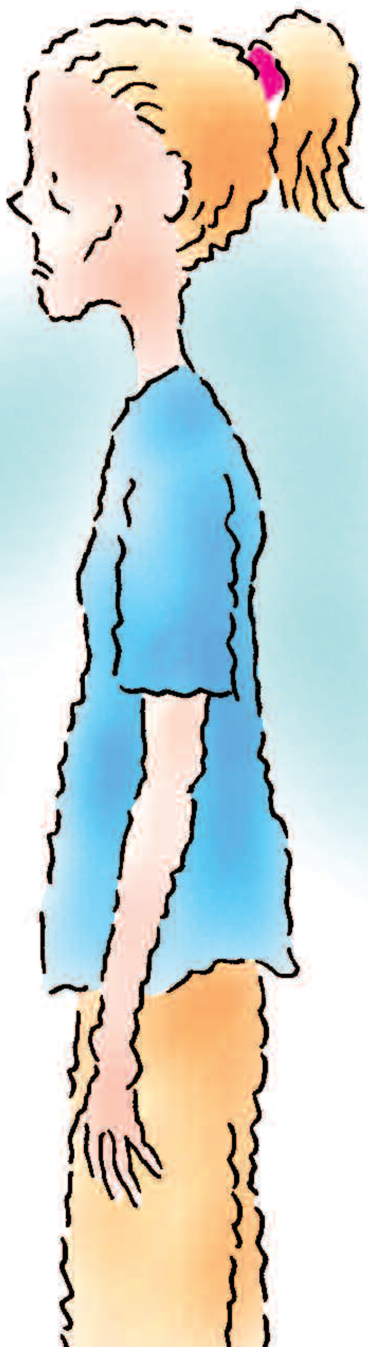
The skinny on eating di

Did you know that eating disorders are on the rise in children as young as age 7? How about these statistics: 13% of high school girls purge, and 40% of 9-year-old girls have dieted? That's why learning about the different types of eating disorders and their signs and symptoms is essential to early detection and prevention. We'll also fill you in on treatment options and give you tips on how to help your patient to a successful recovery.

KATHRYN MURPHY, NP, DNS
Nursing Faculty
Hawaii Community College
Hito, Hawaii

The author has disclosed that she has no significant relationships with or financial interest in any commercial companies that pertain to this educational activity.

sorders



CE
2.0
ANCC/AACN
CONTACT HOURS

EATING DISORDERS encompass a spectrum of problems—anorexia nervosa, bulimia nervosa, and binge eating disorder—each with a range of mild to severe symptoms. These disorders can cause significant health problems across the lifespan. Without treatment, up to 20% of people with serious eating disorders die, the highest mortality rate for any mental illness. With treatment, that percentage decreases to less than 3%, and 60% of patients recover.

In this article, I'll discuss the criteria for each type of eating disorder and take a look at possible physiologic and psychodynamic causes and common risk factors. Then I'll review the signs and symptoms for each disorder, go over available treatment options, and let you know what you can do to help these patients.

What's in a name?

Anorexia nervosa is characterized by self-imposed fasting or dieting with severe weight loss or maintenance of a weight that's less than 85% of normal for the person's age and height. Other characteristics of anorexia include compulsive exercise habits and laxative or diuretic use. In most cases, the person with anorexia is overly preoccupied with food and perceives herself as fat even if she's not (known as body dysmorphia). Perfectionism and an obsessive need for control are two dominating personality traits in people with anorexia. Obsessive control is often utilized in an effort to become the perfect person that others will love and admire.

Anorexia nervosa was first formulated into a diagnostic disorder in the 20th century. In the United States, between 90% and 95% of anorexia cases occur in females, affecting about 1% of young women ages 12 to 25. They aren't the only ones though! Research is now reporting the disorder in children as young as age 7 and adults as old as age 76. About 10% or less of people with anorexia are male. Cross-cultural studies confirm its presence in other countries, with an increased incidence in countries that have a greater degree of westernization.

Bulimia nervosa is characterized by episodes of recurrent binge-purge cycles. During binges, the person eats large amounts of food compulsively and quickly. Weight is controlled through purging (vomiting or the use of emetics, laxatives, diuretics, or diet pills), strenuous exercise, or fasting. The person with bulimia is usually of normal or above-normal weight and has weight fluctuations. In most cases, this person feels a lack of control when binge eating, which leads to an attempt to undo the consequences of the overeating.

Bulimia affects about 4% of college-aged women in the United States. About 50% of people who have had anorexia develop bulimia or bulimic patterns. As with anorexia, only about 10% of people with bulimia are male.

Binge eating disorder is a relatively new diagnosis. It's characterized by eating large amounts of food with a feeling that the eating is out of control. During a binge eating episode, the person may eat faster than usual, eat until she feels overly full, and consume large amounts of food even if she's not hungry. The person with binge eating disorder may also eat alone or hide her eating out of embarrassment or shame. Following a binge episode, the person may feel repulsed, depressed, or guilty about her behavior. Unlike bulimia, the person with binge eating disorder doesn't engage in purging, strenuous exercise, or fasting after binging, often causing her to be overweight or obese. People with this disorder often experience a significant deficit in the ability to work or perform life roles.

A recent study reported that up to 3% of women in the United States have binge eating disorder, as do 30% of women who seek treatment to lose weight. That adds up to 1 to 2 million adults in the United States who have a problem with binge eating.

What causes eating disorders? Are there any identifiable risk factors that can aid in the early detection of these patients? Let's take a look.

Does your patient have an eating disorder?

The SCOFF questionnaire is a quick screening tool for eating disorders. Ask your patient the following questions. If she answers yes to two or more of them, she may have an eating disorder.

- Do you make yourself **S**ick because you feel uncomfortably full?
- Do you worry that you've lost **C**ontrol over how much you eat?
- Have you recently lost more than **O**ne stone (14 pounds) in a 3-month period?
- Do you believe that you're **F**at when others say you're too thin?
- Would you say that **F**ood dominates your thoughts?

Source: Morgan JF, Reid F, Lacey JH. The SCOFF questionnaire: Assessment of a new screening tool for eating disorders. *British Medical Journal.* 319(7223):1467-1468, December 1999.

All in the family?

Physiologic regulation of appetite occurs in the complex neural center of the hypothalamus, the location in the brain that signals hunger and satiety. Neuropeptides, neurotransmitters, the condition of the gastrointestinal (GI) tract, and the metabolic rate are some of the physiologic factors that can influence the regulation of eating. The major neurotransmitter systems involved in eating disorders are serotonin and dopamine. The brain of a person with an eating disorder may not release balanced amounts of these neurotransmitters. A dysregulation in the serotonin system can cause increased obsessive thoughts or compulsive behaviors. Starvation and the excessive exercising that occur in anorexia or the stimulus of the food itself that occurs in binge eating can influence the release of dopamine, producing a feeling of euphoria. The person then increases the stimulus behavior to continue experiencing feelings of pleasure.

Genetics may also play a role. As with diabetes, a person with a family history of an eating disorder has an increased chance—as much as a four to five times greater chance—of developing that disorder. Studies have also shown that twins are more likely than the general population to both develop eating disorders.

The family structure itself can increase the risk. According to family theory, girls who live in families that highly value perfection are at a greater risk for developing an eating disorder. As the child attempts to meet the family's high standards, the eating disorder becomes an act of rebellion, in which the child gains a sense of control over her life.

Sociocultural factors, like popular cultural preferences, media images, and peer pressure, can also influence eating behavior. For example, people with a genetic predisposition to anorexia may respond more readily to triggers in the environment, such as viewing thin fashion models in magazines. People who pursue professions that emphasize thinness, like modeling or dancing, are also more likely to exhibit eating disorders.

Personal characteristics that may influence the development of eating disorders include low self-esteem and feelings of helplessness. People with eating disorders have a high rate of other psychiatric illnesses, including anxiety, depression, and addictive behavior. A lack of a healthy positive body image is also common to all eating disorders; whether influenced by culture or family, the person with an eating disorder views her body negatively and not up to self-imposed standards.

So how do you recognize an eating disorder in your patient? Let's review physical findings that you may encounter.

Focus on...

If you suspect your patient has an eating disorder, you'll need to take a health history and perform a physical exam.

Ask your patient about:

- current, usual, and ideal weight
- complaints of fatigue, tooth sensitivity, intolerance to cold, or dizziness
- abdominal complaints, like constipation, indigestion, and nausea
- regularity or absence of menses
- history or current practice of self-induced vomiting
- usual 24-hour food intake, including which foods are best and least tolerated
- use of vitamin, mineral, and other nutritional supplements, as well as over-the-counter and prescription drugs
- significant medical history, as well as history of drug or alcohol abuse
- psychological aspects, such as family, emotional state, and body image
- physical activity patterns.

See *Does your patient have an eating disorder?* for sample questions you can ask.

You'll also want to assess any cultural, ethnic, or religious influences on your patient's food intake, as well as abnormal food eating practices, such as cutting food into tiny pieces or disposing of food secretly.

Now, let's examine signs and symptoms

Common characteristics of eating disorders

cheat sheet

Eating disorders are most common among young girls with low self-esteem. Other personal characteristics vary by disorder.

Anorexia

- Perfectionism
- Concern with pleasing others
- Lack of maturity
- Family emphasis on high achievement
- History of bulimia

Bulimia

- Difficulty controlling impulses, stress, and anxiety
- Pattern of hiding binge-purge cycles from family
- History of anorexia

Binge eating disorder

- Tendency to eat quickly, eat until uncomfortably full, eat when not hungry, or eat alone
- History of depression
- Difficulty controlling impulses and stress
- Difficulty expressing feelings
- Family history of eating disorders

memory jogger

To remember the goals of nutrition therapy for the patient with anorexia, think of the three **R's:**

***R*estoring nutritional status**

Maintaining ***R*easonable weight**

***R*eestablishing normal eating behaviors.**

specific to each of the eating disorders I mentioned earlier.

Anorexia

Be alert for these signs and symptoms of anorexia:

- wasted appearance
- thinning hair or alopecia (hair loss)
- dry skin and brittle nails
- decreased heart rate and low blood pressure
- constipation
- amenorrhea (cessation of menses)
- reduced muscle mass and joint swelling.

Patients with anorexia typically have long-term health problems that result from the disorder. Malnutrition can lead to irregular heart rhythms, as well as osteoporosis from lack of calcium and reduced estrogen levels. With extreme starvation, heart failure can occur. Severe starvation can also irreversibly change brain tissue structure. Anorexia affects the GI tract too, which can lead to delayed gastric emptying and decreased gut motility. Electrolyte and fluid imbalances can cause an increased blood urea nitrogen level, diabetes insipidus, and peripheral edema. Endocrine complications include the formation of lanugo (fine, infantile hair over the entire body), cold intolerance, cessation of puberty, and lethargy.

Keep an eye out for abnormal complete blood cell count values that indicate leukopenia (decreased white blood cell count) and thrombocytopenia (reduced platelet count) from bone marrow hyperplasia, hypoglycemia from abnormal metabolic patterns, thyroid abnormalities, and an abnormal lipid profile from decreased bile secretion late in the disease process. Vitamin and mineral deficiency may also be evident with blood testing.

Bulimia

Signs and symptoms of bulimia include:

- puffy cheeks due to enlarged salivary glands
- damaged tooth enamel from high acidity in the mouth caused by excessive vomiting
- broken blood vessels in the eyes
- abrasions on the knuckles from using the hand during self-induced vomiting.

The purging behavior and misuse of laxatives associated with bulimia can lead to electrolyte and fluid imbalances, especially hypokalemia (decreased potassium level) and hypochloremia (low chloride level), accompanied by weakness and fatigue. Hypokalemia can lead to potentially fatal cardiac arrhythmias. The chronic use of the emetic medication ipecac can cause skeletal myopathy and cardiomyopathy. Excessive vomiting can result in esophageal inflammation, and gastric and esophageal tears can cause severe bleeding.

Binge eating

Signs and symptoms of binge eating disorder include:

- normal weight or overweight with weight fluctuations
- fatigue
- hypertension
- joint pain.

Binge eating sometimes leads to obesity, which can increase the person's risk of type 2 diabetes, heart disease, hypertension, dyslipidemia, gallbladder disease, obstructive sleep apnea, menstrual irregularities, and stress incontinence.

After a complete assessment and physical exam, it's pretty clear that your patient has an eating disorder. What's next?

Team spirit

The treatment goals for a patient with an eating disorder are to restore normal body weight and eating habits and to resolve psychological issues. To treat anorexia, bulimia, or binge eating disorder, an individualized, multidisciplinary approach is most likely to be effective. Various types of psychodynamic therapy can be used, such as cognitive behavioral therapy, family therapy, and group therapy. Antidepressants may also be helpful. Typically, eating disorders are treated on an outpatient basis; severe cases in which the patient has persistent symptoms despite ongoing treatment, suicidal impulses, or a dangerously low weight may require hospitalization.

Let's start with nutrition therapy.

Nutrition therapy is an important part of treatment. A nutritionist can assess the patient's nutritional status, knowledge base, motivation, and behavioral status. Besides basic nutrition education, each type of eating disorder has particular nutritional needs. Let's take a closer look.

The goals of nutrition therapy for patients with *anorexia* are to:

- reestablish normal eating behaviors
- restore nutritional status
- maintain reasonable weight.

Meal planning for the patient with anorexia should:

- provide about 1,500 calories/day (some patients may need to start at a lower calorie level and increase by 200 calories/week)
- include small, frequent meals and snacks
- incorporate one-on-one supervision during meals
- allow the patient control over food choices whenever possible
- include nutritionally dense foods to meet caloric goals
- include high-fiber or low-sodium foods to control constipation and fluid retention
- include limited gas-producing and high-fat foods
- include multivitamin and mineral supplements
- exclude caffeine
- initially exclude high-risk binge foods, which vary with each patient, because of the high risk of a patient with anorexia developing bulimic patterns; these foods can be reintroduced into the eating plan later to prevent fear of that food.

For patients with *bulimia*, the goals of nutrition therapy are to:

- identify food fears
- correct food misinformation
- reestablish normal eating patterns.

To promote patient adherence, nutrition therapy for patients with bulimia is initially structured and inflexible. Eating plans similar to those used for the patient with diabetes can be used to specify meal portions, food groups, and the frequency of eating.

Meal planning for the patient with bulimia should:

- provide at least 1,500 calories/day, including snacks
- include fat, which helps delay gastric emptying and promotes satiety
- avoid large amounts of food eaten in a short amount of time
- introduce "forbidden" foods as appropriate (a forbidden food is usually a high-calorie food that the patient feels guilty about eating).

To help your patient with bulimia meet nutritional goals, encourage her to:

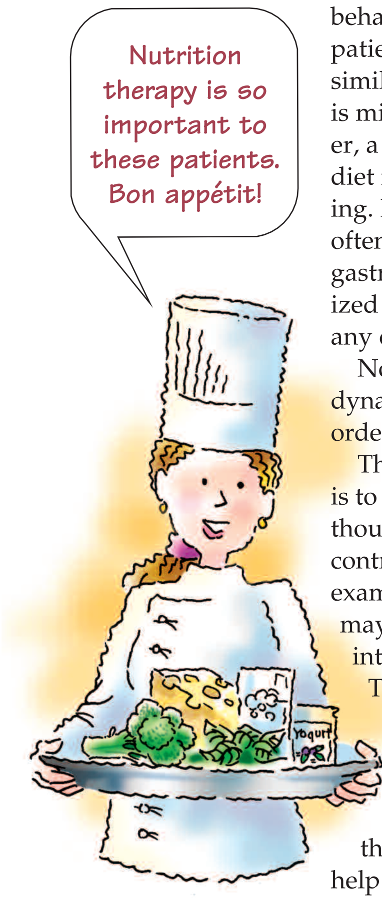
- sit down during each meal to increase awareness of eating and satiety
- eat meals slowly (at least 20 minutes) without distractions like television
- use appropriate-sized utensils

On the Web

These online resources may be helpful to your patients and their families:
Academy for Eating Disorders: **http://www.aedweb.org**
ANRED (Anorexia Nervosa and Related Eating Disorders): **http://www.anred.com**
Eating Disorders Anonymous: **http://www.eatingdisordersanonymous.org**
Eating Disorders Referral: **http://www.edreferral.com**
Multiservice Eating Disorders Association: **http://www.medainc.org**
National Eating Disorders Association: **http://www.nationaleatingdisorders.org**.

- refrain from skipping meals or eating snacks.

Nutrition therapy for patients with *binge eating disorder* focuses on changing unhealthy eating habits and achieving and maintaining a reasonable weight. To promote weight loss and healthy eating behaviors, nutritional interventions for patients with binge eating disorder are similar to those for bulimia. If the patient is mildly obese or not overweight, however, a diet isn't needed because a stringent diet may aggravate episodes of binge eating. Patients with binge eating disorder often seek out surgical solutions, such as gastric bypass or gastric banding. Specialized nutritional support is necessary after any of these surgeries.



Now, let's review the common psychodynamic therapies used to treat eating disorders.

The goal of ***cognitive behavioral therapy*** is to change the patient's automatic thoughts that occur spontaneously and contribute to dysfunctional thinking. For example, a person with an eating disorder may have faulty cognitive processes that interpret each event as a catastrophe. These thoughts can interfere with effective coping, so various dysfunctional eating patterns are perceived as the only way to end intense sad or angry feelings. The cognitive behavioral therapist uses cognitive restructuring to help the patient identify the habitual ways in which she reacts to situations. The therapist then assists the patient in changing her thinking about the situation and thus her emotional response related to food.

Family therapy is aimed at assisting family members in openly expressing feelings—especially anger—to each other rather than through the eating disorder. Issues of power and control are also addressed; family members are encouraged to define appropriate boundaries, decrease controlling behaviors, and support the patient in increasing self-responsibility.

did you know?

The first-ever national survey on eating disorders ranked binge eating disorder as the most prevalent, ahead of bulimia and anorexia. Binge eating disorder affects 3.5% of women and 2% of men, whereas bulimia affects 1.5% of women and 0.5% of men, and anorexia, about 1% of women and 0.3% of men. In the survey, 3,000 people answered questions about eating disorders. Researchers found that the average duration of binge eating disorder was 8.1 years, compared with 8.3 years for bulimia and 1.7 years for anorexia. Overall, data suggest that the rates of all eating disorders are on the rise.

Source: Hudson JI, et al. The prevalence and correlates of eating disorders in the national comorbidity survey replication. *Biological Psychiatry.* 61(3):348-358, February 1, 2007.

Group therapy aims to help the patient relate to others who share similar problems. Patients exchange information and experience while providing acceptance and emotional support. Group therapy can also be *psychodynamic*, treating the core clinical issues, including the psychobiologic connection between dieting and eating, body image, and coping strategies. In this type of group therapy, members interact in a social microcosm, which allows the patient to eventually exhibit maladaptive ways of relating to others. Its goal is to correct emotional experiences and work through internal and interpersonal difficulties. Psychodynamic group therapy is particularly well suited to helping patients resolve difficulties with basic self-control functions, such as tension, self-esteem, and a sense of stability.

Selective serotonin reuptake inhibitors (SSRIs), like fluoxetine (Prozac), sertraline (Zoloft), paroxetine (Paxil), and fluvoxamine (Luvox), can be used to treat the addictive, obsessive-compulsive, and depressive symptoms of eating disorders. Remember, a person with an eating disorder may have a dysregulation in the serotonin system. SSRIs are often the first-line drug treatment for these patients because of their effectiveness and minimal adverse effects.

As I mentioned earlier, the patient may need inpatient hospitalization if her eating disorder is severe. What's a severe eating disorder? It's one that includes severe malnutrition, acute medical complications, and acute psychiatric emergencies like attempted suicide. The goals of inpatient hospitalization are medical and nutritional stabilization. In rare circumstances, enteral or parental feedings may be necessary.

Be patient with your patient

So, what can you do to help your patient with an eating disorder?

First, when assisting with nutrition therapy, remember not to focus on food but rather on the treatment outcomes. For example, if a patient with anorexia refuses to eat or a patient with binge eating disorder eats too much, focus on the weight loss or gain that occurs with these dysfunctional patterns rather than on the amount of food eaten or not eaten. When minor relapses occur, be sure to help your patient resume the structured eating plan immediately.

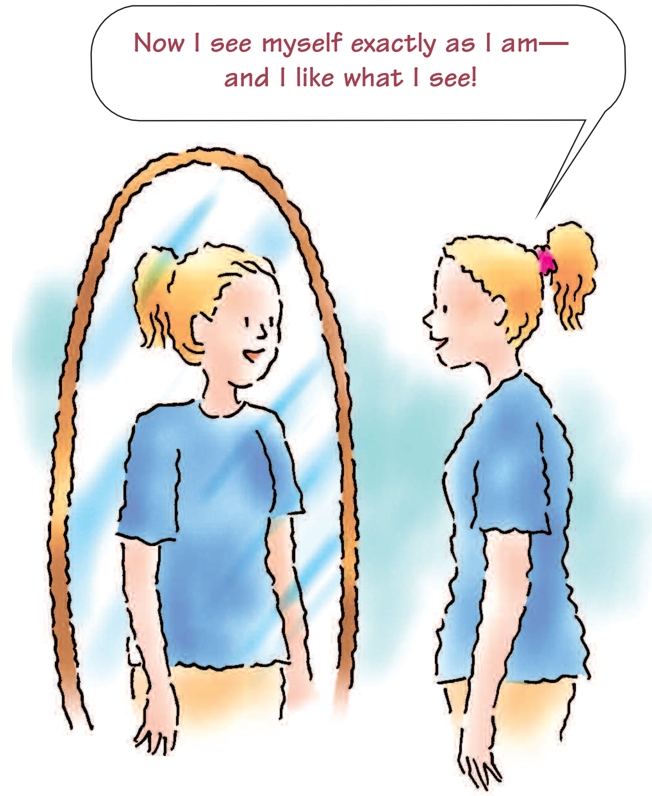
Because many patients with eating disorders experience low self-esteem, they're often very defensive in relationships. Hypersensitivity to criticism and difficulty expressing feelings can make therapeutic work difficult and time consuming. That's why it's important to have a clear understanding of professional and personal boundaries. Remember, you'll be more successful if you're aware of your own feelings, strengths, and weaknesses.

Promoting self-esteem in patients with eating disorders will be essential for positive treatment results. You can help do this by fostering decision making, providing encouragement and support, offering choices, and using a positive approach.

Also, make sure your patient teaching focuses on:

- the components of a healthy diet
- appropriate food intake patterns
- the dangers of dieting, binging, and purging
- how to recognize hunger and satiety
- how to identify food- and weight-related behaviors
- how the idealization of thinness in our society has resulted in distorted body images and unrealistic goals for beauty.

How can you be proactive and help prevent eating disorders from developing? Let's find out.



An ounce of prevention

Because attitudes that influence the development of eating disorders can start as early as fourth grade, prevention needs to begin early. Educate parents and teachers to:

- help children develop a positive self-image and sense of worth
- avoid pressuring children to excel beyond their capabilities
- recognize stressors and provide encouragement and support
- teach children that good nutrition and exercise can keep them healthy
- give children the correct amount of independence, responsibility, and accountability for their age-group
- discourage dieting (If a child needs to

lose weight, it should be done with a medically supervised plan.)
- seek professional help if a child has the signs and symptoms of an eating disorder.

Success story

Eating disorders aren't a new problem and, unfortunately, they seem to be here to stay. But with your expert nursing care, you can help your patient be a success story. ■

Learn more about it

Adey T. Obesity and depression linked. **http://www.med.mun.ca/med/medATmun1/articles/04jan/obesity.htm**. Accessed September 2, 2006.

American Obesity Association. Obesity in the U.S. **http://www.obesity.org/subs/fastfacts/obesity_US.shtml**. Accessed April 30, 2005.

American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders Text Revision*, 4th edition. Washington, D.C., American Psychiatric Association, 2000.

ANRED: Anorexia Nervosa and Related Eating Disorders, Inc. Statistics: How many people have eating disorders? **http://www.anred.com/stats.html**. Accessed September 15, 2006.

Bulik CM, et al. Prevalence, heritability, and prospective risk factors for anorexia nervosa. *Archives of General Psychiatry*. 63(3):305-312, March 2006.

Centers for Disease Control and Prevention. Overweight and obesity. **http://www.cdc.gov/nccdphp/dnpa/obesity**. Accessed December 5, 2006.

Eating Disorders Coalition for Research, Policy & Action. Statistics. **http://www.eatingdisorderscoalition.org/reports/statistics.html**. Accessed December 5, 2006.

Howland RD, Mycek MJ. *Lippincott's Illustrated Reviews: Pharmacology*, 3rd edition. Philadelphia, Pa., Lippincott Williams & Wilkins, 2005.

Isaacs A. *Lippincott's Review Series: Mental Health and Psychiatric Nursing*, 4th edition. Philadelphia, Pa., Lippincott Williams & Wilkins, 2005.

Nutrition Made Incredibly Easy!, 2nd edition. Philadelphia, Pa., Lippincott Wilkins & Wilkins, 2007.

Shinohara M, et al Eating disorders with binge-eating behaviour are associated with the s allele of the 3'-UTR VNTR polymorphism of the dopamine transporter gene. *Journal of Psychiatry & Neuroscience*. 29(2):134-137, March 2004.

INSTRUCTIONS

The skinny on eating disorders

TEST INSTRUCTIONS

- To take the test online, go to our secure Web site at **www.nursingcenter.com/ce/nmie**.
- On the print form, record your answers in the test answer section of the CE enrollment form on page 62. Each question has only one correct answer. You may make copies of these forms.
- Complete the registration information and course evaluation. Mail the completed form and registration fee of $19.95 to: **Lippincott Williams & Wilkins, CE Group**, 2710 Yorktowne Blvd., Brick, NJ 08723. We will mail your certificate in 4 to 6 weeks. For faster service, include a fax number and we will fax your certificate within 2 business days of receiving your enrollment form. Deadline is June 30, 2009.
- You will receive your CE certificate of earned contact hours and an answer key to review your results. There is no minimum passing grade.

DISCOUNTS and CUSTOMER SERVICE

- Send two or more tests in any nursing journal published by Lippincott Williams & Wilkins together and deduct $0.95 from the price of each test.
- We also offer CE accounts for hospitals and other health care facilities on nursingcenter.com. Call **1-800-787-8985** for details.

PROVIDER ACCREDITATION:

Lippincott Williams & Wilkins, publisher of *Nursing made Incredibly Easy!*, will award 2.0 contact hours for this continuing nursing education activity.

LWW is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

LWW is also an approved provider of continuing nursing education by the American Association of Critical-Care Nurses #00012278 (CERP Category A), District of Columbia, Florida #FBN2454, and Iowa #75. LWW home study activities are classified for Texas nursing continuing education requirements as Type 1. This activity is also provider approved by the California Board of Registered Nursing, Provider Number CEP 11749, for 2.0 contact hours. Your certificate is valid in all states.