

OBESITY AND HEALTH

A document from the CQ Researcher archives:

Growing National Health Problem

Extent and Causes of Obesity in America

Imprisoned in every fat man, British author Cyril Connolly once wrote, “a thin one is wildly signalling to be let out.”

¹ In America, that “thin man” is having a hard time escaping. **Obesity**, long the subject of humor, has become a national **health** problem involving tens of millions of people and recently drawing congressional attention. During hearings this year by the Senate Select Committee on Nutrition and Human Needs, Chairman George McGovern (D S.D.) called **obesity** this country's No. 1 form of malnutrition. Not only that, he said, the obese are getting fatter and the number of obese Americans is increasing every year.²

The number of Americans who are overweight is largely a matter of conjecture. Some estimates by medical authorities run as high as 80 million. McGovern used the figure 30 million, of which, he said, 15 million “are obese to a degree that actually shortens their lives.” He defined **obesity** as being 20 per cent overweight based on height, sex and age. However, there are other definitions of **obesity** in use,³ and not everyone accepts the prevailing—sometimes diverse—standards of what constitutes “normal” weight. One set of standards that has gained wide acceptance for correlating weight with height and sex was devised by Metropolitan Life Insurance Co.

Regardless of the lack of consensus as to numbers and definitions, there is ample evidence that a sizable part of the U.S. adult population is overweight. The Department of **Health**, Education and Welfare last fall issued a four-year study it had conducted throughout the nation which found that the average height and weight, for men, was 5 feet 9 inches and 172 pounds and, for women, was 5 feet 3.6 inches and 143 pounds. By HEW's reckoning, the average male weight was 18 pounds heavier than it should have been, and the average female weight was 21 pounds heavier.⁴ According to other findings, a sizable number of schoolchildren and draft-age young men also have been overweight.

In large measure, millions of fat Americans are the victims of ease and affluence, for **obesity** is a natural consequence of plenty. One of the most obvious social patterns to appear in this century is the increased consumption of food in countries with advanced, highly productive agricultural systems. This is especially apparent in the United States. Scurvy, rickets, pellagra and similar diseases resulting from malnutrition have all but disappeared from American life. Yet other diet-related disorders, once of minimal concern to medical authorities, have taken their place.

Despite the suspected perils of being fat, millions apparently do not know how to control their weight. The comforts of a sedentary life combined with a diet rich in animal fats and processed food have created not only an overfed society but a contentedly unhealthy one. The recent outcry against the Food and Drug Administration's announced intention to ban commercial use of the chemical sweetener saccharin underscore the determination of a sizable part of the public to cling to their eating habits regardless of the risks involved. It also pointed to a vast amount of dieting by individuals to lose weight. Saccharin, in addition to being used by diabetics, is favored by millions who want to avoid the calories in refined sugar.

Losing weight has been a national obsession for years. According to one set of calculations,⁵ more than \$100-million is spent annually in the United States on exercise equipment, \$54-million on diet pills, and \$1-billion on diet food and literature. Cultural pressures—the quest for the slim figure—and **health** considerations underlie the dieting binge.

Suspected Health Perils of Affluent Eating

In much of the rest of the world, undernourishment contributes to more deaths than any factor except old age. But in the United States and some of the other industrialized nations, it is eating too much, if not too wisely, that seems to

be responsible for much premature mortality. Medical research has established a suspicious relationship between **obesity** and several diseases, including heart disease, the nation's leading cause of death. Certain forms of cancer, the nation's No. 2 killer disease, are also associated with "overnutrition" and the heavy consumption of processed food—food generously doused with chemical additives to enhance flavor and prevent spoiling. ⁶

"We are in a chronic state of caloric surfeit," Dr. Richard F. Spark of the Harvard Medical School has written, "and it is our own fault. We have demanded and constructed a society that has made it hard to stay th in. ... Our daily routine could not be more perfectly designed to promote **obesity**." ⁷ Most accounts of the dietary shortcomings in the United States reach the same conclusion: with the achievement of more efficient means of food production and distribution, the meals have become nutritionally worse. ⁸

Americans today eat record quantities of meat, and thus ingest far more animal fat than ever. Saturated animal and vegetable fats account for nearly half of the calories in the average American diet. Protein continues to be in good supply and so are essential vitamins, but foods served in this country often lack other ingredients necessary for good **health**, particularly whole grains and fibrous vegetables which are plentiful in diets common to many underdeveloped countries.

The Department of Agriculture reports that while meat eating in the United States last year averaged 155 pounds per person, a record amount, human consumption of grain ("flour and cereal products") fell to 142 pounds, less than half as much as in 1909 when the department started collecting statistics on U.S. eating habits. Moreover, much of the grain has been "refined," or stripped of its nutritious outer layer, an available source of roughage whose absence in the diet is suspected of causing a number of digestive diseases, including intestinal cancer.

The growing popularity of sugar-filled "convenience" foods has been cited as today's most harmful eating trend. The consumption of refined sugar averages 126 pounds a year for every American. For children the figure is even higher. Children's speciality foods, such as pre-sweetened cereals and snack cakes, are so full of sugar that some observers fear the nation is raising a generation of sugar addicts. Not only do high-calorie, sugar-laden food products contribute to **obesity** and its attendant ailments, sugar also acts to impair the body's ability to make use of protein.

A witness appearing before the Senate Select Committee on Nutrition and Human Needs in 1973 suggested that if the food industry were proposing refined sugar as a new food additive, what is known about its effects on metabolism would "undoubtedly lead to its being banned." ⁹ Sugar has little nutritional worth, and because it displaces other foods high in nutrients it may actually increase the body's needs for certain vitamins, such as thiamin, that are necessary to metabolize carbohydrates.

Influence of Overweight on Life Expectancy

Throughout recorded history, being fat has been variously regarded as a sign of wealth, lethargy or poor **health**. Many doctors since the time of Hippocrates have suspected a direct correlation between excess weight and longevity, but it is only in this century that statistical evidence has purported to prove that heavyweights die young.

In 1960, the Metropolitan Life Insurance Co. published findings that indicated men who are 10 per cent overweight run a 30 per cent higher risk of an early death from diabetes, heart attack or stroke than do men of normal weight. Men who are 20 per cent overweight, the findings further indicated, are nearly twice as likely to die prematurely. Overweight women have a higher mortality rate than women of average weight, according to insurance statistics, but withstand the effects of overweight better than men do. ¹⁰ Actuarial tables suggest that for both sexes life expectancy goes up with the loss of excess poundage. The Public **Health** Service reported that in 1975, the latest year for which figures were available, 1,109 persons among every 100,000 in the U.S. population died prematurely because of **obesity**. This figure was slightly better than in the immediately preceding years but the change was not considered statistically significant.

Government surveys and independent studies by doctors have tended to confirm the insurance industry's mortality charts that link overweight to a shortened life span; nevertheless, critics of such figures point out that the information is drawn from "highly selected and atypical populations." ¹¹ In addition, insurance statistics are based on information gathered from death certificates, which may not reflect underlying causes, or in some cases may be inaccurate.

Despite the lack of an agreed-upon standard for measuring the effects of overweight on early mortality, few physicians question the likelihood that **obesity** contributes to a number of fatal diseases. Frequently cited as evidence is the "Framingham study," formally the National Heart Institute's Heart Disease Epidemiology Study. It has been conducted since 1948 in the Boston suburb of Framingham, Mass., on men and women (originally 5,209) who at that time were free of heart problems. They are examined every two years. A portion of the study's current findings, quoted in the 1977 Senate committee hearings, stated:

The overall mortality in the overweight participants of both sexes was lower than for those of normal body weight, but mortality for coronary artery disease, and especially sudden death, was substantially higher in the overweight.... In women, the net effect of overweight or **obesity** was small for all cardiovascular events except congestive heart failure. For males there was a significant relationship between overweight and cardiovascular mortality, even when such atherogenic factors as hypertension, smoking and family history were taken into account.

Linking Fat, Sugar-Filled Diets to Disease

Although most doctors concur in the belief that the relation of overweight to morbidity is a serious matter, medicine's failure to unravel the exact nature of the relationship has left the public confused about whether **obesity** is the cause or the consequence of ill **health**. The malfunctioning of the thyroid or endocrine glands can lead to excessive weight gain, and so can abnormalities in the way food is metabolized. While medical research continues to show how these disorders may contribute to overweight, there is a growing body of clinical opinion that **obesity** leads to or aggravates diabetes, heart trouble and gall bladder ailments. The nutritional deficiencies that often accompany a fattening diet can slow the healing of wounds, lower resistance to colds, and diminish the absorption of nutrients.

Because overweight and heart diseases tend to run in families, some doctors believe they are only coincidentally connected. Yet "populations that eat great quantities of animal fat...have higher coronary death rates than those populations that consume smaller quantities of animal fat," said a 1976 study of world **health** sponsored by the United Nations. The American consumption of fat and incidence of heart disease are the highest in the world. The study continued:

The partial blockage of the arteries with tissue growth and fatty deposits, leads to coronary heart disease when the coronary arteries are affected.... The accumulation of deposits in the arteries seems to be affected by the consumption of saturated fats and cholesterol. These food components appear to contribute to the chain of events that leads from a high cholesterol blood-count to atherosclerosis, and, finally, to a completely blocked coronary artery and a heart attack.... **Obesity**, high blood cholesterol, sedentary living...all raise the risk of coronary disease. ¹²

Similar opinion was reported in a survey of 214 medical scientists in 22 countries who, according to Dr. Kaare Keidar Norum, chairman of the Nutrition Research Institute at the University of Oslo, have "actively engaged in atherosclerosis problems in recent years." Dr. Norum reported to the Norwegian medical association and to the U.S. Senate committee that 85 per cent of the 214 scientists had responded by mid-February 1977. Their answers, according to his information translated by the U.S. Library of Congress and printed in the *Journal of the American Medical Association*, June 13, included the following:

Is there a connection between diet and development of coronary heart disease? Yes 99.4%. No 1.2%.

Is your knowledge of diet and coronary heart disease sufficient for recommending a moderate change in the diet of the population of our society? Yes 91.9%. No 8.1%.

The high-fat, sugar-filled diet that is implicated in cardiovascular disease is also suspected of playing a leading part in the cause of diabetes. In 1950, there were 1.2 million diabetics in the United States; now there are 5 million. Medical researchers theorize that an increase in the overweight population is responsible for the sharp jump. "A person who is 20 per cent overweight is more than twice as likely to develop diabetes as a person of normal weight," the Senate committee was told in 1974 by Dr. Theodore Cooper, who was then assistant secretary of **Health**, Education and Welfare.

Although genetic history is considered to have a greater effect on the juvenile form of diabetes, dietary habits are regarded as an important influence on the variety that strikes mature adults. For those with a family background of diabetes, the best defense is cutting back on fattening foods, particularly foods high in sugar. Saccharin, once

regarded by diabetics as an indispensable substitute for sugar, is slated to be taken off the market this year. The artificial sweetener cyclamate was banned in 1969.

As people get older, they are inclined to get fatter, and as weight adds up, so do the chances of experiencing related medical problems. Gall bladder disease, for instance, occurs more frequently among the overweight. Body fat puts a strain on joints and is a cause of back ailments, particularly in men. Being too heavy has been known to affect male fertility and bring about female menstrual disorders. Surgery is complicated by excess weight, as is childbirth. There is also a clear connection between pre-pregnancy overweight in women and toxemic infection during pregnancy. One recent test¹³ revealed that toxemia was 25 times higher in the heaviest 10 per cent of a group of pregnant women than it was among the lightest 10 per cent.

It used to be jokingly said that the whole world loves a fat man. But fat people, psychologists argue, may not be happy with themselves. In fact, mental depression could be the most difficult **health** burden the obese have to carry. In a country that worships the slender figure, overweight Americans are subjected to intense social pressures to reduce. Ironically, those pressures are components in a behavioral cycle that forces fat men and women into states of nervous distress for which eating is often the only form of solace.

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Diet and the Social Environment

Quest for Psychological Origins of Obesity

Health Authorities say it is difficult to repair the effects of overeating without first discovering its primary cause. Finding out why a person eats too much is an important initial step in reducing what he eats. Many—perhaps most—experts now believe that the eating habits and nutritional patterns that produce fat adults are formed in childhood. Surveys have indicated that 80 to 90 per cent of the obese children in the United States are also overweight in later life. Of obese adults, 25 per cent were overweight as children. New York City has reported that about 10 per cent of the boys in its schools are overweight. Selective Service physical examination records have shown roughly the same percentage for 18-year-old men; in contrast, 5 per cent of the draft-age men were underweight.¹⁴

The compulsion to eat is generated in a region of the brain's hypothalamus called the "hunger center." When we have eaten our fill, impulses in the neighboring "satiety center" are activated to quell the eating urge. Many **health** specialists believe that the obese do not respond to these internal stimuli. Regarding an experiment on this theory, Dr. Richard F. Spark has written that there are implications "the obese literally do not know when they are hungry."¹⁵ In other tests, it has been shown that persons of normal weight respond to fear-provoking stimuli by reducing their intake of food. Obese persons, given the same stimuli, eat the same amount of food or slightly more than they do in periods of emotional calm.

It is believed that psychological influences leading to later **obesity** may occur even before a child is weaned. Mothers who overfeed their babies in an effort to raise healthy offspring may, in fact, be setting the pattern for future **obesity**. Since the number of fat cells adults have is determined by the kind and amount of food consumed as children, overeating in childhood seems to offer a fairly accurate prediction of overweight problems in later life.

Whether an infant is breast fed and for how long seem to be important factors in determining weight gain in childhood; the early introduction of solid food is thought to influence the growth of an excessive number of childhood fat cells that never go away. Dr. Jules Hirsch of Rockefeller University has said that overfeeding in infancy may be the most prevalent cause of **obesity**.¹⁶ Aside from the cell factor, he said, the infant who is fed regardless of any "internal cues of hunger and satiety" may become a grownup who gorges himself without regard to his body's need for nourishment.

Wide Use of Processed Foods and Additives

The social and psychological significance of food in our lives can hardly be overstated. How we eat and what we eat have a profound effect on our well-being. There is a growing concern that a diet dependent on processed foods and mechanized methods of food distribution not only promotes **obesity** but substantially increases the potential for

malnutrition. Since the end of World War II, the popularity of “convenience foods” has kept pace with the greater availability of leisure time. Shake ‘n’ bake and whip ‘n’ chill foods line the grocery shelves for busy housewives and bachelors; there are instant snacks in dozens of varieties and a multitude of diet food for the legion of weight watchers. At the Senate committee's hearings this year, Sen. Charles H. Percy (D Ill.) quoted figures indicating that such prepared foods make up 60 per cent of the American diet. These foods tend to be laden with chemical additives.

Perhaps the most visible sign of America's new dietary habits are the drive-in and downtown “fast food” outlets. A third of all meals are taken outside the home, according to Richard Stalvey, vice president of the Nutrition Foundation, and a large proportion of those are in quick-service places. “Fast foods are prepared fast and eaten fast,” said Dr. J. Charles Sterin, research director of the Wholistic **Health** and Nutrition Institute. “...Most people dash into a fast-food restaurant and choke down their food in a matter of minutes. They get a bloated feeling. Soon after they've eaten and the bloat goes away, they interpret it as hunger and they're ready to eat again.”¹⁷

Fast foods often make up a big part of the diets of overweight Americans. The caloric values of a typical drive-in menu offer good evidence of where the fat comes from: a “deluxe” hamburger (744 calories), four ounces of French fries (275 calories), a milk shake (320 calories) and an apple turnover (290 calories). Although **obesity** has been called an affliction of affluent societies, it is not always prevalent among affluent individuals. In New York in 1964, overweight was nearly seven times more common in the lowest socio-economic groups than it was in the highest.¹⁸ One possible explanation for the discrepancy could be the high caloric content of so-called “junk food,” which often is a mainstay of the diets of low-income Americans.

Criticism of the Food Industry's Advertising

Critics of food-industry advertising say it has so manipulated the concept of healthful eating that American consumers no longer know which foods are good for them and which are not. Dr. Jean Mayer, an outspoken opponent of the promotional practices of the food industry, charges that companies spend too much money “calling attention to the least useful foods, and too little...in urging people to eat fruits and vegetables, bread and other basic foods. People are encouraged to fill up on snacks, candy and soft drinks....”¹⁹

Ralph Nader, the consumer advocate, has accused the food companies of “purposely keeping children and their parents in the dark on the subject of nutrition.”²⁰ Nader pointed to the practice of distributing promotional material to schools under the guise of free teaching material. Overweight will be only one of the **health** problems that this generation and the next will have to face, Nader said, if the quality of food is not made a national political issue. The food industry retorts that it provides the kind of food people want, and it points to disagreement among experts as to the quality of many commercial foods.

Much of the attention of federal agencies concerned with diet and **health** is focused on the food industry's advertising of food products of questionable nutritional value. This advertising, especially on television, seems to be directed mostly at children. But all consumers are affected by incomplete or misleading information about food products. Dr. Mayer told the Senate committee in 1973 that food companies were then spending \$2-billion a year on ads, and most of it to urge people to eat fattening sugar-saturated “junk foods.”

Efforts to Upgrade Nutritional Standards

The committee, which is ending its seven-year existence in June under terms of a 1977 Senate committee reorganization,²¹ has made a number of recommendations to Congress and the President for improving dietary **health** in the United States. The committee has proposed that over the next five years:

1. Nutrition and **health** education be taught in all elementary and secondary schools.
2. Nutrition education become a part of the federally funded food-assistance program.
3. Television be used extensively to counteract food advertising by showing the benefits of following a nutritionally sound dietary goal.

The committee also has asked Congress to require nutritional labeling for all foods, stating the caloric content, the percentage and type of fats, percentage of sugar, the amount of cholesterol and salt, and a complete listing of

additives. Among its other recommendations, the committee suggested a reduction of overall fat consumption from approximately 40 to 30 per cent of the energy intake, and a reduction of saturated fat consumption to about 10 per cent of the total energy intake per person. It called for the reduction of individual cholesterol consumption to 300 milligrams per day, and a cutback in the rate of salt consumption by as much as 85 per cent to 3 grams per day. ²²

The committee estimates that if its dietary proposals are followed, there will be an eventual 80 per cent decrease in **obesity**, a 25 per cent decrease in deaths due to heart disease, 50 per cent fewer deaths caused by diabetes, and an annual 1 per cent improvement in the longevity rate until the point is reached where 90 per cent of the population survives to the age of 65.

Federally subsidized lunches for schoolchildren have drawn congressional attention recently. Lunches are provided free in many schools to needy children, and for others the costs are subsidized by making some of the nation's surplus foods available. Sen. Hubert H. Humphrey (D Minn.) has proposed in the Child Nutrition Act of 1977, which he introduced in April, to provide free hot lunches for all schoolchildren and insure them at least one balanced meal a day. The measure would also establish a nationwide program of nutrition education in the public schools.

The bill, authorizing \$600-million for these purposes, has not won the backing of the Carter administration. Its officials have said they would not be willing to authorize any new expenditures until existing programs have been studied. The Department of Agriculture is considering changes in the existing school lunch program to make the meals better balanced and more appealing.

A Maryland Board of Education study last year said that many schoolchildren in the state were "apathetic" about eating hot lunches in school cafeterias, preferring instead "junk food from a la carte lines." The findings, as reported in the publication *Report on Preschool Education*, March 29, 1977, recommended that junk food be eliminated from school cafeterias. But it noted that school authorities are reluctant to stop these food sales because the schools receive some of the profits and use them to pay for other school services.

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Changing Approaches to Weight Loss

Counting Calories; Variety of Reducing Plans

Americans have made dieting a national pastime, but few topics so apparently simple as losing weight have been the source of as much controversy and confusion. Fat is stored fuel. It builds at the rate of one pound for every 3,500 calories consumed and is expended in the form of energy to power the body. An accumulation of more calories than the body can use leads to **obesity**.

Most people do not need a doctor to tell them when they are getting fat. There are enough familiar signs: clothes fit tighter, physical activities become more difficult, food bills lengthen. The standard clinical method for measuring body fat on people under age 50 is the simple "pinch test," which involves squeezing a fold of skin on the side or back. A measurement of an inch or more in width is a reliable indication of overweight.

The objective of a reducing diet is to limit the intake of calories. An adult of about average size and weight requires a minimum of 1,200 calories a day. The severity of the diet obviously depends on how much weight the dieter wishes to lose and how much discomfort he or she is willing to endure to lose it. When food consumption is cut back, the body begins to feed on itself, turning stored fat into energy. In the process, it produces a substance called ketone, which aids metabolism and is especially abundant during periods of carbohydrate restriction. What makes ketone important to diet specialists is that it acts to suppress, even eliminate, the feeling of hunger. Over the short term, a ketone-induced appetite suspension can result in a dramatic loss of weight.

The problem lies in the fact that few people can tolerate the side effects of fatigue and nausea that accompany a low- or no-carbohydrate diet. In contrast to weight-reducing plans that offer some version of the conventional low-calorie diet, drugs such as amphetamine create the same hunger-quelling effect as ketone by triggering the "satiety center" in the hypothalamus and giving the sensation of fullness.

There seems to be no limit to the gamble some overweight people are willing to take in order to lose extra pounds without sacrificing the joys of their favorite food. And the field is rife with unprofessional “experts” ready to sell reducing schemes. A number have been attacked by consumers and the American Medical Association as ineffective or potentially harmful. “Fad diets” generally promise easily obtainable miracles and sometimes work effectively for short spells. But without self-discipline, the most essential and difficult part of any regimen, the dieter will inevitably regain the lost pounds.

Behavior Modification for Compulsive Eating

Despite the fact that medical research has been able to isolate and define the neurological functions that control hunger and satiety, a good deal about the nature of the human appetite remains a mystery. In its simplest terms, getting fat is a fuel crisis in reverse, an imbalance between high food intake and low energy output. But that equation does not begin to explain the complexity of drives that lie beneath the surface of **obesity**.

In the absence of a glandular disorder, overeating seems governed by conscious and unconscious patterns of behavior, which may suggest that compulsive food consumption has more to do with sociology than biology. Although sensory appeal plays an unmistakable role in our attraction to certain foods, anxiety and group pressures are all integral parts of the whole process that makes people eat too much.

A common characteristic among fat people is their compulsive behavior. “The overeater celebrates excess; it’s difficult for him to do anything in moderation,” wrote movie producer Frank Perry, an “ex-fattie.”²³ For the chronically obese, losing unwanted pounds has been described²⁴ as a “civil war” between mind and body. Since the lack of will power is frequently one of the reasons people become fat, it is difficult if not impossible for many to adhere to a self-imposed reduction schedule.

Desperation dieting in some cases can lead to a severe loss of weight, a condition called *anorexia nervosa*. It begins as a sudden fear of **obesity** and before long can leave a person emaciated and unable to taste food without experiencing extreme emotional distress. The American Medical Association reports that the disorder is 12 times more common in women than in men and questions whether social pressures to stay slim have a greater effect than biological factors. Many doctors advise patients to join diet clubs where the emphasis is on gradual reduction and group support. The crash diet, they agree, is the most harmful method of losing weight.

Stanley Schachter, a professor of psychology at Columbia University, theorizes that the obese are overly responsive to the sight and smell of food. Such people, Schachter speculates, also overrespond to emotional situations. Food is the most important thing in the lives of heavy eaters, for whom, according to Schachter, overeating is a reaction to external surroundings rather than physical needs. It is this widely accepted theory of “externality” that forms the basis of the behavioral approach to dieting.

Patients who undergo behavior modification are first told to monitor and record their regular eating habits. Then, along with a therapist, they examine the account with a view toward locating the special circumstances, such as watching television for instance, that encourage them to overeat. Following this, patients are instructed in normal eating habits: to eat slowly, to put the fork down between bites, and to replace thoughts of hunger with thoughts of being full. Most effective of all, successful graduates maintain, is the idea that behavioral therapy gives patients a sense they are acting to help themselves instead of being merely helpless victims of their appetites.

Surgery as Last Resort in Extreme Cases

If dieting and exercise, even behavioral modification, happen to fail, there are more drastic forms of treatment available. Supervised starvation or surgery are sometimes advised for people with massive weight problems who are otherwise unable to reduce. The most common operative procedure is wiring the jaws nearly closed and placing the patient on a semi-liquid, high-protein diet. The practice normally involves several months of hospitalization along with an intensive program of dietary retraining.

The most dangerous treatment by far is bypass surgery. Suggested in rare cases for extreme or morbid **obesity**, and only for patients between the ages of 18 and 35, the operation entails removal of a portion of the small bowel. “The time it takes for food to pass through the digestive tract is drastically reduced—as is the actual amount of food that will be absorbed through the intestinal walls to turn to fat.”²⁵ The procedure is effective in lessening weight gain for

varying periods of time, yet the risk is high. Almost 5 per cent of the patients who have had bypass surgery have died, while many others have experienced liver and kidney problems, brittle bones and long spells of diarrhea.

Two medical researchers reported in *The New England Journal of Medicine* that for 12 to 18 months after the operation an average weight loss of 77 pounds can be expected for patients initially weighing 298 pounds, and losses averaging 176 pounds in patients originally weighing 339 pounds.²⁶ To be successful, doctors say, bypass surgery must be followed by a strictly regulated dietary schedule designed not only to provide the body with a maximum level of healthful, nutrients but to reduce the possibility that a resumption of old eating habits will cancel the effects of the operation.

Problem of Gaining Society's Understanding

Since the time when citizens of ancient Sparta drove the obese from their city in shame, there has usually been a prevailing social bias against fat people. Although some cultures have smiled on fatness as a symbol of wealth and power, the obese in American society have many social handicaps to overcome. "Get rid of ugly fat," says the television commercial. The lithe figure graces the fashion magazine cover. And "fatso" is not an endearing nickname.

Newsweek magazine reported in 1975 that "the biggest reason many fat [job] applicants are turned down is because of their appearance."²⁷ In the employment market, there is a built-in prejudice against fat people, arising from the notion that they are lazy and unfit for hard work. From time to time, antidiscrimination suits are filed, but the outcome is seldom favorable. Unlike blacks, women and other minorities, the overweight fall outside the protection of civil rights statutes that prevent unfair treatment on the basis of race, sex and physical handicaps. In 1975, Los Angeles became one of the first American cities to propose softening its weight restrictions for city jobs.²⁸ Instead of the old standards which identified applicants on the basis of age, height and weight, the city personnel department has decided to adopt "functional qualifications."

Psychologists say fat people have a sense of low self-esteem, and are therefore reluctant to speak out for their rights. Those who do speak out are wont to argue that they are the victims of derision and centuries of inherited misjudgment. Persons who overlook the complex physiological and emotional reasons for **obesity** assume overweights deserve ridicule because they chose their condition. There is a tendency, even among some doctors, to view weight problems as self-inflicted disabilities, the punishment for luxurious overindulgence. But the fact remains that most obese people are poor. Actor William Conrad and other defenders of the fat do not advocate gaining weight, but they do believe that no one should have to suffer at the hands of society because of his or her size.

Fat people will always be with us, and in ever-increasing numbers since only about 2 per cent of all American dieters manage to maintain a weight loss for more than two years, writer Philip Nobile theorizes. The obese contend that rather than being seen as examples of gluttony and ill-**health**, they deserve cultural and social acceptance.

The people who try to unravel the vexing question of **obesity** see the need for society to reexamine its attitude toward the obese, just as there is need to delve much further into the multiple causes of **obesity**. But psychologists say neither goal can be attained until the public by direct experience or common sense, comes to regard fat people as "just like us"—only more so.

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Footnotes

[1] Cyril Connolly. *Unquiet Grave* (1945).

[2] Opening statement to the committee, Feb. 2, 1977. See *Hearings Before the Select Committee on Nutrition and Human Needs*, Part 2, p. 1.

[3] See, for example. "Overweight and **Health**," *E.R.R.*, 1967 Vol. II, pp. 845, 857–858.

[4] National Center for **Health** Statistics. "Height and Weight of Adults 18–74 Years of Age in the United States", *Advance Data From Vital and **Health** Statistics*, No. 3, Nov. 19, 1976.

[5] By Natalie Allon of Hofstra University, cited in *Human Behavior* magazine, June 1975, p. 63.

[6] See "Food Additives," *E.R.R.*, 1969 Vol. II, pp. 959–976.

[7] Richard F. Spark, "Fat Americans," *The New York Times Magazine*, Jan. 6, 1974, p. 52.

[8] See "Nutrition in America," *E.R.R.*, 1973 Vol. II, pp. 583–602.

- [9] Testimony of Dr. John Yudkin, see *Hearings*, Part 2, April 30, May 1–2, 1973, p. 225.
- [10] See Metropolitan Life Insurance Co.'s *Statistical Bulletin* for February (pp. 9–11) and March (p. 12) 1960.
- [11] See “The Influence of **Obesity** on **Health**,” Part 2, by Dr. George V. Mann, in *The New England Journal of Medicine*, July 25, 1974, p. 182.
- [12] Erik Eckholm and Frank Record, “The Two Faces of Malnutrition” *Worldwatch Paper* 9, December 1976, pp. 29–31.
- [13] Cited by Dr. George V. Mann in *The New England Journal of Medicine*, Aug. 1, 1974, p. 230.
- [14] *Ibid.* p. 229.
- [15] Richard F. Spark. “Fat Americans,” *The New York Times Magazine*. Jan. 6, 1974, p. 42.
- [16] Quoted in *The New York Times*. Dec. 27, 1973.
- [17] Stalvey and Sterin were quoted in *The Washington Post*, March 1, 1977.
- [18] Figures cited by Dr. Richard F. Sparks, *op. cit.*, p. 43.
- [19] Mean Mayer, writing in *Family Health* magazine, June 1971, p. 49. Dr. Mayer, a nutritionist formerly at Harvard, is currently president of Tufts University.
- [20] Ralph Nader, speaking at the Bureau of National Affairs Conference on Students' Rights, Alexandria, Va., April 21, 1977.
- [21] The duties of the Senate Select Committee on Nutrition and Human Needs have been assumed by a newly created subcommittee on nutrition under the Senate Agriculture Committee.
- [22] From *Dietary Goals for the United States*, Select Committee on Nutrition and Human Needs, 1977.
- [23] In *The New York Times*, Nov. 16, 1976.
- [24] By Natalie Allon, quoted in *Human Behavior*, June 1975, p. 63.
- [25] Janet Chase, “Obese in the Land of Milk and Honey.” *Human Behavior*, June 1975. pp. 56–58.
- [26] Ronald Malt and Frederick G. Guggenheim, “Surgery for **Obesity**,” *The New England Journal of Medicine*. July 1, 1976, p. 44.
- [27] *Newsweek*. March 31, 1975, p. 85.
- [28] See “City May Ease Curbs on Hiring Obese Persons,” the *Los Angeles Times*, Oct. 26, 1975.

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Special Focus

Nutrition Terminology

Fat. Tissue which forms soft pads between various organs of the body. It furnishes a reserve supply of energy.

Carbohydrates. A class of organic compounds, including sugars, starches and celluloses, that contain carbon and hydrogen. Carbohydrates are formed by all green plants and used immediately for growth or stored for future use.

Protein. Any one of a group of organic compounds containing amino acids. Protein occurs in all living matter and is responsible for the growth and repair of animal tissue.

Calorie. A unit of energy equal to the amount of heat required to raise the temperature of one kilogram of water one degree centigrade.

Vitamin. A general term for a number of unrelated organic substances that occur in many foods in small amounts and are necessary for the normal metabolic functioning of the body.

Cholesterol. A fatlike substance contained in oils, egg yolk, milk, animal fats and certain other foods. The build-up of cholesterol deposits in the arteries is generally considered to be a major contributing factor in cardiovascular disease.

Metropolitan's Weight Standards

Desirable Weights for Men and Women Aged 25 and Over

(in pounds, in indoor clothing)

Height		Small frame	Medium frame	Large frame
		Men		
Feet	Inches			
5	2	112–120	118–129	126–141
5	3	115–123	121–133	129–144
5	4	118–126	124–136	132–148
5	5	121–129	127–139	135–152
5	6	124–133	130–143	138–156
5	7	128–137	134–147	142–161
5	8	132–141	138–152	147–166
5	9	136–145	142–156	151–170
5	10	140–150	146–160	155–174
5	11	144–154	150–165	159–179
6	0	148–158	154–170	164–184
6	1	152–162	158–175	168–189
6	2	156–167	162–180	173–194
6	3	160–171	167–185	178–199
6	4	164–175	172–190	182–204
		Women		
4	10	92–98	96–107	104–119
4	11	94–101	98–110	106–122
5	0	96–104	101–113	109–125
5	1	99–107	104–116	112–128
5	2	102–110	107–119	115–131

Height		Small frame	Medium frame	Large frame
5	3	105–113	110–122	118–134
5	4	108–116	113–126	121–138
5	5	111–119	116–130	125–142
5	6	114–123	120–135	129–146
5	7	118–127	124–139	133–150
5	8	122–131	128–143	137–154
5	9	126–135	132–147	141–158
5	10	130–140	136–151	145–163
5	11	134–144	140–155	149–168
6	0	138–148	144–159	153–173

Source: U.S. Public Health Service, *Obesity and Health* (1966). Figures based on Metropolitan Life Insurance Co. weight standards.

Saccharin Controversy

The Food and Drug Administration announced March 9 it would ban the artificial sweetener saccharin from food and beverages sold in the United States, probably beginning in July. The FDA cited a three-year study conducted by the Canadian government which showed evidence of cancer in rats that had been fed high doses of saccharin every day. The agency is required by the Delaney amendment (to the Food, Drug and Cosmetic Act of 1958) to ban any ingredient shown to cause cancer in humans or animals.

This announcement provoked an outpouring of criticism, especially from weight-watchers and diabetics who had removed sugar from their diets. Saccharin, a calorie-free crystalline compound several hundred times sweeter than sugar, is used extensively in "sugar free" beverages. At least five million pounds are consumed each year in the United States.

Despite the criticism, which resulted in congressional hearings, FDA Director Donald Kennedy has said as recently as June 9 that the agency is proceeding with its plan to remove saccharin from food and beverages. The agency's process of rulemaking, now in its final stages, is expected to be completed early in August. At that time the ban will take effect, barring new delays imposed by the agency or by Congress. A number of bills have been introduced to postpone or nullify the removal of saccharin from the market. Rep. Paul G. Rogers (D Fla.) has asked for the National Academy of Science to review the **health** hazard data.

Other sugar substitutes that have been considered or used are listed below:

Neohesperidin Dihydrochalone (Neo DHC). A low-calorie synthetic sweetener derived from an intensely bitter substance in grapefruit peel called naringin, it is about 1,000 times as sweet as sugar. Neo DHC is currently being developed by the Department of Agriculture and several private companies.

Miracle Fruit Sweetener. A protein sweetener made of berries from the miracle fruit tree. The Miralin Co. of Hudson, Mass., which planned to market candy sweetened by miracle fruit extract before the company went out of business in 1975 could not assure the FDA of its safety.

Aspartame. A chemical food additive produced by the G.D. Searle Co. of Chicago. The FDA approved limited prescribed use of aspartame in 1974 pending a government investigation into its safety. Tests have not yet been completed.

Cyclamates. The FDA ordered this chemical sweetener taken off the market in 1969 when it was shown to cause cancer in test animals. Earlier this year, Abbott Laboratories of Chicago asked the FDA for permission to remarket cyclamates. Hearings on the petition are scheduled for July 13.

Agencies with Food Monitoring Functions

Food and Drug Administration (FDA) issues regulations governing the nutritional quality and safety of food. The agency also establishes standards for food additives and conducts research into potential **health** hazards conveyed by contamination of the food supply.

Federal Trade Commission (FTC) has the responsibility of safeguarding the public interest by prohibiting false or deceptive advertising of food and other consumer goods.

Department of Agriculture (USDA) grades the quality of commercial foods and monitors food processing and merchandising practices. Through its consumer service activities, it also publishes information on healthful eating.

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