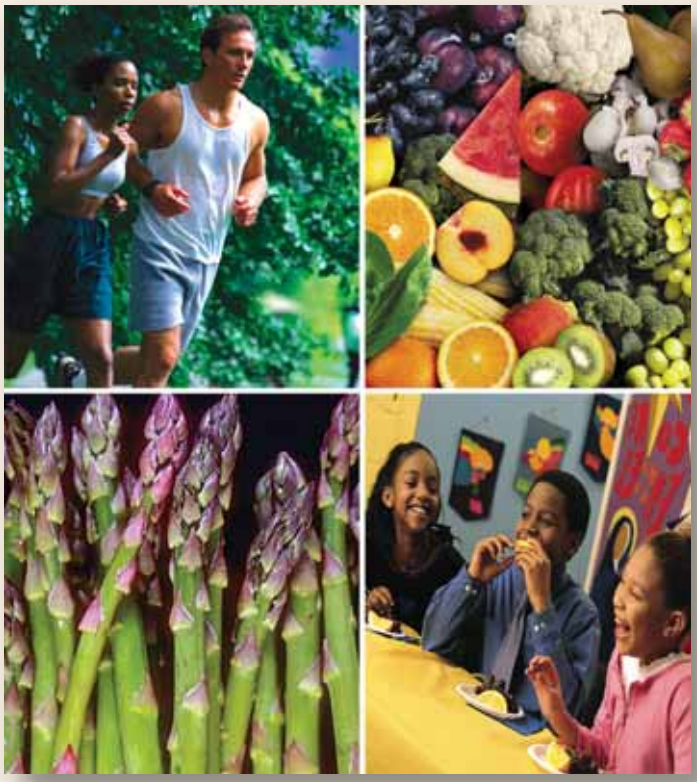
# Strategic Plan for the **Prevention of Obesity in Nevada**

**September 2006**

**Nevada State Health Division Bureau of Community Health**



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Dear Colleague:

The Nevada State Health Division, Bureau of Community Health, is pleased to share with you a copy of the *Strategic Plan for the Prevention of Obesity in Nevada*. This Plan was created through the collaborative efforts of many stakeholders within Nevada's public health system. The State Health Division intends to use this plan to initiate and strengthen public health collaborations that address overweight and obesity in Nevada.

Statewide, Nevada's prevalence rates for overweight and obesity parallel U.S. trends. According to the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics, current National Health and Nutrition Examination Survey (NHANES) data demonstrates 30 percent of U.S. adults 20 years of age and older—over 60 million people—are obese. Obesity increases the risk of many chronic diseases, including diabetes, heart disease, arthritis, and some cancers. The estimated costs associated with obesity are $130 billion annually and $337 million in Nevada.

The prevalence of overweight and obesity in children and adolescents has increased over the past 25 years, with the percentage of young people who are overweight tripling since 1980. Among children and adolescents aged 6–19 years, the CDC reports 16 percent (over 9 million youth) are considered overweight. There are significant health consequences for overweight youth. Many of these children suffer psychological stress, poor academic performance, and are at an increased risk for chronic diseases later in life.

The Nevada Legislature approved Senate Bill 197, which was subsequently signed into law by Governor Kenny C. Guinn on May 10, 2006. Senate Bill 197 establishes the State Program for Fitness and Wellness and the Advisory Council. The State Health Division will use Nevada's *Strategic Plan for the Prevention of Obesity* as a framework to strengthen obesity prevention efforts within Nevada. The Strategic Plan represents the foundation for future obesity efforts by creating partnerships, developing leadership and establishing the necessary infrastructure for a comprehensive obesity prevention program.

The Nevada Department of Health and Human Services and Nevada State Health Division's Bureau of Community Health extend their appreciation to the many individuals who contributed to the development of this Plan.

Sincerely,

Bradford Lee, M.D.
State Health Officer
Nevada State Health Division

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# Executive Summary

During the past 20 years, overweight and obesity prevalence rates among adults have risen dramatically in the U.S. Current statistics indicate that nearly 30% of U.S. adults are obese. Nevada has not escaped the rising epidemic of overweight and obesity with prevalence rates paralleling U.S. trends. The increase in overweight and obesity is not limited to adults. Child and adolescent overweight rates have seen some of the most dramatic increases doubling among children (from 7% to 16%) and tripling among adolescents (from 5% to 16%) according to the Centers for Disease Control and Prevention (CDC).

The increasing rates of overweight and obesity are a major public health concern in Nevada because of the increase in the risk of many preventable diseases and chronic health conditions such as high blood pressure, diabetes, heart disease, stroke, arthritis, and some cancers.

**The effects of excess weight include:**

- High blood pressure is twice as common
- Type 2 diabetes risk doubles
- Risk for osteoarthritis increases by 9-13% for every two pound weight gain
- A weight gain of more than 20 pounds from age 18 to midlife doubles the risk of postmenopausal breast cancer in women

The economic impact of overweight and obesity is staggering. In Nevada, the estimated costs for treating conditions associated with overweight and obesity totals $337 million annually according to estimates from the CDC. These costs are expected to increase over time.

While researchers and the medical community continue the search for treatment options, Nevada must identify and implement obesity prevention and weight maintenance measures to slow the epidemic. In 2005, the Nevada Legislature (Senate Bill 197) approved the establishment of the Nevada State Health Division Program for Fitness and Wellness. This statewide program and its Advisory Council will focus on increasing public knowledge and awareness of the benefits of physical activity, proper nutrition. and wellness in the prevention of obesity, chronic diseases, and other health problems.

The State Health Division in partnership with the Department of Education and with the guidance of the Advisory Council intends to use *Nevada's Strategic Plan for the Prevention of Obesity* as a way to engage public health partners in the development of action plans which will help improve fitness and wellness across all population groups in Nevada.

The Plan is intended to create a solid foundation for a comprehensive and sustainable Obesity Prevention Program in Nevada by 2010. As a new program, the initial goals and objectives are focused on developing the infrastructure necessary to create effective collaboration among all stakeholders as well as creating a solid body of data from which to evaluate obesity prevention efforts in the state.

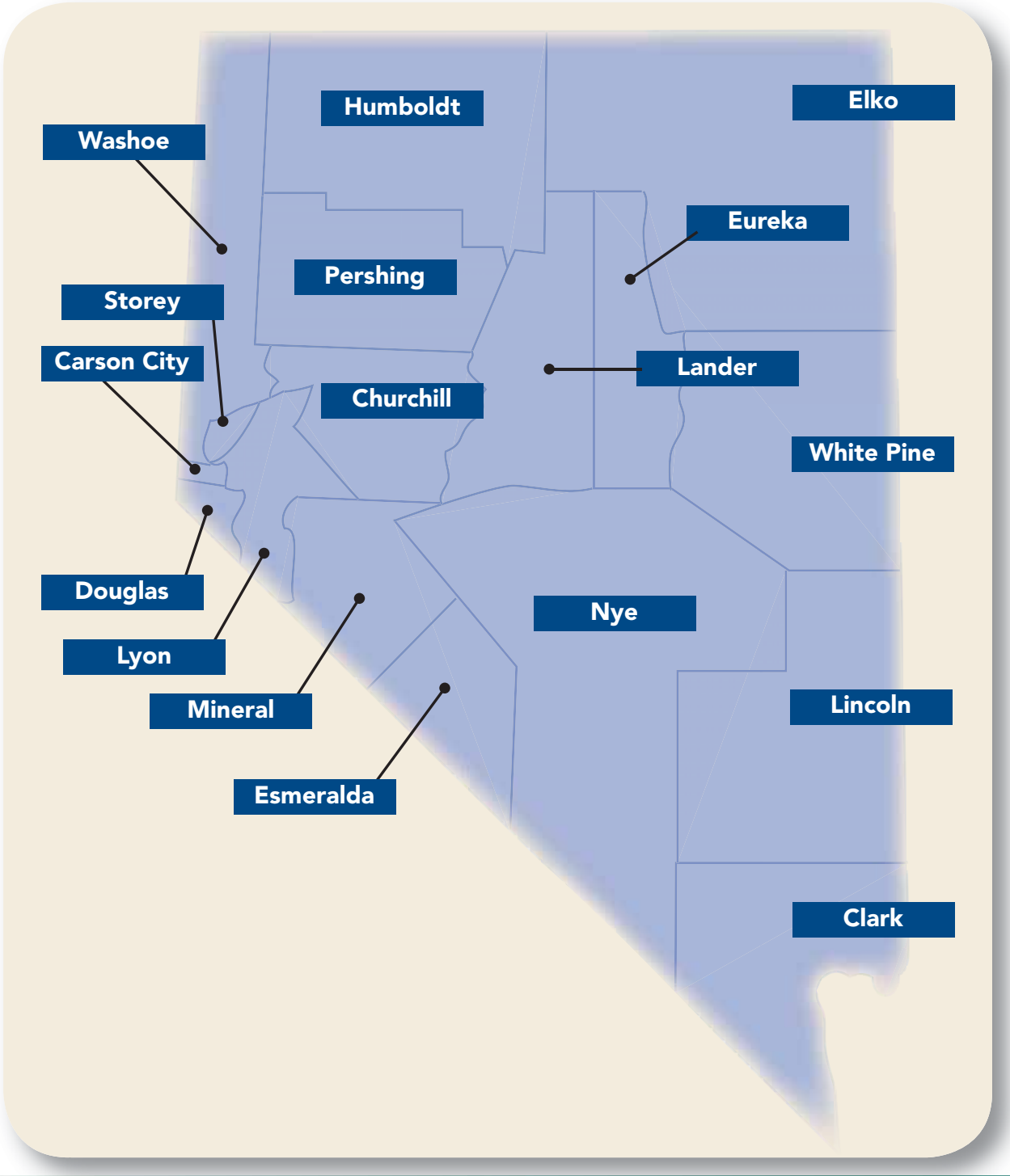
The Plan's overall mission is to decrease the burden of chronic diseases by decreasing the prevalence of obesity in Nevada. Initial goals focus on four areas: leadership, data, partnerships, and performance.

The *Strategic Plan for the Prevention of Obesity in Nevada* is intended as an invitation for collaboration and a springboard for action. It is not meant to detail all of the steps necessary for its implementation. Instead, it is to serve as a roadmap for the development of a statewide program to address overweight and obesity in Nevada. The Nevada State Health Division will lead the effort to activate federal, state, and community organizations in forming partnerships to address overweight and obesity in the state.

# Demographic Profile of Nevada

Nevada is the nation's seventh largest state geographically with an area of 110,000 square miles. This is roughly equivalent to the combined areas of Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, and the District of Columbia. Of Nevada's seventeen counties only Clark, Washoe and Carson City are considered urban, while Douglas, Lyon and Storey counties are rural. The other 11 counties are considered frontier (seven or fewer person per square mile). The rural and frontier population is spread over 95,763 square miles (87% of the state's land mass).

Nevada is a semi-arid, high desert, largely mountainous state. The Sierra Nevada mountains form a natural barrier between Nevada and California. Las Vegas, Nevada's most populated city is located in the southern end of the state. Reno, Nevada's second most populated city is located in the northern part of the state separated by about 430 miles from Las Vegas.



# Demographic Profile of Nevada

According to U.S. Census data, Nevada is the fastest growing state in the nation and has been for the past 17 years. With a total population of nearly two million people (2000 U.S. Census) over ninety percent of Nevada's population is concentrated in three urban counties:

- Clark County (Las Vegas) population 1.35 million
- Washoe County (Reno) population 340,000
- Carson City County population 52,500

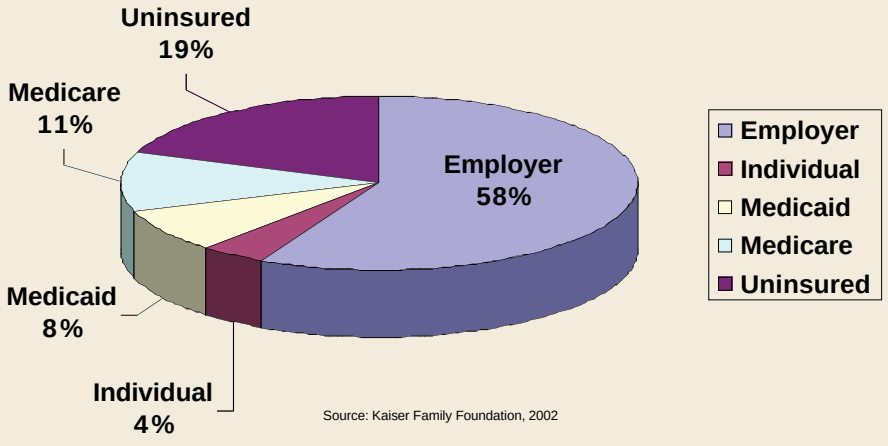
Recent population growth in Nevada is astounding. According to the U.S. Census, between 1990 and 2003:

- Clark County's (Las Vegas area) population has nearly doubled, adding 850,000 residents. 71% of Nevadans now reside in Clark County.
- Washoe County (Reno area) grew by 45%, adding almost 116,000 people.
- The remainder of the state grew by a similar 45% rate, adding 94,000 more people.
- The number of children and youth under age 18, and seniors age 65 and over grew at the fastest rate. In 2003, there were roughly twice as many people in each of these age groups as there were in 1990.
- The number of people of Hispanic descent has more than tripled, now totaling approximately 22% of Nevada's population. In 2003, 30% of persons under age 18 were considered Hispanic.
- The population of Asian or Pacific Islanders in Nevada has almost tripled.

A significant number of Nevadans lack health insurance. Nevada currently ranks 4th in the nation for percentage of individuals without health insurance, near last (49th) for percentage of people who are enrolled in Medicaid and 37th for those who are enrolled in Medicare (Figure 2). This lack of primary insurance coverage indicates that Nevadans bear a substantial amount of medical expenses through private pay, indigent medical care, or state subsidy.

Nevada's rapid growth and low rate of health care coverage has placed unprecedented pressure on health and human services to keep pace with a spiraling demand for services. According to the Nevada Small Business Development Center, population projections indicate continued rapid growth for the next 20 years. These demographic changes, especially in the racial/ethnic groups and age categories have major implications for Nevada's public health system. From social, cultural, behavioral, environmental, and economic aspects, obesity, and chronic diseases impact not only individuals and families but society as a whole.

**Figure 2:**
**Health Insurance Status of Nevadans**




Source: Kaiser Family Foundation, 2002

# Obesity and Chronic Disease

Obesity has become a national epidemic affecting close to one-third of the adult population-approximately 60 million people (CDC, NHANES, 2004). Adding in the number of people considered overweight, this figure more than doubles to 127 million people. While a combination of genetic, environmental, behavioral, cultural, and economic factors influence body weight, the underlying cause is excess caloric consumption in relation to physical activity. When a person consumes more calories than they spend on activity, the body stores the energy as fat.

Excess body weight is a major public health problem facing both the U.S. and the state of Nevada. According to the Surgeon General, serious health risks related to excess body weight are summarized in Figure 3.

**Figure 3:**
**Obesity Related Diseases**

| Obesity is Associated with an Increased Risk of: | |
|---|---|
| • premature death<br>• type 2 diabetes in adults & children<br>• heart disease<br>• stroke<br>• high cholesterol<br>• high blood pressure<br>• some cancers (kidney, gallbladder, endometrial, ovarian, postmenopausal breast) | • gallbladder disease<br>• osteoarthritis<br>• asthma<br>• sleep apnea<br>• depression<br>• social difficulties<br>• complications of pregnancy<br>• childhood type 2 diabetes |

Each year an estimated 300,000 deaths are related to overweight and obesity. The risk of death rises with increasing weight to the point where those who are obese face a 50-100% greater chance of premature death. Being overweight can decrease life expectancy by nearly 20 years.

Many chronic diseases are closely linked with excess weight:

- High blood pressure is twice as common
- Risk for type 2 diabetes doubles
- Risk for osteoarthritis increases by 9-13% for every two pound weight gain
- A weight gain of more than 20 pounds from age 18 to midlife doubles the risk of postmenopausal breast cancer in women

Obesity also costs the U.S. an incredible amount of money. Each year, over $92 billion is spent treating diseases related to overweight and obesity. In 2002, the U.S. spent:

- $25.5- $30.6 billion for heart disease
- $18.4- $20.5 billion for type 2 diabetes
- $8.3- $9.6 billion for high blood pressure
- $6.1- $8.1 billion for stroke
- $6.7- $7.4 billion for osteoarthritis

# Body Mass Index

## Adults

Body Mass Index (BMI), a simple measure of weight in relation to height, is the accepted standard for evaluating body fat in adults over 20 years old. The National Institutes of Health (NIH) defines overweight as a BMI of 25-29, and obesity as a BMI≥30. These BMI categories are based on the effect body weight has on disease and death, not simply a percentage of body fat (WHO, 1995).

As BMI increases, the risk for some diseases increases. It is important to recognize that BMI is only one of many factors that determine a person's risk for disease. However, recent research shows that a small amount of weight loss (10% of a person's weight) may help lower the risk for health problems and chronic disease, such as diabetes.

In general, women will have more body fat than men at the same BMI and older people will have more body fat than younger people at the same BMI. You can find more information about BMI at: http://www.cdc.gov/nccdphp/dnpa/bmi/index.htm.


## Body Mass Index for Children and Youth

BMI-for-age is the recommended measure to assess underweight, overweight, and at-risk for overweight in children and youth (2-20 years of age). The BMI-for-age measure is gender and age specific, allowing for the differences in body fatness as children grow and mature. BMI-for-age in children and youth compares well to laboratory measures of body fat. It can also be used to track body size throughout life because the measure is consistent with the adult BMI index. More information for BMI-for-age, including plotting graphs can be found at http://www.cdc.gov/nccdphp/dnpa/bmi/childrens_BMI/about_childrens_BMI.htm.

Health care professionals use the term at-risk for overweight for children whose BMI-for-age is at the 85 percentile to less than 95th percentile, roughly paralleling the adult term overweight. The term overweight applies to any child whose BMI-for-age is above the 95th percentile, roughly paralleling the adult term obese. Excess weight in children is a serious public health concern because there is a 70-80% chance that they will be overweight or obese as adults.

# Obesity in Adults

## Sources of Data

The primary data source used to describe the prevalence of obesity for adults in the U.S. and Nevada is the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is based upon a randomly selected telephone interview sample of Nevada residents over age 18 years and has been collected since 1992. There are limitations to the BRFSS data, especially with the representation of specific populations. Because the sample is randomly selected, not all regions of the state or members from all population groups will be contacted in numbers large enough to assure statistical reliability. When the frequency of responses by a particular group (e.g. racial and ethnic minorities) is small, multiple years of data must be aggregated or counties of the state combined to achieve reliable frequencies.

Nevada's obesity data is established from the core BRFSS questions "What is your weight without shoes?" and "What is your height?" The BRFSS relies on respondents answering the question to the best of their ability, however many studies indicate that respondents will underestimate their current weight. Using the self-reported data, aggregate BMI's are calculated.

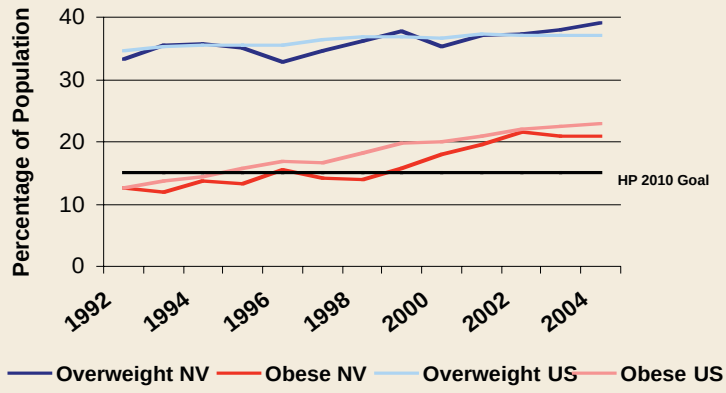
## Prevalence of Obesity in Adults

Across all gender, age, socioeconomic, racial and ethnic groups, dramatic increases in overweight and obesity have been documented over the past 20 years. Figure 7 shows that the increasing prevalence of overweight and obesity in Nevada roughly paralleling U.S. trends since 1992. Obesity rates in Nevada and within the U.S. exceed the Healthy People (HP) 2010 goal of 15%.

## Gender

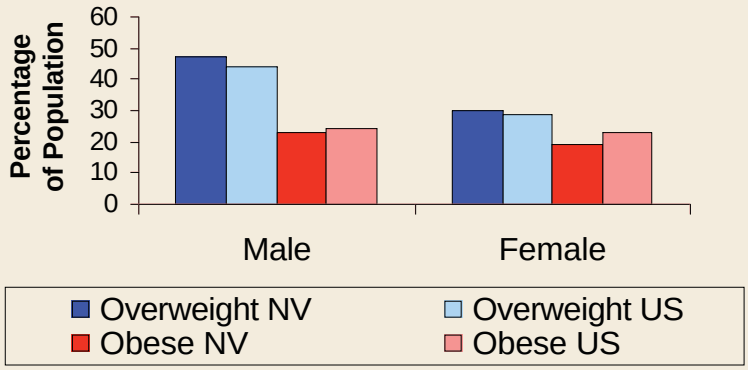
Nationally, men are more likely to be overweight (44%) than women (29%) but are almost as likely to become obese (24% vs. 23%). In Nevada, the percentage of men who are overweight or obese was 70% in 2004 and 49% in females (Figure 8).

**Figure 7**
**Trends in Overweight & Obesity**
**Adults 1992-2004**




Source BRFSS, 2004

**Figure 8**
**Adult Weight Categories by Gender 2004**




Source BRFSS, 2004

## Age

In general, older people tend to have higher rates of overweight and obesity than do younger people. Nationally, in 2004, the 55-64 age group has the highest levels of overweight and obesity. Nevada currently parallels national trends in each age category (Figure 9). Although the 18-24 year age group has the lowest overall rates of overweight and obesity, this group is growing at the fastest rate.

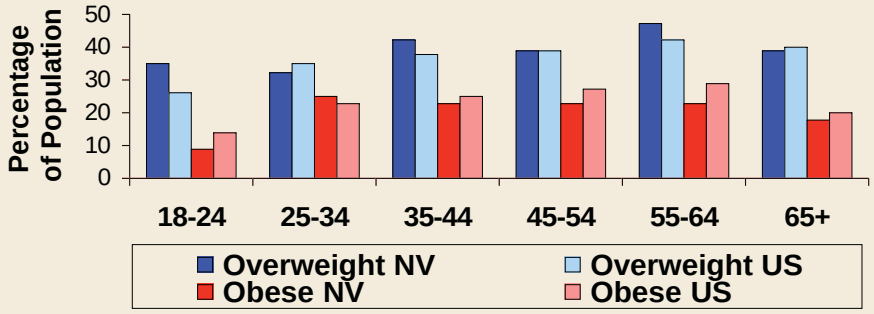
## Race/Ethnicity

National BRFSS data indicates that obesity prevalence differs by race and ethnicity. Nationally, Blacks/African Americans are the most likely to be overweight or obese (65.8%), followed closely by American Indian/Alaska Native (AI/AN) (62%), Hispanic (58%), and Whites (55%).

People of Asian or Pacific Islander decent are least likely to be overweight or obese (36%). However, it should be noted that recent research indicates that people of Asian and Pacific Island descent have different body compositions and need alternative, lower BMI cut-off points (Kim, et al., 2004).

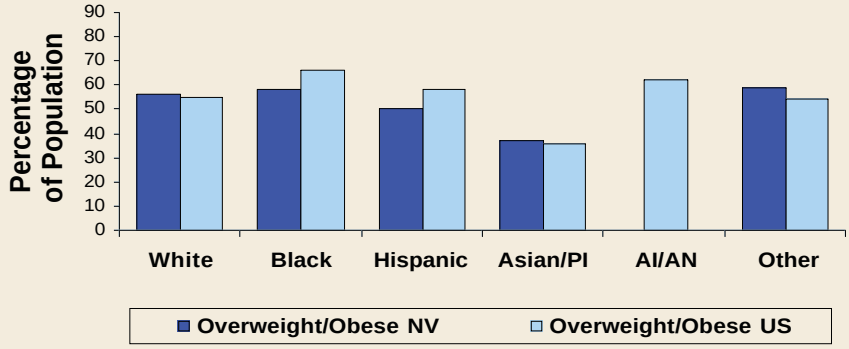
Because of the relatively low BRFSS sampling of racial minorities in Nevada, reliable statistics are not available for all groups. However, the Kaiser Family Foundation has created estimates based on 2002 BRFSS data to provide a general interpretation of racial differences in the prevalence of overweight and obesity in minorities (Figure 10). In Nevada, both blacks and whites in Nevada have similar combined rates at 58% and 57% respectively. Asian and Pacific Islanders have the lowest rates at 37%.

**Figure 9**
**Adult Weight Categories by Age 2004**



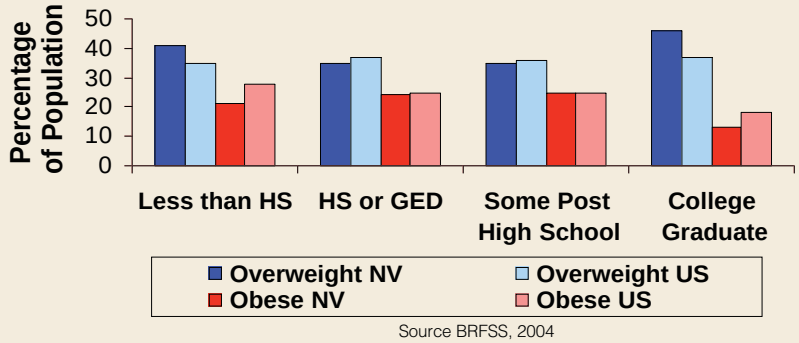

Source BRFSS, 2004

**Figure 10**
**Adult Weight Category by Race/Ethnicity 2002**




Source: Kaiser Family Foundation, 2002

**Figure 11**
**Adult Weight Categories by Educational Level 2004**




Source BRFSS, 2004

# Prevalence of Obesity in Adults

Reliable data for American Indian/Alaska Natives (AI/AN) population was not available for Nevada in 2002. However, a 2004 BRFSS oversample of AI/AN adults living in Nevada estimates overweight (36%) and obesity (42%), significantly higher than 2002 national combined average (62%) for AI/AN adults.

## Education

Nationally, educational level is not strongly linked with being overweight (35% for less than a high school education to 37% for college graduates). In the U.S., 28% of adults with less than a high school diploma are obese compared with 18% of those with a college degree. However, in Nevada, adults with less than a high school education and those with a college degree, have substantially higher overweight prevalence rates compared with national averages (Figure 11). Obesity rates in Nevada are lower than national averages for all educational levels.

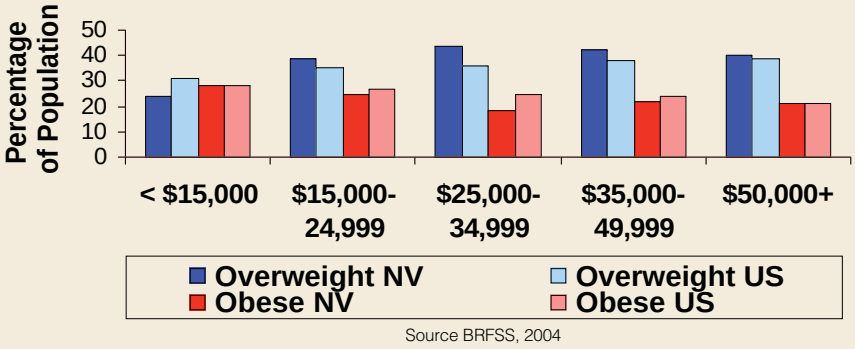
## Socioeconomic Status

Figure 12 shows the effect of socioeconomic status on weight. Nationally, women of lower socioeconomic status (income ≤ 130% of poverty threshold) are about 50% more likely to be obese than those with higher socioeconomic status (income > 130% of poverty threshold). For men, obesity rates are about equal across socioeconomic groups. This is true in Nevada as well.

## Geography

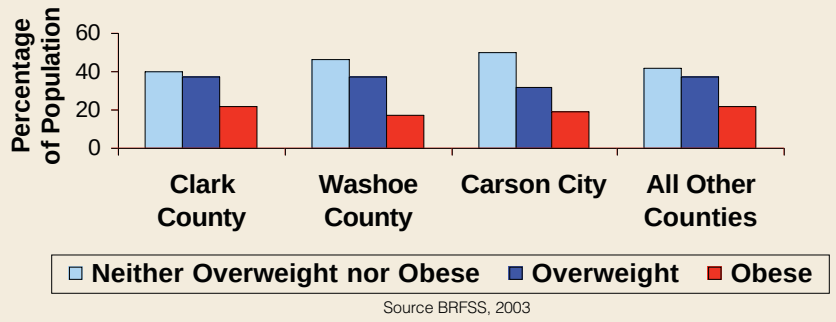
Variations in the prevalence of overweight and obesity by geographic location also exist. BRFSS data from Nevada shows that Washoe County has experienced the greatest *increase* in obesity and overweight-- from 44% in 1998 to 54% in 2003. However, Clark County has the highest adult combined overweight and obesity prevalence at 60% in 2003 (Figure 13).

**Figure 12**
**Adult Weight Categories by Income Level 2004**




Source BRFSS, 2004

**Figure 13**
**Nevada Adult Weight Categories by County 2003**

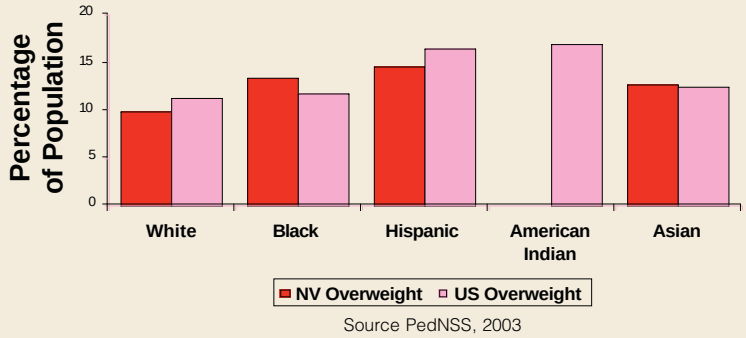



Source BRFSS, 2003

# Obesity in Children

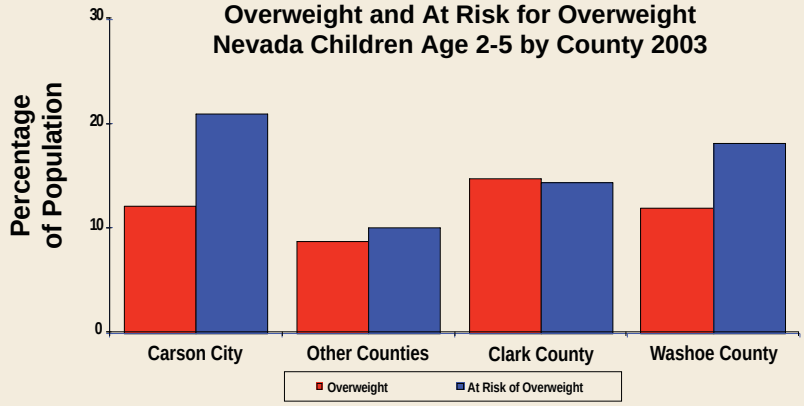
There is much concern about the increasing prevalence of obesity in children and adolescents. Overweight and obesity acquired during childhood or adolescence may persist into adulthood and increase the risk for many chronic diseases later in life. Interventions need to recognize that obese children also may experience psychological stress. The reduction of BMI in children and adolescents should emphasize physical activity and food choices that help maintain healthy growth while reducing weight. Additional research is needed to better define the prevalence, and health consequences of overweight, health impact and public health interventions need to address childhood and adolescent overweight/obesity.

**Figure 14**
**Overweight in Children <5 Years Old by Race 2003**




Source PedNSS, 2003

**Figure 15**
**Overweight and At Risk for Overweight**
**Nevada Children Age 2-5 by County 2003**




**Data for some counties not presented if <100 records are available after exclusions.

## Data Sources for Children

The primary data source for describing prevalence and trends of nutrition, health and behavioral indicators for mothers and young children is the Pediatric Nutrition Surveillance System (PedNSS). The PedNSS is a child-based public health surveillance system that monitors the nutritional status of low-income children in federally funded maternal and child health programs. PedNSS data is obtained through programs including the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the Early Periodic Screening, Diagnosis, and Treatment Program (EPSDT), the Title V Maternal and Child Health Program, Headstart and other programs. Information regarding birth weight, stature, underweight, overweight, anemia, and breastfeeding are collected for infants and children up to 5 years of age.

For adolescents, the primary data source is the Youth Risk Behavior Surveillance System (YRBSS). The YRBSS was developed by the CDC in 1990 to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and young adults in the U.S. YRBSS data includes national, state, and local school-based surveys of representative samples of 9th through 12th grade students. The national survey is conducted periodically by the CDC and provides data representative of high school students in public and private schools in the U.S. The state and local surveys are conducted by departments of health and education and provide data representative of the state or local school districts.

## Obesity in Children

### Prevalence of Obesity in Children

Between 1980 and 2002, child and adolescent overweight rates have seen some of the most dramatic increases— doubling among children (from 7% to 16%) and tripling among adolescents (from 5% to 16%) according to the CDC. Nationally, the prevalence of overweight among youths aged 6-19 is higher for African Americans (21%) and Hispanics (22%) than for whites (14%).

In Nevada, PedNSS data shows that overall overweight prevalence amongst children (less than 5 years of age) averages 14% in 2003. Most racial groups have roughly the same prevalence of overweight as in other areas of the U.S. (Figure 14). It is notable however, that American Indian children in the U.S. have experienced the highest rate of increase with a tripling of overweight prevalence from 5% in 1993 nearly 17% in 2003.

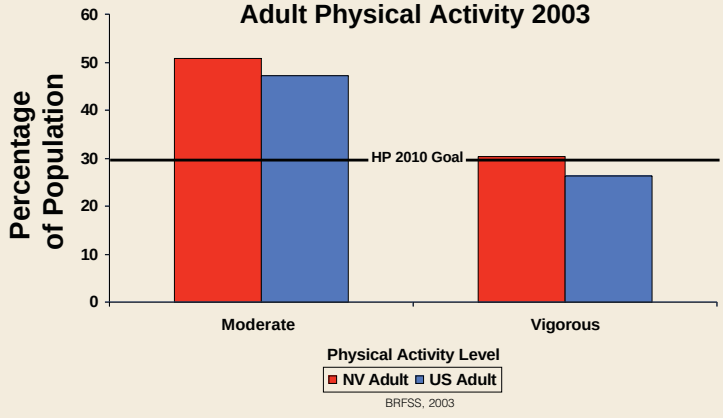
Figure 15 shows the overweight prevalence rates of Nevada children age 2-5 by county in 2003. Carson City had the highest combined rate at 33%. Among middle and high school students, roughly 27% of Nevada students reported they thought they were "slightly overweight or "very overweight" (YRBSS).

## Exercise, Nutrition, and Breastfeeding

Because excess weight is created by an imbalance of energy consumption compared with energy expenditures, physical activity has been shown to positively impact weight management. The CDC recommends at least 30 minutes of moderate physical activity on five or more days and encourages 20 minutes of vigorous activity three or more days per week for both youth and adults.

BRFSS data (2003) show that approximately 50% of Nevada adults engage in regular *moderate* physical activity and 30% engage in the recommended amount of *vigorous* activity per week. This compares to national proportions of 47% and 26% respectively. HP 2010 goal for adults reporting moderate or vigorous physical activity is 30% (Figure 16).

**Figure 16**
**Adult Physical Activity 2003**




According to the YRBSS data from 2003, nationally 63% of high school students engaged in the recommended amount of *vigorous* physical activity per week. In Nevada, the proportion was 67%. Teens who participated in the recommended amount of *moderate* physical activity is 25% nationally and 27% for Nevada. HP 2010 goals target 35% (moderate) and 85% (vigorous) activity levels for teens (Figure 17).

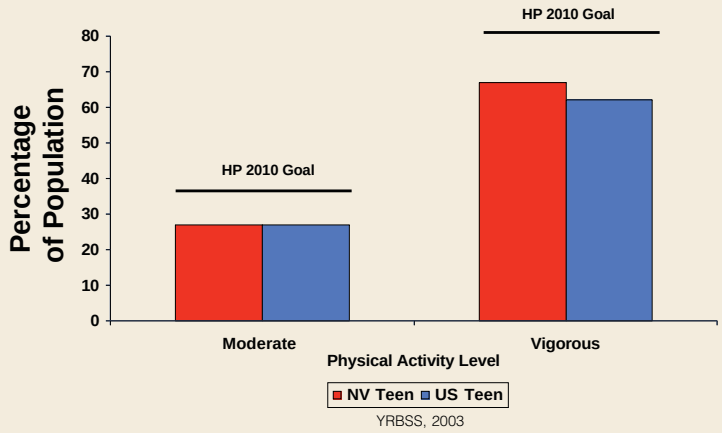
Recent research has indicated that school physical education (PE) programs can be effective in reducing the incidence of childhood overweight. Expanding existing PE programs by as little as one hour per week in first grade can lead to reductions in the prevalence of overweight among girls by 10% and the prevalence of at-risk-for-overweight by more than 20% (NICHM, 2004). If existing PE programs are expanded to five hours per week for kindergarteners, it is projected that the prevalence of overweight in girls could be reduced by 43% and at-risk-for-overweight by 60%. Although Nevada requires PE standards to be included in curriculum for grades two through 12 local districts develop, hire, and teach the standards.

According to the Henry J. Kaiser Foundation, a 2005 survey of children indicated that most watch more than four hours of television, pre-recorded shows, music videos or DVDs each day. In addition, children spend approximately one hour on the computer and 50 minutes playing video games. YRBSS data indicates that 49% of Nevada teens watched more than 3 hours of TV per day which parallels the U.S. average of 48%. Current recommendations limit TV viewing to two hours or less per day.

Regular fruit and vegetable consumption can help maintain or reduce body weight. BRFSS and YRBSS data shows that fruit and vegetable consumption (five or more servings per day) among Nevadans roughly parallels U.S. consumption with only 20-22% of adults or teens eating the recommended quantities.

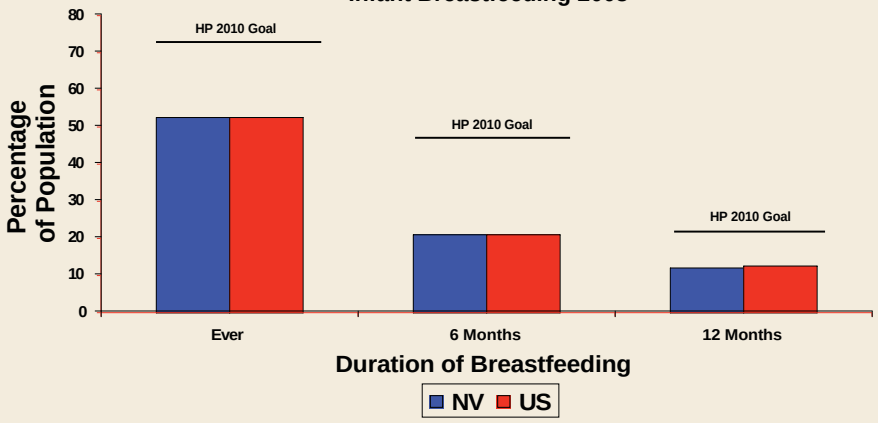
Scientific studies show that breastfeeding may reduce the risk for obesity. The American Academy of Pediatrics currently recommends breastfeeding for all infants less than 12 months of age. According to 2003 PedNSS data, both the U.S. (12%) and Nevada (12%) have extremely low rates of breastfeeding for the recommended duration. Nevada rates are below recomended HP 2010 goals for the nation (Figure 18).

**Figure 17**
**Teen Physical Activity 2003**




YRBSS, 2003

**Figure 18**
**Infant Breastfeeding 2003**

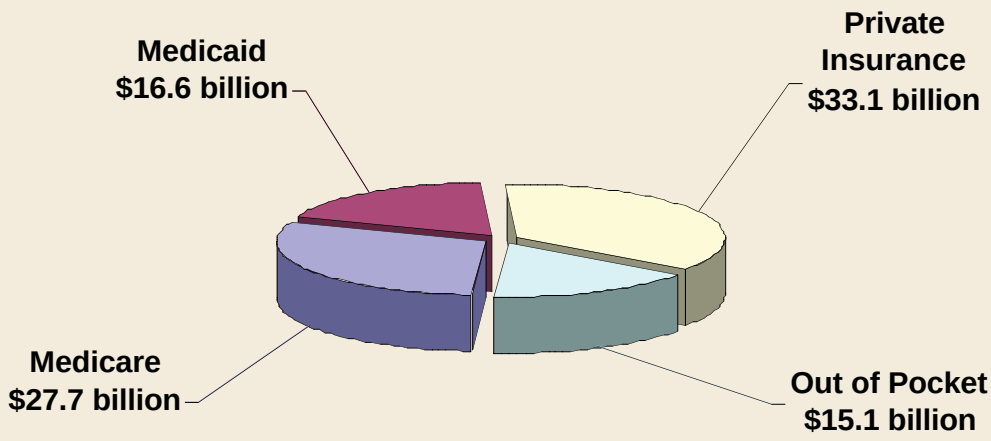



PedNSS, 2003

# Economic Costs of Obesity

The costs and consequences of obesity make it a societal issue, not just an issue of individual behavior and choice. Society bears the cost of obesity in terms of both medical care and lost productivity. Direct health care costs refer to preventive, diagnostic, and treatment services related to overweight and obesity (for example, physician visits, hospital and nursing home care). Most of these costs are associated with type 2 diabetes, heart disease, and high blood pressure. Indirect costs refer to the value of wages lost by people unable to work because of illness or disability, as well as the increase in health insurance premiums and other factors.

**Figure 19: National Aggregate Medical Spending Attributable to Overweight & Obesity 2002**




Estimates of the direct costs of obesity are staggering. Nationally, approximately $52 billion were attributed to direct costs related to obesity in 1995. By 2003, this figure has increased to $75 billion (CDC, 2004). Indirect costs are estimated at $56 billion per year (Finkelstein, et al., 2003) for a total spending of more than $130 billion per year and rising. In Nevada, the estimated annual direct costs of overweight and obesity totaled $337 million in 2003 dollars (CDC). On a per person basis, being overweight increases annual medical spending by $247 (14.5%) per year while obesity increases spending to $732 (37.4%) per year.

The cost to business of obesity-related health care totaled $15.4 billion in 2002. Health insurance expenditures made up the bulk of the costs, but sick leave, life insurance, and disability insurance accounted for nearly 39% of the total. This does not include significant costs such as lost productivity or absenteeism. Medical costs for those who are overweight or obese may be as much as 50% higher than for healthy weight employees.

Taxpayers fund approximately half of all obesity related spending through the Medicare and Medicaid programs. According to the CDC, in 2002, Medicare direct costs for treating overweight and obesity related issues totaled $27.7 billion with Medicaid adding another $16.6 billion. Private insurance paid for approximately $33 billion and $15 billion came from out-of-pocket expenses (Figure 19). Together this spending accounts for nearly 10% of all medical expenses.

Obesity in children has both economic and academic consequences. Annual hospital costs for obesity related issues in children have risen to $127 million during 1997-1999 (Wang, Dietz, 2002). Severely overweight children miss as much as four times as much school as normal weight children and are four times more likely to report difficulties with school. Because school funding is tied to attendance, even missing one day per month for obesity related issues could cost the average sized school district $95,000 to $160,000 per year (Schwimmer, et al., 2003).

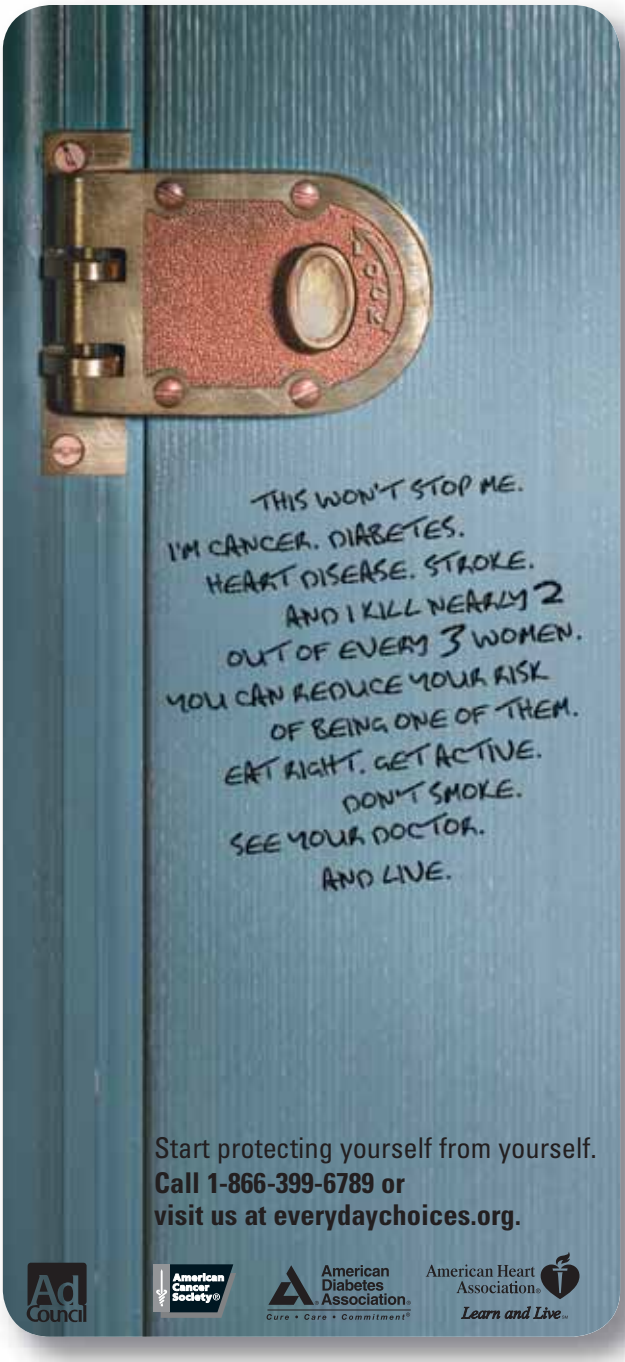
# Conclusion

The prevalence of overweight and obesity has risen dramatically over the past 20 years with Nevada trends roughly paralleling the U.S. Substantial increases have been seen in ***all*** populations regardless of gender, age, race, ethnicity, educational level, socioeconomic status or geographic location. However, children and teens have a disproportionate increase with rates two to three times higher as compared to twenty years ago.

Physical activity, nutrition and breastfeeding have been shown to positively impact weight management. Current data indicates that most Nevadans participate in the recommended amount of physical activity; however few eat the recommended amount of fruits or vegetables. Additionally, most Nevada infants are not breastfed for the recommended duration, if at all.

The economic costs of overweight and obesity are substantial—over $130 billion dollars annually. Estimates of direct health care costs in Nevada exceed $337 million annually and do not include "indirect costs" such as lost productivity, higher insurance premiums, or decreases in school funding related to child attendance.

While researchers and the medical community continue the search for treatment options, Nevada must identify and implement obesity prevention and weight maintenance measures to slow the epidemic. Because of the widespread increase in obesity, it is difficult to identify one segment of the population which would benefit from intervention more than any other segment. The Diabetes Prevention Program, a landmark study sponsored by the National Institutes of Health, found that modest weight reductions—5-to-7 percent—can have significant effects in reducing chronic disease risks. Most people in the study achieved their weight loss by getting 30 minutes of physical activity (usually walking) 5 days a week, and making healthy food choices. Taking action to address overweight and obesity in Nevada communities will have tremendous, positive public health effects.



# Efforts to Address Obesity in Nevada

A comprehensive, statewide approach to the issues of overweight and obesity in Nevada is needed. Several independent events have exemplified a general awareness of the public health challenges that overweight and obesity present as well as the need for collaboration and coordination of resources.

## Legislation

In 2003, Nevada State Senator Valerie Wiener chaired a Legislative Committee on Health Care Subcommittee to study Medical and Societal Costs and Impacts of Obesity (SCR 13, Statutes of Nevada 2003). The subcommittee heard testimony and considered issues from several federal, regional, and state agencies, non-profit organizations and private interests working with obesity prevention programs. As a result of these hearings, the subcommittee recommended that the Nevada State Health Division continue the subcommittee's work in formulating a public health strategy for the prevention of obesity.

To elicit input from various geographical regions, organizations, and community perspectives, the State Health Division contracted with the Nevada Public Health Foundation to conduct a series of Obesity Stakeholder Meetings in 2004-2005. In total, more than 80 participants contributed to this process. Representatives from the State Department of Education, University and Community College System of Nevada, Cooperative Extension, Area Health Education Centers, Nevada Dietetic Association, county health districts, non-profit agencies, and private industry all participated. The Stakeholder meetings helped identify community resources, challenges and opportunities, service gaps and also suggested goals and objectives for the State Strategic Plan for Obesity Prevention. In addition, community coalitions were formed to address local obesity related issues in Washoe and Clark Counties as well as the Carson-Lyon-Storey-Douglas area.

The Nevada Legislature approved Senate Bill 197, which was subsequently signed into law by Governor Kenny C. Guinn on May 10, 2006. Senate Bill 197 establishes the State Program for Fitness and Wellness and the Advisory Council. This statewide program and its Advisory Council will focus on increasing public knowledge and awareness of the benefits of physical activity, proper nutrition and wellness in the prevention of obesity, chronic diseases and other health problems. The State Health Division in partnership with the Department of Education and with the guidance of the Advisory Council intends to use *Nevada's Strategic Plan for the Prevention of Obesity* as a way to engage public health partners in the development of action plans which will help improve fitness and wellness across all population groups in Nevada.

## Department of Education

The Nevada Department of Education began addressing the issue of nutrition and its relationship to overweight and obesity in children through the development of a statewide school nutrition policy. In 2002, the Department of Education engaged more than 1500 stakeholders statewide in order to identify measures that would support healthy school environments. From these initial stakeholders, a Nutrition Advisory Committee was formed. Over the next two years, this committee drafted a Statewide School Wellness Policy that was adopted by the Nevada Board of Education in June of 2005. This policy becomes mandatory on July 1, 2006, for all Nevada school districts participating in the National School Lunch Program or the School Breakfast Program, thus equating to 100% of Nevada's seventeen school districts.

Clark County School District, the state's largest school district and the fifth largest district in the nation, pioneered its own nutrition policy in school year 2005. Washoe County School District, the state's second largest school district piloted a limited nutrition policy in school year 2005. In addition, there will be a review of Nevada school districts' physical education standards and health standards in 2006.

# Guiding Principles

By utilizing public health planning tools, Nevada will build a solid foundation for an Obesity Prevention Program based on currently accepted best practices in public health.

## Essential Public Health Services

In *The Future of Public Health* (1988), the Institute of Medicine (IOM) critically assessed the status of public health in the U.S. and identified three core functions of the public health system: assessment of health status and health needs, policy development, and assurance. In 1994, the Public Health Functions Steering Committee, working with representatives of the U.S. Public Health Service agencies and other national public health organizations, developed a list of *Ten Essential Public Health Services* that would further define the core functions and activities (Figure 20). These essential services provide a foundation for the nation's public health strategy including the development of Healthy People 2010 objectives and the National Public Health Performance Standards for state and local public health systems.

## Healthy People 2010

Healthy People 2010 is a national effort to reflect the major public health concerns in the U.S. and to provide the basic building blocks for community health initiatives. With an overarching goal of increasing both quality and years of life as well as decreasing health disparities, Healthy People 2010 is prioritized in to 10 Leading Health Indicators. Within each indicator are a series of objectives designed to give specific target levels to be monitored when implementing a program. Figure 21 shows the Healthy People 2010 objectives and targets used in developing the *Strategic Plan for the Prevention of Obesity in Nevada*.

### Figure 20
### Ten Essential Public Health Services

1) Monitor health status to identify community health problems
2) Diagnose and investigate health problems and health hazards in the community
3) Inform, educate, and empower people about health issues
4) Mobilize community partnerships to identify and solve health problems
5) Develop policies and plans that support individual and community health efforts
6) Enforce laws and regulations that protect health and ensure safety
7) Link people to needed personal health services and assure the provision of healthcare when otherwise unavailable
8) Assure a competent public health and personal health care workforce
9) Evaluate effectiveness, accessibility, and quality of personal and population-based health services
10) Research for new insights and innovative solutions to health problems

### Figure 21:
### Healthy People 2010 Objectives

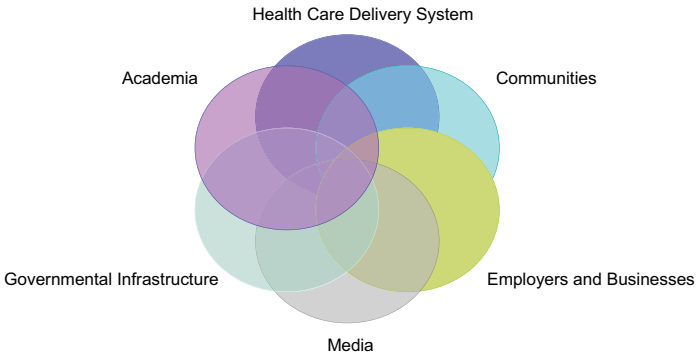
| Obj. # | Healthy People 2010 Objectives | Target % For 2010 | Recent Nevada % |
|---|---|---|---|
| 19-01 | Adults who are normal weight | 60 | 40 |
| 19.02 | Adults who are obese | 15 | 21 |
| 19-03c | Children age 6-19 who are obese | 5 | * |
| 19-05 & 06 | People who eat 5 or more fruits and vegetables per day | 50-75 | 20 |
| 19-16 | Worksite nutrition and weight management counseling | 85 | * |
| 22-02 | Adults who get moderate physical activity on a regular basis | 50 | 51 |
| 22-06 | Students grade 9-12 who get moderate physical activity on a regular basis | 35 | 27 |
| 22-13 | Worksite physical activity and fitness programs | 75 | * |
| 16-19b | Infants breastfed more than 6 months | 50 | 21 |
| 16-19c | Infants breastfed more than 12 months | 25 | 12 |

*= no data available

### Public Health System Interactions

The 2003 IOM committee report: *The Future of the Public's Health in the 21st Century* describes the need for a strong public health system that engages partnerships beyond the national, state, and local government agencies to reach the goals of Healthy People 2010. There is strong and growing evidence that health is shaped not only by inherent factors such as age or gender but also by social, economic, natural, built, and political environments. These multiple determinants of health represent a reality that tells us it is impossible for one entity or one sector alone to bring about population health improvements. An effective public health system is a strong, complex, inter-sectoral network that includes governmental infrastructure, the community, the health care delivery system, employers and businesses, the media and academia (Figure 22). Consequently, it is not only state or local health departments that play a role in carrying out the Ten Essential Services. All partners can utilize the Ten Essential Services as a framework to assess their roles and responsibilities, consider changes, and develop strategies for increased partnerships and collaboration in order to assure the health of the population. This includes designing strategies for chronic disease and obesity prevention.

**Figure 22: Assuring Conditions for Population Health**




# Strategic Plan for the Prevention of Obesity in Nevada

### Mission Statement:

***To decrease the burden of chronic diseases by decreasing the prevalence of obesity in Nevada***

When an initial assessment of obesity and obesity-related programs in Nevada was completed, it became evident that a comprehensive and coordinated infrastructure was lacking. Without a solid basis of leadership, data, and partnership coordination, obesity prevention efforts will remain fragmented and only moderately effective.

The following goals and objectives are designed to provide the Nevada's state public health system the necessary foundation for both monitoring and improving the status of obesity within the state while creating sustainable obesity prevention programs and partnerships. Progress towards these goals and objectives will be reviewed annually with revisions or updates as needed. A comprehensive review of the Plan will be conducted in 2010 with subsequent realignment of goals and objectives at that time.

*The following describes four foundational components (leadership, data, partnerships, and performance) with specific goals, objectives, and strategies for developing framework for obesity prevention in Nevada.*

### Foundation Component: Leadership

***Goal:*** Nevada will have a statewide, coordinated leadership network which develops, directs, and supports obesity related efforts and resources.

***Objective 1A:*** By April 30, 2006, a State Fitness & Wellness Advisory Council will be established from relevant stakeholders to provide statewide leadership.

- ***Strategy 1:*** Research and develop recommendations for statewide policy.
- ***Strategy 2:*** Begin development of long-range planning which addresses participation in existing programs and disparate populations.

***Objective 1B:*** By December 31, 2008, a documented infrastructure will be created by the State Health Division for the coordination of obesity related programs.

- ***Strategy 1:*** Produce an asset map to identify infrastructure strengths, gaps, and needs.
- ***Strategy 2:*** Develop specific strategies to improve state obesity related infrastructure as identified by the asset map.

### Foundation Component: Data

***Goal:*** Thorough and reliable obesity related data and information will be easily accessible.

***Objective 2A:*** By December 31, 2009, the State Health Division will develop a comprehensive open-access data base so that reliable obesity related information and statistics are readily available to assist in the development of new programs and to track progress.

- ***Strategy 1:*** Standardize and improve statistical gathering from all state and district health programs, schools, BRFSS, YRBSS, etc.
- ***Strategy 2:*** Facilitate data sharing agreements between all stakeholders and partners.
- ***Strategy 3:*** Ensure timely access to and dissemination of obesity related information including the most current, solid, scientific information on physical fitness, nutrition, breastfeeding, and the prevention of obesity.

***Objective 2B:*** By June 30, 2007, the State Health Division in conjunction with the Department of Education, will conduct a statewide assessment of local school district implementation of physical education standards.

### Foundation Component: Partnerships

***Goal:*** Nevada will have local, regional, and statewide partnerships which promote, coordinate and implement obesity prevention efforts.

***Objective 3A:*** By June 30, 2007, the State Fitness & Wellness Advisory Council, will develop formal local, regional, and statewide partnerships.

- ***Strategy 1:*** Facilitate partnerships between state agencies (including health divisions and districts, welfare, transportation, agriculture, economic development, tourism, recreation, and education), obesity coalitions, businesses, local programs, and others to coordinate obesity prevention efforts, pool resources, lobby for funds, and decrease bureaucratic burden.
- ***Strategy 2:*** Disseminate information to the business community regarding the direct and indirect costs of obesity as well as return on investment for workplace wellness programs.
- ***Strategy 3:*** Raise public awareness of the benefits of weight maintenance, weight loss, proper nutrition, physical fitness, and wellness through media, social marketing, and educational institutions.

### Foundation Component: Performance

***Goal:*** Nevada residents will demonstrate improvement in meeting the recommended guidelines for weight, physical activity, fruit and vegetable consumption, and breastfeeding duration.

***Objective 4A:*** By December 31, 2010, the proportion of Nevada adults who report themselves to be of a "healthy weight" as defined by BMI will increase by 5% points to 45%.

***Objective 4B:*** By December 31, 2010, the proportion of Nevada adults who report that they eat 5 or more fruits and vegetables per day will increase by 10% to 30%.

***Objective 4C:*** By December 31, 2010, the proportion of Nevada infants who are breastfed 6 months or longer will increase by 5% to 25%.

***Objective 4D:*** By December 31, 2010, the proportion of Nevada teens who get moderate physical activity on a regular basis by 7% to 35%.

# Call to Action

The *Strategic Plan for the Prevention of Obesity in Nevada* is an invitation for collaboration and a springboard for action. It is not meant to detail all of the steps necessary for its implementation. Instead, it is to serve as a roadmap for the development of a statewide program to address overweight and obesity in Nevada. The Nevada State Health Division will lead the effort to activate federal, state, and community organizations in forming partnerships to address overweight and obesity in the state.

While these organizational processes are forming, many opportunities exist for individuals, communities, employers, and schools to positively affect overweight and obesity in Nevada. By taking action to increase physical activity and improve food choices, individuals and community organizations can help slow the epidemic of overweight and obesity. Below is a brief summary of suggested actions:

### Individuals can:

- Engage in regular moderate physical activity
- Eat 5 or more fruits and vegetables per day
- Limit television and other sedentary activities
- Lobby for zoning requirements to improve access to opportunities for physical activity

### Communities can:

- Create safe walking and bicycle paths
- Provide increased physical activity opportunities for all (recreation department rental of bicycles, after-school programs for children, chair aerobics, etc.)
- Create or support farmer's markets to increase accessibility of fresh, locally grown produce
- Modify residential neighborhoods, workplaces, and shopping districts to promote physical activity

### Employers can:

- Provide worksite-based physical activity and wellness programs
- Allow flexible work schedules so employees can exercise or attend weight-management activities
- Alter worksite to promote physical activity (e.g. clean stairwells, availability of showers/lockers, bike racks)
- Provide healthy food choices in staff meetings, vending machines and worksite food service

### Schools can:

- Make regular physical activity available to all students
- Provide adequate time for children to eat nutritious meals
- Supply healthy food choices in all food venues
- Encourage National School Lunch Program participation by teachers, staff and students
- Limit or prohibit the sale of high-calorie, low-nutrition foods
- Use non-food incentives and rewards
- Encourage faculty and staff to model physical activity and healthy food choices

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Nevada State Health Division
Bureau of Community Health

# Strategic Plan for the **Prevention of Obesity in Nevada**