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SCIENTIFIC, SOCIAL & LEGAL PERSPECTIVES ON OBESITY: WHAT GROWN-UPS NEED TO KNOW

Judith G. McMullen*

I. INTRODUCTION

Americans are, on average, fatter than ever. According to a 2012 report from the National Academy of Sciences, two-thirds of American adults are overweight, and at least one-third of those people are obese.¹ The percentage of obese adults has more than doubled during the past 35 years.² During the same period, the number of people who are extremely obese also increased.³ Although there is some data suggesting these trends have flattened somewhat in the very recent past, the current high levels of obesity still merit serious concern.⁴

Why should we care about obesity? American culture values thinness as a function of physical attractiveness but, aside from aesthetic preferences, there are legitimate health concerns that underlie policies to treat and prevent obesity. Obesity has been linked to a variety of serious health problems, including heart disease, cancer, and Type 2 diabetes.⁵ Middle-aged and

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1. COMM. ON ACCELERATING PROGRESS IN OBESITY PREVENTION, INST. OF MED. OF THE NAT'L ACADEMICS, *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation* 2, 42-43 (May 8, 2012) [hereinafter COMM. ON ACCELERATING PROGRESS].

2. *Id.* at 43. "[T]he proportion [of adults] who are obese has more than doubled since 1976-1980, when it was 15 percent." *Id.*

3. *Id.*

4. *Id.* at 44.

5. Ctrs. for Disease Control & Prevention, *Overweight and Obesity: Causes and Consequences*, CDC.GOV, <http://www.cdc.gov/obesity/adult/causes/index.html> (last updated Apr. 27, 2012).

older adults are most likely to experience conditions like these, and to suffer from adverse consequences such as lower quality of life, disability, and reduced life expectancy.⁶ This group of older adults is particularly hard-hit by high blood pressure and Type 2 diabetes.⁷ In addition, health and mobility issues linked to obesity lead to other undesirable consequences, such as social isolation, job discrimination, and verbal abuse.⁸

Despite decades of hand-wringing over obesity, many adults who are battling their weight are either confused about what to do or simply mired in old habits. Fad diets don't seem to work, at least not in the long-run.⁹ Despite constant advice to exercise, American adults are, as a group, quite sedentary.¹⁰ The public views expert dietary advice with suspicion – many people believe that doctors and scientists contradict themselves; so implementing any suggestions is futile. Policy-makers try suggested solutions, often to be greeted with wails of protest accusing them of running a “nanny state.” The outlook is bleak enough that some experts have suggested that, for the first time ever, the current generation may have a shorter life span than their parents did.¹¹

What are the causes and consequences of the American obesity epidemic and what can be done about it? This article will attempt to answer these questions from scientific, social, and legal perspectives. In Part II, the article will describe current scientific theories about the causes and effects of adult obesity.

6. COMM. ON ACCELERATING PROGRESS, *supra* note 1, at 34.

7. *Id.* at 34–35.

8. *Id.* at 35.

9. See, e.g., Katherine Hobson, *Do Program Diets Work? Rarely. Here Are 7 Tips to Shed Pounds*, U.S. NEWS, Feb. 25, 2009, <http://health.usnews.com/health-news/blogs/on-fitness/2009/02/25/do-program-diets-work-rarely-here-are-7-tips-to-shed-pounds>.

10. Half of adults do not get the recommended amount of daily physical activity, and 35% of children are estimated to be inactive. *Facts & Statistics*, PRESIDENT'S COUNCIL ON FITNESS, SPORTS & NUTRITION, <http://www.fitness.gov/resource-center/facts-and-statistics/> (last visited June 14, 2013).

11. U.S. Dep't of Health and Human Serv., *Obesity Threatens to Cut U.S. Life Expectancy, New Analysis Suggests*, NIH NEWS (Mar. 16, 2005), <http://www.nih.gov/news/pr/mar2005/nia-16.htm>.

Part III will discuss the social consequences of being obese. Part IV will describe relevant laws dealing with certain aspects of obesity, such as laws against discrimination, rules about coverage of medical expenses related to obesity, and societal rules concerning product labeling or marketing. Finally, Part V will discuss some proposals for successfully addressing some of the problems caused by obesity, as well as proposals for reducing the incidence of obesity now and in the future.

II. THE SCIENCE OF OBESITY: WHAT WE KNOW

A. INCIDENCE

In order to determine the incidence of overweight and obesity in the population, we need to agree on how to determine whether a person is at a healthy weight. There is a fair range of weights that might be considered healthy for any given individual, depending on that person's gender, age, height, and skeletal structure. Also, there are a couple of comparative weight measures that are commonly used by doctors and researchers to summarize that information. Originally, ideal weight tables were developed by insurance companies to compare mortality rates across gender, age, and weight.¹² Tables with a range of "ideal" weights for men and women based on their heights and frame (in light of subsequent mortality data) were issued by the Metropolitan Insurance Company in 1959, and revised in 1983.¹³ According to these tables, a five foot ten inch woman would have an ideal weight range between 132 pounds (the lowest ideal weight listed for a small-framed woman) and 173 pounds (the highest ideal weight listed for a large-framed woman).¹⁴ A five foot ten inch man would have

12. John H. Himes & Claude Bouchard, *Do the New Metropolitan Life Insurance Weight-Height Tables Correctly Assess Body Frame and Body Fat Relationships?*, 75 AM J. PUB. HEALTH 1076, 1076 (1985).

13. *See id.*

14. *See Height and Weight Charts*, HEALTHCHECK SYSTEMS, <http://www.healthchecksystems.com/heightweightchart.htm> (last visited Apr. 5, 2013) (making available the Metropolitan Life Insurance Weight-Height Tables).

and ideal weight range of between 144 and 180 pounds, depending on his frame.¹⁵ Both the men's and women's tables presume that the subjects are wearing shoes with one inch heels, and that they are dressed.¹⁶ These tables have a number of shortcomings, including the subjective nature of the judgment about frame, as well as variations in clothing weight.

More recently, medical experts have devised a formula that utilizes height and weight to produce a number known as one's "body mass index," or BMI.¹⁷ A healthy BMI ranges from 18.5 to 24.9, with BMIs below 18.5 indicating underweight status, BMIs between 25 and 29.9 indicating overweight status, and BMIs at or above 30 indicating obesity.¹⁸ According to BMI tables, our five foot ten inch adult would have a healthy weight range if s/he weighed 129 to 173 pounds. This same adult would be underweight if under 129 pounds, overweight if s/he weighed 174 to 209 pounds, and obese if s/he weighed over 209 pounds.¹⁹

Unlike the Metropolitan Insurance tables, BMI calculations do not differentiate based on gender or body frame; and, like the Metropolitan tables, the BMI measurement has limitations. It has been criticized as less reliable for children or for people who have a greater than average percentage of muscle mass, such as athletes. However, the BMI scale is currently the most common measure used to assess the healthiness of an individual's weight.

Comparing BMIs over time reveals that there has been a huge increase in the number of overweight and obese people in the United States population over the past few decades.²⁰ 50 years ago, the obesity rate in the United States was around 13

15. *See id.*

16. *See id.* (stating women's clothes are assumed to weigh three pounds, while men's clothes are presumed to weigh five pounds).

17. *Calculate Your Body Mass Index*, NAT'L HEART, LUNG, & BLOOD INST., NIH, <http://nhlbisupport.com/bmi/> (last visited Apr. 10, 2013).

18. *See id.*

19. *See id.*

20. Ctrs. for Disease Control & Prevention, *Overweight and Obesity: Adult Obesity Facts*, CDC.GOV, <http://www.cdc.gov/obesity/data/adult.html> (last updated Aug. 13, 2012) (asserting that figures show a dramatic increase in U.S. obesity rates between 1990 and 2010).

percent.²¹ Figures from 2010 reveal that approximately 35 percent of adults in the United States were then obese.²² The data shows that there are differences in these rates based on various sociological and geographic factors. For example, there are significant variations in the obesity rates of different states, ranging from Colorado's 21 percent rate to Mississippi's 34 percent rate.²³ There are also variations due to race and socioeconomic status.²⁴ The highest obesity rates are found in non-Hispanic blacks (a rate of 44.1%), followed by Mexican-Americans (a rate of 39.3%), all Hispanics (a rate of 37.9%), and non-Hispanic whites (a rate of 32.8%).²⁵ Similarly, income and education levels correlate with obesity rates. Higher income and college degrees have been linked to lower rates of obesity among women; although, higher income was linked to *higher* obesity rates among non-Hispanic black and Mexican-American men.²⁶ Yet, even though obesity is more prevalent in some racial, ethnic, or economic groups than others, a steady increase in obesity across groups poses a significant public health concern for all people in 21st century America.

B. PHYSICAL EFFECTS

Health experts agree that the obesity epidemic poses dire consequences for the health of Americans. Obesity is linked to

21. NAT'L CTR. FOR HEALTH STATISTICS, NCHS *Health E-State: Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults: United States, Trends 1960-62 through 2005-06*, CDC.GOV, http://www.cdc.gov/nchs/data/hestat/overweight/overweight_adult.htm (last updated Dec. 23, 2009) (Data shows that in 1960-62, the U.S. obesity rate was 13.4 percent).

22. Ctrs. for Disease Control & Prevention, *Overweight and Obesity: Adult Obesity Facts*, CDC.GOV, <http://www.cdc.gov/obesity/data/adult.html> (last updated Aug. 13, 2012).

23. *Id.* (asserting that as of 2011, twelve states had obesity rates of 30% or more).

24. *Id.*

25. Katherine M. Flegal et al., *Prevalence and Trends in Obesity Among US Adults, 1999-2008*, 303 JAMA 235, Table 2 (2010).

26. Ctrs. for Disease Control & Prevention, *Overweight and Obesity: Adult Obesity Facts*, CDC.GOV, <http://www.cdc.gov/obesity/data/adult.html> (last updated Aug. 13, 2012).

higher rates of heart disease, Type 2 diabetes, liver disease, gallbladder disease, sleep apnea, certain cancers, osteoarthritis, stroke, and gynecological problems.²⁷ Some researchers claim that obesity is a greater risk to public health than smoking, heavy drinking, or living in poverty because obesity is linked to higher rates of chronic illness than any of those other risk factors.²⁸

Obesity poses particular risks for older adults. Obesity-related conditions such as high blood pressure, Type 2 diabetes, and certain cancers may first occur in middle-aged or older adults, resulting in reduced quality of life and shortened life-spans.²⁹ A moderate amount of weight gain is likely a normal part of the aging process: in many developed countries, adult BMIs continue to increase until approximately age 60, at which point both BMIs and weight tend to decrease.³⁰ In fact, Reubin Andres, a gerontologist and diabetes researcher, advocated modest weight gain throughout adulthood for better health and increased longevity.³¹ Andres compared heights and weights disseminated by the insurance industry (and widely recommended by doctors through the 1970s) with mortality data, and concluded that the group with the lowest mortality was ten to 20 percent over recommended weights.³² Andres did not advocate obesity; he recommended that "people should start thin and then gain about six pounds a decade beginning in their early 40s."³³

27. Ctrs. for Disease Control & Prevention, *Overweight and Obesity: Causes and Consequences*, CDC.GOV, <http://www.cdc.gov/obesity/adult/causes/index.html> (last updated Apr. 27, 2012).

28. See Roland Sturm, RB-4549 (2002), *The Health Risks of Obesity*, RAND.ORG (2002), http://www.rand.org/content/dam/rand/pubs/research_briefs/2005/RB4549.pdf (describing the work of health economist Roland Sturm and psychiatrist Kenneth Wells).

29. COMM. ON ACCELERATING PROGRESS, *supra* note 1, at 34.

30. Marinos Elia, *Obesity in the Elderly*, 9 OBESEITY RES. 244S, 244S (Supp. 4 2001).

31. Leslie Kaufman, *Reubin Andres, an Advocate of Weight Gain, Dies at 89*, N.Y. TIMES, Sept. 30, 2012, <http://www.nytimes.com/2012/10/01/health/reubin-andres-an-advocate-of-weight-gain-dies-at-89.html?smid=pl-share>.

32. *Id.*

33. *Id.*

However, excessive weight gain in middle or old age can be problematic for at least two reasons. First, age-related loss of muscle mass and an accompanying increase in body fat means that an older person will have a higher percentage of body fat than a younger person with the same BMI, and body fat is problematic for health.³⁴ Second, this increase in fat is more likely to settle in the mid-section, taking the form of visceral or abdominal fat, which has been linked to higher mortality across age groups.³⁵

Increased risk of mortality is not the only problem associated with obesity in the elderly: obesity in older adults is also linked to higher levels of disability and, therefore, lower quality of life. For example, in one survey of more than 10,000 people over age 65, researchers found that obesity was associated with a greater risk of falling.³⁶ In addition, obesity was correlated with a greater likelihood that the injuries after a fall would significantly interfere with a person's daily living.³⁷ Obesity is linked to lower levels of physical fitness, mobility limitations, reduced productivity, and increased disability.³⁸ These undesirable consequences may often have a snowball effect. For example, obese adults currently experiencing mobility problems are also more likely to continue to experience mobility problems in the future.³⁹ Moreover, elderly obese people are more likely to end up in a nursing home due to disability and loss of physical functioning.⁴⁰ There may be some gender differences in the effect of obesity on older adults, with women reporting a higher level of functional decline than men.⁴¹

34. Elia, *supra* note 29, at 244S.

35. *See id.*

36. Christine L. Himes & Sandra L. Reynolds, *Effect of Obesity on Falls, Injury, and Disability*, 60 J. AM. GERIATRICS SOC'Y 124, 126–27 (2012).

37. *Id.*

38. COMM. ON ACCELERATING PROGRESS, *supra* note 1, at Table 2-1.

39. Elia, *supra* note 29, at 246S.

40. *See* Dennis T. Villareal et al., *Obesity in Older Adults: Technical Review and Position Statement of the American Society for Nutrition and NAASO, The Obesity Society*, 82 AM. J. CLIN. NUTR. 923, 924–26 (2005) (discussing how obesity leads to increased frailty, which can lead to nursing home stays).

41. Susan Gallagher Camden & Judy Gates, *Obesity: Changing the Face of*

It should be noted that not all researchers agree with the connection between obesity and ill health. Some researchers propose that obese adults who do not yet have high blood pressure or diabetes are at no greater risk for mortality than are their thinner counterparts.⁴² The corollary of this is that thinness is no guarantee of health.⁴³ It is certainly the case that the health effects of obesity are more complex than sometimes supposed. For example, a recent study showed higher mortality rates from Type 2 diabetes among people who were normal weight, rather than obese, at the time of diagnosis.⁴⁴ In fact, researchers recognize that there is a so-called "obesity paradox": that some chronic diseases like heart failure, hypertension, and kidney disease may actually have lower mortality rates when the patients are obese, rather than of normal or below-normal weight.⁴⁵ Currently, the reasons for this are unclear. However, the strong association between extreme overweight and severe health problems make policies reducing obesity a mandatory part of sensible public health policy.

C. THEORIES ON CAUSES, CURES, AND PREVENTION

Weight gain is attributed to ingesting more calories than are expended; and, traditional wisdom states that an individual should eat less and exercise more to achieve a healthy weight. "For decades, people have treated obesity as a personal

Geriatric Care, OSTOMY WOUND MANAGEMENT (Sept. 30, 2006), <http://www.owm.com/article/6246>. The authors speculate that women may, in fact, experience worse effects from obesity due to the higher percentage of fat that the women may have had. Alternatively, the fact that women have higher average lifespans than men may mean that some obese men do not live long enough to experience as many of the ill effects of obesity. Finally, it is possible that women are more willing than men to admit to limitations.

42. Jennifer L. Kuk et al., *Edmonton Obesity Staging System: Association with Weight History and Mortality Risk*, 36 APPL. PHYSIOL. NUTR. METAB. 570, 573 (2011).

43. Oz Garcia, *Being Thin Isn't the Same as Being Healthy*, HUFFINGTON POST (Aug. 8, 2011, 9:00PM), http://www.huffingtonpost.com/oz-garcia/thin-health_b_918942.html.

44. Mercedes R. Carnethon et al., *Association of Weight Status with Mortality in Adults with Incident Diabetes*, 308 JAMA 581, 586 (2012).

45. *See id.*

failure.”⁴⁶ Undoubtedly, individual behavior in response to physical urges or environmental stimuli contributes to obesity; but, the notion that simple willpower is all that is necessary to lose weight does not comport with the experience of many overweight people. Why do some people find it nearly impossible to consistently follow the advice to eat less? Various theories hypothesize as to what sets the overweight process in motion and keeps it going. Hunger and satiety, which are the signals a person gets about when to eat and when to cease, appear to be disrupted in some people, leading them to keep eating long after their bodies’ basic energy needs have been fulfilled. These excess calories are stored as fat. Research into obesity has revealed an extraordinarily complex mechanism through which human bodies regulate appetite, caloric intake, and body weight. Ultimately, body weight appears to be influenced by the interaction of genes, environmental influences, and individual behaviors.⁴⁷

Heredity seems to be a factor in overweight and obesity, although it is often unclear how much family weight patterns are due to genetics and how much they are due to socialization or shared food practices. Still, genetics may be either a direct or indirect cause of obesity. It will be a direct cause if a person has one of several specific genes that scientists have identified as responsible for obesity-causing disorders, such as Prader-Willi syndrome or Bardet-Biedl syndrome.⁴⁸ In extreme cases, a

46. Philip M. Boffey, *How Do You Put a Nation On a Diet*, N.Y. TIMES, June 9, 2012, <http://www.nytimes.com/2012/06/10/opinion/sunday/how-do-you-put-a-nation-on-a-diet.html>.

47. Ctrs. for Disease Control & Prevention, *Overweight and Obesity: Causes and Consequences*, CDC.GOV, <http://www.cdc.gov/obesity/adult/causes/index.html> (last updated Apr. 27, 2012).

48. *Id.* For example, “Prader-Willi syndrome is caused by a gene missing on part of chromosome 15.” The condition is present at birth, and has various symptoms, including uncontrollable urges to eat and obesity. A.D.A.M. MED. ENCYCLOPEDIA, *Prader-Willi Syndrome*, <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002572/> (last reviewed May 7, 2012). Similarly, Bardet-Biedl syndrome is a genetic disorder that causes various symptoms including blindness and obesity, with abnormal weight gain beginning in early childhood. *Bardet-Biedl Syndrome*, GENETIC HOME REFERENCE, <http://ghr.nlm.nih.gov/condition/bardet-biedl-syndrome> (last reviewed May, 2010).

hormonal disorder, such as hypothyroidism, may directly cause obesity.⁴⁹ Specific disorders like these, which are known to inevitably cause obesity, are relatively rare in the general population.

Genetics is more likely an indirect cause of obesity, since it is generally recognized that factors that may predispose people to obesity – such as variations in metabolism or hormone levels – probably also have partly genetic origins.⁵⁰ It is well-known, for example, that different individuals have different metabolic rates: two people of the same age and height may need different caloric intakes in order to maintain the same weight.

Various hormones also play a role in appetite regulation and weight gain.⁵¹ In most cases, the hormonal influence indirectly causes obesity by influencing appetite or metabolism.⁵² Fat cells themselves appear to produce hormones that may impact appetite and rate of weight gain.⁵³ Overweight and obese people seem to have different hormone levels over time than do normal weight people, and these different levels may both be a cause of overeating (since it may cause cravings or urges to overeat) and a result of overeating (because chronic overeating may result in more fat cells that create further hormonal imbalances). Moreover, being heavy is, in some ways, a self-perpetuating condition. Research has shown for example, that once people are overweight or obese, it is easier for them to gain weight than it would be for a person of normal weight.⁵⁴ “An extra [ten] calories a day puts more weight onto an obese person than on a thinner one.”⁵⁵

49. Daniel Bessesen et al., *Hormones and Obesity*, 89 J. CLINICAL ENDOCRINOLOGY & METABOLISM (Apr. 1, 2004).

50. See Villareal, *supra* note 40, at 924.

51. Bessesen, *supra* note 49.

52. *Id.*

53. *Hormones and Obesity*, THE HORMONE HEALTH NETWORK (Mar. 2010), <http://www.hormone.org/Resources/upload/hormones-and-obesity-bilingual-042010.pdf>.

54. Claudia Dreifus, *A Mathematical Challenge to Obesity*, N.Y. TIMES, May 15, 2012, at D2.

55. *Id.*

Whether or not a person becomes obese is also undeniably linked to environmental influences, including the cost and availability of certain types of food, portion sizes, food marketing practices, and customs related to food and eating. Some theories about the causes of obesity center on the nature of American food, as well as the availability of certain types of food, both of which have changed significantly since World War II. A lot of the nation's food has become highly processed, with less fiber and higher levels of sugar, salt, and unhealthy fats. Some experts believe that human bodies are adapted to natural rather than processed foods, and that consumption of highly processed foods may lead to over-eating or cravings.⁵⁶ "We don't abuse lettuce, turnips and oranges," says Dr. Kelly D. Brownell, director of Yale's Rudd Center for Food Policy and Obesity, "[b]ut when a highly processed food is eaten, the body may go haywire. Nobody abuses corn as far as I know, but when you process it into Cheetos, what happens?"⁵⁷

Some researchers theorize that high levels of sugar, salt, and fat cause individuals to behave as if they are addicted to food, craving it and eating it in ever greater quantities. In his book *The End of Overeating* former FDA Commissioner, Dr. David A. Kessler argues that processed food manufacturers have determined optimal levels of sugar, fat, and salt to encourage food overconsumption bordering on addiction.⁵⁸ Kessler argues that hyper palatable foods lead to "conditioned hypereating," which can be overcome only by learning to appreciate and eat nutritious food that does not override the body's regulatory mechanisms.⁵⁹

Related research suggests that it may not be so much the number of calories as the type of food that is determinative in obesity. One recent study suggests that excess consumption of

56. Tara Parker-Pope, *Craving an Ice-Cream Fix*, N.Y. TIMES WELL BLOGS (Sept. 20, 2012, 4:00 PM), <http://well.blogs.nytimes.com/2012/09/20/craving-an-ice-cream-fix/>.

57. *Id.*

58. DAVID A. KESSLER, *THE END OF OVEREATING* 25–29 (2009).

59. *See id.* at 223–26.

carbohydrates, particularly sugar and refined starches, leads to overweight and obesity in some people.⁶⁰ The current American diet is, on average, high in added sugars and low in fruits and vegetables. Current dietary recommendations are that women limit added sugars to six teaspoons (about 25 grams) per day, and men limit added sugars to nine teaspoons (about 37 grams) per day.⁶¹ Actual average sugar consumption is much higher. According to U.S. Department of Agriculture (USDA) estimates, the average person consumes 31 teaspoons of sugar per day.⁶²

Sugary soft drinks are a significant source of sugar in the American diet. Per capita consumption of sodas, sports drinks, and other sweetened beverages has increased steadily in the past few decades. "In 1980, when rates of obesity were just starting to rise, the U.S. food supply provided an average of 30 gallons of sugary soft drinks per capita, but the amount rose to 35 gallons in 2003."⁶³ Moreover, obesity researchers have evidence that beverages containing sugar and its accompanying calories do not appear to reduce the appetite for additional calories. In other words, calories that are eaten will usually trigger feelings of satiety in the eater, who will eat fewer calories as he feels full. Soft drinks do not appear to induce feelings of satiety. Experimental subjects given a sugared drink before a meal ate an equal or greater amount of calories at the meal compared to subjects who did not have the soft drink.⁶⁴ Researchers have also found that a genetic tendency to be overweight or obese appears to be more pronounced as intake of sugar-sweetened

60. Gary Taubes, *What Really Makes Us Fat*, N.Y. TIMES, June 30, 2012, http://www.nytimes.com/2012/07/01/opinion/sunday/what-really-makes-us-fat.html?_r=1.

61. Rachel K. Johnson et al., *Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement From the American Heart Association*, 120 CIRCULATION 1011, Table 5 (2009).

62. MARION NESTLE, WHAT TO EAT 484 (2007) (stating that of these 31 teaspoons, 14 are from sucrose and 17 are from corn syrups. This amounts to approximately 500 calories per day).

63. *Id.* at 481.

64. See, e.g., Matthias B. Schulze et al., *Sugar-Sweetened Beverages, Weight Gain, and Incidence of Type 2 Diabetes in Young and Middle-Aged Women*, 292 JAMA 927, 933 (2004).

beverages increases.⁶⁵

Sugar raises particularly vexing questions in obesity research because nutritional experts do not agree about the value of sugars in the diet. Some experts believe that a healthy diet can contain modest amounts of sugar, but caution that sugars have no nutritive value other than calories (120 per ounce), and that there is a risk that overeating sweets will cause people to cut back on healthier foods.⁶⁶ Other experts believe that added sugars are harmful even in modest amounts.⁶⁷

Nor do experts agree about the relative harms and merits of the different types of sugar. There are many dietary sugars, including glucose, sucrose, fructose, and lactose. "If an ingredient ends with 'syrup' or ' -ose,' it's a sugar; if it is honey or fruit concentrate, it is still sugar(s)."⁶⁸ The human digestive process ultimately breaks down all food into glucose, the simplest sugar, which is then used by cells for energy. Fructose is a sugar that occurs naturally in all fruits and many vegetables. A highly processed and concentrated form of fructose, high-fructose corn syrup (HFCS), is widely used in prepared foods of all sorts.⁶⁹ Other sugars are derived from various plant sources and are subjected to varying degrees of processing.⁷⁰ Some nutritionists maintain that all of these sugars are essentially the same from a nutritional viewpoint, while other nutritionists claim that the different forms of sugar are metabolized differently by the body.⁷¹

65. Qibin Qi et al., *Sugar-Sweetened Beverages and Genetic Risk of Obesity*, 367 *NEW ENG. J. MED.* 1387, 1393 (2012).

66. See, e.g., NESTLE, *supra* note 62, at 486.

67. See Gary Taubes, *Is Sugar Toxic?*, *N.Y. TIMES*, Apr. 17, 2011, at MM47.

68. NESTLE, *supra* note 62, at 502.

69. *Id.* at 488–93.

70. For example, white table sugar is sucrose: a form of sugar derived mainly from sugar cane and highly processed.

71. NESTLE, *supra* note 62, at 479, 481 ("In sucrose, the glucose and fructose sugars are stuck together. In high fructose corn syrup (HFCS) and other sweeteners made from corn, the glucose and fructose are separate. Because enzymes in the digestive tract quickly split sucrose into its constituent sugars, your body can hardly tell the difference."). *But see*, Dana Flavin, *Metabolic Danger of High-Fructose Corn Syrup*, *LIFE EXTENSION*, Dec. 2008, available at http://www.lef.org/magazine/mag2008/dec2008_Metabolic-Dangers-of-High-Fructose-Corn-Syrup_01.htm.

In recent years, much of the controversy has centered on HFCS, with some experts claiming that it is harmful to health.⁷² An examination of food trends reveals that as consumers turned to low-fat diets beginning in the 1980s, many food manufacturers substituted HFCS for fats to give prepared foods better flavor and texture, and to keep costs lower.⁷³ This usage was not limited to traditionally sweet foods such as cakes, cookies, soft drinks, and candies. In fact, HFCS can be found in almost any type of food, including breakfast cereals, frozen pizza, yogurt, salad dressings, and macaroni and cheese.⁷⁴ The increasing amounts of HFCS in the American diet over the past 50 years has corresponded with rising obesity rates over the same period, leading some to conclude that the two trends are causally linked.⁷⁵ Although not everyone agrees that HFCS is harmful if consumed in reasonable quantities as part of an otherwise healthy diet, public concern over HFCS has led some food manufacturers to reduce or eliminate its use in prepared foods.⁷⁶

Rather than demonizing HFCS, some experts maintain that *all* added sugars are harmful, and should be severely limited in the diet.⁷⁷ Sugars that occur naturally in fruits and vegetables are not problematic because this produce also includes fiber, vitamins, antioxidants, and enzymes, all of which support human nutrition and health. Although sugar had previously been suspected only of causing tooth decay and obesity, some researchers now link its consumption to Type 2 diabetes, heart

72. See Flavin, *supra* note 71.

73. See John S. White, *Straight Talk About High-Fructose Corn Syrup: What It Is and What It Ain't*, 88 AM. J. CLIN. NUTR. 1716S, 1716S (Supp. 2008) (explaining why HFCS was an economically sound replacement).

74. See *id.* at 488–93.

75. See Flavin, *supra* note 71.

76. Hunt's ketchup, Sara Lee products, Starbucks' pastry and Gatorade are just a few examples of foods now made without HFCS in response to consumer demand. Emily Bryson York, *Sara Lee Latest to Curtail Use of High-Fructose Corn Syrup*, CHI. TRIB., Aug. 17, 2010, http://articles.chicagotribune.com/2010-08-17/health/ct-biz-0817-corn-syrup-hfcs-20100816_1_high-fructose-corn-syrup-corn-refiners-association-capri-sun.

77. See Taubes, *supra* note 67.

disease, and cancer.⁷⁸ Moreover, sugar-linked risks of these diseases are thought to be a concern for normal-weight people, as well as for obese people.

There have also been suggestions that the American obesity epidemic is partly, or largely, due to American cultural customs concerning food, as well as an oversupply of cheap food, in general, and cheap processed food, in particular.⁷⁹ Practices such as eating alone or on the run, eating many restaurant meals as opposed to cooking at home, increased snacking and increased consumption of fast foods, and highly processed foods for home consumption are more widespread in the United States than in other countries with lower rates of obesity. Research in this area is ongoing, and has yielded interesting but sometimes conflicting results.

For example, it has been suggested that the easy availability of fast food has encouraged greater consumption of unhealthy meals. However, the research shows otherwise: in one recent study, the researchers concluded that ready availability of fast food outlets did *not* increase the number of fast food meals per week consumed by neighborhood residents.⁸⁰ On the other hand, the larger portion sizes offered by most American restaurants probably contributes to the ingestion of excess calories, since studies have demonstrated a link between consumption levels and portion sizes.⁸¹

Medical science has not yet found a reliable cure for obesity; and, even the traditional advice to cut calories and increase exercise does not result in long-term success for many people. For one thing, reducing calories appears to slow metabolism in a way that makes weight reduction difficult.⁸² For another thing,

78. *See id.*

79. *See generally* Dreifus, *supra* note 54.

80. Andrea S. Richardson et al., *Neighborhood Fast Food Restaurants and Fast Food Consumption: A National Study*, 11 BMC PUB. HEALTH 543, 546 (2011).

81. NESTLE, *supra* note 62, at 767–69.

82. Barbara Rolls & Robert A. Barnett, THE VOLUMETRICS WEIGHT-CONTROL PLAN 30 (2005).

it's not clear whether exercise programs help.⁸³ However, the good news is that there is evidence that even modest weight loss or a slight increase in physical activity can result in health improvements.⁸⁴

Ultimately, there are many unanswered questions about obesity, and the uncertainties of the scientific studies to date complicate social reactions to and legal rules concerning obese persons. The age-old assumption that obesity is merely a lifestyle choice makes it easier to rationalize the harsh moral judgments and paucity of legal remedies currently seen in our society. Yet scientific research suggesting complicated causes and uncertain cures for obesity make social rejection even more troubling and legal solutions more necessary.

III. THE SOCIAL EFFECTS OF OBESITY

A. STIGMA

Physical health and mobility issues are not the only harms to befall obese adults. There are also numerous undesirable psychosocial consequences, including stigma, negative stereotyping, discrimination, low self-esteem, social marginalization, and depression.⁸⁵ For example, obese adults face discrimination in employment settings.⁸⁶ Modern American society is very focused on physical appearance, and individuals who do not have an ideal body type can be subjected to harsh judgments. Although the nation is hardly prejudice free in areas

83. See, e.g., Gretchen Reynolds, *Do Exercise Programs Help Children Stay Fit?*, N.Y. TIMES WELL BLOGS (Oct. 3, 2012, 12:01 AM), <http://well.blogs.nytimes.com/2012/10/03/do-exercise-programs-help-children-stay-fit/> (citing research suggesting that physical fitness programs for children do not necessarily increase their overall activity or fitness levels).

84. See, e.g., F. Pasanisi et al., *Benefits of Sustained Moderate Weight Loss in Obesity*, 11 NUTR. METAB. CARDIOVASC. DIS. 401, (2001); Chi Pang Wen et al., *Minimum Amount of Physical Activity for Reduced Mortality and Extended Life Expectancy: A Prospective Cohort Study*, 378 LANCET 1244, 1249 (2011).

85. COMM. ON ACCELERATING PROGRESS, *supra* note 1, at 35.

86. *Id.* at 35. See also Christina Wilkie, *Obesity Discrimination on the Job Provokes Dispute Over Best Remedy*, HUFFINGTON POST (Oct. 4, 2012), http://www.huffingtonpost.com/2012/10/04/obesity-discrimination_n_1939385.html.

such as race, religion, or ethnicity, notions of political correctness inhibit at least *some* cruel verbal or print attacks in these contexts. This is not the case with obesity, which is still regarded as an acceptable form of prejudice by many.⁸⁷

Obese people report that even simple outings to the grocery store or attendance at school can be occasions for ridicule, or worse. Total strangers will offer advice or criticism. Students may be harassed by other students or even teachers at schools. Sahale A. Flanagan's paper on prejudice towards obesity cites the example of "Pamela," a morbidly obese high school student who was verbally attacked, pushed down stairs, and ridiculed by fellow students while teachers stood by, doing nothing.⁸⁸ On one occasion, several boys followed her home and attacked her with mace. She had to transfer to a special high school to avoid the abuse, and she later had successful bariatric surgery to enable her to lose weight and maintain the weight loss.

Numerous normal-weight individuals have donned fat suits, and then written accounts of the reactions of people around them. For example, a therapist at an eating disorders clinic routinely donned a fat suit to give school presentations about body image.⁸⁹ While in her "fat" persona she typically had difficulty capturing the attention of her audience. When she left the room and returned sans fat suit, the resulting change in audience perceptions led to a discussion about body image and prejudice. In another article, a slim woman donned a fat suit for one week in order to write an article for a popular women's magazine.⁹⁰ In some circumstances, people treated her with

87. See, e.g., Sahale A. Flanagan, *Obesity: The Last Bastion of Prejudice*, 6 OBESITY SURGERY 430 (1996).

88. *Id.*

89. Ian Parker, *Thy Neighbor's Fat Suit*, THE NEW YORKER, July 16, 2001, available at http://www.newyorker.com/archive/2001/07/16/010716ta_TALK_COSTUME_DEPT.

90. Leslie Lampert, *Fat Like Me*, LADIES' HOME JOURNAL, May 1993, at 154, 154–55. Nor is the problem limited to America. One article in Great Britain's *Daily Mail* newspaper recounts how reporter, Kate Faithfull, attended London fashion week while wearing a fat suit that made her appear to weigh 250 pounds. She experienced dirty looks, whispers and even meant-to-be-overheard comments like this one as she approached the champagne bar: "She's taking on more calories? Oh

open contempt: laughter, dirty looks, and nasty comments were typical. In other circumstances, she felt invisible, as people ignored her. By the middle of the week she felt depressed, angry, and hungry.

In addition to being the target of derogatory comments and judgmental attitudes, obese people may experience more overt forms of discrimination due to their weight, and this discrimination may take various forms. In some cases, obese individuals may be required to do something, such as pay a higher fare or purchase two seats on an airplane.⁹¹ In other cases, generally applicable standards may result in differential treatment for someone who is obese. For example, employee wellness programs could result in discrimination against overweight employees, who may be viewed as “choosing” unhealthy behaviors. There are also situations where obese people are the objects of blatant discrimination, as in situations where people are not hired – or are fired – because of their obesity.⁹² In addition, it is widely recognized that there is a great deal of social bias against individuals who are obese: this may result in lost opportunities of various kinds.⁹³

Studies have shown that the prejudice against fat people is deep-seated and widespread, even occurring among people who ought to know better. In one study, doctors were found to have similar levels of bias against fat people as the general public.⁹⁴ Many people associate negative stereotypes such as “lazy” or

my God.” Kate Faithfull, *What Happened When We Sent a ‘Fattie’ to London Fashion Week? Kate Faithfull Reports Back on Her Week on the Fatwalk*, DAILY MAIL (Mar. 3, 2009), <http://www.dailymail.co.uk/femail/article-1155735/What-happened-sent-fattie-London-Fashion-Week-Kate-Faithfull-reports-week-fatwalk.html>.

91. Mary Jane Credeur, *United Air to Charge Obese Fliers Twice on Full Jets (Update2)*, BLOOMBERG (Apr. 15, 2009), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ajtmQ7v86kyg&refer=home>.

92. See *infra* Part IV.A.

93. See, e.g., Harriet Brown, *For Obese People, Prejudice in Plain Sight*, N.Y. TIMES, Mar. 16, 2010, at D6 (reporting that Dr. Delos Cosgrove, Chief Administrator of the Cleveland Clinic, has been quoted as saying that if he could get away with it, he would never hire an obese person).

94. Trevor Stokes, *Doctors Biased Against Fat Patients, Study Finds*, NBC NEWS (Jan. 20, 2013, 1:09 PM), http://vitals.nbcnews.com/_news/2012/11/07/15002901-doctors-biased-against-fat-patients-study-finds?lite.

“ugly” with overweight people.⁹⁵

There have been some organized efforts to counter social prejudice. For decades, the National Association to Advance Fat Acceptance (NAAFA) has worked to encourage health and social acceptance for people of all sizes.⁹⁶ NAAFA endeavors to use advocacy, education, and support to reduce discrimination against people who are overweight or obese according to conventional measures.⁹⁷ Some academics have developed courses and scholarly agendas (analogous to women’s studies or minority studies) to reduce and educate students about discrimination.⁹⁸ Despite these efforts, much work needs to be done before obese people can move beyond current prejudices.

B. JOB DISCRIMINATION

Job discrimination comes in many forms and many of them do not have legal remedies. However, it is worth noting that the social prejudices described above often play out in the job environment, to the detriment of everyone. One type of discrimination may occur if the job has certain image or appearance requirements and an obese applicant does not meet them. Modeling is an obvious example of a job for which the obese (and normal weight persons for that matter) need not apply.⁹⁹ Other jobs may have height or weight requirements that are theoretically tied to job performance, such as a requirement that flight attendants be slender enough to fit into cramped quarters on an aircraft. More problematic are cases where a candidate is simply not chosen, not promoted, or criticized, possibly because of some of the social judgments

95. *Negative Attitudes Toward Fat Bodies Going Global, Study Finds*, SCIENCE DAILY (Mar. 29, 2011), <http://www.sciencedaily.com/releases/2011/03/110328171226.htm>.

96. NATIONAL ASSOCIATION TO ADVANCE FAT ACCEPTANCE, <http://www.naafaonline.com/dev2/index.html> (last visited May 10, 2013).

97. *See id.*

98. *A Weighty Issue*, OREGON STATE UNIVERSITY, <http://oregonstate.edu/cla/weighty-issue> (last visited May 15, 2013).

99. Except, of course, for plus-size models modeling plus-size fashions.

made consciously or unconsciously about people who are heavy.¹⁰⁰ Prejudice like this may be partly veiled even to a person harboring it, and this makes remedies almost impossible.

IV. OBESITY AND THE LAW

It is not possible to legislate social attitudes or cultural beliefs about obesity, but there are at least three areas where laws address some aspects of the obesity problem. In two areas – job discrimination and treatment costs – laws may partly protect obese people from the harsh consequences of discriminatory treatment. In the third area – product content, labeling, and marketing – the law endeavors to create an environment that helps obese people become healthier (if not actually thinner), as well as an environment that slows or prevents excess weight gain in people of normal weight.

A. DEALING WITH JOB DISCRIMINATION

There are no federal laws and very few state laws that prohibit general discrimination based on obesity; but, obese individuals who believe that they have been subject to weight-based discrimination can sometimes bring successful claims under either the Rehabilitation Act of 1973 or the Americans with Disabilities Act (ADA).¹⁰¹ Analysis and application of these laws is complicated, and a complete discussion is beyond the scope of this article. Nonetheless, a brief summary of employment discrimination rules as applied to obese employees serves to illustrate how difficult it is to achieve adequate

100. A recent example is La Crosse, Wisconsin news anchor Jennifer Livingston, who received an email from a viewer who criticized her weight and castigated her for being a poor role model who should instead lose weight and use her on-air presence to promote a healthy lifestyle. Katherine Fung, *Jennifer Livingston, TV Anchor, Responds to Viewer's Attack on Her Weight*, HUFFINGTON POST (Oct. 2, 2012, 1:23 PM), http://www.huffingtonpost.com/2012/10/02/jennifer-livingston-anchor-obesity-letter_n_1932869.html.

101. *Weight Discrimination and the Law*, YALE RUDD CTR. FOR FOOD POLICY & OBESITY, http://yaleruddcenter.org/what_we_do.aspx?id=206 (last visited May 10, 2013).

remedies in this area.

First of all, the scope of each law is different: the earlier Rehabilitation Act prohibits disability-based discrimination in public sector jobs, while the ADA prohibits disability-based discrimination in private employment, as well as in services or accommodations, whether offered by private or public entities.¹⁰² Second, the terminology of the two Acts is somewhat different. The Rehabilitation Act uses the term “handicapped,”¹⁰³ while the ADA uses the term “disability;”¹⁰⁴ however, the definitions are the same. “Congress selected the term ‘disability’ for the ADA rather than ‘handicap’ as used in the Rehabilitation Act, not because of any difference in meaning, but because the former term is less stigmatizing to disabled persons.”¹⁰⁵

Both acts are meant to protect disabled individuals from unjustified differential treatment but do not prohibit different treatment in situations where a person’s disability prevents certain activities or causes danger to the disabled person or others. However, if the job or activity could be made safe and possible with “reasonable accommodation”¹⁰⁶ by the provider or employer, failure to provide the job or service with accompanying accommodation is a violation of the law.¹⁰⁷ Thus, refusal to hire a blind person as an airline pilot does not violate the law, but refusal to hire a wheelchair-bound person as a sales associate might well be a violation.¹⁰⁸

In order to win a discrimination case, the plaintiff has to prove either that she has a disability as defined by the ADA, or

102. JENNIFER STAMAN, CONG. RESEARCH SERV., RS 22609, OBESITY DISCRIMINATION AND THE AMERICANS WITH DISABILITIES ACT CRS-2 (2007).

103. 29 U.S.C. § 701 (2013).

104. 42 U.S.C. § 12102 (2013).

105. *Smaw v. Va. Dep’t of State Police*, 862 F. Supp. 1469, 1474 (E.D. Va. 1994) (citing S. REP. NO. 101-116, at 2 (1989)).

106. 42 U.S.C. § 1211(9) (2013).

107. 42 U.S.C. § 12112(b)(5) (2013).

108. For example, an employer could claim that the person could not reach the cash register from his wheelchair, but a reasonable accommodation, like a lower counter, might make the job easily doable.

that the employer perceived her as having such a disability.¹⁰⁹

The ADA defines 'disability' with respect to an individual as (A) a physical or mental impairment that substantially limits one or more of the major life activities of such individual [such as walking, or working]; (B) a record of such an impairment; or (C) being regarded as having such an impairment.¹¹⁰

Section 504 of the Rehabilitation Act of 1973 uses the same standards as the ADA for determining whether employment discrimination has occurred, and prohibits discrimination against qualified individuals solely on the basis of disability.¹¹¹

The threshold issue for an obese employee making a claim is whether obesity is a disability under the law. The answer to this question is still not entirely clear. Although ADA regulations state that obesity will rarely, if ever, be considered a disabling impairment, the Equal Employment Opportunity Commission (EEOC) has stated that extreme obesity, where body weight is 100 percent or more above normal, is an impairment, as is a physiological disorder that causes obesity.¹¹² As an informal EEOC opinion makes clear, if a severely obese employee's condition makes him incapable of performing essential job duties, firing or refusal to hire are not violations of the ADA – a violation occurs only when a qualified employee is excluded because of his obesity even though he is capable of performing the job.¹¹³

It is also important to distinguish various issues that may be raised by obese individuals. In some cases, individuals claim that they were denied employment, fired, or demoted because of obesity. In some of these cases employees claim their obesity as a disability. In others they claim their employer perceived them to have a disability that would impede job performance. In the

109. STAMAN, *supra* note 102, at CRS-2.

110. *Id.* (citing 42 U.S.C. § 12101).

111. *Id.* at CRS-3.

112. *Id.* (citing EEOC 915.002 at 8 (1995)).

113. See Informal Discussion Letter from Reed L. Russell, Legal Counsel of EEOC, ADA: Disability-Related Inquiries; Hiring (Mar. 31, 2008), available at http://www.eeoc.gov/eeoc/foia/letters/2008/ada_disability_hiring.html.

second case, the employee may or may not concede that obesity is a disability, but in any event he claims either that his weight did not adversely impact his job performance or that it would not have impeded job performance if only the employer had offered reasonable accommodation to facilitate performance.

Courts are split over whether the Rehabilitation Act or the ADA apply to any, or all, of these obesity-related scenarios, and courts that recognize a potential cause of action under these acts do not necessarily hold in the employee's favor in particular situations.¹¹⁴ Much of the ambivalence, no doubt, comes from uncertainty about both the physical effects of severe obesity (and whether it substantially interferes with major life activities) as well as uncertainty about to what extent obesity is a lifestyle choice or failure of willpower. Some representative cases illustrate these principles and the inconsistency of their interpretation from one court to another.

In *Cook v. Rhode Island Department of Mental Health*, 10 F.3d 17 (1st Cir. 1993), an early case addressing a claim of employment discrimination based on obesity, the First Circuit Court of Appeals held that a qualified employee was unlawfully denied employment because a state institution refused to hire her on account of a perceived disability.¹¹⁵ In fact, the employee, who weighed 320 pounds at five feet two inches in height, had previously held the refused position and was qualified to perform the job. The court noted that she had an actual physical impairment, and this would entitle her to prevail on the actual as well as perceived disability theory.¹¹⁶ The court also found that the Rehabilitation Act did not disqualify a discrimination claim in the event that the condition (obesity) was allegedly "mutable" and "voluntary."¹¹⁷

114. *Weight Discrimination and the Law*, YALE RUDD CTR. FOR FOOD POL'Y & OBESITY, (last visited Apr. 17, 2013), http://www.yaleruddcenter.org/what_we_do.aspx?id=206.

115. See *Cook v. Rhode Island Dep't of Mental Health, Retardation & Hospitals*, 10 F.3d 17 (1st Cir. 1993).

116. STAMAN, *supra* note 102, at CRS-4.

117. *Id.*

In *Cook*, the court implicitly rejected the notion that the plaintiff's willpower or personal choices were relevant to the legal claim. However, some courts have required plaintiffs to prove that the obesity was the result of a specific medical condition before it would be recognized as a disability for job discrimination purposes. For example, in *Francis v. City of Meriden*, 129 F.3d 281 (2nd Cir. 1997), the Second Circuit Court of Appeals stated that obesity was not an impairment within the meaning of the Rehabilitation Act or the ADA, "except in special cases where obesity relates to a physiological disorder."¹¹⁸

Even if a court recognizes obesity as a disability in theory, an employee claiming job discrimination must establish that *his own* weight problem substantially interfered with major life activities. An illustration of this principle can be found in a 2012 case, *Lescoc v. Pennsylvania Department of Corrections—SCI Frackville*, 464 F. App'x 50 (3d Cir. 2012), where the Third Circuit Court of Appeals affirmed summary judgment in favor of an employer on both the actual disability and perceived disability prongs of the ADA.¹¹⁹ The employee, who was five feet seven inches tall and weighed approximately 300 pounds, worked as a Corrections Officer Trainee for several months until he resigned. Throughout his brief employment, his performance evaluations went from "satisfactory" to "needs improvement" to "unsatisfactory." The former employee claimed that his obesity caused mild lower back and foot pain, but because he was not permitted to sit during the workday he had difficulty performing all of his job duties. The appellate court upheld the lower court's conclusions that the employee was neither disabled under the ADA nor regarded as disabled by his former employer, and that no reasonable accommodation was required

118. *Francis v. City of Meriden*, 129 F.3d 281, 286 (2nd Cir. 1997). *Francis*, a firefighter, had been disciplined for failure to comply with department weight requirements. His maximum acceptable weight for the job was 188 pounds, while his weight ranged from 217 and 247 pounds. His claim failed.

119. *Lescoc v. Pa. Dep't. of Corr. – SCI Frackville*, 464 F. App'x 50, 53–54 (3d Cir. 2012).

under the act.¹²⁰ The appellate court agreed with the lower court's conclusion that the employee "did not establish any major life activities that were adversely affected by his weight."¹²¹ Moreover, the court noted a lack of "any evidence that the Appellee treated Lescoe differently from any other employee."¹²²

The current trend appears to be moving towards consistently recognizing severe obesity as a disability, even if there is no proof of an underlying genetic disorder. For example, in another recent employment case, the court held that severe obesity was a disability and that the plaintiff did not need to prove the underlying cause of her obesity.¹²³ The employee, Lisa Harrison, weighed more than 400 pounds at the time she was hired to oversee a day care program for the children of mothers staying in a Louisiana drug treatment facility. When her employment was terminated almost eight years later, Harrison weighed 527 pounds. Approximately a year before her firing, Harrison had been rated as excellent in three out of seven evaluation categories. She denied having a disability, but claimed that her former employer had perceived her as having a disability and had, therefore, discriminated against her. Harrison died two years after her firing, and the EEOC brought suit on behalf of her estate.¹²⁴ The court granted summary judgment that Harrison was a qualified individual with a disability under the ADA, noting that severe obesity is an impairment under the ADA and that, in any case, she was

120. *Id.* The employee also claimed that he was subjected to a hostile work environment due to jokes and derogatory comments about his obesity; the court upheld summary judgment against this claim as well.

121. *Id.* at 53.

122. *Id.* at 54.

123. U.S. Equal Opportunity Comm'n v. Res. For Human Dev., No. 2:10CV03322, 2012 U.S. Dist. LEXIS 26749, at *11 (E. D. La. Feb. 29, 2012). *See also* Press Release, EEOC, Res. for Human Dev. Settles EEOC Disability Suit for \$125,000 (Apr. 10, 2012) (available at <http://www.eeoc.gov/eeoc/newsroom/release/4-10-12a.cfm>).

124. Her death certificate cited "morbid obesity" as her official cause of death and listed hypertension, diabetes, and congestive heart failure as other significant contributing conditions.

actually disabled because of resulting cardiac problems and diabetes. The court left other significant issues for trial, specifically the cause of her termination and whether her former employer regarded her as substantially limited in her daily activities.

Sometimes, disability claims result not from denial of employment or firing, but because of undesired treatment by an employer, such as when an obese worker is transferred to a different job within the company because management believes that her weight is an impediment to the performance of job duties. For example, in *Smaw v. Virginia Department of State Police*, 862 F. Supp. 1469 (E.D. Va. 1994), an overweight state trooper was transferred to a desk job because her superiors believed her weight would not allow her to protect herself or pursue suspects.¹²⁵ In fact, Smaw's weight had exceeded guidelines for troopers at the time of her hire, and she was hired with the understanding that she would thereafter lose weight to comply with department maximum weight guidelines.¹²⁶ However, she was never successful in her weight loss efforts and, after nine years of employment, she was terminated as a trooper but allowed to remain employed as a dispatcher.¹²⁷ Smaw brought claims under both the Rehabilitation Act and the ADA, and she invoked both the actual disability and the perceived disability theories.¹²⁸

In examining Smaw's claim that she had an actual disability because she was obese, the court noted that although it was not clear whether "simple obesity" is a physical impairment, it could potentially be a disability if it interfered with work, which constitutes a "major life activity."¹²⁹ However, the court went on to note that the fact "that the regulations define major life activity to include working does not necessarily mean working

125. *Smaw v. Va. Dep't of State Police*, 862 F. Supp. 1469, 1471 (E. D. Va. 1994).

126. *Id.*

127. *Id.*

128. *Id.* at 1470, 1472.

129. *Id.* at 1472-73.

at the job of one's choice."¹³⁰ Even in a "perceived disability" case, "the employer must regard the individual's disability as the type that would defeat many or all kinds of employment."¹³¹ The court concluded that Smaw was not eligible for protection under the ADA or the Rehabilitation act, noting that "[e]ven assuming that Smaw's obesity is a physical impairment . . . which substantially limits her ability to pursue employment . . . there is no indication that her employer perceived it as such."¹³² In other words, Smaw could not prove that she was either "handicapped" or "disabled" as required for Rehabilitation Act or ADA protection.¹³³

As the above cases illustrate, the law remains somewhat unsettled on how to address obesity in a job environment. At least some of the differential treatment experienced by overweight and obese adults is difficult to prove and possibly legal, even in employment contexts.

B. PAYMENT OF OBESITY AND OBESITY PREVENTION COSTS

Obesity can cause increased health costs because it causes or exacerbates certain diseases that are themselves costly to manage, or because treatments designed to reduce weight or prevent further weight gain are expensive. Health costs for diseases thought to be caused or aggravated by obesity (such as Type 2 diabetes or heart disease) are covered to the same extent as any other disease under private insurance plans or government plans such as Medicare or Medicaid.¹³⁴ However, devices or treatments tied directly to obesity are not necessarily covered, and coverage is somewhat inconsistent from program to program and from state to state.¹³⁵ A recent survey of state

130. *Id.* at 1473.

131. *Smaw v. Va. Dep't of State Police*, 862 F. Supp. 1469, 1473 (E. D. Va. 1994).

132. *Id.* at 1475.

133. *Id.*

134. UNITEDHEALTHCARE, POLICY NO. O-001, OBESITY – TREATMENT OF OBESITY 1 (2006).

135. *See generally* GEORGE WASH. UNIV., MEDICAID FEE-FOR-SERVICE TREATMENT OF OBESITY INTERVENTIONS (2012 Update), available at <http://www.stopobesity>

Medicaid coverage revealed that no state covers all obesity-related treatments.¹³⁶ While only a handful of states cover all obesity-related preventive care or nutritional consultations, 44 states cover bariatric surgery.¹³⁷ Obesity drug coverage is offered by only a dozen states, while over 30 states explicitly *preclude* drug coverage.¹³⁸

Medicare will cover obesity screening and counseling for patients with a BMI of 30 or over.¹³⁹ Medicare will also cover weight loss programs if weight loss is necessary for the treatment of another disease, such as diabetes or high blood pressure.¹⁴⁰ Since January 2009, the coverage for prevention or treatment services, such as individual counseling, has been increased, at least for some individuals.¹⁴¹ Under current guidelines, Medicare will pay for one face-to-face visit per week for one month, and one visit every other week for the next five months.¹⁴² An additional six months of once a month face-to-face visits will also be covered if, at the six-month visit, the beneficiary has lost at least three kilograms during those first six months of intensive therapy.¹⁴³

Coverage under private insurance plans will obviously vary widely; however, state insurance laws typically mandate specific types of preventive or treatment services for various conditions, including obesity. According to a survey by The George Washington University, all states mandate that insurance

alliance.org/wp-content/assets/2012/09/2012-Medicaid-Fee-For-Service-State-Charts_final1.pdf.

136. *Id.* at 2.

137. *Id.* at 4.

138. *Id.*

139. See *Your Medicare Coverage*, MEDICARE.GOV, <http://www.medicare.gov/coverage/obesity-screening-and-counseling.html> (last visited May 15, 2013).

140. See *Obesity and Weight Loss Coverage*, MEDICARE.GOV, <http://www.medicare.gov/coverage/obesity-screening-and-counseling.html> (last visited May 15, 2013).

141. CTRS. FOR MEDICARE & MEDICAID SERVS., CAG-00423N, FINAL COVERAGE MEMORANDUM FOR INTENSIVE BEHAVIORAL THERAPY FOR OBESITY 26 (2011).

142. *Id.* at 5.

143. *Id.*

issuance or renewal cannot be denied on the basis of obesity.¹⁴⁴ However, only a handful of states require coverage of obesity prevention or treatment services, including bariatric surgery.¹⁴⁵

C. REGULATING LABELS AND MARKETING

1. LABELS

Achieving or maintaining a healthy weight requires healthy eating, and consumers need accurate information about the foods in their diet in order to make good food choices. Foods such as fresh vegetables, fresh fruits, and fresh meats or fish need minimal – if any – labeling since their composition is obvious. However, the typical American diet includes many foods that are highly processed, and many of these products include a multiplicity of ingredients. Labeling these products with accurate ingredient information is important for several reasons, including giving notice of potential allergens to consumers, giving information that helps consumers choose a balanced diet replete with essential nutrients, and giving content information that makes it possible for people to regulate their food intake so as to advance health and control chronic conditions like diabetes or obesity.

The Food and Drug Administration (FDA) oversees food labeling, and promulgates rules about what information must be included on packaging and what claims cannot be included. Currently, nutrition labeling is included in a box that lists calories per serving, grams of fat, protein, carbohydrates and sugars per serving, and percentages of the minimum recommended daily allowances of various vitamins and minerals.¹⁴⁶ The label must also include a complete list of

144. See GEORGE WASH. UNIV. DEPT OF HEALTH POLICY, OBESITY & HEALTH-STATUS MANDATES FOR PRIVATE INSURANCE: 50 STATE AND DISTRICT OF COLUMBIA SURVEY (n.d.), available at <http://sphhs.gwu.edu/departments/healthpolicy/pdf/Obesity%20&%20Health-Status%20Mandates%20for%20Private%20Insurance.pdf>.

145. See *id.*

146. See *How to Understand and Use the Nutrition Facts Label*, U.S. FOOD & DRUG ADMIN., <http://www.fda.gov/Food/IngredientsPackagingLabeling/>

ingredients, which must be listed in order of their predominance by weight, meaning that the ingredients comprising the highest percentage of the total product must be listed first.¹⁴⁷ These ingredients must be listed by their specific or common names, for clarity.¹⁴⁸ Food manufacturers are also required to clearly label so as to place consumers on notice if a product contains one of the eight most common food allergens: milk, eggs, peanuts, tree nuts, fish, shellfish, soy, and wheat.¹⁴⁹

The FDA restricts the use of health claims, nutrient content claims, and structure/function claims on labels.¹⁵⁰ Only claims that are backed by scientific evidence and have been evaluated as accurate by the FDA may appear without qualification on labels: product health claims not meeting these criteria must appear with qualifying language.¹⁵¹ The FDA also restricts the use of certain terms on labels, such as “low sodium,” “lite,” “healthy,” “natural flavor,” or “reduced fat.”¹⁵² It is important to remember that despite enforcement efforts, food manufacturers often resort to product puffery, which blurs the line of accurate labeling, and thus it is important for consumers to be informed and aware.

Several food and nutrition experts maintain that while current labeling practices are better than nothing, improvements are necessary if food labeling is to provide useful and accessible information that can be readily utilized to achieve a nutritious diet that helps the eater maintain a healthy weight. Food writer Mark Bittman has suggested a “traffic light” label, with foods earning red, yellow, or green lights based on ratings for nutrition, foodness (“how close the product is to real food”), and

LabelingNutrition/ucm274593.htm (last updated Mar. 2, 2013).

147. 21 C.F.R. § 101.4(a)(1) (2013).

148. 21 C.F.R. § 101.4(b)(2)(i) (2013).

149. *Food Allergies: Understanding food labels*, MAYO CLINIC (Jan. 4, 2011), <http://www.mayoclinic.com/health/food-allergies/AA00057>.

150. *Claims That Can Be Made for Conventional Foods and Dietary Supplements*, U.S. FOOD & DRUG ADMIN. (Sept. 2003), <http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm111447.htm>.

151. *See id.*

152. *See* 21 C.F.R. § 101.13 (2012). *See also* 21 C.F.R. § 101.22 (2012).

welfare (which “would include the treatment of workers, animals and the earth”).¹⁵³ Similarly, the Institute of Medicine of the National Academies has proposed uniform nutrition labeling based on a point system.¹⁵⁴ Other improvements in labeling could include requiring bigger print, listing more realistic portion sizes, or giving information about the types of sugars that are found in a given product.

Print size is a relevant issue for elderly consumers, since near vision declines as people age, making small print difficult to read.¹⁵⁵ In addition, more serious vision problems, such as cataracts, macular degeneration, or vision impairment caused by glaucoma, may make reading tiny print on a food label virtually impossible.¹⁵⁶

The issue of listing calories per portion in a consumer-friendly way has generated significant discussion. Nutritionists point out that the food portion listed on the package is often not a realistic estimate of how much the average person eats at one sitting.¹⁵⁷ For example, a 20-ounce soft drink bottle typically lists the calories per eight-ounce portion, and discloses that there are two and a half servings in each bottle. Consumers, on the other hand, routinely view the 20-ounce bottle as a single serving, and are likely to consume it in one sitting. Moreover, they may be misled; thinking that if a portion is 100 calories then the bottle contains only 100 calories, instead of the 250 calories that it likely contains.

153. Mark Bittman, Op-Ed., *My Dream Food Label*, N.Y. TIMES, Oct. 14, 2012, at SR6.

154. INST. OF MED. OF THE NAT’L ACADS., REPORT BRIEF, FRONT-OF-PACKAGE NUTRITION RATING SYSTEMS AND SYMBOLS (2011), available at <http://www.iom.edu/~media/Files/Report%20Files/2011/Front-of-Package-Nutrition-Rating-Systems-and-Symbols-Promoting-Healthier-Choices/frontofpackagereportbriefornap.pdf>

155. David Zacks, *Why Does Eyesight Deteriorate With Age?*, SCIENTIFIC AM., Jan. 9, 2006, <http://www.scientificamerican.com/article.cfm?id=why-does-eyesight-deterio>.

156. *Id.*

157. See e.g., *How to Avoid Portion Size Pitfalls To Help Manage Your Weight*, CDC.GOV, http://www.cdc.gov/healthyweight/healthy_eating/portion_size.html (last visited May 15, 2013).

It might also be useful to give more information about the amount and type of sugar contained in a product, at least if the experts who claim that some sugars are healthier than others are correct. Although current labeling requirements described above require food manufacturers to list the grams of sugar per serving, compliance with current regulations does not require a distinction between sugars that occur naturally in the food, and those sugars that are added. So, for example, a serving of breakfast cereal might contain seven grams of sugar, some of which occur naturally in the rice, wheat, or oats and some of which is added during processing, but the consumer will not be informed about the source of the sugars under current practices.

2. *MARKETING REGULATION*

There are other potential areas for government regulation aimed at making it easier for consumers to make healthy dietary selections. Various tactics that have been suggested and tried in some places include requiring restaurants to post calories for dishes on their menus, restricting product placement for sweet or processed foods (such as restricting soft drink sales in schools), and limiting portion sizes. In a recent effort to address the obesity epidemic, New York City passed an ordinance banning the sale of individual serving drinks larger than 16 ounces.¹⁵⁸ Though it was ultimately struck down, there continues to be a storm of controversy over it.

Opponents of the regulation argue that adults have a right to choose their own foods and beverages without government interference. These people also believe that people should be persuaded through education, rather than coercion, to drink fewer sugar-sweetened drinks.¹⁵⁹ Further, they argue that individuals who want to drink sugary beverages will simply

158. Erin Durkin, *Judge Halts Bloomberg's Large Soda Ban One Day Before It's Set to go Into Effect*, N.Y. DAILY NEWS, Mar. 11, 2013, <http://www.nydailynews.com/new-york/bloomberg-soda-ban-national-article-1.1285235>.

159. Jane E. Brody, *In Fighting Obesity, Drink Sizes Matter*, N.Y. TIMES, Oct. 23, 2012, at D7.

substitute other sugary options, so the regulation will not achieve the goal of increasing healthy eating.¹⁶⁰ Proponents of limiting drink size argue that education is not enough: ending the obesity epidemic requires creating a “food environment” that does not encourage excess consumption of sugary drinks.¹⁶¹ Some have argued for even greater regulation of sugary beverages, such as a beverage tax on sugar-sweetened beverages.¹⁶² Whatever the outcome of this particular controversy, it is clear that public debate on the merits of sugar, as well as the merits of government food regulation, will continue for the foreseeable future.

V. CONCLUSION: WHERE DO WE GO FROM HERE?

A. LEGAL AND SOCIAL REFORMS

Product marketing restrictions (like the large soft drink ban in New York) or taxes on foods high in calories but having little nutritional value are two possible ways to try to influence the way Americans eat. However, in a diverse society that values individual choice and freedoms, these measures may encounter substantial resistance.

On the other hand, continued efforts at public education may have better results. The information presented needs to be simple and unambiguous. As discussed above, advice to eat more fruits and vegetables but less junk food is useful and easily understood. Complicated advice on the percentages of certain nutrients that should comprise the daily diet is less user-friendly.

Diet advice is not useful unless it is clear how it can be implemented. A person attempting to eat more fruits and

160. David R. Just et al., *Regulation of Sugar-Sweetened Beverages*, 367 *NEW ENG. J. MED.* 1464, 1465 (2012).

161. *Id.*

162. See e.g., Mark Bittman, *A Cardiologist Makes the Case for Taxing Soda*, *N.Y. TIMES*, Oct. 10, 2012, <http://bittman.blogs.nytimes.com/2012/10/10/a-cardiologist-makes-the-case-for-taxing-soda/>.

vegetables should not fall prey to food packaging claims that Soda X is healthy because it contains trace amounts of fruit juice that has been stripped of all nutritional value. Government agencies like the FDA can insist on more accurate and user-friendly information on labels and in advertising. Labels with larger lettering or color-coding, such as suggested by food writer Mark Bittman, would be a good place to start. Nor should public policy focus only on food: exercise is an important component of a healthy life. Employers, community designers, and citizens need to work to incorporate physical activity into everyday life. Sidewalks in suburban or rural communities and standing desks in offices are two examples of changes that could result in big changes for the individuals using them.

Despite excellent efforts, there are likely to always be some people who are at risk for obesity. Private insurance and government health providers, like Medicare and Medicaid, should continue to review preventative and treatment services to help in the prevention and treatment of overweight and obesity. Just as some employee health plans offer premium discounts to employees who participate in wellness programs, other health payers could offer incentives to patients who complete nutrition classes or exercise programs.

B. INDIVIDUAL ACTION

Given the substantial scientific uncertainties surrounding obesity and the wide variety of food available at all times and places in the United States, ultimately the individual consumer needs to take action to become food and health savvy. There is a plethora of scientific information available to consumers that can enable them to avoid obesity through eating healthfully and being physically active. Although people often complain that experts give confusing or conflicting advice over time, the bottom line has been remarkably consistent for over 50 years. Marion Nestle sums it up this way: "The basic principles of good diets are so simple that I can summarize them in just ten words: *eat less, move more, eat lots of fruits and vegetables*. For additional

clarification, a five-word modifier helps: *go easy on junk foods.*"¹⁶³ Similarly, food reporter Michael Pollan advises his readers, "[e]at food. Not too much. Mostly plants."¹⁶⁴

Research has shown that staying on a diet and maintaining weight loss are difficult, and many people do not achieve these goals despite constant trying. On the other hand, there is evidence that even small amounts of weight loss or modest amounts of physical activity can result in health improvements. Most people can accomplish these smaller goals. To this end, individuals need to become aware of the components of a healthy diet. Individuals need to become conscious consumers who read labels and opt for healthier foods most of the time. Big food companies are responsive to consumer demand, so individuals can make purchasing decisions that will, in the aggregate, lead to better products being available. Even if the big profit companies do not comply with an individual's desire for healthier fare, that individual can choose better options at the grocery store or farmer's market by becoming aware of the components of a healthy diet. We might not all become thin, but improved health is an achievable goal for all.

163. NESTLE, *supra* note 60, at 14.

164. Editorial, *How to eat: Diet secrets from Michael Pollan (and your great-grandma)*, HOUS. CHRON., Jan. 24, 2010, <http://www.chron.com/default/article/How-to-eat-Diet-secrets-from-Michael-Pollan-and-1707416.php>.