Eating Disorders

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References


consumed. No serious side effects were reported. Both operations, however, are considered major surgery and are used only in a few selected cases where the patient is dangerously obese, yet is able to handle the psychological effects of surgery.

A surgical method used by plastic surgeons in France has been reported as highly successful. This method, which involves sucking fat from the fat tissues, has not been approved for use in the United States.

Still another method used to surgically control obesity is wiring the jaws shut. This forces the patient to eat only liquids. Although weight is lost, the patient may suffer serious side effects. There is also the danger of gaining back the unwanted weight as soon as normal eating patterns begin again.

Starvation diets and drugs have been used by physicians to treat obesity. Studies reveal serious side effects from most drugs, as well as from starvation diets. They also reveal that no one drug has been effective on all patients.

All of the methods discussed here have occurred under direct medical supervision. Additional research is needed to determine the safety of each.

Treatment and control of obesity is not limited to physicians and psychologists. Behavioral psychologists have used methods which any person may safely use in controlling obesity. This puts control of some of the behavioral aspects of obesity directly into the hands of the obese person.

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**Eating Disorders**

Obesity, anorexia nervosa, and bulimia are clinical names for three eating disorders suffered by many Americans. Just exactly how many is not known.

Obesity (overfat) seems to be the most prevalent eating disorder. An estimated 14 percent of all men and 24 percent of all women in the United States are afflicted. Approximately 7 million Americans are severely obese. Anorexia nervosa (self starvation) usually, but not always, occurs in women—particularly adolescent women. Bulimia (binge and purge) is a newly discovered eating disorder and appears most often in college-educated women, but some men and a few children have also been treated.

What causes some people to become obese while others appear to have no trouble staying at or near their ideal weight? What causes some people to starve themselves and some to go on an eating binge and then purge themselves? How are these people different from the average?

At the present time, there are several theories being researched. One is that physiological disturbances cause eating disorders; others, that environmental or psychological factors cause them. Some researchers are trying to find if it may be an interaction or interrelationship of all three.

**Obesity**

A certain amount of fat is needed to protect the bones and internal organs as well as to maintain body heat necessary for vital functioning of the physiological systems. And women have a somewhat greater percentage of fat than men because of their childbearing abilities.

Obesity, though usually described as an overweight condition, is actually an overfat condition. No one knows exactly what causes obesity nor if the cause is the same in different people. Research seems to indicate that no two people convert fuel (kilocalories) from food into energy for action and energy for storage in exactly the same way. In other words, it appears that some people use up energy more readily while others tend to store it.
The following review of studies conducted to discover a cause for obesity is divided into two groups: physiological factors and environmental and psychological factors.

**Physiological Factors.**

1. **Heredity**—traits inherited from parents, grandparents, and family—is being studied for possible genetic factors in obesity. Early studies indicated that obese parents were more likely to have obese children while thin parents were more likely to have thin children. Other studies suggested this might be due to eating patterns rather than an inherited factor from the parents. But more recent studies of identical twins raised in different homes showed them with similar weight, possibly indicating a genetic factor.

2. Another genetic factor under consideration is body type. True *ectomorphs*, people with long fingers, arms, and legs, appear to stay thin throughout life. True *endomorphs*, people who have rounder figures and larger abdomens than chests, have a greater tendency to develop obesity. Many people, however, are a mixture of endomorphic and ectomorphic characteristics rather than all one or the other.

3. A disturbance of the endocrine system has been considered a factor in obesity. In the past, treatment of the thyroid gland was quite popular. Later research shows that it is quite possible that obesity causes the disturbance rather than the disturbance causing obesity.

4. Another area of research is in metabolic disturbances and the relationship or availability of metabolic fuels. One study has shown ATPase, an enzyme estimated to be responsible for 20- to 50-percent of heat production in the body, is lower in obese people. This could account for the fact that less energy is expended in some metabolic functions by an obese person. However, no specific research has successfully shown that ATPase production is related to obesity in humans.

5. Research has been conducted in the areas of hunger and appetite. According to an early theory, hunger and satiety (a feeling of fullness) were controlled and monitored by the hypothalamus section of the brain. Some current studies have discounted this theory and at present scientists feel signals for hunger and satiety may be associated with energy production from fatty acids, glucose, and amino acids.

The bulimic will stuff an unbelievable amount of food down at one sitting. Studies cite cases in which 40,000 to 50,000 kilocalories—an equivalent of about 16 pounds of food—have been eaten at one sitting. After the binge, the bulimic purges herself by vomiting or taking a laxative. According to some studies, the cause is stress or depression. Others also mention frustration, a feeling of emptiness, and boredom accompanied by a feeling that she will not be able to stop eating. The bulimic has an exaggerated fear of becoming fat.

According to medical studies, bulimia may occur in 15- to 30-percent of all college-educated women, although exact figures are not known. They also point out severe health implications: obesity from binging; dehydration, electrolyte imbalances, and malnutrition from purging. Extensive vomiting can lead to serious dental problems, and the binge-purge habit can result in endocrine and metabolic changes affecting the menstrual cycle. Bulimia has been recognized as an eating disorder only since 1980 so there is not a great deal of research available at this time.

**Controlling Eating Disorders**

Treatment of anorexia nervosa and bulimia have been primarily in the hands of psychologists and physicians. They use therapeutic methods, such as individual and group therapy. In some cases, particularly with bulimia, an antidepressant drug has been used successfully.

Treatment and control of obesity has a much longer history than that for anorexia nervosa and bulimia. In some extreme cases with a dangerously obese individual, surgery has been used. Intestinal bypass surgery is a very drastic method of curing obesity. Some successful cases have reported weight loss during the following two years, but there were some serious side effects noted. Also, this type of major surgery has a 3- to 6-percent mortality rate.

Another type of surgery, called stomach wrapping, has been used successfully on some patients. The stomach is wrapped in such a way that no more than 3 ounces of food per meal can be
patterns which would distinguish the obese from those of normal weight.

5. A few studies also link fast eating to obesity. Number of bites, amount of food consumed, length of time between bites, and time spent in eating have all been subjects of study. All of these studies appear to demonstrate that eating speed affects how much is eaten with faster eaters consuming more than slower ones. Conclusions drawn from these and other studies seem to indicate, however, that more research is necessary.

6. One current study holding out hope for the obese is one involving both smoking cessation and weight loss maintained over a period of years. In studying several different groups of people with differing socio-economic, educational, and work backgrounds, it was found that weight loss did occur and was successfully maintained for a number of years. The implication of the study was that habits can be broken successfully by those dedicated to breaking them. In fact, it has been found that about 95 percent of all obese people can control their eating behavior if they have a strong enough motivation.

Summary. Current reviews of research related to obesity take the position that, in all probability, obesity is the result of a combination of physiological, environmental, and psychological factors affecting different people in different ways. In spite of this, there are some methods that can and do work in helping get rid of excess fat. Methods used experimentally have worked for some people and can be adapted for use with others.

One important aspect of all the research shows there is no one method that works on all people, but there are many different methods to try. Most importantly, many of these methods can be tried and controlled by the obese people themselves.

Anorexia Nervosa and Bulimia

Anorexia nervosa and bulimia appear most frequently in middle and higher income teenage and adult women. Both anorexia nervosa and bulimia are in extreme contrast to obesity. The bulimic usually appears to be of normal weight while the anorexic is characterized by a "skin-and-bones" appearance.

The typical anorexic starves herself on 50 to 100 kilocalories per day. Usually a teenaged perfectionist with an obsession for becoming thin, the anorexic believes she can gain control over hunger and satiety. The more physically active you are, the less hungry. The less physically active you are, the hungrier you become.

Current theories on hunger and satiety include the possibility that the liver may control hunger and satiety signals rather than the brain. Research with animals has shown a direct effect on food intake when nutrients were infused directly into the main vein going into the liver (hepatic portal vein). Researchers point out that there is a loss of appetite associated with liver disease, and this may be caused by a hunger and satiety mechanism within the liver.

6. The production or lack of production of brown fat is another possible hereditary factor. Brown fat is small masses of dark tissue located primarily around the neck and chest. Research has concentrated on animals so far and appears to indicate that brown fat is important in heat production and cold adaptation. Its importance to human beings is, at present, speculative but poses the possibility that obese people may have less brown fat than those of normal weight. Another possibility is that the brown fat of obese people produces less heat. This means the obese person may use less energy than people of normal weight, which leaves more fat for storage.

7. The set point theory states there is a set point for the amount of fat needed by each individual. It is possible to go below the set point through exercise, but the body automatically adjusts the fat back to the set point or above it. This theory is used to explain the so-called yo-yo effect some people experience as they diet and lose great amounts of weight and then gain it back again, sometimes adding more than they lost.

8. The adipose cell theory was developed in the late 1960s and 1970s. This theory hypothesized that both the number and the size of fat cells may increase. At first, research was related only to infants and juveniles, but currently it is considering the possibility that adults may develop extra fat cells, too. Theoretically, at least in the case of juvenile onset obesity, it is possible to reduce the size of the fat cells but not the number.

9. Recently, research with infants has centered around bottle feeding and early introduction of solid foods as a possible risk factor in juvenile onset obesity. Researchers found there was no difference in the risk of obesity for infants who were
breast fed or bottle fed and introduced to solids at an early age. Other aspects of juvenile onset obesity research are considered environmental since they involve parental attitude toward food, overfeeding, and psychological relationships between the mother and child and the family and child.

**Summary.** Research into the physiological causes of obesity may appear to be discouraging at times. Yet continuing research holds the promise of finding a cause or causes and ultimately a cure. In addition, current research reflects a changing social attitude toward obesity. It has not been long since most people thought the cause of obesity was only a lack of will power.

**Environmental and Psychological Factors.**

Environmental factors related to obesity are social and economic attitudes. Psychological factors involve environmental cues and learning behaviors. It is usually easier to explain environmental factors influencing obesity because many of these factors can be seen easily. Eating habits and patterns can be observed, and many of the cues related to eating appear to be clearly visible to anyone who wishes to see. However, relationships between physiological, environmental, and psychological factors are not always clear-cut, and often result in conflicting theories with the question of "why?" remaining unsolved.

The culture we live in encourages obesity. Food is plentiful for most people in the United States, but few people actually grow the food they eat. In addition to buying food, Americans often drive or ride to the grocery store rather than walk. Many scientific and technological advances in the past century have made hard physical labor almost nonexistent and have provided more leisure time as well. So, in our culture, we have more to eat and less to do, physically, than did our ancestors.

Not only is it easier to get food necessary for survival, there is a constant temptation to eat. All we have to do to receive a food cue is to walk through a grocery store, read a newspaper or magazine, or watch television. We can see, hear, smell, taste, or touch food cues throughout our entire waking hours. Almost every social occasion, at home, at a friend's house, at church, and at sports events, provides an opportunity to eat or snack. At the office there are coffee breaks, business lunches, and office parties. At home there is the kitchen with readily available snacks and food.

1. Until recently, plumpness and even obesity were outward symbols of wealth. Recent studies reveal that this is no longer true. From later infancy up to the teenage years, rich children tend to be fatter. Middle-income men tend to be fatter than men in either lower or higher income levels. And, the poorest adult women tend to be obese while middle-income and high-income women tend to be lean. Studies caution, however, that not all low-income women are obese nor are all high-income women thin. These recent findings lead to more questions than answers. For instance, are social attitudes, as reflected in media and advertising, more influential than income level? How are dietary patterns changing? Have Americans become more health conscious?

2. Eating habits— including when one eats, how much, what, and under what circumstances—are learned behaviors. According to behavioral psychologists, we learn through stimulus-response events which are reinforced each time the event occurs. Eating habits are learned from birth. Early studies showed that babies who were overfed, fed when they were not hungry, and had overly protective mothers seemed to be at greater risk for juvenile onset obesity than babies whose mothers recognized hunger cries or underfed them. Recent research questions some of these conclusions, indicating the need for further study. There is, however, a great deal of evidence that fat babies have a greater tendency to develop into obese adults.

3. Eating habits and dietary patterns appear to change in relation to a number of environmental and psychological factors. Although as adults we eat when we feel hungry, some people also tend to substitute emotions for hunger and, in turn, feel better after eating just as others feel satisfied after eating because they were hungry. Consequently, boredom, anger, mental tension, frustration, and depression can act as triggers for some people to eat. Studies tend to show that obese people eat more under stressful conditions than those of normal weight.

4. Some researchers tried to find if overweight people ate basically because of external or environmental forces. Some studies seemed to indicate that the obese were more susceptible to external cues, such as time of day, ability to see food, and how the food tasted. Other studies showed that this was not true in all cases. When eating was observed under normal conditions, researchers found no consistent or distinctive eating