

# SCHOOL FOODSERVICE & NUTRITION

**JUNE/JULY 2004**

## That's a Mouthful (teens)

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It's tough to be a teenager. Raging hormones, changing bodies, difficult choices, and intense pressures from peers, parents, and the media.

In our 24/7 world, teens face many challenges when it comes to eating well, getting fit, and maintaining a healthy weight: hectic schedules with little time for regular meals or physical activity; fatty foods and sugary drinks available everywhere; unrealistic body images; and an unending stream of diet fads and miracle weight loss products.

Adolescence is a time of serious nutrition needs. Teens need lots of energy for rapid growth and plenty of protein for muscle development. They also have high mineral needs: calcium for building bones, zinc for normal maturation, and iron for making extra blood cells, especially for teen girls.

Today's teens, however, face many obstacles in getting the nutrient-rich foods they need for normal growth and healthy weights. They can find fast foods on every corner, empty-calorie soft drinks in every vending machine, and salty snacks wherever they eat.

Unfortunately, whole grains, fruits, veggies, lean meat, and low-fat dairy foods are often much harder to find in their grab-n-go lives. In such a food environment, called toxic by some experts, it is no wonder the rates of adolescent overweight, eating disorders, and diabetes are rising rapidly.

Helping teens make healthy choices is a challenge, but it's not mission impossible. Families, schools, and communities all play important roles. Delicious nutrition and fun fitness can help adolescents enjoy lifetime health, reduce everyday stress, and achieve their dreams – all at the same time.

### Teen Trends

When it comes to nutrition, physical activity, weight, and related health issues, teen trends are moving in the wrong direction. The overall picture is of a generation that is undernourished, sedentary, increasingly overweight, and at risk for serious medical and psychological problems – not a healthy picture for tomorrow's workers and parents.

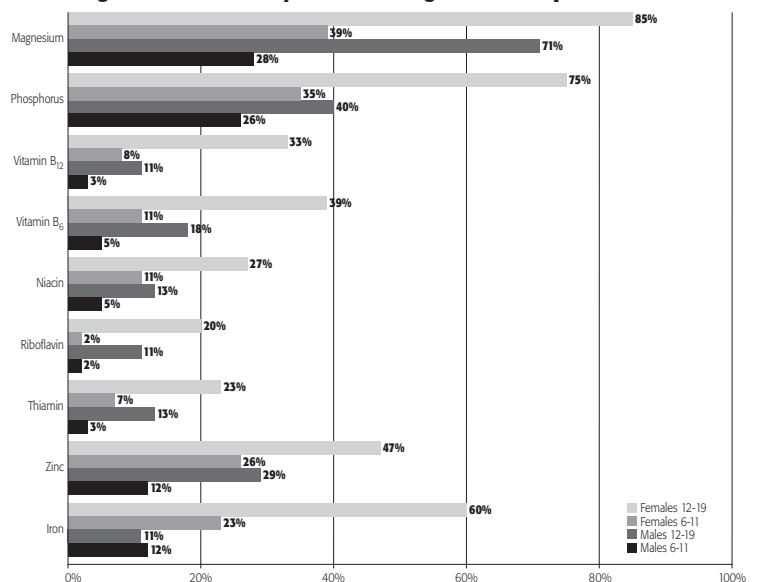
### Nutrient Intakes

Although many American teens are clearly getting plenty of calories, they are just as clearly not getting enough nutrients. Whether you look at intake in terms of food groups or in terms of individual nutrients, many adolescents are undernourished.

When young Americans' intake is compared to the daily recommendations from MyPyramid, it's easy to see that teens aren't getting the nutrition they need. Adolescent girls are doing significantly worse than boys. On average, teen girls consume only 1.25 cups per day of vegetables (2.5 cups recommended), .7 cup per day of fruit (2 cups recommended), 1.7 cups of milk (3 cups recommended) and only 3.9 ounce equivalents from the meat and beans group (5.5 ounces recommended).

A similar situation emerges when we look at the number of teens not meeting the recommendations for individual nutrients. Again, adolescent girls are missing more nutrients than boys – including some critical ones like calcium and phosphorus (for bones and teeth), iron (for cognition, muscles, and blood), and zinc (for cognition and the immune system). (See figure 1).

**Figure 1.**  
Percentages of Girls and Boys NOT Meeting Needs for Specific Nutrients



Source: Updated Analysis of the 1994-96 Continuing Survey of Food Intake by Individuals (CSFII). Final Report prepared by Bermudez Consultenos International, August 2002. Recommended Dietary Allowances (RDA) for Phosphorus, Magnesium (1997); RDA for Thiamin, Riboflavin, Niacin, Vitamin B<sub>6</sub>, Vitamin B<sub>12</sub> (1998); RDA for Iron, Zinc (2001).

The Youth Risk Behavior Survey (YRBS), a national sample done every two years by the Centers for Disease Control and Prevention (CDC), provides more evidence for the gaps in the teen nutrition, especially among young women. The 2001 survey reported that, in the seven days preceding the survey:

- Only 23.3 percent of teen boys and 19.7 percent of teen girls had eaten five or more servings of fruit and vegetables.
- Only 22.3 percent of teen boys and 10.9 percent of teen girls had consumed three or more glasses of milk.

The flip side of the nutrition equation is where teens are getting their calories – since they are not meeting recommendations for the five food groups. The obvious answer – one that is confirmed by many food intake surveys – is from “extras,” or foods with solid fats or added sugars.

Indeed, fats, sweets, and oils do appear frequently in teen dietary recalls. In fact, estimates from the mid-1990s suggested that 40 percent of the energy intake of 2- to 17-year olds came from added fat and sugar. There is every reason to indicate that the percent calories from fat and sugar has only increased since then.

The eating patterns that lead to poor teen nutrition are well-known and readily apparent to anyone who spends time around adolescents:

- Increased intake of fast food (often with super-sized amounts of sugar and fat)
- Decreased family mealtimes (more family meals = higher nutrient intake)
- Increased intake of snack foods and soft drinks (more fat and sugar)
- Decreased breakfast meals (breakfast skippers have lower nutrient intakes)
- Increased intake of refined carbohydrates and hydrogenated fats (few nutrients)
- Decreased intake of nutrient-rich whole foods (whole grains, fruits, veggies, etc.)

## **Physical Activity**

When it comes to physical activity and fitness, every recent study points in the same direction: Today's teens are more sedentary than any generation before them. Fewer and fewer meet the recommended goal of 60 minutes of daily physical activity – and a recent California study estimated that only one in four teens can be considered fit.

There are numerous reasons for the low levels of adolescent fitness:

- More screen entertainment (TV, video games, and computers) time at home
- Less physical education and activity at school
- More demands on teens' time (homework, after-school jobs, etc.)
- Less opportunity for participation as team sports become more competitive
- More teens with cars driving between home, school, and work
- Less safety in some neighborhoods limiting outdoor activities

CDC's Youth Risk Behavior Survey (YRBS) offers a snapshot of the physical activity problems among American teens. 2001 data shows that, in the 7 days prior to the survey:

- 35.4 percent of teens did not participate in sufficient vigorous activity
- 46.6 percent did not do any strengthening exercises
- 48.3 percent were not enrolled in a physical education class
- 67.8 percent did not attend a physical education class

In fact, physical activity appears to drop dramatically during the teen years. In a 2002 study of girls, most 9- to 10-year-olds reported doing some physical activity outside of school. By ages 16 to 17 in the same sample, 56 percent of African-American girls and 31 percent of white girls said they did not do any regular activity in their spare time.

By the time the young women in this study were 18- and 19-years old, 70 percent of young African-American women, and 29 percent of whites reported no regular leisure physical activity. This study confirms other research suggesting that adolescent physical activity varies by race – with African-Americans and Hispanic-Americans being generally less active than others.

## Weight

The rapid rise in the number of overweight children and teens has become a regular topic in the daily news. The numbers are certainly a concern: (See figure 2).

- About 16 percent of 12- to 19-year olds being overweight and another 15 percent at risk of becoming overweight
- Higher rates overweight among teen boys than girls – and among African American, Hispanic American, and Native American teens

Being undernourished, inactive, and overweight is a particularly unhealthy combination. These factors put teenagers at risk for problems today (like type 2 diabetes and eating disorders) – and in the future (like adult obesity and osteoporosis).

Unfortunately, there is no simple solution to the weight problems of American teens. The traditional approach to weight management – diet and exercise – has not proven to be particularly effective. In fact, many experts are concerned that pressuring teens to lose weight will lead to other problems – including weight gain and eating disorders (from anorexia to binge-eating).

## Dieting Behaviors

It should be no surprise that more American teens are dieting. As more of them become overweight, more of them undoubtedly feel pressured to lose weight by parents, peers, and health providers.

Not all dieting teens are overweight however. Many normal, and even some underweight, adolescents also feel pressure to be thin – by recent attention to the obesity epidemic and by the unrealistic images they see constantly in the media. CDC's 2001 Youth Risk Behavior Survey (YRBS) reported that 29.2 percent of teens thought they were overweight – and 46 percent were trying to lose weight. However, in this same sample, only 13.6 percent were actually overweight.

It is also probably not a surprise that teens do not always use healthy, effective weight management strategies. After all, many of their adult role models are following fad diets and using over-the-counter weight loss preparations. There are few structured, or monitored, weight management programs for adolescents – and even fewer opportunities for low-income teenagers to get professional weight management assistance.

In the 2001 YRBS survey:

- 19.1 percent of teen girls and 7.6 percent of teen boys had gone more than 24 hours without food in an effort to lose weight
- 12.6 percent of female and 5.5 percent of male teenagers had taken diet pills, powders, or liquids without a doctor's advice
- 7.8 percent of girls and 2.9 percent of boys had vomited or taken laxatives to lose weight or to avoid gaining weight

The result of teen dieting efforts may come as a surprise – especially to teens themselves. Two large studies have shown that, for many adolescents, dieting actually may promote weight gain:

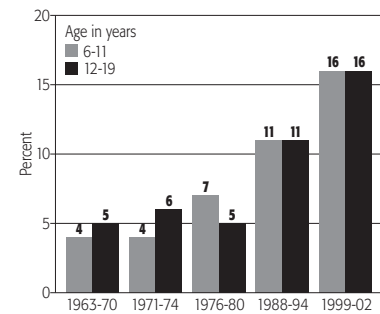
- A 1999 study, following almost 700 high school girls for four years, reported that dieters gained more weight over time than non-dieters.
- A three-year survey of over 14,000 boys and girls, published in 2003, also showed that teen dieting can lead to problems. In this study, dieters again gained more weight than non-dieters. They were also more likely to engage in binge eating.

## Teen Pregnancy

Although teen pregnancy rates have been dropping in the US, thousands of adolescents give birth each year. Pregnant teens are more likely to have low-birth-weight babies and to experience certain complications, like pre-eclampsia. They have higher nutrient needs because they are growing babies – before their own bodies have finished developing. Erratic eating patterns can make it difficult for many pregnant teens to get sufficient nutrients.

A 2004 national study confirmed that adolescents are at high risk for another pregnancy problem – excessive weight gain. Over 27 percent of the teen moms gained more than 40 pounds during pregnancy – as compared to 18 percent of older mothers. The authors of this research noted that although higher prenatal weight gains are generally associated with improved birth outcomes, excessive maternal weight gain increases the risk for gestational diabetes and for postpartum, adult obesity.

**Figure 2.**  
**Prevalence of Overweight Among Children and Adolescents Ages 6-19 Years**



Note: Excludes pregnant women starting with 1971-74. Pregnancy status not available for 1963-65 and 1966-70. Data for 1963-65 are for children 6-11 years of age; data for 1966-70 are for adolescents 12-17 years of age, not 12-19.  
Source: CDC/NCHS, NHES and NHANES  
[www.cdc.gov/nchs/products/pubs/pubd/hestats/overfig1.GIF](http://www.cdc.gov/nchs/products/pubs/pubd/hestats/overfig1.GIF)

## **Diabetes**

Lifestyle-related chronic diseases and risk factors (like high blood pressure and elevated cholesterol levels) are becoming more common at younger and younger ages. Type 2 diabetes is of special concern because the medical and economic consequences of the disease are so dramatic.

Type 2 diabetes, once a disease of grandparents, is now becoming common in children as young as nine or ten. The longer that a person has diabetes, the greater their risk of developing serious complications. Clinics around the country are now seeing kids in their late teens who already show signs of diabetes-related damage to their eyes, nerves, heart, and kidneys. The lifetime cost of caring for young people with diabetes is predicted to be a serious economic strain on our future health care system.

In all age groups, type 2 diabetes is linked to being overweight, inactive, and having a family history of diabetes. According to reports from around the US, childhood type 2 diabetes cases have risen dramatically since 1994, when less than 5 percent of new childhood diabetes cases were type 2.

By 1999, type 2 diabetes accounted for 8 to 45 percent of new diabetes cases in children, depending on geographic location. African American, Hispanic American, and Native American children have a greater genetic susceptibility, as well as higher weights, both of which increase their risk for the disease. Some communities with high risk populations are beginning to implement school-based diabetes management programs.

## **Supporting Healthy Teens: What Parents and Other Adults Can Do**

Improving teen nutrition and fitness is like putting together a complicated puzzle. Recognition of the problems is one piece of the puzzle. Understanding the causes of the problems is another. Knowing that healthful eating and active lifestyles are the best strategies to fix the problems is a critical piece. But the puzzle won't be solved until families, schools, and communities figure out how to take action together.

When it comes to healthy lifestyles, teens need the same important things from all the adults in their lives:

- Positive role models who they can trust and talk to
- Straight-forward information about making positive food and fitness choices
- Healthy environments that make the right choices possible and easy

Whether you are a parent, grandparent, aunt, uncle, health provider, teacher, or school foodservice professional, you can help adolescents in some very basic ways. Whether you are trying to help your own child or helping to design a comprehensive school health program, here are five basic ways to help teens eat smarter and move more.

### **1. Stop, look, and listen - before you lecture.**

- When you're concerned about a teen, it's easy to start lecturing. Before you know it, you're telling them exactly what's wrong – and exactly how to fix it.
- If you're worried about a teen's weight being too low or too high, the first step is to assess the situation. Observe their usual eating habits and activity patterns.
- If you are a parent, the next step is to discuss the issue with your child. Find out how they view their weight, eating, and activity – and what changes they want to make.

### **2. Walk the healthy walk.**

- Talking to teens is important – for parents and others. It is just as important to talk about food and fitness as it is to discuss drugs, alcohol, and other lifestyle choices.
- Setting a healthy example is another critical adult role. Even though rebellion is a normal part of growing up, adolescents still see adults as primary role models.
- Teens always learn more from watching what you do than from listening to what you say. The key is to model healthful eating and an active lifestyle – every day.

### **3. Make nutrition easy.**

- It's easy for today's teens to find fatty foods and sugary drinks. There are fast food restaurants, convenience stores, and vending machines around every corner.
- As adults, we need to make it easy for teens to find nutrient-dense foods and beverages. We need to fill homes, schools, and teen hangouts with appealing, healthful choices.
- When we fill teen's lives with nutrient-rich fruits, veggies, whole grains, low-fat dairy products, lean meats, and other tasty treats, we all benefit.

### **4. Take an active interest.**

- Teens need to know that you care. It is important to them that you take a serious interest in what they eat and how active they are.
- Family meals are one of the easiest ways to show that you care. Research confirms that children who eat with their families get more of the nutrients that they need.
- Teens also need encouragement for fitness. Whether they choose organized sports or an individual activity, they need to know that they have some serious adult fans.

## 5. Provide the right resources.

- Sometimes teens need more information than you have – or specific guidance that is beyond your expertise.
- If you know that a teen needs additional help managing their weight or overcoming an eating problem, get help as soon as possible.
- If you are not sure where to find the right resources, check with a school counselor, a family health care provider, or a hospital health information center.

## Resources

Although teens desperately need accurate nutrition and fitness information, they can be a challenging audience to reach. Teens are exquisitely sensitive to how things are presented to them. They want information that is targeted to their needs – not too childish, not too adult. For two creative examples of how health educators are tackling this tough job, check out these sites:

## Health Partners

<http://www.healthpartners.com/Menu/0,1791,5506,00.html>

*Totally Teen: Information for You to Navigate the Teen Years*

This publication, produced by a Minnesota-based HMO, is packed with useful details on social, emotional, and physical issues that affect teens. Eating and moving are just two of the many topics covered in 60 pages of straight talk about relationships, drugs, stress, girls' and boys' bodies, acne, tattooing and more.

## California Project Lean

<http://www.caprojectlean.org/>

This site is part of *Food on the Run*, administered by the Public Health Institute (active in promoting healthy school environments in California).

*Your Energy Wake-up Call: The simple solution to healthy eating and physical activity for teens* offers tips, recipes, games, quizzes and ways for young people to get involved health policy development

These sites have resources for, and about, teen nutrition, fitness, and health issues.

## Adolescent Health Topics (Centers for Disease Control and Prevention)

<http://www.cdc.gov/health/adolescent.htm>

This index page provides access to CDC's wide variety of teen topics. From here, you'll be able to find state-by-state data from the Youth Behavior Risk Survey (YRBS) and school health report cards, as well as guidelines, resources, and tools for promoting physical activity and bone health.

## Diabetes Tools for School Personnel (National Diabetes Education Program)

<http://www.ndep.nih.gov/resources/school.htm>

The increasing number of young Americans with diabetes means that administrators, teachers, and child nutrition program need resources for dealing with the disease. At this site, you can access many helpful materials, including *Helping the Student with Diabetes Succeed* (a comprehensive guide) and *Tip Sheets for Children with Type 2 Diabetes*.

## Healthy Weight Network

<http://www.healthyweight.net/>

Francie Berg, MS, publishes books and offers handouts, resources, and links, like *SNE Guidelines for Childhood Obesity Prevention Programs: Promoting Healthy Weight in Children* (2002). Her most recent book is *Overweight and Underage: America's Childhood Obesity Crisis – What every family needs to know* (2003).

## Michigan Department of Education

[http://www.michigan.gov/documents/healthyweight\\_13649\\_7.pdf](http://www.michigan.gov/documents/healthyweight_13649_7.pdf)

*The Role of Michigan Schools in Promoting Healthy Weight: A Consensus Paper* (2001) features guidance on excessive weight and weight gain; social pressure for excessive slenderness; and unsafe weight loss practices. It provides detailed background on weight issues and specific suggestions on what school personnel can do.

## Team Nutrition (US Department of Agriculture)

<http://www.fns.usda.gov/tn/Default.htm>

Team Nutrition is always a goldmine of materials, kits, and local efforts to enhance school nutrition environments. You can read about Team Nutrition success stories; find out what states are doing to reach the teen market; and download free materials like *The Power of Choice: Helping Youth Make Healthful Eating and Fitness Decisions* (2003).

## Recently published books about young people's nutrition and fitness:

*Fuel for Young Athletes*, Ann Litt, MS, RD, Copyright 2004, ISBN: 0736046526 (\$17.95), 800-747-4457

<http://www.humankinetics.com/>

*Childhood and Adolescent Overweight: The Health Professional's Guide to Identification, Treatment, and Prevention*, Mary Catherine Mullen, MS, RD and Jodie Shield, MEd, RD, Copyright 2004, ISBN: 0-88091-335-5 (\$58.50), 312-899-0040

<http://www.eatright.org/Public/ProductCatalog/104.cfm>

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