

NATURE AND NURTURE: FACTORS CONTRIBUTING TO THE DEVELOPMENT  
AND CONTINUATION OF EATING DISORDERS

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## ABSTRACT

SUBHASHNI DEVI SINGH JOY: Nature and Nurture: Factors Contributing to the  
Development and Continuation of Eating Disorders  
(Under the direction of Tom Linden, M.D.)

This thesis discusses the impact of genetics, personality traits and media on the development and continuation of eating disorders, including bulimia and anorexia. The project includes a literature review of current research on factors related to eating disorders. The series of three articles highlights three factors that affect the development of eating disorders. The first article considers some of the personality traits often associated with people with eating disorders, as told through one person's experience. The second uses a narrative approach to tell the story of a young girl who struggled with anorexia and binge eating and who also has a mother and half-sister who have dealt with eating disorders. The third article describes how media can affect how girls and women view their bodies and also reports on a recent movement toward using "real" women in advertising and in magazines directed to teenage girls.

## DEDICATION

To Brian, for your endless ability to always make me laugh and for your unwavering support.

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## CHAPTER I: INTRODUCTION

Eating disorders have been a health problem in America for years, and the incidence of these disorders has increased during the past 30 to 40 years. Reports on the number of people with eating disorders vary widely. Accurate statistics are difficult to obtain because people may be secretive about their problems and deny that they have disorders. According to the National Institute of Mental Health, estimates on the number of American women who suffer from anorexia during their lifetimes range from 0.5 percent to 3.7 percent (National Institute of Mental Health [NIMH], 2001). Statistics on the number of women who have bulimia at least once in their lifetimes range from 1.1 percent to 4.2 percent of females. Eating disorders can lead to serious health problems. Anorexia can cause osteoporosis, anemia, low blood pressure, and can lead to muscles wasting away (American Psychiatric Association, 2005). Bulimia can result in a chronic sore throat, severe dehydration, and kidney problems.

### **Theoretical Justification**

The complexity of eating disorders creates a challenge for clinicians and researchers alike. Recent research has shown that personal, familial, behavioral, sociocultural and biological factors may contribute to the development of eating disorders.

Researchers continue to learn more about the underlying causes of eating disorders while the media continue to profile the people who suffer from these disorders. Recently, a *Newsweek* article described a father's discovery that his 16-year-old daughter was starving herself (Berrien, 2005). Raleigh's newspaper, *The News and Observer*, reported the story of a woman who lived with an eating disorder for 21 years before undergoing treatment (Brodey,

2005). An episode of *Oprah* showed the story of two girls with eating disorders and how their families struggled to help them (Oprah, 2001). While these stories can be informative and educational by shedding light on an often taboo topic, other media spotlights on eating disorders may be more harmful than helpful.

On August 4, 2005, the FX cable network premiered a situation comedy, *Starved*, to an audience of 1.4 million. The show followed four 30-something friends living in Brooklyn, each struggling with a different type of eating disorder. The four friends attended meetings for Belt Tighteners, a radical satirical support group that promoted a harsh approach to recovery. During a group session, the group chanted “it’s not ok” after a member admitted to relapsing. The show explored the characters’ relationships and sexual orientations and showed examples of disordered eating (Swartz, 2005). For example, one scene showed a man digging through garbage to find a chocolate cake that he had covered in Ajax and had thrown out to prevent himself from eating. He ate around the Ajax. Reviewers pronounced the show “funny,” “poignant,” “sick,” and “offensive” (Osterweil, 2005). It was cancelled in October 2005.

The Internet is now packed with web sites concerning eating disorders. The sites range from on-line support groups, where members can chat anonymously with one another, to information on how to help others to other sites that post warning signs of eating disorders. There are web sites that promote dangerous habits too. More than 500 web sites that encourage anorexia and bulimia litter the Internet (Lucile Packard Children’s Hospital, 2005). These sites support unhealthy behaviors, offering tips on how to avoid eating, how to lose weight and how to hide these tactics from friends and family. They may even provide pictures, body weight goal charts, and low-calorie recipes. The web sites portray eating

disorders as a way of life, rather than the disease that it is. In a recent preliminary study by the Stanford School of Medicine and Lucile Packard Children's Hospital, researchers found that 40 percent of adolescents diagnosed with an eating disorder had visited web sites promoting eating disorders and about 25 percent frequently visited these sites, as well as sites dedicated to recovery (Lucile Packard Children's Hospital, 2005).

Treatment of an eating disorder can be a lifelong process. People with anorexia and bulimia often go through periods of healthy behaviors, only to revert to their eating disorders during stressful or overwhelming times. According to the South Carolina Mental Health Department, only 20 percent of women who begin treatment for an eating disorder actually get the intensity of treatment that they need to recover (South Carolina Mental Health Department, n.d.).

Although the media have often told the stories of men and women who have recovered from or who currently have eating disorders, this series of articles will approach the subject differently. A person's susceptibility for developing an eating disorder may stem from personal, familial, behavioral, and genetic influences. This series of articles will focus on these factors. The interplay between nature and nurture is complex, and this series will examine factors from both sides by specifically addressing genetics, personality traits and media impact. In order to stop the eating disorders cycle or, even better, to prevent the cycle from beginning at all, it may be helpful to understand the underlying factors that increase a person's susceptibility of developing and continuing to have an eating disorder.

## CHAPTER II: LITERATURE REVIEW

Eating disorders such as anorexia and bulimia are complex disorders, with social, psychological, biological and behavioral processes all contributing to their prevalence. Eating disorders are more prevalent in women and can begin as early as the pre-teen years or as late as the third or fourth generation of life.

Anorexia and bulimia are the two most common eating disorders in the United States. According to the South Carolina Department of Mental Health, eight million Americans have an eating disorder. Anorexia nervosa is associated with a refusal to maintain a healthy weight corresponding to a person's height and age, an intense fear of gaining weight and a distortion of body shape and image (NIMH, 2001). Someone with bulimia nervosa eats excessively or binge eats regularly and then purges her body by using laxatives, self-induced vomiting, or excessive exercise. Binging and purging tend to occur at least two days a week for cycles of an average of three months (NIMH, 2001).

Traditionally, research on eating disorders has focused on the influences of society and family on the development of anorexia and bulimia, particularly in adolescents. Also, historically, a main research focus has been on psychological disorders commonly associated with eating disorders. Although the influences of society and family and the co-morbidity of psychological disorders are well established, recent research has shifted in focus. A growing body of research suggests a genetic component to eating disorders. Scientists are attempting to pinpoint specific genes that may make a person more susceptible to developing an eating disorder (Grice et al., 2002; Bergen et al., 2003; Devlin et al., 2002; Bulik et al., 2003; Bulik

et al., 2005b; Bacanu et al., 2005). Partly because of this research, there has been greater emphasis on personality traits commonly exhibited by people with eating disorders, such as obsessiveness and anxiety. Researchers write that personality traits are to some extent inherited, but also develop in response to the environment (Klump, McGue & Iacono, 2002).

Environmental influences, including peer pressure, media images, and a culture that tends to promote a thin body as the ideal, can influence the development of an eating disorder. Television and magazine commercials promoting a variety of products tend to feature slim, stereotypically attractive women. Media depict these women with small waists and large breasts. Imperfections are airbrushed to show flawless skin. These media images also show women who are far smaller than the average American woman who, according to a 2004 Centers for Disease Control and Prevention press release, is 5-feet-4-inches tall and weighs 164 pounds. Research shows that the depictions of these thin, stereotypically attractive women can promote body dissatisfaction as well as decrease self-esteem and lead to risky behaviors, such as food restriction and purging (Park, 2005; Ogden & Munday, 1996; Hargreaves & Tiggemann, 2003b; Myers & Biocca, 1992; McCabe & Ricciardelli, 2005; Cooley & Toray, 2001).

This review will examine research involving the relationship between genetics, personality traits and media images on the susceptibility for and development of eating disorders, specifically anorexia and bulimia. The series of articles will explore the relationship between genetic and environmental factors influencing the development and continuance of eating disorders.

**Genetics: Genes linked to eating disorders**

Traditionally, susceptibility to eating disorders was thought to be due to only environmental factors and familial influence. Early theories focused on family and sociocultural issues as underlying factors (Bulik, 2005a). More recently, research has shown that specific genes may increase the risk of having an eating disorder. Identification of these genes may lead to a better understanding of how environmental factors influence eating disorders. In a review article, Gorwood, Kipman, and Foulon (2003) analyzed the beginnings of genetic research and found, by compiling results from several studies, that the heritability of anorexia was around 70 percent. Several studies have demonstrated some association between altered serotonin neurotransmission and anorexia. Researchers have isolated the 5-HT<sub>2A</sub> gene as a possible candidate for the gene that encodes the serotonin receptor responsible for altered neurotransmission. Although there are inconsistencies among studies, Gorwood et al. (2003) pointed out that these studies showed some association between the 5-HT<sub>2A</sub> gene and anorexia, even if there was no clear evidence of a direct linkage. Similarly, Klump and Gobrogge (2005) agreed that studies suggest that the 5-HT<sub>2A</sub> gene may play a role in causing anorexia.

Researchers have looked at families and twins to determine the basis for a relationship between genetics and eating disorders. Several twin studies indicated an environmental as well as genetic contribution to eating disorders. The results of a study of a longitudinal, population-based sample of adolescent twins suggested significant genetic impact on anorexic pathology. The results also showed that environmental influences, which were different between twins, played a role in the development of anorexia (Klump, Miller, Keel, McGue, & Iacono, 2001). Another large population-based twin sample included pre-pubertal, pubertal and 17-year-old twins (Klump, McGue, & Iacono, 2003). Researchers found similar

levels of genetic influence on the pubertal and 17-year-old twins, indicating that part of the genetic influence on eating pathology may develop during puberty.

Review articles have attempted to quantify the genetic contribution to eating disorders by analyzing twin studies. In a 1999 study, Fairburn, Cowen, and Harrison (1999) found estimates for the heritability of bulimia ranging from 0 percent to 83 percent and from 0 percent to 70 percent for anorexia. The authors cited a variety of differences and problems in methodology to explain the wide variation. Bulik, Sullivan, Wade, and Kendler (2000) also noted twin studies may have arcane methodology. The authors of this review article concluded that twin studies showed a clear contribution of genetics to the development of both anorexia and bulimia; however, the magnitude of this contribution was unclear.

In recent years, researchers have conducted linkage studies to determine specific genes associated with eating disorders. In general, linkage studies examine families who have more than one person with an eating disorder. These studies look at whether these family members share marker alleles at certain positions on a chromosome at a rate greater than can be explained by chance (Klump & Gobrogge, 2005). Grice et al. (2002) found evidence of a susceptibility gene for anorexia on chromosome one. Similarly, Bergen et al. (2003) found evidence that two receptors on chromosome one may be involved in causing anorexia. In a study incorporating behavior traits into linkage analysis, researchers found regions of suggestive linkage to anorexia on chromosomes one, two, and 13 (Devlin et al., 2002).

Linkage analyses of families with a history of bulimia showed evidence that a location on chromosome 10 increases the susceptibility of developing an eating disorder (Bulik et al., 2003). Although the research did not pinpoint a specific gene, it did indicate that the likelihood of finding a gene on the part of the chromosome that the research identified. This

study added to the growing body of knowledge concerning specific genes linked to eating disorders.

In a 2005 study, researchers measured more than 100 attributes thought to be related to eating disorders and narrowed the traits, or phenotypic behaviors, to six (Bulik et al., 2005b). The researchers looked at groups of people with both anorexia and bulimia. This study pinpointed a set of phenotypes that may be used for genetic analyses and that could aid in distinguishing the exact locations of genes that make a person more susceptible to an eating disorder. The study also demonstrated the complex relationship between genetic and environmental factors that affect the development of anorexia and bulimia. In a continuation of this study, Bacanu et al. (2005) genotyped DNA from groups of people with either anorexia or bulimia. Two linkage analyses showed several linkage signals, particularly for the group with bulimia. Interestingly, the analyses showed some overlap of linkage signals for the bulimic and anorexic groups, suggesting that the disorders may be genetically related.

A recent study found that the connection between personality traits and disordered eating attitudes was influenced more by genetic than environmental factors (Klump, McGue & Iacono, 2002). Study results demonstrate that certain personality traits, such as perfectionism and obsessiveness, may be caused partly by those genes that could increase the susceptibility of developing an eating disorder. Future genetic studies may be able to identify all of the specific genes that may predispose a person to developing an eating disorder.

### **Personality Traits: Traits associated with eating disorders**

Several researchers have found that people with eating disorders often suffer from psychological illnesses as well. These illnesses include personality and anxiety disorders, as well as obsessive-compulsive disorder. For example, Picot & Lilenfeld (2003) found a

correlation between personality psychopathology and binge eating, a symptom of bulimia. Affective, anxiety, substance-related and personality disorders were common in a large non-randomized sample of people with eating disorders (Milos, Spindler, & Schnyder, 2004). Similarly, Ro, Martinsen, Hoffart, Sexton, and Rosenvinge (2005) found a correlation between personality disorders and eating disorders. They also found that personality disorder symptoms increased and decreased in relationship to similar changes in eating disorder symptoms. The participants, however, were being treated in a psychiatric hospital and then in outpatient settings, and symptom changes may have been in response to treatment, which was listed as “a variety of treatment modalities,” instead of a direct correlation between personality disorder symptoms and eating disorder symptoms.

Grilo (2002) noted that, within the previous two years, more studies than not reported high rates of personality disorders in people with eating disorders; however, there was considerable variability in the co-occurrence rates, which are the rates at which people had both eating disorders and personality disorders. In another review article, O’Brien and Vincent (2003) looked at research from the previous two decades and discussed several studies revealing that depression is common in people with anorexia and bulimia, and obsessive-compulsive disorder is prevalent in those with anorexia.

While past research has focused mainly on links between psychological disorders and eating disorders, recent research shows that a number of personality traits are often found in people with eating disorders. Several authors have proposed that parents pass on these personality traits, through genetics, the environment, or a combination of the two. Woodside et al. (2002) found that females with anorexia and their mothers both showed greater perfectionism and higher levels of other attitudes and behaviors associated with eating

disorders, such as body dissatisfaction and interpersonal distrust, compared with a group of mothers and daughters without eating disorders. In a small study, Lilenfeld et al. (2000) found higher levels of perfectionism, ineffectiveness, and interpersonal distrust among immediate female relatives of women with an eating disorder, compared with levels of relatives of women who had never had an eating disorder. Klump, McGue, and Iacono's (2002) findings from a study of female twins support research showing a genetic contribution to the heritability of personality traits. Results showed that genes mediated the connection between personality traits and eating attitudes and behaviors; however, the authors pointed out that other genetic and environmental factors also contributed to the development of these attitudes and behaviors.

Although researchers have found a large number of personality characteristics common among people, particularly women, with eating disorders, a few traits are consistently identified. In a recent review article, Cassin and von Ranson (2005) used a meta-analysis to identify the most consistently reported personality traits among people with bulimia and anorexia. The traits that they identified most often were perfectionism, obsessive-compulsiveness, neuroticism, negative emotionality, harm avoidance, low self-directedness, low cooperativeness and other traits associated with avoidant personality disorders. According to Perkins, Klump, Iacono, and McGue (2004), identifying these traits is important because personality can help predict the development of disordered eating. Klump et al. (2004) found that women who either suffered or recovered from an eating disorder showed high levels of harm avoidance, which involves inhibited behavior because of worry or fear; lower self-directedness, defined as being immature, self-striving, and unreliable; and cooperativeness than women in the control group. In a small long-term study, Holtkamp,

Muller, Heussen, Remschmidt, and Herpetz-Dahlmann (2005) found that depression, anxiety, and obsessiveness remained traits of men and women who had suffered from an eating disorder as adolescents, even up to 10 years after showing no eating disorder symptoms. In a study of undergraduate females, women who scored higher on a test assessing the psychological and behavioral symptoms associated with anorexia also showed obsessive symptoms and some form of dependency, such as reliance on another person (Rogers & Petrie, 2001).

In contrast, an earlier study by Klump et al. (2000) identified a variety of characteristics among women with eating disorders. In the large study, women displayed a wide range of certain temperaments regardless of diagnostic subtype; however, they also showed some similar characteristics as a whole, such as low cooperativeness and high harm avoidance, in association with their diagnostic subtype. This study demonstrated the complexity of the relationship between personality traits and eating disorders.

Some researchers have recently attempted to categorize people with eating disorders according to personality traits. Using several self-report questionnaires from women with bulimia, Wonderlich et al. (2005) identified three personality subtypes: affective-perfectionistic, a group with high levels of obsessionality, compulsivity, and perfectionism; impulsive; and low co-morbid psychopathology, which referred to participants displaying the lowest levels of psychiatric disorders such as depression. Each group showed differences in personality and eating-disorder measures. For example, those in the impulsive group had the highest levels of dissocial behavior and lowest compulsiveness, while those in the affective-perfectionistic cluster displayed the most eating disorder symptoms. In an earlier study, Westen and Harnden-Fischer (2001) analyzed clinicians' descriptions of patients to

determine whether patients clustered into groups according to personality profiles. Analysis identified three groups: high-functioning/perfectionistic, constricted/overcontrolled, and emotionally dysregulated/undercontrolled, which consisted of people with intense emotions and impulsive behaviors. In an attempt to validate Westen and Harnden-Fischer's (2001) groupings, Thompson-Brenner and Westin (2005) asked clinicians to categorize patients according to the three groups and provide additional information concerning symptoms, personality and treatment responsiveness for each individual. The authors stated that the study provided evidence validating the three subgroups because people within the three subtypes shared characteristics, and the three groups differed from each other in functioning, co-morbidity, and outcome. Yet, clinicians were forced to categorize their patients into one of these three groups, which may have affected the study results.

Much of the research on personality traits related to eating disorders involves women. One study compared the personality traits of men and women with eating disorders and found that men had lower levels of perfectionism, harm avoidance, reward dependence, and cooperativeness than females (Woodside et al., 2004). The study did not compare traits of the men in the trial with those of men without eating disorders. Therefore, the authors could not definitely conclude whether the difference in traits between males and females was specific to the illness or to gender.

Prior research has found a connection between certain psychological disorders and eating disorders; however, recent research has focused more on personality traits often exhibited by people with eating disorders. Although a large number of traits have been suggested, some have been consistently identified, including perfectionism, obsessiveness, anxiety, and avoidance. Research to identify these traits has developed within the past decade, in

particular, and this article series will focus on these personality traits instead of the psychological disorders related to eating disorders. Research on personality traits linked to eating disorders is just beginning to be researched from a genetic perspective. Also, not everyone who has an eating disorder has a psychological disorder.

Personality traits are developed in response to genetics, family influence, and other environmental factors. Traits such as low self-esteem may be reinforced by images of stereotypically thin, attractive models depicted in media images both in print and on television. These media images of the “ideal” female figure can increase body dissatisfaction and unhealthy behaviors, particularly in women (Hargreaves & Tiggemann, 2003b; Myers & Biocca, 1992).

### **Media Impact: How media influences eating disorders**

#### *Body Dissatisfaction*

Society and culture are known to affect the development of eating disorders (Bulik, 2005). Media often portray excessively thin and attractive women in advertisements both in print and on television. Scholarly research suggests that these idealized images contribute to a distorted body image, weight concerns, low self-esteem and other measures of eating disorder symptoms (Park, 2005). In a 1996 study, a group of 20 men and 20 women completed measures of body satisfaction before and after viewing images of thin or overweight individuals (Ogden & Munday, 1996). Regardless of gender, participants were less satisfied with their bodies after viewing the thin pictures but more satisfied after viewing the pictures of overweight individuals. In contrast, a similar study with adolescent girls did not find such a strong direct relationship between viewing images of thin individuals and body dissatisfaction. The authors suggest that this finding, which is contrary to other research, is likely because media influence on body satisfaction is complex and that there is

not a direct causal relationship between media and body dissatisfaction (Champion & Furnham, 1999). The study did find, however, that the 16-year-old girls expressed significantly more dissatisfaction with their weight and bodies than did the 12-year-old girls after viewing the images, suggesting that weight concerns increase as adolescent girls age and also suggesting that older adolescents have an increased susceptibility to media images.

A survey of more than 500 college women found that the use of beauty and fashion magazines, such as *Vogue* and *Cosmopolitan*, increases the desire to be thin directly by increasing women's perceived societal pressure to be thin. The survey also found that these magazines indirectly increase women's desire to be thin by encouraging the notion that both women and men prefer a thin body type (Park, 2005). Botta's (1999) study examining images of thin women and men on television shows and how these images have an impact on body image in adolescents also found both direct and indirect links between media and body image disturbance. Indirectly, media images encourage girls to aspire to an impossible thin ideal and directly, media define what women's bodies should look like.

One study specifically addressed the impact of television commercials on body image satisfaction of adolescents (Hargreaves & Tiggemann, 2003b). This research demonstrated that when girls viewed commercials depicting "ideally thin" women, they had significantly higher body dissatisfaction after viewing these commercials, compared with when they viewed commercials without female actresses. Effects of the commercials were measured using surveys and word association tests. The study showed the direct impact of television commercials on body satisfaction among adolescent girls. Since bulimia and anorexia often first appear in adolescents and teenagers, and body dissatisfaction has been shown to be a strong predictor of eating disorders, this study showed the media impact on this at-risk group

of young women. In a follow-up to their study, Hargreaves and Tiggemann (2003c) looked at the long-term implications of watching commercials portraying thin female images. The girls who were very negatively affected by viewing commercials with thin women two years earlier during the first study felt even more dissatisfied and showed a greater drive for thinness than they did two years earlier. The authors suggested that media images of the “thin-ideal,” defined as excessively thin and attractive women, may be associated with weight control behavior and feelings of dissatisfaction. Although the two studies were similar in method, it may be hard to draw a direct correlation between viewing commercials with thin, attractive women and body dissatisfaction over time. This direct relationship may be hard to determine in part because the media exposure between time periods is unknown and also because other factors have an influence on the level of a person’s body satisfaction.

#### *Internalization of Media Messages*

Some studies have examined the influence of several media outlets on body image. In one study, the authors developed a scale to assess the influence of multidimensional media on body image (Cusumano & Thompson, 2000). The scale looked at five dimensions of media influence: awareness of media promotion of thinness, internalization of the publicized ideal body type, importance of media as a source of information on attractiveness, tendency to compare one’s own body to those in the media, and perception of pressure from the media to look like models and actors. Results showed that females had higher levels of measures of media influence and body dissatisfaction than males, suggesting a direct link between media and body image dissatisfaction, as well as a possible link between these and gender. Broader study results confirmed previous work, which demonstrated that how media images are internalized may help to predict what impact these images will have on body dissatisfaction.

Although only tested among a small group, the media influence scale developed by the researchers may guide future studies of media influence on body image.

Hogg and Fragou (2003) also examined the internalization of media influences on women's body image and self esteem. The researchers looked at the reasons 18- to 24-year-old women compare themselves to models in print advertisements. They based their study on the "social comparison process," in which comparisons can be made for three purposes: self-evaluation, self-improvement or self-enhancement. Self-evaluation was defined as a woman comparing her physical attractiveness to models to determine if she is prettier than the models. Self-improvement was making the same comparison but with the purpose of seeking ways to improve her own attractiveness, and self-enhancement was making the comparison to enhance her self-esteem by finding ways that she is prettier than the models. If women used the images to evaluate themselves, there were no long-term effects on self-esteem; however, if women compared themselves to thin images in order to improve themselves, their perceptions of their own attractiveness was lower after viewing the images. Lennon, Lillethun, and Buckland (1999) also found that not all college women are passive viewers of idealized advertising images. Instead, the women filtered media images and paid attention to those in which they were most interested, which varied by individual. These studies convey the complexity of the relationship between media and body dissatisfaction.

One study attempted to specify what body proportions the media tend to promote (Harrison, 2003). Undergraduate women's exposure to thin-ideal body images on television, in advertisements and on shows, was correlated with their perceptions of an ideal female figure, specifically a smaller waist, smaller hips, and a medium-sized bust. This finding that women perceived thin, attractive women as having ideal figures is supported by Myers and

Biocca (1992), who found that young women's perceptions of their bodies can be significantly changed after watching as little as 30 minutes of television showing thin-ideal body images, thus creating conflict between their own body images and the thin images represented by media.

### *Men's Views*

A few authors have examined the effect of the thin body image portrayed by media in relation to how men view attractiveness of females. Harrison (2003) found that exposure to thin-ideal body images on television did not have an effect on men's perceptions of the ideal female figure, but did increase men's approval of surgical body-alteration methods such as breast surgery and liposuction. Somewhat contrasting results were found in a study in which high school boys were shown commercials with stereotypically thin, attractive females and commercials with females considered "normal" in appearance (Hargreaves & Tiggemann, 2003a). More boys who viewed the commercials with thin actresses rated slimness and attractiveness as relatively more important than boys who viewed the commercials with "normal" actresses. Some boys were not affected by the thin body images, however, and more research is needed to determine the strength of the connection between media body-image ideals and boys' and men's views of attractiveness. The research does highlight the notion that ideal body images portrayed by media may indirectly affect women by influencing men's perceptions of an attractive female figure. Media may encourage men to include thinness in their definitions of attractive.

### *Impact on Health Behaviors*

Some research has examined the effect of thin-ideal body images in media not only on body dissatisfaction, but also on other thoughts that may lead to disordered eating, such as

dissatisfaction with weight and preoccupation with dieting. In a prospective study of adolescents, McCabe and Ricciardelli (2005) found that perceived messages to lose weight from peers and media were more prevalent in girls than boys. During the 16-month study, the number of perceived messages that came from female friends and media increased for girls. The authors suggested that friends and media greatly influence girls to lose weight and conform to the sociocultural ideal body during adolescence. In another longitudinal study, investigators assessed eating pathology in college women for a three-year period (Cooley & Toray, 2001). Women entering college with high levels of body dissatisfaction tended to display worsening eating pathology, specifically bulimia and restraint scores, during the three years. Although the research cannot be generalized because of the lack of diversity of the participants, the study did suggest that body dissatisfaction was a risk factor for disordered eating pathology.

An analysis of published studies in which experiments involved watching thin, attractive, idealized body images portrayed by media showed that these images can alter self-perceptions and cause eating disorders in young women (Myers & Biocca, 1992). The constant barrage of thin women in media may contribute to feelings of body dissatisfaction and lead to health risk behaviors such as increased dieting, over-exercising, binge eating and other behaviors associated with eating disorders (McCabe and Ricciardelli, 2005). Media images both directly and indirectly affect both women's and men's perceptions of the ideal, attractive female figure (Park, 2005; Botta, 1999). A large body of evidence supports the idea that thin media images can cause body dissatisfaction; however, personal beliefs, sociocultural impacts, and other factors may dictate how much influence media images have.

## **Summary**

Research on the genetic underpinnings of eating disorders has led to the identification of specific genes that may be responsible for increasing the susceptibility of developing an eating disorder. Although the research is in preliminary stages, it creates a strong base from which further research can draw and may lead to the identification of specific genes that predispose individuals to develop eating disorders. Much of this research is based on linkage studies examining particular phenotypes, as displayed by certain traits. Identification of these personality traits may also aid in determining characteristics that may increase a person's susceptibility for developing an eating disorder. If someone is predisposed to develop an eating disorder, media's depiction of stereotypically thin, attractive models as the "ideal" figure can play a role in increasing a person's body dissatisfaction and increasing the likelihood of beginning the cycle of anorexia or bulimia. Research on the influence of genetics, certain personality traits and thin, ideal body images portrayed in media may aid in preventing some people from developing an eating disorder. The more that is understood about the causes of anorexia and bulimia, the greater chance that there is to prevent such disorders before they begin. If people, particularly women, understand what may push them to binge and purge or to starve themselves, then they may be more apt to seek help early, before an eating disorder actually begins. Also, these same factors that contribute to developing an eating disorder could be partly responsible for why people often turn back to their eating disorder after being healthy and symptom-free for a time. Understanding the causes for development and continuance of eating disorders is particularly important because the disease is often lifelong. By developing an understanding of eating disorders, the media may be able to help combat the health problem. I plan to address the development of eating

disorders by examining the impact of personality, genetics, and media. This different approach to the topic may help people gain a better understanding of eating disorders.

### CHAPTER III: METHODOLOGY

I interviewed specialists in the field of eating disorders, both researchers and practitioners. With the help of these experts, I got in touch with people with eating disorders who were willing to speak with me about their experiences, traits, and family history. Because of the sensitivity of the issue, the subjects with eating disorders were given pseudonyms unless they agree to be identified by their real names. I also contacted several media experts. I also spoke with employees of Dove and teen magazines.

I used a narrative and anecdotal approach for two articles. My approach is based on that described by Jon Franklin in *Writing for Story* (1994). Franklin suggests that to tell the story the writer should use a five-part structure made up of a complication, three developments, and a resolution. I used this outline as the structure for all three articles. In two articles, I tell the story of one person to illustrate the issues of genetics and personality traits. For the last article on the impact of the media on eating disorders, I discuss how media affect women using more of a straight news style. I look at the relationship between media and eating disorders. Also, I discuss an advertising campaign by Dove, using “real” women in commercials and what the company says prompted the campaign. I also discuss what media experts and people who have a history of eating disorders think of the commercials. Dove specifically developed their campaign in response to their own survey showing a large proportion of American women were unhappy with their bodies. The company is also creating programs to increase self-esteem and broaden definitions of beauty among pre-teen

and teenage girls. Also, I briefly looked at a new move towards using average-size girls in teen magazines such as *Teen Vogue* and *Seventeen*.

### **Medium**

I wrote a series of three articles appropriate for publication in the *Charlotte Observer*. The *Charlotte Observer* has told the stories of the women who appear in the Dove commercials, but has not looked at how advertising may have an impact on the development of an eating disorder. Also, the paper has printed articles describing the interactions of members of a support group for people with eating disorders. My approach is different because it looks at the several different influences that may increase the likelihood of someone developing an eating disorder. My goal is to reach a wide audience, particularly women, since the incidence of anorexia and bulimia is far higher in women than in men. Because eating disorders can begin as early as pre-adolescence, but can also start at middle age, a newspaper readership is a good potential audience since newspapers, both in print and online, reach a range of age groups. My hope is that by addressing the underlying factors behind eating disorders I will provide a deeper understanding both to those struggling with the disorders and to their families and friends.

### **Expert Resources**

Several media and eating disorder specialists spoke with me for this series of articles. I began by talking with local nutritionists and therapists who have patients with eating disorders. Ellen Morrison and Jen Ketterly are both nutritionists who see patients with anorexia and bulimia. They provided me with background information on people with eating disorders and helped me understand the role of nutrition in recovery from an eating disorder. Also, I spoke with Dr. Kristen McAleavey, a professor at Longwood College and a social

worker who counsels women and men with eating disorders. Much of the recent genetic research has been conducted at The University of North Carolina at Chapel Hill. Dr. Cynthia Bulik has been an investigator in these studies and spoke with me about the genetics related to eating disorders.

I also spoke with several local therapists about putting me in touch with people who have eating disorders. Some people whom I contacted were willing to ask their clients if they would speak with me and provided their clients with my contact information.

I spoke with many media experts with backgrounds on the impact of media in relation to eating disorders, women and adolescent girls. The experts whom I spoke with were Sarah Stinson and Professors Jane Brown, Jess Haines, Michael Levine, Pamela Tracy, Kristen Harrison, and Sri Kalyanaram. All of these people helped me understand how media affect women and girls in particular, and pointed me to other experts in the area.

I also spoke with Jane Keltner, fashion news editor of *Teen Vogue*, who spoke with me about why editors use “real” girls in their magazine. I attempted to talk with Atoosa Rubenstein, editor of *Seventeen* magazine directly, but was refused an interview.

Philippe Harousseau, marketing director for Dove, provided me with answers to my questions about the company’s campaign. Also, I was able to speak with Julie Arko and Shanel Lu, who are both pictured in the campaign’s advertisements showing “real” women.

## CHAPTER IV: PERSONALITY PLAYS A PART

Cindy Shaw was a tall child. She grew faster and earlier than the other children. She always felt awkward and big, as if her body didn't quite fit. She wasn't the small, slim, Asian girl – the girl whom her Korean mother had always wanted her to be.

Shaw, which is not her real name and who was referred to this reporter by a local therapist, strived to make others happy and measured her own happiness by the way others viewed her. “The main thing I'm insecure about is my image that other people see,” Shaw said. She is now 25 years old, but as far back as she can remember, she said, “I always felt like I never quite measured up.”

Starting at age 13, Shaw wrote in a diary each night. The entries were always the same. “They always said something like, ‘I'm so unloved, I have no friends, I'm ugly, I'm stupid, I'm worth nothing,’” Shaw said.

Research in journals such as the American Journal of Psychiatry, International Journal of Eating Disorders and Clinical Psychology Review has identified several personality traits often found in people with eating disorders. These traits include low self-esteem, body dissatisfaction, obsessiveness, perfectionism and a need to feel in control.

“Someone who has the profile – low self-esteem, low self confidence while growing up, perfectionism, the traits associated with eating disorders, and then they have this poor environment pushing for thin ideals, that can push them toward an eating disorder,” said Jen Ketterly, a nutritionist who works with college-age girls with eating disorders at the University of North Carolina at Chapel Hill.

Shaw said the push to be thin came from her own wish to be attractive, as well as from her mother, friends and boys. She said she craved attention from the opposite sex and thought she would be more attractive if she could lose some weight. During high school in Hawaii when Shaw was 16, she said she decided that she wanted to do something about her body that she hated so much. So she started running.

“I just thought if I could be a little more fit, I’d be happier,” Shaw said. She joined the track team, made up of many girls who worked to be thin because they were told that it would help them run faster if they were lighter.

A 2005 study with teenage girls who had eating disorders showed that the girls’ activity levels increased dramatically at least a year before their diagnoses. The authors suggested that enhanced physical activity may be an early warning sign of the beginning stages of an eating disorder in adolescent girls.

Shaw not only learned how to train to be a better athlete, but she also found out from her teammates that she could still eat whatever she wanted and also lose weight. All she had to do was keep up the exercise and throw up her food, or purge after meals.

Shaw began losing weight. “The more weight I lost, the more positive feedback I would get,” Shaw said. “So I just kept going.” She was getting attention from boys at her high school, her friends and her mother. Boys started noticing Shaw more and began asking her out on dates.

“When I felt the need to be desired, wanted or validated, I would set out to find a date,” Shaw said. “Most of the time, it was just to get asked out, I just wanted to get confirmation that way, I didn’t necessarily follow through with the dates.”

Although Shaw said she had never been very close with her mother, after Shaw started losing weight, her mother wanted to take her shopping and spend more time with her. “I felt like she started to really love me at that point,” Shaw said.

Shaw said the attention from her mother and friends helped to increase her self-esteem and decrease feelings of insecurity, but she said she still wasn’t happy. She forced herself to lose more weight. What began as exercising became exercising and purging. Eventually, losing weight became an obsession. Shaw restricted what she ate and would purge even if she hadn’t eaten.

“When it started, I didn’t [purge] every day, just once in a while,” Shaw said. “But it started to get more frequent and eventually became every day. I couldn’t stop.”

When Shaw left home in Hawaii to attend the University of Hawaii, she continued to restrict her diet and purge. Despite suffering from an eating disorder, she excelled academically, as she had in high school.

“Cindy was very focused in college,” Sarah Smith, not her real name, said. Shaw and Smith have been friends since their freshman year in college. They had many of the same classes throughout college and enjoyed spending time winding down when not in class. “She always tried to get A’s in all her classes and she was very concerned about keeping her GPA as high as she could,” Smith said.

Shaw said she always worked hard to be a perfect student, to please her parents.

“A lot of people with eating disorders tend to be overachievers, they strive for perfectionism,” said Kristen McAleavey, assistant professor of social work at Longwood College in Farmville, Va. “Also, they want approval from other people to boost their low self-esteem.”

Shaw said she felt that she did get approval from others in college. She made friends more easily than she had in high school, when she had weighed more.

“I made really good friends, which reinforced this idea that being thin is being liked,” Shaw said. “I was very much accepted and liked since I was thinner and showed more confidence overall.” Shaw hid her disordered eating habits from her friends at college while she reached toward her goal of weighing less than 100 pounds. Shaw also said she tried to hide behind an image of confidence so people wouldn’t realize how low her self-esteem was.

“Cindy is very driven...she’s also very intelligent and fun to be around,” Smith said. “Yet even with all these wonderful qualities about her, Cindy is insecure. At first glance you wouldn’t see any insecurities in Cindy. She hides it well.”

At the age of 20, almost four years after Shaw’s eating disorder began, she tired of hiding her disorder from her parents. She admitted to them that she had a problem. She said she had thought about telling her parents when she dropped to 90 pounds. When her weight shrunk to 85 pounds, she finally told her parents.

“At that point, I ate nothing, I drank water and threw that up to get rid of stomach acid each morning,” Shaw said. “I knew I had a problem and I was so sick of being obsessed with weight and accomplishing nothing in life.”

During the summer after her sophomore year at college, Shaw sought inpatient treatment at a hospital psychiatric ward in Hawaii. She remained in the hospital for a month and then had intensive outpatient treatment for four months. Shaw was able to stabilize her weight at 110 pounds and convince her family that she was better.

“I was just trying to please everybody,” Shaw said. “My heart wasn’t in the recovery.”

Shaw returned to college for her junior year but said it was a struggle. “I had a hard time accepting my bigger body. I thought everyone was talking about me.” A few months after being back at college, Shaw began restricting her diet again under the pretense that she wanted to eat a more healthful diet. She lost some weight but stayed above 100 pounds in order to avoid questions from her boyfriend and parents about whether she was eating.

“I basically had what I called a ‘controlled eating disorder,’” Shaw said. “I used my old habits to control my weight to feel more comfortable.” When she lost enough weight that her family or boyfriend started asking about it, Shaw said she would gain a couple of pounds to please them.

Though Shaw struggled with her eating disorder throughout college, she continued to do well in her studies and made good grades. Shaw decided to go to medical school after graduating from college with a zoology degree. She was accepted to several top schools on the mainland and moved away from her family in Hawaii to attend medical school in North Carolina.

“Everybody was so proud that I got into a good med school,” Shaw said. “I think I was genuinely happy. I thought, I’m going to make great things of myself and not care about how thin I am.”

Shaw had no disordered eating habits for the first eight months of medical school. She wasn’t weighing herself every day, was going out with friends and said she felt truly happy. But then school got hard and she was fighting with the boyfriend whom she had been with for five years.

In an online blog entry from that time, Shaw wrote, “I AM the biggest failure and disappointment in the world...Inside, I am dying. I hate my life, my face, my body...I am no longer in control of anything. My days are all a haze.”

Shaw went back to what she was comfortable with, and that was losing weight. “I wasn’t happy, and I definitely felt dumb,” Shaw said. “I thought, at least I can look pretty. And to me, pretty means thin.”

According to Ellen Morrison, a nutritionist with a practice in Raleigh who specializes in eating disorders, many people revert to an eating disorder because they feel that it’s their safety zone. “If their life feels chaotic, then controlling food makes them feel like they have control of something,” Morrison said.

A 2005 study in the International Journal of Eating Disorders showed that for females who have personality characteristics often seen in people with eating disorders, stress can trigger behaviors such as dieting and binging. The research suggested that stress may be a central factor in changing a vague insecurity about one’s body into a consuming desire to lose weight.

Toward the end of her first year in medical school, Shaw decided to lose a few pounds, just so she could buy some nice clothes. But after Shaw had a serious fight with her boyfriend, she reached her breaking point. “That’s when I thought, okay, I’m just not going to eat.”

Much of what Shaw bought was sugar free, fat free or had zero calories. Shaw made up what she called “the half rule,” take half of what you think you want to eat and then eat only half of what’s on your plate. She tried to eat fewer than 200 calories a day, which consisted mainly of Diet Coke, chicken broth, hot sauces, popsicles, Jell-O and gum. Shaw kept a log

of exactly how many calories she ate. She weighed herself five to ten times a day. She started running more.

Shaw's roommate, Jessica Roberts, noticed a change. Roberts, not her real name, said she and Shaw had initially been close and worked through the medical school curriculum together. "Gradually, she started canceling on outings more and more," Roberts said. "I was frustrated and hurt... until I realized she was getting thinner and thinner."

Within a year, Shaw had lost more than 30 pounds. She was down to her lowest weight ever, only 78 pounds. About 115 pounds is the minimum healthy weight for her 5-foot 3-inch frame. Some days, she was so weak she couldn't even make it out of bed.

Finally, Roberts confronted her. Roberts said Shaw started eating in her room, avoided her and other friends as much as possible and ordered large exercise equipment that she hid in her room.

"I confronted her because I was afraid that she wouldn't make it much longer," Roberts said. "I knew something bad would happen, but I didn't know what, and I didn't know when. So I told her that she needed to talk to someone."

The dean of the Shaw's medical school also confronted her and told her that she should take some time off. Shaw realized she was sick, but she said she didn't want to go into inpatient therapy.

"The doctors said that my weight was too low, that I should really do inpatient therapy," Shaw said. "But I was really scared of losing control and just wanted to do intensive outpatient therapy."

Shaw started seeing a therapist, nutritionist and a doctor, all once a week. According to nutritionist Ketterly, the best treatment for an eating disorder is a multi-disciplinary approach

including a psychiatrist, physician, and nutritionist. Shaw said she promised to be honest with her group of providers and to work hard to get better so that she would not have to be hospitalized.

“I was very committed to recovery this time. I was very hopeful that I would get better,” she said. Shaw gained weight. Now, seven months after she began therapy, she tries to eat a well-balanced diet with three meals a day. Her caloric intake is about 2,000 calories, although she admits that she has bad days when she only eats about 1,000 calories.

She has just started walking to get moderate exercise, but she found that she had lost so much weight that it was hard to start exercising again. She initially had a hard time eating solid foods. “After eating something solid and heavy, it’s slow to digest, and I think I’m getting fatter by the hour,” Shaw said. “Then I would panic and think of stupid things to do.”

Although Shaw said it will take time for her to change the way that she views food, she eats a wider variety of food than in the past. She still doesn’t eat rice or potatoes, but she can snack on a small bag of Doritos, which she knows is 140 calories, and she can eat the entire bag. That’s a huge change.

Roberts describes Shaw’s recovery as a slow process. “She started cooking more,” Roberts said. “She was very health conscious and still counted every calorie that went in...but at the very least, she was eating.”

Shaw has also started to change her self-image. “I am finally letting go of the idea that it’s important how others see me,” Shaw said. “I was always the thin girl, it was my identity. It was very hard to let go of that identity because that’s who I was and without it, I didn’t know who I was. I’m ready to let that go.”

She said although she's ready to let go of the thin girl image, she is still struggling with her self-image. "The way I see myself in the mirror is very different from what I probably should see," she said. "It's totally distorted. I'm working on that too."

Emily Anderson, a friend from Shaw's recovery group, said Shaw is struggling with the idea of weight gain and self-acceptance. "I think she's getting to a place where she will start to like herself again," Anderson, not her real name, said. "I don't think she is there yet. But Cindy has changed, she was extremely numb and quiet when I first met her. I've seen her transform into a beautiful and happier adult." Anderson met Shaw about five months after Shaw began treatment while in medical school.

Shaw is taking an extended break from medical school. She is staying in Hawaii with her family until she begins her third year of school in the spring.

While on vacation, Shaw continues her online blog that she has kept for more than a year. It chronicles her struggle with her eating disorder and her path to recovery. A recent entry reads, "On a congratulatory side of things...I have not weighed myself for close to two weeks. Part of me is dying to know, but the better side of me knows that this is the right direction... damn, damn, damn."

## CHAPTER V: INHERITING MORE THAN BLUE EYES, BROWN HAIR

Michele Crisafulli, 20, takes care of her body by eating healthful foods and exercising moderately. But Crisafulli didn't always care for her body in a healthful way. She said she has come to realize that she must treat her body with respect, a lesson that has taken her years to learn.

Crisafulli, who was referred to this reporter by a local therapist, spent the first 18 years of her life in a small suburb of Washington in a house in which her mother and father still live. She describes her family as being very "body conscious" in the past, with both her parents paying attention to what they ate and how they looked. She said both her mother and father were very conscious of their weights and that her father encouraged her mother to stay slim.

For Crisafulli, the drive to be thin started early and slowly when she was 12. She decided to exercise more, to eat more healthful foods. Crisafulli would ask her mother to buy salad ingredients on her way home from work. Granola bars replaced cookies as an afternoon snack. "Little by little, more and more foods got cut out of what I allowed myself to eat," Crisafulli said. "[The food restriction] became increasingly obsessive and somewhat addictive."

Crisafulli said her parents noticed the change in her eating habits a couple of months after she began restricting her diet. But she said they tried to pretend she didn't have a problem because the dieting and weight loss didn't seem severe at first.

"She began by wanting to eat healthy, and what parent wouldn't want their child to eat lots of salad and cut out junk food?" Crisafulli's mother, Nancy, said.

Her parents didn't realize that an eating disorder could begin at such a young age, Crisafulli said. "They just didn't expect it at that age," she said.

But after about four months of Crisafulli restricting her diet, she said her parents became concerned and encouraged her to eat more. One night before a school dance, Crisafulli's parents told her that she couldn't go to the dance until she had something to eat.

"She wouldn't even eat salad and began to cry when I tried to force her," Nancy said. "I made her get on the scale and was truly shocked when I realized how much weight she'd lost."

A year after Crisafulli began restricting her diet, at the age of 13, she was eating only a small piece of fruit for breakfast and lunch, and a small salad for dinner. She would step on the scale in her bathroom several times a day. Although she was too weak to exercise more than 15 minutes at a time, she exercised compulsively, doing as many sit-ups as she could as soon as she woke up in the morning.

"In the evenings, I would ride a stationary bike in my basement for 10 minutes or so," Crisafulli said. "Then my heart would be beating so ridiculously that I'd have to stop." She said that she felt inadequate if she didn't exercise every day.

Crisafulli became visibly emaciated and kept losing weight from her 5-foot frame until she weighed only 68 pounds. After her fingernails began to turn blue because of poor circulation, Crisafulli's mother took her to see a doctor who diagnosed Crisafulli with anorexia. She was 13 years old. She spent five days in the hospital, followed by six weeks of intensive outpatient therapy and then weekly therapy sessions.

By the time she turned 14, Crisafulli had gained enough weight to return to 85 pounds, the amount she weighed before she began to restrict her diet. But Crisafulli was a growing

adolescent and as she grew taller, she also became thinner. She said she refused to put on more weight.

“I was still being really restrictive in my eating, both in terms of what I ate and how much.” Crisafulli said. “There were so many foods that were totally out of the question, just about everything with fat in it.”

Crisafulli would make huge plates of vegetables for lunch and dinner, but wouldn’t eat anything with fat or carbohydrates. “She would stand in the grocery aisles for 20 minutes just looking at the labels on foods to try and decide if they were something she could eat,” Nancy said. “I would spend hours with her at the grocery store if I thought it would result in her buying just one thing to add to her repertoire of acceptable foods.”

Crisafulli said her mother shared her fear of gaining weight. Her mother had restricted her diet too, for as long as Crisafulli could remember. Crisafulli said although her mother was never formally diagnosed, she would have fit the weight criteria for an eating disorder.

Every morning, afternoon and evening, her mother would weigh herself and keep a log of her weight, Crisafulli said.

“I had some pretty disordered eating patterns,” Nancy said. “Even though I was relatively thin, I was never satisfied with my body. What I ate was almost always on my mind.” Nancy said one of the most difficult things for her to deal with was that Crisafulli was using Weight Watchers materials to track her calories and fat intake, materials that Nancy had brought home.

When Crisafulli was 15, she discovered that her half sister, who is 9 years older and who did not grow up with Crisafulli, had struggled with disordered eating when she was a teenager. Like Crisafulli, her sister began restricting her diet when she was 16. After she had

been restricting her diet for several months, there were only a few foods, such as yogurt, that she would allow herself to eat. Crisafulli's sister lost enough weight in a few months that people began commenting on how disgustingly skinny she looked. Crisafulli said those negative remarks made her sister realize that she wasn't being healthy anymore and needed to change her eating habits.

Research shows that girls like Crisafulli may have genetic predispositions for developing an eating disorder. Dr. Cynthia Bulik, a psychiatrist at the University of North Carolina at Chapel Hill and director of the university's eating disorders program, said she often sees families in which several members have an eating disorder or at least traits of a disorder, such as binge eating or excessive exercising.

According to a 2003 article in the European Journal of Pharmacology that looked at several genetic studies, the heritability of anorexia, or the chances of developing this eating disorder from one generation to the next is about 70 percent. Other studies show that the heritability of bulimia is between 50 percent and 80 percent. Several studies with twins have indicated that eating disorders have a strong genetic component.

Bulik has been working to identify genes that may make a person more vulnerable to an eating disorder. "There will never be one gene for anorexia and one gene for bulimia," she explained. Yet, there may be several genes that influence behavior, increasing a person's chances of being perfectionistic, obsessive, anxious or other personality traits associated with people with eating disorders.

Since there is no single gene that can be linked to eating disorders, Bulik's recent genetic studies have focused on the heritability of the traits that are often seen in people with eating disorders. Bulik, along with other researchers, has identified regions of the genome, on

chromosome numbers one and 10, which may account for the traits observed in individuals who have anorexia and bulimia.

She said she hopes her work will help the public understand that these disorders are not by choice, but are biologically determined in some people. Pinpointing specific genes may ultimately serve a role in prevention based on a person's family history and genetic makeup.

Crisafulli said she recognizes in herself, her mother and her sister some of the traits associated with people who have anorexia and bulimia. She said all three are perfectionists, driven and prone to anxiety.

After six weeks of intensive outpatient therapy when Crisafulli was 13, she went back to school to finish the eighth grade. Crisafulli continued to see a therapist at least once a week. She maintained a weight of 85 pounds, which is what she weighed before she had become anorexic, but she refused to gain any more weight even though she was growing taller. During her freshman year in high school when she was 14, Crisafulli turned to binge eating, consuming large quantities of food at a time.

"At first I would allow myself to eat a food I hadn't allowed myself in a long time, like chocolate," she said. "Then I felt so guilty about it... I would feel like I could only eat those foods while I was bingeing because it wasn't in my control."

During the latter half of her freshman year and the following summer, Crisafulli gained about 30 pounds, which she said brought her up to the proper weight for her height. But Crisafulli said she was still unhappy with her body and herself.

"I was continuing to binge out of habit and depression," Crisafulli said. She continued to binge on and off for more than a year. Crisafulli said that at age 16, she knew she needed to make a change.

“I was at the end of my rope, almost suicidal,” Crisafulli said. “I was desperate to stop binging.” So she made an appointment with a nutritionist.

“She recognized that I was not the average person who had started binging, but rather a former anorexic who still maintained many anorexic viewpoints,” Crisafulli said. “She helped me work through my attitudes toward food in general. The goal was not to just stop binging, but to be normal around food.”

During the following six months, Crisafulli gradually stabilized her weight and learned how to trust herself and her hunger, she said. By the time she was 17, Crisafulli was no longer binging. She overcame the genetic and environmental pressures that may have contributed to the development of her eating disorder. Crisafulli is now 20, a junior in college, and considers herself fully recovered.

“I think my relationship with my body is more positive and healthier than a lot of people, especially women my age just because I’ve had to work at it so much,” Crisafulli said. Crisafulli now eats healthful foods, like salads and fruits, but she doesn’t restrict herself from treats like cookies and ice cream.

“I’ve come to such an appreciation of myself and my body and what I put my body through and it recovered from...that I feel like eating healthy is a way of honoring it,” Crisafulli said. She tries to exercise four or five times a week, and it has become a positive part of Crisafulli’s life.

“I’ll go out for a run just because I need to get away from stress or whatever,” she said. “It allows me to do that and it has absolutely nothing to do with how many calories I am or am not burning. It just makes me feel strong, and it makes me feel centered.”

Crisafulli's parents have also changed their views about their own bodies. Crisafulli said her parents felt guilty that she developed an eating disorder and, in response, have changed their habits. She said her mother no longer restricts her own food, and that her mother's physical self-image has improved.

"I'm not as obsessive about my weight as I've been in the past," Nancy said. "I still like to be able to fit into my clothes, but now I won't diet to get there." Crisafulli's father doesn't pressure his wife to be slim anymore. "His attitudes have changed tremendously," Crisafulli said.

Crisafulli also tries to encourage other girls to eat healthful foods and accept their bodies. She started a group promoting eating disorders awareness in her high school. At the University of North Carolina at Chapel Hill, Crisafulli created with another student Students Helping to Achieve Positive Esteem, a student organization with the mission "... of promoting positive body image and eating disorders awareness."

"That's been really beneficial to my recovery," she said. "When you're putting yourself out there, telling people how important it is to love themselves and accept themselves...you start believing what you're saying. You realize it actually applies to you too." Crisafulli said she hopes to continue helping others after she finishes college with a double major in Spanish and psychology. She plans to become a psychologist.

## CHAPTER VI: THE POWER OF MEDIA

The images are everywhere, on billboards, on posters, in magazines, and on television commercials and programs. Generally, the images are similar. They are of the “ideal” American woman, who is thin, beautiful and has flawless skin.

### **Media’s Ideal Female Figure**

Research has shown that during the past 30 years, models in advertisements and other media have been getting slimmer.

“They can’t get much skinnier,” said Kristen Harrison, assistant professor of speech communication at the University of Illinois. “If you look at images of the ’80s, they’re full bodied and so much bigger than they are now, they’re normal. Now, it’s an emaciated look and it’s been that way since the late ’90s.”

The Body Mass Index (BMI) is a measure that compares height and weight. According to the Centers for Disease Control and Prevention (CDC), a “normal” weight status is a BMI between 18.5 and 24.9. A BMI lower than 18.5 is considered “underweight.” Data from the CDC show that the average American woman has a BMI of 26. In a 2003 study in *Topics in Clinical Nutrition*, researchers determined the BMI of models from the 1920s to the 1990s. On average, models in the 1920s had a BMI of 19.0, while in the 1990s they had an average BMI of 17.8.

Jess Haines, a community health specialist at the University of Minnesota, maintains that the media set the goal for an ideal female figure at a level unachievable for most women. According to Sarah Stinson, eating disorders program coordinator at Fairview Red Wing

Health Services in Minneapolis, Minn., the media are promoting a thin and straight body, a figure that differs from the curvy female body. “We’re not emphasizing the feminine body, it’s more of a pre-pubescent body type,” Stintson said. “This emphasis is especially damaging for pre-pubescent girls who should be putting on fat during adolescence because they don’t see that at all in the media. And in order to achieve what they see, which they feel is the right image, media creates that idea that they just have to have a lot of self control and they’ll be able to have the thin body.”

### **Pressure to be Thin**

Experts generally agree that adolescent girls are particularly prone to media influences. In a study in the journal *Pediatrics* of more than 500 fifth through 12<sup>th</sup> grade girls, researchers found that 69 percent of the girls indicated that magazine pictures influence their ideas of the perfect body shape. More than 45 percent said they wanted to lose weight because of magazine pictures.

Cindy Shaw, not her real name, who is now 25, has struggled with eating disorders since she was 16. She said when she was in the midst of anorexia and bulimia, she used to pay close attention to models and celebrities in magazines. “During my disorder days, I looked at each and every one of those women’s and celebrity magazines in the grocery store,” Shaw said. “I would look at those women and say, ‘I can be smaller than that.’ It used to be my goal, to look up their stats and beat their BMI.” Among the women’s statistics that she looked up were Kate Moss, Mary Kate Olsen and Calista Flockhart.

Research findings cited in the “Handbook of Eating Disorders and Obesity” show that adolescent girls consistently list mass media as a significant factor in promoting cultural ideals of beauty and the desire to be thin.

“If you’re bombarding people with only one image, it becomes easy to believe that’s the only healthy and right image that will achieve acceptance,” Stinson said. “When media show the extremely thin figure as the ideal, it doesn’t allow anyone to expand the idea of what health or beauty really is. Youth are not exposed to normal, healthy images.”

### **From Media’s Ideal to a Personal Ideal**

Researchers have examined the way that mass media can lead adolescent girls to internalize, or incorporate into their own beliefs and values, the thin female figure as the ideal. In a recent study, Harrison showed pictures of pre-adolescent girls of various sizes to second- to fourth-grade girls and asked them which body that they would like to have. Overall, the girls chose an average-sized, healthy body. Harrison then showed them pictures of adult women of various sizes, and they were asked what body they would like when they grew up. Most of the girls chose an extremely thin adult body instead of the average or larger-sized women’s bodies.

“What might be happening is that pre-pubescent girls store away a view of a woman’s body that they want so that when they hit puberty, they strive for this thin body,” Harrison said. “This shows that media is likely linked to the internalization of the thin female figure as the ideal.”

Girls may be comparing themselves to media depictions of female bodies and then striving to achieve the same look. Research shows that girls also compare themselves to their peers who have internalized the “ideal” thin female figure. According to the “Handbook of Eating Disorders and Obesity,” this tendency to make comparisons to models and peers concerning height and weight is linked to body dissatisfaction in adolescent girls.

“At Carolina, you see these girls who are thin, blonde, have big boobs and you think, wow, I want to be like that.” said Kelsey Taylor, not her real name, a sophomore at the University of North Carolina at Chapel Hill. Taylor is 18 and has struggled with bulimia and anorexia since she was 15. She said she thinks young women always compare themselves to one another and feel pressure to be the thinnest, the most beautiful.

Michele Crisafulli, now a junior at the university, struggled with anorexia and binge eating throughout most of high school. She said she agrees that seeing media depictions of thin models may lead to comparing oneself with models and with peers.

“There’s no escaping the images,” Crisafulli said. “Media images impacted me not only directly because I would sit and look at them and say, ‘Maybe I want to look like that.’ But also, everybody around you is striving for the same ideal so that even if you’re not competing with the ideal itself, you’re competing with other people who are competing with the ideal.”

Crisafulli also said that media images may have reinforced her eating disorder. “I always had this sense that, I already have what everybody else wants. I’m really skinny. Why should I give that up?” she said.

### **Media and Eating Disorders**

According to the National Institute of Mental Health, someone with bulimia nervosa binge eats, or eats large quantities, regularly and then purges her body using laxatives, self-induced vomiting or excessive exercise. Anorexia is described as a refusal to maintain a healthy weight, an intense fear of gaining weight and a distortion of body image. Although estimates vary widely on the number of people who suffer from these disorders, according to the U.S. Department of Health and Human Services, at least five million American women suffer

from an eating disorder, and anorexia is the third most common chronic illness among female adolescents in the United States.

Although there is an association between exposure to media portrayals of a thin “ideal” body and eating disorders, there is no direct causal link. However, a study in *Mass Media and Eating Disorders* found that exposure to television programs and magazines showing primarily thin characters and models predicted eating disorder symptoms, such as body dissatisfaction and a drive for thinness in college women.

“These [media] images certainly contribute to the body hatred so many young women feel and to some of the resulting eating problems, ranging from bulimia to compulsive overeating to simply being obsessed with controlling one’s appetite,” states Jean Kilbourne, who lectures and writes about addictions and gender issues related to media, in her book “*Deadly Persuasion*.”

A large body of research shows that depictions of excessively thin women in the media decrease self-esteem in women and girls, particularly those who are prone to have low self-esteem anyway. One study of college-age women in *Journalism and Mass Communication Quarterly* found that reading beauty and fashion magazines, such as “*Cosmopolitan*,” was linked to body shape concerns and an increase in the perceived pressure from society to be thin. In another study in 2003, researchers found that girls felt dissatisfied with their bodies after watching television commercials that showed thin women.

“There’s a very strong message that anyone can be thin or beautiful and you just need to find the right way to do it, you need to try hard,” said Michael Levine, professor of psychology at Kenyon College. “There’s also the message that at all costs, you want to avoid

being fat, taking up too much space...and the implication is that if it's not going well, it's because you're not trying hard enough."

Thus, for some women, media reinforce body dissatisfaction, a drive for thinness and low self-esteem, traits often found in people with eating disorders. These traits can then lead to depression and anxiety. Women who tend to be perfectionists may also be prone to strive for the "perfect," thin body shown in television, magazines and other media.

### **Recognizing the Issue**

In 2004, Dove®, a Unilever® beauty brand, gathered literature and conducted surveys of women across ten countries. The "Real Truth About Beauty" study was carried out because of a "growing concern that portrayals of female beauty in popular culture were helping to perpetuate an idea of beauty that was neither authentic nor attainable," the report read. The report stated "the company was also aware that – in a world where female beauty is highly valued – this situation could also impact women's well-being, happiness and self-esteem."

The study of 3,200 women aged 18 to 64 looked at issues such as women's level of satisfaction with their own beauty and how this level affects their well-being. The study found that only 2 percent of women around the world describe themselves as beautiful. Overall, almost half of the women said their weight was too high. Sixty percent of the American respondents said their weight was too high. Almost half of all women said they strongly agreed with the statement: "When I feel less beautiful, I feel worse about myself in general." Only 12 percent and 13 percent said they were very satisfied with their beauty and physical attractiveness, respectively.

In response to these findings, Dove announced on June 23, 2005, that it was launching the advertising campaign called the "Campaign for Real Beauty" starring "real women with real

bodies and real curves.” Dove said the campaign’s focus was to celebrate the diversity of real women by challenging today’s stereotypical view of beauty. A press release announcing the campaign states that, “Dove hopes to change the way women perceive their bodies and their beauty, by widening the definition of what it means to be beautiful.”

### **A New Approach**

Six women – two students, a kindergarten teacher, a manicurist, an administrative assistant, and a café barista – star in Dove’s new television and magazine advertisements. Dove states in a June 23, 2005 press release that the images were not altered or retouched in any way and showed these six women as they are, without makeup and dressed only in white underwear.

Julie Arko, a kindergarten teacher who lives in Charlotte, N.C., said she thinks the campaign is really bold and is proud to be a part of it. “The ads encourage women to stand firm and celebrate their curves,” Arko said. “No one else has really said that, and it’s such a positive message.”

Shanel Lu, a manicurist from Landover, Md., was also pictured in the advertisements. “I love how the ads turned out,” Lu said. “There’s no other ad out there that’s saying be yourself, love yourself for who you are, love your curves, embrace your beauty.”

According to Philippe Harousseau, marketing director for Dove, the response to the campaign has been overwhelmingly positive. “Many women and men are appreciative of the ads and find it refreshing to see normal-sized women in the media.”

During Super Bowl XL on Sunday, Feb. 5, Dove launched a new phase of their campaign with the Dove self-esteem advertisement. The commercial showed images of girls of varying ethnicities, ages and sizes. As each girl was pictured, a statement such as the following

appeared on the screen: “thinks she’s ugly, hates her freckles, afraid she’s fat.” The commercial did not show any products, but talked about how Dove has created the Self-esteem Fund, “because every girl deserves to feel good about herself and see how beautiful she really is.” The Self-esteem Fund supports self-esteem related programs in the country and around the world.

“The ‘Campaign for Real Beauty’ will continue to grow and inspire positive change in the way the world defines attainable beauty,” Harousseau said in an e-mail. “Dove has made a long-term commitment to widening the definition of beauty and we hope to see other brands use this type of advertising, not only because it’s up and coming, but also to show their complete commitment to embracing real beauty.”

Some teen magazines are also taking steps toward using “real” girls in their magazines. “Teen Vogue” constantly scouts for girls to put in the magazine, girls who have a unique style and personality, according to Jane Keltner, the magazine’s fashion news editor.

“We try to feature girls of different shapes, sizes and ethnicities,” said Keltner. “It’s definitely very important to us.”

### **A Step in the Right Direction**

Dove said it has received positive feedback from consumers, who can submit their thoughts on the campaign’s web site. That is a step in the right direction, but not perfect, said Communication Professor Kristen Harrison.

“On the one hand, it’s great that they’re showing normal women,” Harrison said. “If they were advertising just a skin moisturizer alone, I’d say more power to you.” Harrison is referring to Dove’s recent commercials in which the “real women” advertise a firming lotion

to decrease cellulite. Harrison did say, however, that when you expose women to photos of larger or normal-bodied women, they tend to go away feeling better about themselves.

Jess Haines said these types of commercials are a step in the right direction. She said she welcomes seeing images of women of normal weight who are talking about loving their bodies and celebrating women of average size. “At least now women get to see some average size people in the media.” Haines said.

Sarah Stinson said although teen magazines may have articles showing more average-size girls, they still include advertisements, such as those by Calvin Klein, that depict very thin women and often have sexual undertones. “I am seeing a few more healthy ads and pictures in magazines than 15 years ago,” Stinson said. “But we still have a long way to go.”

But some women who have suffered from eating disorders personally have a different take.

“I love them, I think the Dove commercials are a really positive step in the right direction,” said Crisafulli, who has battled anorexia during most of her adolescent life. “The women all have very pretty faces so to a certain extent, there’s still an idea of beauty being put out there, but at least it’s expanding.”

Amanda Jones, not her real name, is a 25-year-old who was first diagnosed with anorexia at age 18. “I really like [the Dove ads] a lot,” Jones said. “I’m really glad that there are women who want to do these ads and to put out there a contrary image to the mainstream and let women see that all shapes are beautiful. I think it’s really important for girls and women to see the average woman portrayed.”

The women in the Dove commercials have also received positive responses from women who have dealt with an eating disorder. Julie Arko, who is pictured in the Dove

advertisements, was approached by a woman who had an eating disorder. The woman had recently been hospitalized for the disorder and as part of her therapy, she had created a self-esteem collage. She showed Arko the collage in which a “Real Beauty” advertisement with Arko and the other five women was placed in the center. Arko said the woman told her that when she saw the advertisement, it helped her realize that it was okay to be herself, that she was finally understanding that she didn’t have to be a size two. “It’s been amazing,” Arko said. “I never really thought how many people it would touch.”

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