



*Eating Disorders and Obesity:
How Are They Related?*

BodyWise

BODWORKS

Eating disorders and obesity are usually seen as very different problems but actually share many similarities. In fact, eating disorders, obesity, and other weight-related disorders may overlap as girls move from one problem, such as unhealthy dieting, to another, such as obesity. This information sheet is designed to help parents, other adult caregivers, and school personnel better understand the links between eating disorders and obesity so they can promote healthy attitudes and behaviors related to weight and eating.

HOW ARE EATING DISORDERS AND OBESITY RELATED?

Eating disorders and obesity are part of a range of weight-related problems.

These problems include anorexia nervosa, bulimia nervosa, anorexic and bulimic behaviors, unhealthy dieting practices, binge eating disorder, and obesity. Adolescent girls may suffer from more than one disorder or may progress from one problem to another at varying degrees of severity. It is important to understand this range of weight-related problems in order to avoid causing one disorder, such as bulimia, while trying to prevent another, such as obesity.¹

Body dissatisfaction and unhealthy dieting practices are linked to the development of eating disorders, obesity, and other problems. High numbers of adolescent girls are reporting that they are dissatisfied with their bodies and are trying to lose weight in unhealthy ways, including skipping meals, fasting, and using tobacco. A smaller number of girls are even resorting to more extreme methods such as self-induced vomiting, diet pills, and laxative use.²

These attitudes and behaviors place girls at a greater risk for eating disorders, obesity, poor nutrition, growth impairments, and emotional problems such as depression.³ Research shows, for example, that overweight girls are more concerned about their weight, more dissatisfied with their bodies, and more likely to diet than their normal-weight peers.⁴

Binge eating is common among people with eating disorders and people who are obese. People with bulimia binge eat and then purge by vomiting, using laxatives, or other means. Binge eating that is not followed by purging may also be considered an eating disorder and can lead to weight gain. More than one-third of obese individuals in weight-loss treatment programs report difficulties with binge eating.⁵ This type of eating behavior contributes to feelings of shame, loneliness, poor self-esteem, and depression.⁶ Conversely, these kinds of feelings can cause binge eating problems.⁷ A person may binge or overeat for emotional reasons, including stress, depression, and anxiety.⁸

Depression, anxiety, and other mood disorders are associated with both eating disorders and obesity. Adolescents who are depressed may be at an increased risk of becoming obese. One recent study found that depressed adolescents were two times more likely to become obese at the one year follow up than teens who did not suffer from depression.⁹ In addition, many people with eating disorders suffer from clinical depression, anxiety, personality or substance abuse disorders, or in some cases obsessive compulsive disorder.¹⁰ Therefore, a mental health professional may need to be involved in treating an adolescent who is obese or suffers from an eating disorder or other weight-related problem.

The environment may contribute to both eating disorders and obesity. The mass media, family, and peers may be sending children and adolescents mixed messages about food and weight that encourage disordered eating.¹¹ Today's society idealizes thinness and stigmatizes fatness, yet high-calorie foods are widely available and heavily advertised.¹² At the same time, levels of physical activity are at record lows as television and computers replace more active leisure activities, travel by automobile has replaced walking, and many communities lack space for walking and recreation.¹³



Most teens don't suffer from either anorexia or obesity.

They are more likely to engage in disordered eating behaviors such as bingeing, purging, and dieting. These behaviors are associated with serious physical and emotional health problems.

We've got to get back to three square meals a day, healthy meal planning, nutritious snacks, and regular physical activity.¹⁴

— RICHARD KREIPE, M.D., CHIEF, DIVISION OF ADOLESCENT MEDICINE, UNIVERSITY OF ROCHESTER MEDICAL CENTER

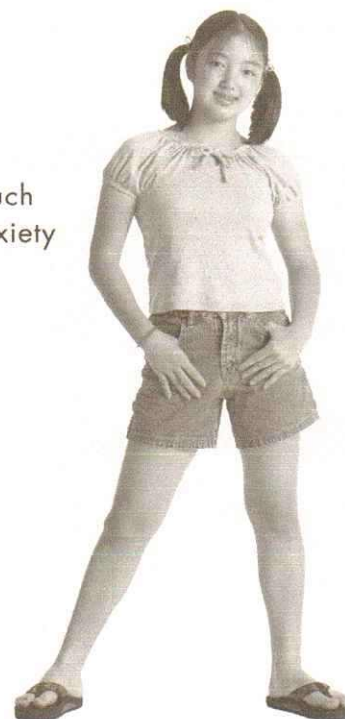
HEALTH RISKS

Eating disorders may lead to

- ◆ Stunted growth
- ◆ Delayed menstruation
- ◆ Damage to vital organs such as the heart and brain
- ◆ Nutritional deficiencies, including starvation
- ◆ Cardiac arrest
- ◆ Emotional problems such as depression and anxiety

Obesity increases the risk for

- ◆ High blood pressure
- ◆ Stroke
- ◆ Cardiovascular disease
- ◆ Gallbladder disease
- ◆ Diabetes
- ◆ Respiratory problems
- ◆ Arthritis
- ◆ Cancer
- ◆ Emotional problems such as depression and anxiety



*Changing habits is never easy, but switching to a healthier diet and regular physical activity will bring children and their families many benefits, including improved health, more energy, and a better quality of life.*¹⁵

— JONELLE C. ROWE, M.D., OFFICE ON WOMEN'S HEALTH

HELP ADOLESCENTS DEVELOP HEALTHY EATING ATTITUDES AND BEHAVIORS

Be a positive role model. Children look to parents and other adult caregivers as they develop their own attitudes and behaviors toward eating and weight. For example, children of overweight parents are more likely to be overweight than their peers. Also, daughters of mothers who diet are more likely to diet than other girls.¹⁶ Teach young people how to eat healthily through your own actions. Avoid unhealthy habits such as skipping meals to lose weight, complaining about your body, or using food as a reward.

Help children learn to control their own eating. Parents and other adults can help children get in touch with their feelings of hunger and fullness. For example, encourage young people to stop eating when satisfied. Avoid forcing children to eat certain foods, requiring that they “clean their plates,” or forbidding particular foods, as it may even increase their preference for and intake of those foods.¹⁷ Studies show that when mothers try to restrict their children's food, the children actually tend to eat more when they are not being supervised.¹⁸

Offer young people a variety of healthy foods at meal and snack times. Plan meals in advance, and make sure they include vegetables, whole grains, protein, and other foods that are low in sugar and saturated fat. Pack a healthy school lunch for your child. Keep plenty of healthy snacks such as nuts and fruit available at home.

Eat dinner together as a family most days of the week. Meals are an important social activity, and help parents and caregivers keep track of what young people are eating, as well as their activities and moods. Make mealtime a relaxed and enjoyable occasion.

Be aware of your child's emotional health. Depression, anxiety, and other mood disorders are associated with obesity, eating disorders, and other weight-related problems. Consult a mental health professional if you think your child may be suffering from a more serious emotional problem than typical adolescent mood swings.

Provide opportunities for children to participate in sports, dance, swimming, or other physical activities. Take your child regularly to parks, beaches, and other places where he or she can be physically active. Take walks, hikes, or bike rides as a family. Keep exercise clothing and equipment available. Limit and monitor time spent watching television, which encourages sedentary behavior and exposes children to junk food advertisements. Remove televisions from kids' bedrooms.

Counteract harmful media messages about body image. Watch television with children and talk about messages regarding body image. Discuss how advertisers use thin models to market products and manipulate photos and other images to make bodies look perfect. Praise the child for his or her talents and abilities, and encourage a focus on health rather than on appearance.

Don't be afraid to seek help. Take your child to a family doctor if you think he or she has a weight-related problem. A doctor can suggest ways to maintain a healthy weight, assess your child for any underlying emotional problems, or recommend a program that promotes healthy food choices and exercise. Many of these programs include family members, so you may benefit personally from it too.

Did you know...

- ◆ In American high schools, 30 percent of girls and 16 percent of boys schools suffer from disordered eating, including bingeing, vomiting, fasting, laxative and diet pill use, and compulsive exercise.¹⁹
- ◆ Childhood obesity has more than tripled in the last 30 years. By the year 2000, 15 percent of children and adolescents ages 6 to 19 were obese.²⁰
- ◆ Studies suggest that about 70 percent of overweight adolescents will become obese adults.²¹
- ◆ A personal or family history of obesity is a risk factor for later development of bulimia.²²
- ◆ The average child in the U.S. watches 10,000 television advertisements for food each year, 95% of which are for foods in one of four categories: sugared cereals, candy, fast foods, and soft drinks.²³

DEFINITIONS

Body image is how you see yourself when you look in the mirror or picture yourself in your mind.

Obesity means having an abnormally high proportion of body fat. A person is considered obese if he or she has a body mass index (BMI) of 30 or greater. BMI is calculated by dividing a person's weight in kilograms by height in meters squared. You can also calculate your BMI by going to an online BMI calculator at www.fns.usda.gov/tnrockyrun/diff.htm.

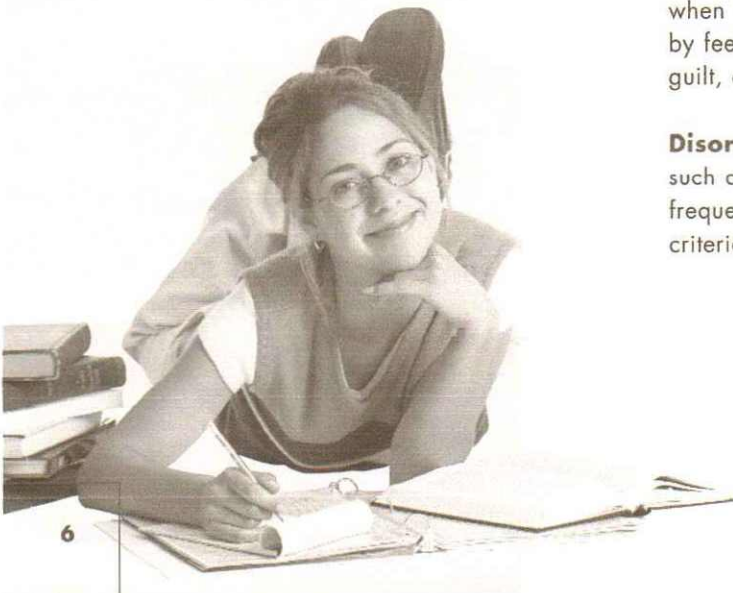
Overweight refers to an excess of body weight compared to set standards. The excess weight may come from muscle, bone, fat, and/or body water. A person can be overweight without being obese (for example, athletes who have a lot of muscle). However, many people who are overweight are considered obese due to excess fat on their bodies. A person may be considered overweight if he or she has a BMI of 25-29.9.

Anorexia nervosa is self-starvation. People with this disorder eat very little even though they are thin. They have an intense and overpowering fear of body fat and weight gain.

Bulimia nervosa is characterized by cycles of binge eating and purging, either by vomiting or taking laxatives or diuretics (water pills). People with bulimia have a fear of body fat even though their size and weight may be normal.

Binge eating disorder means eating large amounts of food in a short period of time, usually alone, without being able to stop when full. The overeating and bingeing are often accompanied by feeling out of control and followed by feelings of depression, guilt, or disgust.

Disordered eating refers to troublesome eating behaviors, such as restrictive dieting, bingeing, or purging, which occur less frequently or are less severe than those required to meet the full criteria for the diagnosis of an eating disorder.



THE DIET TRAP

- ◆ The risk for obesity may be 324 percent greater for adolescent girls who describe themselves as dieters than girls who do not diet.²⁴
- ◆ Up to one in four 11-year-old girls have already tried to diet at least once.²⁵
- ◆ Children who diet may actually end up gaining more weight in the long term than children who do not diet. This is because dieting may cause a cycle of restrictive eating, followed by overeating or binge eating.²⁶
- ◆ People who are obese or at risk of becoming obese are more likely to use unhealthy weight loss practices, such as vomiting and using diet pills or laxatives.²⁷
- ◆ Disordered eating and dieting have been linked to serious risk-taking behaviors such as drug, alcohol and tobacco use, delinquency, unprotected sexual activity, dating violence, and suicide attempts.²⁸

...the potential consequences of body dissatisfaction and unhealthy weight control behaviors are of considerable public health significance, because these negative cognitions and behaviors are associated with the development of both eating disorders and obesity.²⁹

— DIANNE NEUMARK-SZTAINER, Ph.D., M.P.H., R.D.,
DIVISION OF EPIDEMIOLOGY, UNIVERSITY OF
MINNESOTA SCHOOL OF PUBLIC HEALTH

RESOURCES

The National Women's Health Information Center (NWHIC)

Telephone: (800) 994-9662
TDD: (888) 220-5446
Web site: www.4woman.gov
www.4girls.gov

NWHIC is a federal government Web site and toll-free call center that provides free, reliable women's health information. Sponsored by the Department of Health and Human Services' Office on Women's Health, NWHIC features special sections on body image and girls' health. The 4girls.gov Web site gives girls between the ages of 10 and 16 reliable, current health information designed to motivate them to choose healthy behaviors.

National Institute of Diabetes and Digestive and Kidney Disease (NIDDK)

Telephone: (877) 946-4627
Web site: www.niddh.nih.gov

NIDDK offers statistics, research, and educational information on its Web site and manages The Weight-control Information Network (WIN), which provides resources on obesity, eating disorders and other weight-related issues.

The National Heart, Lung, and Blood Institute (NHLBI)

Telephone: (301) 592-8573
Web site: www.nhlbi.nih.gov
E-mail: NHLBinfo@rover.nhlbi.nih.gov

The NHLBI Information Center and the Obesity Education Initiative provide information about weight control, including tools such as an online BMI calculator for adults and a menu planner. The NHLBI also operates a program called Hearts N'Parks, a partnership with the National Recreation and Parks Association, which helps provide activities for kids and adults that encourage healthy lifestyle choices to reduce the risk of obesity and heart disease.

BodyWise and BodyWorks are initiatives of the U.S. Department of Health and Human Services Office on Women's Health. BodyWise provides school personnel and other adults who interact with students ages 9 to 12 with information to help prevent disordered eating and eating disorders. BodyWorks is a toolkit on physical activity and nutrition for parents and other adult caregivers of girls ages 11 to 13. Print copies of BodyWise and BodyWorks are available at www.4woman.gov.

American Dietetic Association

Nutrition hotline: (900) 225-5267
Publications: (800) 877-1600 ext. 5000
Web site: www.eatright.org

The American Dietetic Association operates a nutrition hotline that provides the public with nutrition information for a small fee. The association also offers publications and other resources to the general public, health care providers and other professionals, teachers, and parents.

National Eating Disorders Association (NEDA)

Telephone: (206) 382-3587
Information and Referral Helpline: (800) 931-2237
Web site: www.nationaleatingdisorders.org

NEDA is the largest eating disorders prevention and advocacy organization in the world. The association provides treatment referrals to those suffering from anorexia, bulimia, binge eating disorder and to those concerned with body image and weight issues. NEDA also develops prevention programs for a wide range of audiences, publishes and distributes educational materials, conducts an annual conference, and operates a toll-free eating disorders helpline.

The Body Positive

Telephone: (510) 548-0101
Web site: www.thebodypositive.org
E-mail: Info@thebodypositive.org

The Body Positive is a non-profit organization that educates people to think about self-esteem, health and body image in a new way. Their resources include a guidebook on how to create comprehensive, youth-led eating disorders prevention programs in schools and youth organizations, as well as videos on body image and self-esteem for girls, families, health care providers and educators.

End Notes

- 1 Neumark-Sztainer, D. "Obesity and Eating Disorder Prevention: An Integrated Approach?" *Adolescent Medicine*, Feb;14(1):159-73 (Review), 2003.
- 2 Neumark-Sztainer, D., Story, M., Hannan, P.J., et al. "Weight-Related Concerns and Behaviors Among Overweight and Non-Overweight Adolescents: Implications for Preventing Weight-Related Disorders." *Archives of Pediatrics and Adolescent Medicine*, Feb;156(2):171-8, 2002.
- 3 Neumark-Sztainer, D. "Obesity and Eating Disorder Prevention: An Integrated Approach?" 2003.
- 4 Burrows, A., Cooper, M. "Possible Risk Factors in the Development of Eating Disorders in Overweight Pre-Adolescent Girls." *International Journal of Obesity and Related Metabolic Disorders*, Sept;26(9):1268-1273, 2002; Davison, K.K., Markey, C.N., Birch, L.L. "Etiology of Body Dissatisfaction and Weight Concerns Among 5-year-old Girls." *Appetite*, Oct;35(2):143-151, 2000; Vander Wal, J.S., Thelen, M.H. "Eating and Body Image Concerns Among Obese and Average-Weight Children." *Addictive Behavior*, Sep-Oct;25(5):775-778, 2000.
- 5 Yanovski, S.Z. "Binge Eating in Obese Persons." In Fairburn, C.G., Brownell, K.D. (eds), *Eating Disorders and Obesity*, 2nd ed. New York: Guilford Press, 403-407, 2002.
- 6 Waller, G. "The Psychology of Binge Eating." In Fairburn, C.G., Brownell, K.D. (eds) *Eating Disorders and Obesity*, 2nd ed. New York: Guilford Press, 98-102, 2002.
- 7 Fairburn, C., *Overcoming Binge Eating*. New York: The Guilford Press, 1995, pp. 80-99.
- 8 Goodman, E., Whitaker, R. "A Prospective Study of the Role of Depression in the Development and Persistence of Adolescent Obesity." *Pediatrics*. 2002 Sep;110(3):497-504. Lumeng JC, Gannon K, Cabral HJ, Frank DA, Zuckerman B. "Association between clinically meaningful behavior problems and overweight in children." *Pediatrics*. 2003 Nov;112(5):1138-45.
- 9 Goodman, E., Whitaker, R.C. "A Prospective Study of the Role of Depression in the Development and Persistence of Adolescent Obesity." *Pediatrics*. Sep;110(3):497-504, 2002.
- 10 National Mental Health Association. "Teen Eating Disorders." 1997.
- 11 Irving, L.M., Neumark-Sztainer, D. "Integrating the Prevention of Eating Disorders and Obesity: Feasible or Futile?" *Preventive Medicine*, 34:299-309, 2002. Stice, E. "Sociocultural Influences on Body Image and Eating Disturbance." In Fairburn, C.G., Brownell, K.D. (eds) *Eating Disorders and Obesity*, 2nd ed. New York: Guilford Press, 103-107, 2002.
- 12 Battle, E.K., Brownell, K.D. "Confronting a Rising Tide of Eating Disorders and Obesity: Treatment vs. Prevention and Policy." *Addictive Behavior*, 21:755-65 (Review), 1996.
- 13 French, S.A., Story, M., Jellery, R. "Environmental Influences on Eating and Physical Activity." *Annual Review of Public Health*, 22:309-35 (Review), 2001.
- 14 Kreipe, R. Personal communication. November 9, 2003.
- 15 Rowe, J.C. Personal communication. October 31, 2003.
- 16 Steinberg, A.B., Phares, V. "Family Functioning, Body Image, and Eating Disturbances." In Thompson, J.K., Smolak, L. (eds), *Body Image, Eating Disorders, and Obesity in Youth*. Washington, DC: American Psychological Association, 127-147, 2001.
- 17 Fisher, J.O., Birch, L.L. "Early Experience with Food and Eating: Implications for the Development of Eating Disorders." In Thompson, J.K., Smolak, L. (eds), *Body Image, Eating Disorders, and Obesity in Youth*. Washington, DC: American Psychological Association, 23-39, 2001.
- 18 Birch, L. "Acquisition of Food Preferences and Eating Patterns in Children." In Fairburn, C.G., Brownell, K.D. (eds), *Eating Disorders and Obesity*, 2nd ed. New York: Guilford Press, 75-79, 2002.
- 19 Austin, B., Ziyadeh, N., Lelher, A., Zachary, A. & Forman, S. "Screening High School Students for Eating Disorders: Results of a National Initiative." *Journal of Adolescent Health*, 28(2), 96, 2001.
- 20 Ogden, C.L., Flegal, K.M., Carroll, M.D., Johnson, C.L. "Prevalence and Trends in Overweight Among US Children and Adolescents, 1999-2000." *JAMA*. 2002;288:1728-1732.
- 21 Dietz, W.H. "Medical Consequences of Obesity in Children and Adolescents." In Fairburn, C.G., Brownell, K.D., (eds), *Eating Disorders and Obesity*, 2nd ed. New York: Guilford Press, 473-476, 2002.
- 22 Fairburn, C.G., Stice, E., Cooper, Z., Doll, H.A., Norman, P.A., O'Connor, M.E. "Understanding Persistence in Bulimia Nervosa: A 5-year Naturalistic Study." *Journal of Consulting and Clinical Psychology*, Feb;71(1):103-9, 2003.
- 23 Brownell, K.D. "The Environment and Obesity." In Fairburn, C.G., Brownell, K.D. (eds) *Eating Disorders and Obesity*, 2nd ed. New York: Guilford Press, 403-407, 2002.
- 24 Stice, E., Cameron, R.P., Killen, J.D., et al. "Naturalistic Weight-Reduction Efforts Prospectively Predict Growth in Relative Weight and Onset of Obesity among Female Adolescents." *Journal of Consulting and Clinical Psychology*, Dec;67(6):967-74, 1999.
- 25 Hill, A.J. "Prevalence and Demographics of Dieting." In Fairburn, C.G., Brownell, K.D. (eds) *Eating Disorders and Obesity*, 2nd ed. New York: Guilford Press, 80-83, 2002.
- 26 Field, A.E., Austin, S.B., Taylor, C.B., Malpeis, S., Rosner, B., Rockett, H.R., Gillman, M.W., Colditz, G.A. "Relation Between Dieting and Weight Change Among Preadolescents and Adolescents." *Pediatrics*, Oct;112(4):900-6, 2003.
- 27 Neumark-Sztainer, D., Story, M., Falkner, N.H., et al. "Sociodemographic and Personal Characteristics of Adolescents Engaged in Weight Loss and Weight/Muscle Gain Behaviors: Who is Doing What?" *Preventive Medicine*, 28:40, 1999. Neumark-Sztainer, D., Story, M., French, S., Hannan, P., Resnick, M., Blum, R.W. "Psychosocial Concerns and Health-Compromising Behaviors among Overweight and Non-overweight Adolescents." *Obesity Research*, May;5(3):237-49, 1997.
- 28 Neumark-Sztainer, D., Story, M., French, S.A. "Covariations of an Unhealthy Weight Loss Behaviors and Other High-Risk Behaviors among Adolescents." *Archives of Pediatric Adolescent Medicine*, 150(3), 304-308, 1996.
- 29 Neumark-Sztainer, D. "Obesity and Eating Disorder Prevention: An Integrated Approach?" 2003.



Office on Women's Health



BOEYWORKS
A Toolkit for Healthy Girls & Strong Women