl is overweight or obese, there is no true way to tell if it’s actual breast development or just fat. So, it’s difficult to tell with any validity if it is early onset puberty or just related to weight.” He cites an old theory that suggested a correlation between a high percent of body fat and an early age for the onset of puberty but notes that research does not bear this out. That said, there is a link between increased storage fat and the hormone leptin, but “It is unclear whether leptin causes puberty or is merely present at higher levels when puberty begins,” he notes.

In addition, Gottschalk doesn’t subscribe to concerns that processed food plays any kind of specific role. “At this point, there is no scientific evidence to support our food supply containing

hormones or endocrine disrupters that are causing early pubertal development,” he reports.

### Overweight & Obesity

What is more straight-forward to understand is the overweight and obesity epidemic in today’s children. Gottschalk points to a strong correlation between overweight and increased rates of type 2 diabetes, explaining, “We have seen a dramatic change and increase in type 2 diabetes in both boys and girls. Approximately 30 to 40% of new onsets in children are type 2. These rates have increased in young children even in the past five years.” And there’s no debate in the medical community that these increased rates of “diabesity” are a tremendous health concern.

For weight maintenance or weight loss, most pediatricians base recommendations on the severity of overweight or obesity. “For overweight children, I recommend weight maintenance for the next two years,” says Gottschalk. “This is because as the child grows in height, their weight relative to height (BMI) will decrease. For very obese children, I recommend mild weight loss of about one-half to one pound per week.”

Can school meals, stricter nutrition standards and various health-based initiatives play a role in reducing childhood obesity? Preliminary evidence suggests that such efforts may pay off (see “Are We Moving the Meter?” page 66), but most experts acknowledge that a dramatic societal shift is required.

### Your Responsibility

While further research is required to understand the links between food and many health-related conditions in children, what already is evident is that most of the issues discussed in this article are reaching alarming numbers of kids today.

As our students grapple with eating disorders, allergies, overweight and more, we must do everything we can as school nutrition professionals to stay true to our core mission and values. In addition to being foodservice professionals, we have roles as educators, caregivers and healthcare providers—and we have the responsibility to do what we can and what we must to create a sustainable environment that provides the foundation for a child’s future success. As a new school year approaches, let’s pledge to be vigilant and supportive when it comes to the children who spend time in our cafeterias. We owe it to them—and to our nation’s future. **SN**

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