

The Burden of Obesity in Vermont

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Executive Summary

Obesity has become a major concern in the United States and in many areas of the world. The obesity epidemic is affecting all segments of the population and is a particular concern for children who may develop chronic conditions at an early age. Vermont is not immune to this public health problem although the extent of overweight and obesity in Vermont is less than in many states. In 2003, over half of adult Vermonters 18 years and older were overweight or obese and 11 percent of Vermont youth were overweight. The health consequences of obesity are many and include premature death, disability, cardiovascular disease, diabetes, arthritis, and other chronic conditions. These in turn lead to increased hospitalizations and increased health care costs and decreased quality of life.

The upward trend of obesity in Vermont is disturbing. From 1992 to 2003 the prevalence of obesity rose by 51 percent from 12.8 percent to 19.3 percent. Class III, or extreme obesity, rose by 250 percent for the same time period, from 0.8 percent to 2.8 percent. Although the morbidly obese make up a relatively small percentage of the population, the rapid increase in prevalence is of concern.

Adults of healthy weight are more likely to engage in healthy behaviors such as eating 5 or more fruits or vegetables per day than those who are obese. Obese adult Vermonters are more likely to report no exercise during the past 30 days than their healthy weight counterparts and are also less likely to report their general health as excellent. Obese Vermont adults report more chronic conditions such as arthritis, diabetes and high blood pressure compared to those of healthy weight.

Now is the time to recognize obesity as a major public health problem in Vermont and to identify and implement appropriate intervention strategies to prevent obesity and to promote achievement of better health.

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Table of Contents

	Page
Executive Summary	1
Table of Contents	2
Introduction	3
Measuring Overweight and Obesity	3
Health Consequences and Impact	4
Economic Impact	5
Vermont Data Overview	6
Behavioral Risk Factor Surveillance System	6
Youth Risk Behavior Survey	30
Pediatric Nutrition Surveillance System	42
Vermont Vital Statistics	48
Pregnancy Nutrition Surveillance System	50
Healthy Vermonters 2010 Objectives	53
References	54
Data Notes	55
Directions for Possible Future Research	56
Acknowledgements	56

Introduction

The purpose of this document is to present the status of obesity in Vermont based on current data and to also indicate the impact and consequences of obesity in the state.

Overweight and obesity have reached epidemic levels in the United States and in many areas throughout the world and have become major public health problems. In 2001, the U.S. Surgeon General released a *Call to Action* to address the increasing concern in this country.(1)

The impact of obesity and overweight is far-reaching. Overweight and obesity are listed as Leading Health Indicators for the nation in *Healthy People 2010*. Overweight and obesity can lead to many health concerns including premature death, heart disease, high blood pressure, diabetes, some forms of cancer, and other chronic health conditions. Overweight and obesity may also exacerbate chronic conditions and affect quality of life. A recent report indicated that obesity-related health issues may lead to shorter life expectancies and this is particularly important for children. (7) Overweight and obesity affect the nation's children by putting them at risk for chronic conditions at an earlier age. For example, type 2 diabetes is increasing considerably in children and adolescents. (1,11,14) The primary concern of obesity is one of health. Even moderate weight excess (10-20 pounds for a person of average height) may increase the risk of death. (1,14)

Overweight and obesity result from a combination of metabolic, genetic, behavioral, environmental, cultural, and socioeconomic influences.

Measuring Overweight and Obesity

BMI* Classification in Adults

Classification	BMI: kg/m ²
Underweight	<18.5
Healthy weight	18.5-24.9
Overweight	25.0-29.9
Obese	≥30
Class III obese	≥ 40

Height	Weight Range	BMI	Considered
5' 9"	124 lbs or less	Below 18.5	Underweight
	125 lbs to 168 lbs	18.5 to 24.9	Healthy weight
	169 lbs to 202 lbs	25.0 to 29.9	Overweight
	203 lbs or more	30 or higher	Obese

* BMI is calculated by a person's weight in kilograms divided by the square of his/her height in meters. BMI = Kg/m² or BMI = 703 times weight (in pounds) divided by height (in inches) squared [(wt/ht²) x 703].

(Source: CDC) (15)

The Body Mass Index (BMI) is the widely accepted measure for obesity and is based on a person’s height and weight. In 1998, the National Heart, Lung, and Blood Institute published clinical guidelines on using the BMI in adults 20 years and older. (2) The BMI measurement has wide support because of its ease of measurement and correlation with body fat. However, the BMI may not be the best measure of fat. Muscular individuals may appear to be overweight based on their BMI because of their dense muscle mass.

Individuals with a BMI of 25 to 29.9 are considered **overweight**, while individuals with a BMI of 30 or more are considered **obese** and those with a BMI of 40 or greater are **class III or extremely obese**.

Children

In children and teens, BMI is also used to assess underweight, overweight, and at risk for overweight. However, BMI is used differently with children and adolescents than it is with adults. Children's body fat changes over the years as they grow and they differ in their amount of body fat as they mature. This is why BMI for children, also referred to as BMI-for-age, is gender and age specific.(3,4) BMI-for-age is plotted on gender specific growth charts. These charts are used for children and teens 2 – 20 years of age.

Each of the Centers for Disease Control and Prevention’s (CDC) BMI-for-age gender specific charts contains a series of curved lines indicating specific percentiles. Healthcare professionals use the following established percentile cutoff points to identify underweight and overweight in children. In a healthy population only 5 percent of children and adolescents should fall above the 95th percentile. This report uses the definitions in the table below.

Classification	Percentile Cut Off
Overweight	$\geq 95^{\text{th}}$
At risk for overweight	$\geq 85^{\text{th}} - < 95^{\text{th}}$
Healthy weight	$> 5^{\text{th}} - < 85^{\text{th}}$
Underweight	$\leq 5^{\text{th}}$

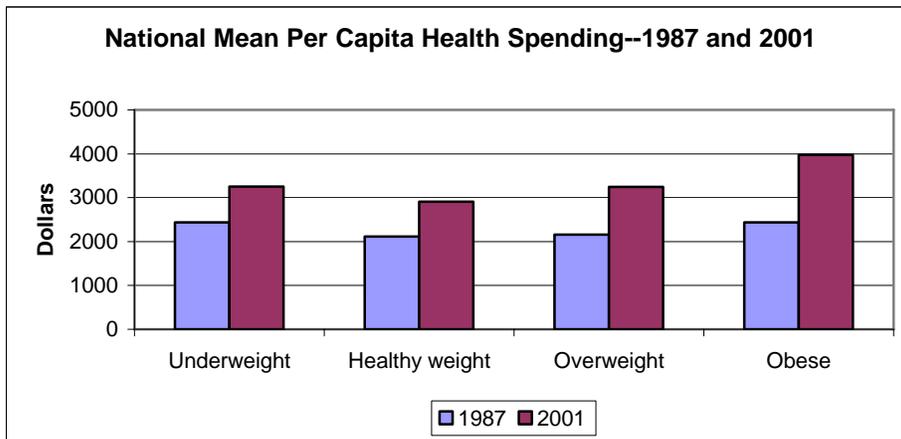
Health Consequences and Impact of Overweight and Obesity

Overweight and obesity can result in premature death and also cause disability, increase health care costs, contribute to cardiovascular disease, diabetes, arthritis and other chronic conditions. The impact of overweight and obesity is also seen in increased hospitalizations. The major health consequences of obesity and overweight include heart disease, stroke, diabetes, certain cancers, gallbladder disease, sleep apnea and osteoarthritis. (14, 17)

Economic Impact

The Trust for America's Health (TFAH) recently examined obesity related costs and economic impact on a state-by-state basis. (5) They reviewed a 2004 study by the CDC and RTI International (6) that enumerated the economic impact of obesity at the state level. TFAH made calculations based on that study. The costs they examined included those from the federal health insurance programs, Medicare and Medicaid, and private health insurance. The national total for obesity costs was \$75 billion in 2003. The total state medical costs related to obesity for Vermont in 2003 were \$141 million. California was the state with the highest costs at \$7.7 billion and Wyoming was the lowest at \$87 million. The Vermont per capita costs related to obesity were \$228. Vermont's state ranking in 2003 for medical costs related to obesity was 39 (with 1 being highest). Vermont's Medicaid costs related to obesity were \$40 million.

A recent study investigated national expenditures per capita based on BMI. (21) The study found higher medical spending attributable to obesity. Some results from that study are shown in Figure 1 below.



(Source: E. Thompson, VDH 6/2005 adapted from *The Impact of Obesity on Rising Medical Spending* (21)).

Figure 1