The Mirror Lies: Body Dysmorphic Disorder

THOMAS J. HUNT, MD, *University of Nevada School of Medicine, Las Vegas, Nevada*
OLE THIENHAUS, MD, MBA, *University of Nevada School of Medicine, Reno, Nevada*
AMY ELLWOOD, MSW, LCSW, *University of Nevada School of Medicine, Las Vegas, Nevada*

Body dysmorphic disorder is an increasingly recognized somatoform disorder, clinically distinct from obsessive-compulsive disorder, eating disorders, and depression. Patients with body dysmorphic disorder are preoccupied with an imagined deficit in the appearance of one or more body parts, causing clinically significant stress, impairment, and dysfunction. The preoccupation is not explained by any other psychiatric disorder. Patients present to family physicians for primary care reasons and aesthetic or cosmetic procedures. Cosmetic correction of perceived physical deficits is rarely an effective treatment. Pharmacologic treatment with selective serotonin reuptake inhibitors and nonpharmacologic treatment with cognitive behavior therapy are effective. Body dysmorphic disorder is not uncommon, but is often misdiagnosed. Recognition and treatment are important because this disorder can lead to disability, depression, and suicide. **(*Am Fam Physician.* 2008;78(2):217-222, 223-224.** **Copyright © 2008 American Academy of Family Physicians.)**

▶ **Patient information:** A handout on body dysmorphic disorder, written by the authors of this article, is provided on page 223.

Italian physician Enrique Morselli first described body dysmorphic disorder (BDD) in 1891 by using the term "dysmorphophobia," defined as the fear of having a deformity.[1] The American Psychiatric Association classified BDD as a distinct somatoform disorder in 1987.[2] BDD has received particular attention in the media and in clinical research over the past 10 years.

Patients with BDD are preoccupied with a perceived physical defect, and this disrupts their lives by causing them considerable social distress and occupational dysfunction. They may seek care for their perceived defects from many subspecialties, including dermatology,[3] cosmetic surgery,[4] dentistry,[5] psychiatry, and family medicine. These patients often want cosmetic and aesthetic procedures, which have become more affordable and available than ever before. Therefore, family physicians who perform in-office aesthetic procedures (e.g., botulinum toxin type A injections [Botox]; filler injections [collagen and hyaluronic acid]; mesotherapy; microdermabrasion) may encounter patients with BDD. However, cosmetic procedures rarely improve the symptoms of patients with BDD, and often add to their psychic distress; therefore, considering the presence of this disorder before performing aesthetic procedures has been recommended. Furthermore, numerous reports have documented patients with BDD committing violent acts toward physicians who perform procedures on them.[6]

Demographics

It is estimated that 1 percent of adults in the general population have BDD.[1] The disorder is more prevalent in patients undergoing cosmetic procedures and in those who have psychiatric comorbidities *(Table 1[3,7-10])*. Persons with BDD have higher rates of major depression,[11] suicide,[12] and disability than the general population.[1,3] BDD is reported worldwide, with most large studies coming from the United States, Italy, and England.[13] Clinical features of BDD are similar across many cultures, but some manifestations are culturally specific.[13] For instance, Japanese case reports discuss eyelids as the focus of concern, which is a rare complaint in Western cultures.

Persons with BDD worry about a large range of body parts, which may include hair, noses, freckles, chests, breasts, skin,

Downloaded from the American Family Physician Web site at www.aafp.org/afp. Copyright © 2008 American Academy of Family Physicians. For the private, noncommercial use of one individual user of the Web site. All other rights reserved. Contact copyrights@aafp.org for copyright questions and/or permission requests.

SORT: KEY RECOMMENDATIONS FOR PRACTICE

Clinical recommendation	*Evidence rating*	*References*	*Comments*
Treatment of BDD with cosmetic procedures is not recommended.	C	22, 23	Rarely improves symptoms, adds to psychic distress
BDD should be considered in patients before performing aesthetic procedures.	C	1, 3, 6	
Treatment with high dosages of SSRIs has been shown to be effective for BDD.	B	24-29	See Table 5
Cognitive behavior therapy has been shown to be effective in patients with BDD.	B	30-34	

BDD = body dysmorphic disorder; SSRIs = selective serotonin reuptake inhibitors.

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, see http://www.aafp.org/afpsort.xml.

muscles, buttocks, genitalia, hands, and feet. The types of bodily concerns tend to vary with gender *(Table 2)*[14,15]; however, similarities include single marital status (75 percent) and living with one's parents (25 percent).

CASE STUDY

Demetrius is a 16-year-old Greek-American male who was admitted to the adolescent inpatient unit following an automobile collision. Demetrius has a history of major depression, school absences, and declining grades. His depression began at the onset of puberty. He reported that his automobile crash was not intentional, but that he was looking at his nose and acne in the rearview mirror when he lost control of his car on the freeway. No one else was with him; he has no friends and prefers to stay at home with his parents because he feels that his nose is hideous. He has never dated, avoids school functions, does not participate in sports, and believes that others laugh at the size of his nose. Demetrius is six feet tall, lanky, and thin. He has a full head of curly brown hair, a large nose, severe acne, and a pleasant demeanor.

While on the adolescent psychiatric unit, Demetrius spent a lot of time in the bathroom picking at his face, looking at his nose in reflective surfaces, and trying to manipulate his way out of group activities. He often had his hand over his nose and insisted on wearing a large hat and glasses on field trips. In spite of these behaviors, he was well-liked by others on the unit. Dermatology was consulted and his acne improved. Later that year, he had a rhinoplasty and his outlook was more positive. Two years later, he was readmitted following a suicide attempt after a breakup with his first girlfriend. At the second admission, he became convinced that he would be more appealing to women if he had cosmetic dentistry and began a bodybuilding regimen to achieve more definition of the muscles in his arms. At a five-year follow-up, Demetrius had quit high school and was living at home with his parents, not working, and on psychiatric disability.

Table 1. Rates of Body Dysmorphic Disorder in Selected Populations

*Population**	*Prevalence rates (%)*
Anorexia nervosa	39
Atypical depression	14 to 42
Obsessive-compulsive disorder	8 to 37
Social anxiety	11 to 13
Dermatology and cosmetic surgery patients	6 to 15
Female college students	2 to 5

**—Populations listed in order of prevalence.*

Information from references 3 and 7 through 10.

Etiology

Many theories have been proposed to explain the possible root causes of BDD, but no definitive etiology has been identified to date. Some popular theories include unrealistic societal standards and expectations, parental pressure, poor self-esteem, and neurotransmitter imbalances.[1,16] Cultural, social, and psychological components seem to play a role. One proposed model is similar to other psychiatric diagnoses that include genetic, cultural, and psychological factors[1] that manifest after a triggering event. For example, BDD may be triggered in a person genetically predisposed to anxiety who has been teased throughout high school about some distinguishing physical characteristic. One small study found that serotonin transporter promoter genes tend to be shorter in persons with BDD compared with the general population.[1] A 20 percent concordance rate of BDD among first-degree relatives has been described.[15]

Diagnosis

BDD is commonly missed, dismissed, and misdiagnosed in most medical settings.[3] Numerous studies have illustrated the rarity of a BDD diagnosis being included on a patient's problem list, even when looking at mental health records.[17] Successful treatment requires physician awareness of the disorder and a timely and accurate diagnosis. *Table 3*[2] lists diagnostic criteria for BDD.

Patients are often reluctant or ashamed to admit to the problem or seek help for it. Important clinical features physicians should look for include: impairment in social functioning, such as avoidance of school, work, or other social situations; poor performance at school or work; and lateness caused by time spent grooming or camouflaging. Bodybuilders and patients with eating disorders also may have BDD. Muscle dysmorphia, considered by many to be a subtype of BDD, is characterized by excessive preoccupation and insecurity with one's musculature, resulting in excessive weight lifting, anabolic steroid use, and impaired social functioning.[18] Comorbid diagnoses such as obsessive-compulsive disorder (OCD), anorexia nervosa, and depression have also been well described.[19,20] However, BDD is a clinically distinct entity and its treatment differs in several important ways. Therefore, physicians should have a high index of suspicion for this disorder. Risk of depression and suicidality should be considered in patients with BDD because of the high correlation between these disorders.[11,12]

To rule out an eating disorder, ask the patient if his or her main appearance-related concern is with not being thin enough. If

Table 2. Gender Predominance of Specific Symptoms in Body Dysmorphic Disorder

Symptom	*Male*	*Female*
Body part focus	Body build	Breasts
	Genitalia	Buttocks
	Thinning hair	Excessive hair
		Nose
		Skin
		Stomach
		Teeth
		Thighs
		Weight
Behavior	Substance use disorder	Camouflaging techniques (e.g., baggy clothing, hats, wigs, makeup)
	Weight lifting	Eating disorder
		Skin picking

Information from references 14 and 15.

Table 3. Criteria for Diagnosis of Body Dysmorphic Disorder

A person is preoccupied with an imagined deficit in appearance. If a slight physical anomaly is present, the person's concern is markedly excessive

The preoccupation causes clinically significant distress or impairment in social, occupational, or other important areas of functioning

The preoccupation is not better accounted for by another mental disorder (e.g., anorexia nervosa)

NOTE: *All three criteria must be present for diagnosis.*

Adapted with permission from American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. *4th ed. Washington, DC: American Psychiatric Association; 2002:510.*

not, BDD screening questions to ask the patient should cover the level of preoccupation and pervasiveness of thoughts related to the appearance of the body part; how much time is spent on these thoughts per day (e.g., less than one hour; one to three hours or longer); and how these thoughts have affected aspects of the patient's life (e.g., distress levels, social life impairment, productivity at school or work, avoidance behaviors, impact on friends and family).[1] A positive screen should include answers from the patient that indicate a high level of concern about the body part, which includes thinking about it for at least one hour per day and having at least one apsect of daily life significantly affected by this preoccupation.[1]

Treatment

One approach to treating patients with BDD is to change their appearance. However, procedures aimed at treating the underlying physical "defect," usually performed by a plastic surgeon, dermatologist, or other medical subspecialist, have proved unsuccessful in patients with BDD.[21,22] The altered appearance may fall short of patient expectations and fail to relieve psychic distress, and additional changes may be sought. Before long, such patients may be seen as hypochondriacs or as having Munchausen syndrome. Consequently, the most important management point is to help patients with BDD to avoid surgical "corrections," which only address a derivative symptom and leave the underlying ideation unchanged.

Whereas definitive treatments for BDD are unknown, pharmacologic interventions may be modeled on approaches to related disorders. Several classes of psychotropic medications have been tried since BDD was classified as a mental illness. Antipsychotics, monoamine oxidase inhibitors, and tricyclic antidepressants have been used; although anecdotal reports of treatment success appear in the literature, no randomized controlled trials (RCTs) are on record. In hindsight, it seems most likely that the treatment successes occurred in patients who had comorbid conditions such as major depression or an anxiety disorder, or in cases where the diagnosis should have been somatic delusional disorder.

Newer medications were tried when the central role of serotoninergic neurotransmission in the manifestation of obsessive thinking and compulsive behavior became clearer. Selective serotonin reuptake inhibitors (SSRIs) have been shown to effectively treat OCD.[23] This observation suggested the potential effectiveness of SSRIs for treatment of BDD, and led to several small-scale, open-label studies and a few RCTs.[24-29] The most rigorous of the RCTs used fluoxetine (Prozac).[24] The SSRIs were shown to reduce symptoms and subjective distress in 63 to 73 percent of patients. Dosages were higher than customarily used in the treatment of depressive disorders, and treatment response often took up to 12 weeks.[10,24-29] None of these agents are currently approved for the treatment of BDD; therefore, the prescription is off-label. It is unknown how long medication needs to be continued after BDD has gone into remission. *Table 4*[24-29] lists effective dosages of medications for BDD treatment.

The limitations of SSRIs are evident, but they may provide relief in combination with psychotherapy. Promising psychotherapeutic approaches include cognitive behavior therapy (CBT), which appears to be a particularly useful adjunct to pharmacotherapy.[30] There

Table 4. Effective Dosages of Medications Used to Treat Body Dysmorphic Disorder

Medication	*Average dosage**
Citalopram (Celexa)	50 mg per day
Clomipramine (Anafranil)	140 mg per day
Escitalopram (Lexapro)	30 mg per day
Fluoxetine (Prozac)	80 mg per day
Fluvoxamine (Luvox; brand only available in extended-release capsules)	More than 200 mg per day

NOTE: *Treatment of body dysmorphic disorder is an off-label use for these medications.*

**—Dosages based on those used in studies of body dysmorphic disorder. These studies had small numbers of patients; thus, the ideal dosage range has not yet been determined.*

Information from references 24 to 29.

Table 5. Resources for Research-Based Information on Body Dysmorphic Disorder

Readers interested in learning more about the latest research on body dysmorphic disorder can reference these Web sites:

Los Angeles Body Dysmorphic Disorder Clinic Research Studies
Web site: http:www.bddclinic.com/bddresearchstudies.html

BioBehavioral Institute, New York
Web site: http://www.bio-behavioral.com/bdd.asp

Body Image Program at Butler Hospital
Web site: http://www.butler.org/body.cfm?id=123

Harvard Medical School and Massachusetts General Hospital
Web site: http://www.massgeneral.org/bdd/

are no data on record to document the comparative effectiveness of pharmacologic treatments and CBT. In CBT, the therapist assists the patient to correct (or "restructure") cognitive distortions, putting the patient's negative self-perception into a different perspective to develop less negative beliefs about his or her appearance. This may involve helping the patient see an offensive body part in the context of his or her ethnic heritage or family connections. CBT methods have been employed in individual therapy arrangements[31-33] and group therapy formats.[34]

When referring to a therapist, it is important to locate one with CBT training who has experience treating patients with eating disorders, OCD, and depression. Collaboration among psychiatrists and primary care physicians is essential. *Table 5* lists resources that offer additional information about BDD.

The authors thank Kathryn Hunt for her assistance in the preparation of the manuscript.

The Authors

THOMAS J. HUNT, MD, is an associate professor in the Department of Family and Community Medicine at the University of Nevada School of Medicine, Las Vegas. He received his medical degree from New York Medical College, Valhalla. Dr. Hunt completed a residency in family medicine at Merrithew Memorial Hospital, Martinez, Calif., and a fellowship in teaching and learning at the Keck School of Medicine at the University of Southern California, Los Angeles.

OLE THIENHAUS, MD, MBA, is a professor and chairman of the Department of Psychiatry, and Dean of The University of Nevada School of Medicine, Reno. He received his medical degree from the Free University of Berlin (Germany) School of Medicine. Dr. Thienhaus completed a residency in psychiatry at the University of Cincinnati (Ohio) College of Medicine and received a master of business administration degree from the University of Cincinnati.

AMY ELLWOOD, MSW, LCSW, is a professor with a dual appointment in family medicine and psychiatry at the University of Nevada School of Medicine, Las Vegas. Professor Ellwood received her master of social work degree from the University of Michigan School of Social Work, Ann Arbor.

Address correspondence to Thomas J. Hunt, MD, Department of Family and Community Medicine, Family Medicine Residency Program, University of Nevada School of Medicine, 2410 Fire Mesa St., Suite 180, Las Vegas, NV 89129 (e-mail: thunt@medicine.nevada.edu). Reprints are not available from the authors.

Author disclosure: Nothing to disclose.

REFERENCES

1. Phillips KA. *The Broken Mirror: Understanding and Treating Body Dysmorphic Disorder.* New York, NY: Oxford University Press; 2005.
2. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders.* 4th ed. Washington, DC: American Psychiatric Association; 2002:510.
3. Wilson JB, Arpey CJ. Body dysmorphic disorder: suggestions for detection and treatment in a surgical dermatology practice. *Dermatol Surg.* 2004;30(11):1391-1399.
4. Sarwer DB, Whitaker LA, Pertschuk MJ, Wadden TA. Body image concerns of reconstructive surgery patients: an underrecognized problem. *Ann Plast Surg.* 1998;40(4):403-407.
5. Herren C, Armentrout T, Higgins M. Body dysmorphic disorder: diagnosis and treatment. *Gen Dent.* 2003;51(2):164-166.
6. Cotterill JA. Body dysmorphic disorder. *Dermatol Clin.* 1996;14(3):457-463.
7. Sarwer DB, Cash TF, Magee L, et al. Female college students and cosmetic surgery: an investigation of experiences, attitudes, and body image. *Plast Reconstr Surg.* 2005;115(3):931-938.
8. Bohne A, Keuthen NJ, Wilhelm S, Deckersbach T, Jenike MA. Prevalence of symptoms of body dysmorphic disorder and its correlates: a cross-cultural comparison. *Psychosomatics.* 2002;43(6):486-490.
9. Cansever A, Uzun O, Dönmez E, Ozsahin A. The prevalence and clinical features of body dysmorphic disorder in college students: a study in a Turkish sample. *Compr Psychiatry.* 2003;44(1):60-64.
10. Grant JE, Phillips KA. Recognizing and treating body dysmorphic disorder. *Ann Clin Psychiatry.* 2005;17(4):205-210.
11. Phillips KA, Didie ER, Menard W. Clinical features and correlates of major depressive disorder in individuals

with body dysmorphic disorder. *J Affect Disord*. 2007;97(1-3):129-135.

12. Phillips KA, Menard W. Suicidality in body dysmorphic disorder: a prospective study. *Am J Psychiatry*. 2006;163(7):1280-1282.
13. Phillips KA. Body dysmorphic disorder: recognizing and treating imagined ugliness. *World Psychiatry*. 2004;3(1):12-17.
14. Phillips KA, Menard W, Fay C. Gender similarities and differences in 200 individuals with body dysmorphic disorder. *Compr Psychiatry*. 2006;47(2):77-87.
15. Phillips KA, Menard W, Fay C, Weisberg R. Demographic characteristics, phenomenology, comorbidity, and family history in 200 individuals with body dysmorphic disorder. *Psychosomatics*. 2005;46(4):317-325.
16. Slaughter JR, Sun AM. In pursuit of perfection: a primary care physician's guide to body dysmorphic disorder. *Am Fam Physician*. 1999;60(6):1738-1742.
17. Zimmerman M, Mattia JI. Body dysmorphic disorder in psychiatric outpatients: recognition, prevalence, comorbidity, demographic, and clinical correlates. *Compr Psychiatry*. 1998;39(5):265-270.
18. Pope CG, Pope HG, Menard W, Fay C, Olivardia R, Phillips KA. Clinical features of muscle dysmorphia among males with body dysmorphic disorder. *Body Image*. 2005;2(4):395-400.
19. Frare F, Perugi G, Ruffolo G, Toni C. Obsessive-compulsive disorder and body dysmorphic disorder: a comparison of clinical features. *Eur Psychiatry*. 2004;19(5):292-298.
20. Ruffolo JS, Phillips KA, Menard W, Fay C, Weisberg RB. Comorbidity of body dysmorphic disorder and eating disorders: severity of psychopathology and body image disturbance. *Int J Eat Disord*. 2006;39(1):11-19.
21. Crerand CE, Phillips KA, Menard W, Fay C. Nonpsychiatric medical treatment of body dysmorphic disorder. *Psychosomatics*. 2005;46(6):549-555.
22. Phillips KA, Grant J, Siniscalchi J, Albertini RS. Surgical and nonpsychiatric medical treatment of patients with body dysmorphic disorder. *Psychosomatics*. 2001;42(6):504-510.
23. Williams J, Hadjistavropoulos T, Sharpe D. A meta-analysis of psychological and pharmacological treatments for body dysmorphic disorder. *Behav Res Ther*. 2006;44(1):99-111.
24. Phillips KA, Albertini RS, Rasmussen SA. A randomized placebo-controlled trial of fluoxetine in body dysmorphic disorder. *Arch Gen Psychiatry*. 2002;59(4):381-388.
25. Phillips KA, Najjar F. An open-label study of citalopram in body dysmorphic disorder. *J Clin Psychiatry*. 2003;64(6):715-720.
26. Phillips KA. An open-label study of escitalopram in body dysmorphic disorder. *Int Clin Psychopharmacol*. 2006;21(3):177-179.
27. Hollander E, Allen A, Kwon J, et al. Clomipramine vs desipramine crossover trial in body dysmorphic disorder: selective efficacy of a serotonin reuptake inhibitor in imagined ugliness. *Arch Gen Psychiatry*. 1999;56(11):1033-1039.
28. Phillips KA, Dwight MM, McElroy SL. Efficacy and safety of fluvoxamine in body dysmorphic disorder. *J Clin Psychiatry*. 1998;59(4):165-171.
29. Perugi G, Giannotti D, Di Vaio S, Frare F, Saettoni M, Cassano GB. Fluvoxamine in the treatment of body dysmorphic disorder (dysmorphophobia). *Int Clin Psychopharmacol*. 1996;11(4):247-254.
30. Neziroglu F, Khemlani-Patel S. A review of cognitive and behavioral treatment for body dysmorphic disorder. *CNS Spectr*. 2002;7(6):464-471.
31. McKay D. Two-year follow-up of behavioral treatment and maintenance for body dysmorphic disorder. *Behav Modif`*. 1999;23(4):620-629.
32. Rosen JC, Reiter J, Orosan P. Cognitive-behavioral body image therapy for body dysmorphic disorder [published correction appears in *J Consult Clin Psychol*. 1995;63(3):437]. *J Consult Clin Psychol*. 1995;63(2):263-269.
33. Veale D, Gournay K, Dryden W, et al. Body dysmorphic disorder: a cognitive behavioral model and pilot randomised controlled trial. *Behav Res Ther*. 1996;34(9):717-729.
34. Wilhelm S, Otto MW, Lohr B, Deckersbach T. Cognitive behavior group therapy for body dysmorphic disorder: a case series. *Behav Res Ther*. 1999;37(1):71-75.