
Obesity and Overweight in New Jersey: Data from the New Jersey BRFSS

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Abstract

The adverse effects of obesity are not only well documented in the scientific literature but are well known in the community. Yet, an ever-increasing number of New Jerseyans are overweight if not obese. Overweight and obesity substantially increase the risk of morbidity from hypertension, dyslipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea and respiratory problems, and endometrial, breast, cervical, ovarian, prostate and colon cancers. Physical inactivity, often referred to as sedentary lifestyle, has also been associated with increased risk of death from heart disease and colon cancer. Diet/physical inactivity may be considered the second leading cause of preventable death. The data presented, from the New Jersey Behavioral Risk Factor Surveillance System (BRFSS), illustrate that half of all adults are either overweight or obese while thirty percent are physically inactive. Considering that BRFSS data are self-reported, the estimates of overweight are likely to be underestimated.

Introduction

Overweight and obesity, which are often caused by the interdependence of dietary factors and physical inactivity, are associated with an increased risk for a number of serious health conditions. In particular, overweight and obesity substantially increase the risk of morbidity from hypertension, dyslipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea and respiratory problems, and endometrial, breast, cervical, ovarian, prostate and colon cancers.^{1,2} In a landmark 1993 article, McGinnis and Foege argued that half of all deaths in the United States could be attributed to nine factors. Of these, diet/activity patterns (14% of all deaths) was second only to tobacco (19% of all deaths).³ Thus, activity patterns and dietary factors may be considered the second leading cause of preventable death.¹⁻³ The increase in prevalence of overweight children suggests that the obesity epidemic may worsen.^{4,5}

Although common usage equates the terms overweight and obesity, they are distinct and are measured by a formula which considers height and weight. The formula is the Body Mass Index (BMI), which is calculated by dividing weight in kilograms by height in

meters squared. To estimate BMI using pounds and inches, multiply weight in pounds by 703, then divide the result by height in inches squared.¹

In 1998, the National Heart Lung and Blood Institute revised the threshold for overweight from a BMI of 27 (greater than or equal to 27.8 kg/m² for men and greater than or equal to 27.3 kg/m² for women) to 25.0 kg/m² for men and women. Hence, using the current BMI standards, overweight is defined as a BMI between 25.0 and 29.9. While obesity is defined as a BMI of 30.0 or greater.¹ However, the appropriateness of using BMI for persons sixty five years of age and over has been questioned.⁶

Data

The data presented are from the New Jersey Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS, an ongoing national telephone survey of persons aged 18 and over, is partially funded by the national Centers for Disease Control. Because the BRFSS provides information on the prevalence of major health risk behaviors among New Jerseyans, it offers a unique opportunity to look at weight status and activity patterns.

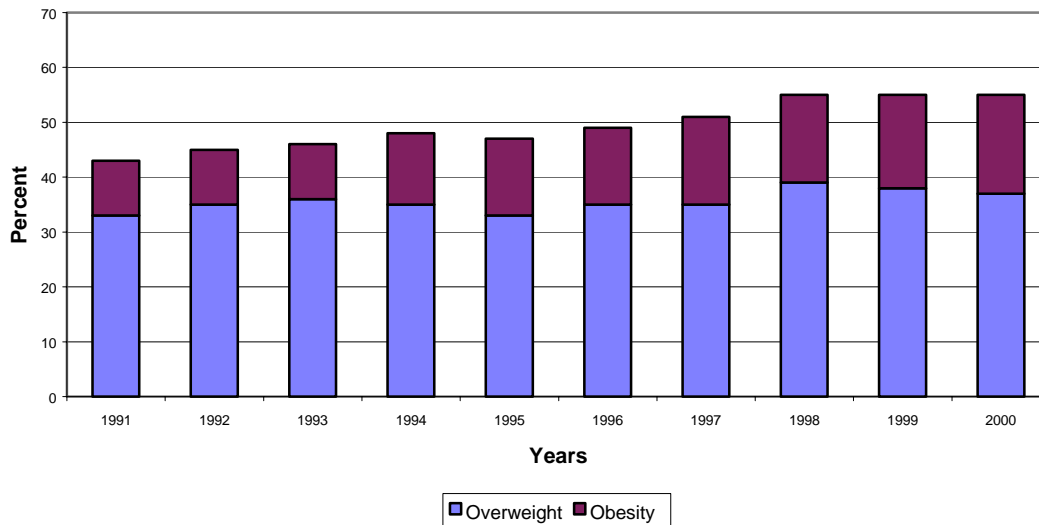
Since the BRFSS provides self-reported estimates and research has shown that women and the overweight underreport weight, and all persons overestimate height, the actual prevalence of overweight and obesity are probably even higher.^{1,7} Furthermore, persons without telephones are not surveyed by BRFSS. Such persons are likely to be of lower socioeconomic status, a risk factor associated with obesity.⁷ For these reasons, the BRFSS estimates of overweight should be viewed as conservative.

As seen in Figure 1, the BRFSS data show a clear trend of increases in the prevalence of both overweight and obesity of (non-pregnant) persons age 18 and over during the past decade, although this trend has leveled in the past several years. Currently half of the adult population are either overweight or obese.

These estimates are far above the *Healthy New Jersey 2010* objectives of 28 percent overweight and 12 percent obese.⁸ Table 1 provides the prevalence of overweight and obesity among various demographic groups. As can be seen, the overweight and obese population is disproportionately male, minority, and less well educated. The overall estimated prevalence of overweight and obesity among New Jersey adults of 54.4% matches the nationwide figure exactly. In accordance with reported national trends, Figure 2 illustrates that overweight and obesity in New Jersey increases with advancing age until a person reaches his or her sixties when it starts to decline.⁹

Primary care providers have an important role in evaluating overweight and obese adults and promoting weight control through the use of multiple interventions and strategies tailored to particular patient needs.¹ According to the NJ BRFSS data, about 20% of the overweight and obese receive counseling from their health care provider. The percentages differ by gender: with about 26% of overweight or obese women receiving counseling compared to 18% of men.

Figure 1. Overweight and obese NJ adults



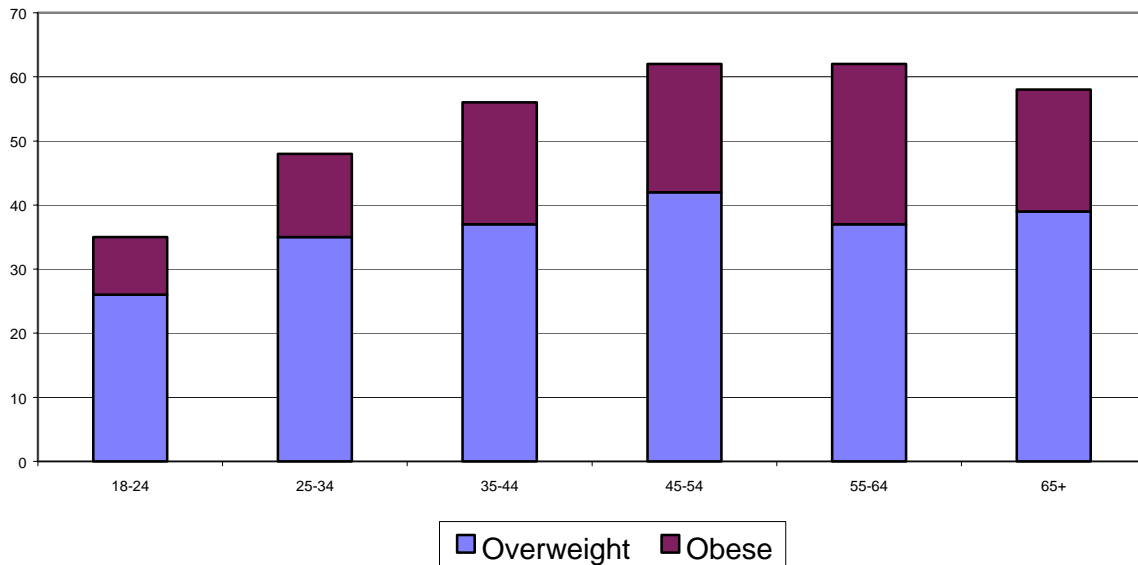
Source: New Jersey BRFSS

Note: Overweight and obesity status calculated from self-reported height and weight

Demographic Group	Percent	
	Overweight	Obese
Overall	36.7	17.7
Gender		
Males	47.8	18.2
Females	26.5	17.2
Race/ethnicity		
White, non-Hispanic	35.7	17.0
Black, non-Hispanic	42.5	25.0
Hispanic	38.3	19.5
Education		
Not a High School graduate	35.7	24.3
High School graduate	36.3	21.4
Some college	34.9	15.5
College graduate	38.6	13.3
Income		
Under \$15,000	36.6	25.3
\$15,000 - 24,999	33.7	27.0
\$25,000 - 49,999	35.9	20.7
\$50,000 - 74,999	41.6	16.0
\$75,000 or more	38.9	13.5

Source: New Jersey BRFSS

Figure 2. Overweight and obesity by age, NJ adults, 2000



Source: New Jersey BRFSS

Activity

Regular physical activity contributes to a healthy lifestyle, prevents chronic disease and prevents obesity.¹⁰ Regular, preferably a daily regimen of 30-45 minutes of walking, bicycling or working around the house conveys physical activity's positive effects on the musculoskeletal, cardiovascular, respiratory and endocrine systems, reduces risk of premature mortality, coronary heart disease, hypertension, colon cancer and diabetes.¹¹ Furthermore, regular physical activity has been shown to reduce depression and anxiety, improve mood, and enhance ability to perform daily tasks throughout the life span.

Yet levels of physical inactivity among New Jersey adults have remained fairly constant, around 30%, since the early 1990's.¹² Figure 3 illustrates that in 2000, while twenty-nine percent of adult New Jerseyans are physically inactive, 27% obtain irregular activity, which is defined as less than twenty minutes of activity a session three times a week. Only 44% perform regular physical activity sufficient to convey health benefits.¹¹ The percentage of inactive New Jersey adults is similar to national estimates.

Table 2 shows that females are somewhat more likely to be inactive, while males are more likely to get regular exercise. Yet males and females are equally likely to get irregular activity and regular and vigorous exercise. Thirty-five percent of those 65 years of age and older obtain no leisure time physical activity. Interestingly, 35% of the retired or unable to work population also perform no leisure time physical activity. The Black and Hispanic populations have the lowest rates of physical activity. As expected, rates of physical activity increase with education and income.

Not surprisingly, as Figure 4 shows, obese New Jerseyans are more likely to be inactive and less likely to exercise regularly and vigorously than the total population of adults. But estimates for irregular and regular levels of activity are similar for all weight classifications.

Table 2. Participation in physical activity, NJ adults, 2000

Demographic Group	Inactive *	Irregular **	Regular ***	Regular and Vigorous****
Overall	29	27	30	14
Gender				
Men	27	27	33	14
Women	31	27	28	15
Age Groups				
18-64	27	27	32	14
65+	35	26	22	18
Race/Ethnicity				
White, non-Hispanic	25	27	31	16
Black, non-Hispanic	29	32	30	9
Hispanic	40	25	25	10
Education				
<High School grad	47	26	19	8
High School Grad	35	24	30	11
Some college	24	31	31	14
College grad	18	27	34	21
Income				
<\$15,000	46	20	23	11
\$15,000 - 24,999	43	23	25	9
\$25,000 - 49,999	30	27	30	12
\$50,000 - 74,999	23	27	34	16
>= \$75,000	16	29	34	21
refused	33	28	27	12
BMI				
<25	24	27	32	17
25-29.9	27	28	31	14
>=30	39	24	27	10

* no leisure time physical activity

** some activity but <3 times/week or <20 minutes/session

*** 3+ times/week, 20+ minutes/session, <50% of capacity

**** 3+ times/week, 20+ minutes/session, 50+% of capacity

Source: New Jersey BRFSS

Physical activity of adults, NJ 2000

Figure 3. All Adults

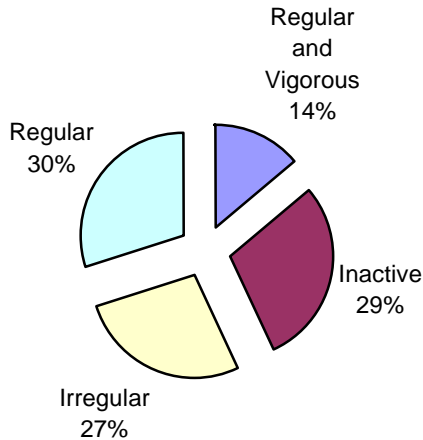
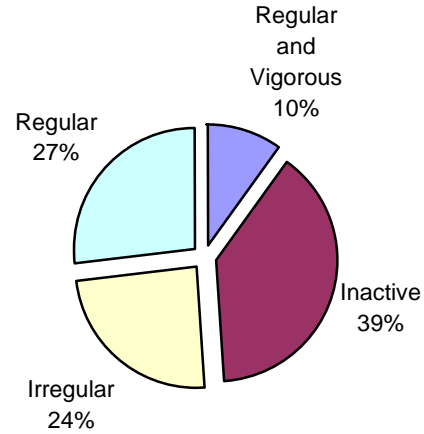


Figure 4. Obese Adults



Source: New Jersey BRFSS

Diet

In their natural state, fruits and vegetables provide fewer calories than other choices, especially if they replace foods high in fat.^{13, 14} The percentages of persons not consuming five fruits and vegetables a day remains relatively constant between 71 and 73% for the years 1996 through 2000. Twenty seven percent of the New Jersey population reported consuming the recommended five servings of fruits and vegetables a day, slightly more than the 23% of Americans who consumed five fruits and vegetables a day in the year 2000.

Reason for the Trend

The rapid increase in the prevalence of obesity among New Jerseyans has also occurred in all segments of the population and regions of the country. Such a nationwide trend implies that there have been sweeping changes in the United States society that are contributing to the weight gain by fostering energy intake imbalance.⁷ This long-term energy imbalance has been linked to decreases in the amount of physical activity required for work, transportation and routine daily tasks and is coupled with excessive caloric consumption.¹⁰ The modern American society is characterized by mechanization, sedentary lifestyle, and ready access to abundant food.^{1,13}

Many traditions, especially at holidays or special occasions, promote overeating and preferential consumption of high calorie foods. Additionally, the abundance of food in the supermarket, the availability of food sold at fast food restaurants and vending machines, and the large portions of food served outside the home, promote high calorie consumption. Aggressive and sophisticated food marketing in the mass media further promotes consumption.¹

Finally, the number of calories spent in physical activity are often insufficient to offset consumption. Many people are entrenched in sedentary daily routines consisting of sitting at work, in traffic, and in front of a TV or computer monitor for most of their waking hours.^{9,15}

Unless there is a major change in eating and activity patterns, this epidemic will continue and may worsen. Such increases will tremendously affect the health of the public since obesity is strongly associated with several chronic diseases, including the two leading causes of mortality.^{1-3,7,9} If the prevalence of overweight remains at the current levels, the health care system will become overwhelmed by patients presenting with obesity-related health conditions.¹⁶ To alter this trend, strategies and programs for weight maintenance/reduction and increasing the level of physical activity must become a public health priority.^{3,15} Furthermore, as eating patterns and physical activity patterns are established in childhood, programs aimed at improving these risk factors should be addressed in the school system.¹⁷ Parents and the school system should also encourage children to be physically active.

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