

# Research-to-Results <sup>Brief</sup>

Child **TRENDS**

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*...information for program practitioners on diet, exercise, body image and weight status of youth and ways to measure these outcomes.*

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## **ASSESSING THE DIET, EXERCISE, BODY IMAGE, AND WEIGHT OF ADOLESCENTS: A GUIDE FOR OUT-OF-SCHOOL TIME PROGRAM PRACTITIONERS**

Laurie Martin, Sc.D., M.P.H. and Alyssa Milot, B.A.

### **BACKGROUND**

This brief discusses diet, exercise, body image, and weight and also provides information for practitioners on how to measure these factors among youth in their program. Most adolescents do not eat the recommended amount of fruit (one and a half cups) and vegetables (two and a half cups) per day,<sup>1,2</sup> and about one-third fail to meet the current recommendations of three or more sessions of moderate to vigorous physical activity a week.<sup>3</sup> Inexpensive fast food, the availability of foods high in sugar, salt, and fat in both school and at home, unsafe neighborhoods where youth are not free to go outside and play, and an increasing amount of time spent watching television or playing video games have contributed to the overweight status of many children and adolescents. Regardless of their actual weight, some adolescents, and in particular female adolescents, have an intense desire to be thin, leading in some cases to an eating disorder. Since both unhealthy weight loss and unhealthy weight gain are problems among today's adolescents, it is important to be aware of and sensitive to both sides of the issue when working with young people.

### **WHAT DOES IT MEAN TO BE “OVERWEIGHT”?**

Overweight is determined by weight when compared to a person's height, age, and sex. This is a serious issue today, as more and more children and adolescents are becoming overweight, and being overweight can cause many health problems both now and in the future.

- § Approximately 30 percent of children and adolescents are overweight.<sup>4</sup>
- § Children and adolescents who are overweight are more likely to have asthma, type 2 diabetes, and high blood pressure.
- § Some studies have found that overweight children are more likely to have low self-esteem and to be stigmatized compared with children of normal weight.<sup>4</sup>

### **WHAT ARE BODY IMAGE AND EATING DISORDERS?**

Body image refers to how an individual views his or her body shape and weight. Individuals who have a poor body image may believe that they are overweight, even if they are not. Eating disorders occur when a person has a poor body image and does dangerous things to control his or her weight, such as not eating or vomiting after eating. In the most severe cases, eating disorders can cause death.

- § Adolescent females are most likely to have eating disorders.<sup>5</sup>
- § Although eating disorders are more common among white adolescents, girls of all races and ethnicities engage in unhealthy weight-control behaviors.<sup>6</sup>

- § To lose weight, 13 percent of high school students report that they had gone without eating for more than 24 hours; 8 percent had taken diet pills, powders, or liquids; and 5 percent had vomited or taken laxatives.<sup>7</sup>
- § *Anorexia nervosa* is marked by extreme weight loss and a fear of weight gain. Warning signs of anorexia include: dramatic weight loss, preoccupation with weight, food, calories, fat grams or dieting, excessive or obsessive exercise, and frequent comments about feeling overweight despite weight loss.<sup>8</sup>
- § *Bulimia nervosa* is another eating disorder. Individuals with bulimia eat extremely large amounts of food and then vomit or misuse laxatives to lose weight. Individuals with bulimia are often harder to identify than are those with anorexia because most bulimics are able to keep their body weight at or above a healthy level.<sup>9</sup> Warning signs of bulimia include: evidence of binge-eating or vomiting (purging), excessive or obsessive exercise, and the creation of complex lifestyle schedules or rituals to make time for binge-and-purge sessions.<sup>10</sup>

### **WHAT TO DO IF YOU SUSPECT THAT SOMEONE IN YOUR PROGRAM IS SUFFERING FROM AN EATING DISORDER**

If you notice that a participant in your program is losing an unhealthy amount of weight, or you notice a participant talking a lot about her or his weight and not eating or vomiting after eating, contact a local health professional or contact the National Eating Disorders Association for more information at 1-800-931-2237 or <http://www.edap.org>.

### **ASSESSING WEIGHT ISSUES AMONG ADOLESCENTS IN OUT-OF-SCHOOL TIME PROGRAMS**

Below we list several potential questions you may wish to use in an evaluation or outcomes study of the diet, exercise, body image, and weight status of the participants in your program. It is a good idea to involve a researcher or research organization to help you learn how best to ask sensitive questions like these, which may upset some youth in your program. These organizations can also help you work with your local Institutional Review Board (often called an IRB) which will look over the questions you want to ask and the way you are going to get the information (e.g., paper and pencil survey, or in-person interviews). They will also make sure the children and/or adolescents in your programs have permission and have agreed to participate.

#### Diet

1. Not counting juice, how many times a week do you eat fruit?<sup>11</sup>  
Scale: 0 – 7
2. How many servings of vegetables do you eat each day?<sup>12</sup>  
Scale: 0 – 7

#### Exercise

1. During the past week, on how many days did you exercise or participate in physical activity for at least 20 minutes that made you sweat and breathe hard, such as basketball, soccer, running, swimming, bicycling, dancing, or similar activities?<sup>13</sup>  
Scale: 0 – 7

### Body Image/Eating Disorders<sup>14</sup>

1. During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or to keep from gaining weight?
  - A. Yes
  - B. No
  
2. During the past 30 days, did you take any diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight? (Do not include meal replacements.)
  - A. Yes
  - B. No
  
3. During the past 30 days, did you vomit or take laxatives to lose weight or to keep from gaining weight?
  - A. Yes
  - B. No

### Weight and Height

Weight and height can be assessed in two ways. One option is to ask children or adolescents to write down or tell you how much they weigh and how tall they are; this is called a self-report. While this is commonly done in research, some people will not know their current weight or height (particularly during adolescence when bodies are rapidly changing), and some may tell you they weigh more or less than they actually do depending on what they think they should weigh, or would like to weigh.

The other option is to measure each student's height and weight with a standard bathroom scale and tape measure. If you choose to measure the student's weight and height, it is important to have standard procedures so that all measurements are as accurate as possible. While more time consuming, this way generally will give you better measurements. It is also important to be sensitive to students' privacy when taking these measurements.

Body Mass Index (BMI) is the measure used to determine if a person is overweight. It is calculated by dividing the person's weight (measured in kilograms) by their height (in meters) squared. An adolescent is overweight if they are above the 85<sup>th</sup> percentile of BMI for their age and sex according to standards set by the Centers for Disease Control.

Because BMI may be difficult to calculate by hand, several Web sites are available that will calculate BMI for you; all you have to do is enter in their gender, date of birth, weight and height. As an example, see [http://www.kidshealth.org/parent/general/body/bmi\\_charts.html](http://www.kidshealth.org/parent/general/body/bmi_charts.html).

## **ADDITIONAL RESOURCES ON HEALTHY DIET AND EATING DISORDERS FOR YOUR PROGRAM**

### § **KidsHealth: Nemours Foundation**

For information regarding healthy eating habits and guidelines for children and adolescents go to [www.kidshealth.org](http://www.kidshealth.org).

### § **BodyWise Handbook**

For information regarding both the detection of eating disorders as well as tips for teaching healthy eating habits to youth in your program go to <http://www.girlpower.gov/AdultsWhoCare/resources/Pubs/bodywise.htm>.

### § **National Eating Disorders Association**

For more general information on eating disorders, such as warning signs, causes, and some helpful tips for both educators and friends of individuals suffering from eating disorders call the Information and Referral Help Line toll-free at (800) 931-2237 or email [info@NationalEatingDisorders.org](mailto:info@NationalEatingDisorders.org).

### § **Eating Disorder Referral and Information Center**

For the largest online searchable database of eating disorder professionals go to [www.edreferral.com](http://www.edreferral.com).

### § **Anorexia Nervosa and Related Eating Disorders Inc. (ANRED)**

For information on eating disorders in boys and teenage athletes, as well as a confidential self-test to help gauge if a student is at risk for an eating disorder go to [www.anred.com](http://www.anred.com).

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<sup>2</sup> Homeier, B.P. (2005). KidsHealth for Kids: The Food Guide Pyramid.

<sup>3</sup> Gordon-Larson, P., McMurray, R.G., & Popkin, B.M. (1999). Adolescent physical activity and inactivity vary by ethnicity: The National Study of Adolescent Health. *Journal of Pediatrics*, 135(3):301-306.

<sup>4</sup> American Obesity Association. (2005). AOA Fact Sheet.

<sup>5</sup> Phelps, A., Rizzo. (1994) In: Phelps, L., Sapia, J., Nathanson, D., & Nelson, L., editors. (2005). An empirically supported eating disorder prevention program. *Psychology in the Schools*, 443-452.

<sup>6</sup> Neumark-Sztainer, D., Croll, J., Strory, M., Hannan, P., Frunch, S., & Perry, C. (2002). Ethnic/racial differences in weight-related concerns and behaviors among adolescent girls and boys: Findings from Project EAT. *Journal for Psychosomatic Research*, 53:963-974.

<sup>7</sup> U.S. Department of Health and Human Services. (2000). Youth risk behavior surveillance - United States, 1999. *Morbidity and Mortality Weekly Report*, 49(SS-5).

<sup>8</sup> National Eating Disorders Association. (2002). Anorexia nervosa.

<sup>9</sup> Ponton, L. (1996). Disordered eating. In: DiClemente R, Hansen W, Ponton L, editors. *Handbook of Adolescent Health and Behavior*. New York: Plenum Press, 83-113.

<sup>10</sup> National Eating Disorders Association. (2002). Bulimia nervosa.

<sup>11</sup> Centers for Disease Control and Prevention. (2003). Behavioral risk factor surveillance system.

<sup>12</sup> Murphy, S., Kaiser, L., Townsend, M., & Allen, L. (2001). Evaluation of validity of items for a food behavior checklist. *Journal of the American Dietetic Association*, 101(7):751-61.

<sup>13</sup> National Center for Health Statistics. (2004). National Survey of Children's Health.

<sup>14</sup> National Center for Chronic Disease Prevention and Health Promotion. (2007). Youth Risk Behavior Surveillance System (YRBS): Eating Disorders Measure.