

The Burden of Overweight & Obesity in Alaska



Summary Report

State of Alaska
Department of Health and Social Services
December 2009



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State of Alaska

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Dear Alaskans:

I am pleased to share with you the following publication, the *Burden of Overweight & Obesity in Alaska: Summary Report*. This *Summary Report* highlights the key findings from the full technical report, *The Burden of Overweight & Obesity in Alaska*. The *Summary Report* contains data on the extent of overweight and obesity in children, adolescents and adults, as well as behaviors that contribute to overweight and obesity.

Two out of every three adults and one in four high school youth are overweight or obese; however, not every Alaskan is equally likely to be obese or to engage in obesity-related risk behaviors. The racial, regional, socioeconomic and other disparities outlined in this report are troubling. Too many Alaskans do not have positive physical activity and nutrition habits; they consume excessive soda and sugar-sweetened beverages, eat too few fruits and vegetables, and spend more time looking at television and computer screens than being physically active.

The biggest challenge to reversing this trend will be addressing the physical, social and economic environment that makes it easy to take in excess calories while making it harder to be physically active enough to burn those extra calories. To be successful in reducing obesity and obesity-related disparities, government, communities, and individuals need to work together to create population-wide and targeted policy and environmental changes.

I hope this report mobilizes government leadership and community partnerships to adopt a comprehensive, coordinated, long-term obesity prevention approach that involves and is supported by individuals, families, communities, schools, worksites, health care, media, industry, organizations, and government. By working together we can ensure that the healthy choice becomes the easy and affordable choice for everyone.

Sincerely,

Ward B. Hulburt, M.D., MPH
Chief Medical Officer
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The Burden of Overweight & Obesity in Alaska

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Introduction

Purpose of Report

The Burden of Overweight & Obesity in Alaska:

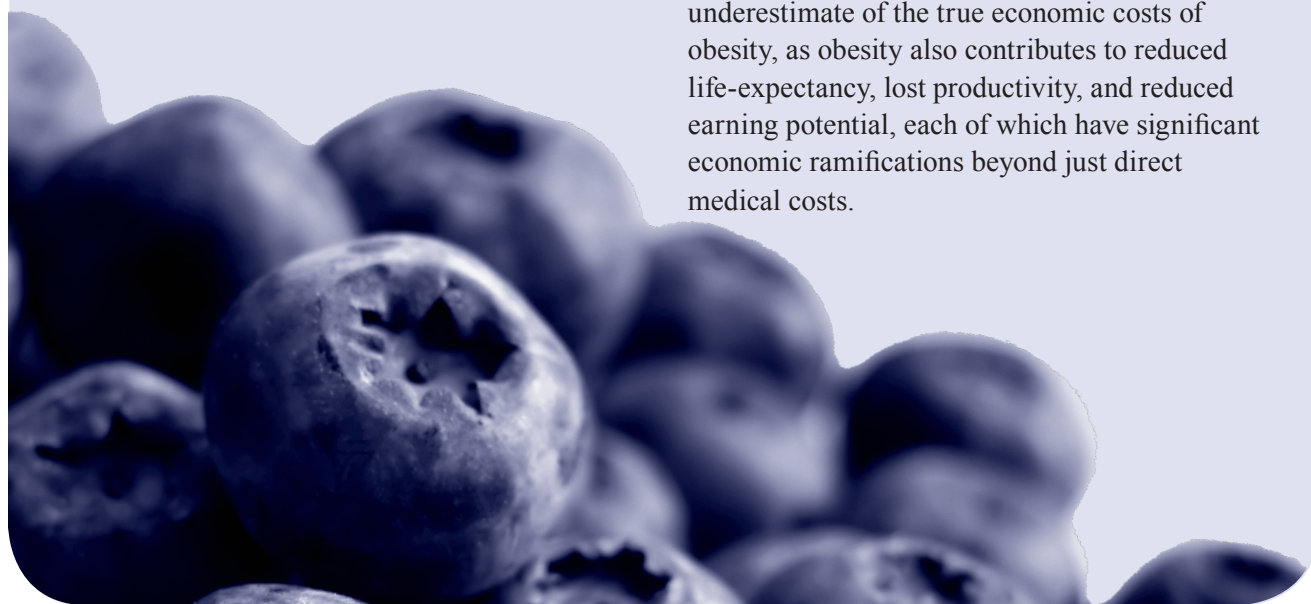
Summary Report highlights the key findings from the full technical report, *The Burden of Overweight & Obesity in Alaska*. The full technical report gathered existing data from a variety of sources to provide the best estimates we have currently of overweight and obesity in the state. *The Summary Report* contains key data on the extent of overweight and obesity in children, adolescents and adults, as well as the impact overweight and obesity has in the state. Data are presented on key physical activity and nutrition behaviors identified by the Centers for Disease Control and Prevention (CDC) as contributing to obesity, such as sugar-sweetened beverage consumption, energy-dense foods consumption, and screen (television and computer) time; and behaviors that contribute to obesity prevention, such as breastfeeding, fruit and vegetable consumption, and physical activity.^{1,2} The full technical report, complete with graphs and charts, can be found at: <http://www.hss.state.ak.us/dph/chronic/obesity/pubs/ObesityBurden2009.pdf>.

Overview

As is the case nationally, overweight and obesity are on the rise in Alaska, affecting individuals of all ages, from all areas of the state, of all racial and ethnic backgrounds, and with all levels of education and income. Increases in obesity have occurred rapidly, and the changes in weight that have occurred over the past 15 years will have lasting impacts on the health of individuals and of the healthcare system for decades to come.

In adults, overweight and obesity are associated with a variety of poor health outcomes ranging from coronary heart disease and type 2 diabetes to premature death.³ Aside from an increased likelihood of becoming overweight or obese adults, children and adolescents who are overweight or obese are at increased risk for a variety of negative physical, social, and emotional problems.³

The economic costs of treating the medical conditions associated with overweight and obesity are substantial — \$147 billion each year in the United States⁴ and \$477 million annually in Alaska (Eric Finklestein, personal communication, 7/9/2009). This is surely an underestimate of the true economic costs of obesity, as obesity also contributes to reduced life-expectancy, lost productivity, and reduced earning potential, each of which have significant economic ramifications beyond just direct medical costs.



Introduction

Measuring Overweight and Obesity

The body mass index (BMI), calculated as weight [kg]/height [m]², is a common surveillance tool used to estimate a person's risk of weight-related health problems.³ This report relies on BMI to determine weight status of adults and youth in Alaska. Table 1 shows BMI ranges and corresponding weight status categories applied to adults.

Table 1: BMI Classification for Adults 20 Years of Age and Older⁵

BMI	Weight Status
<18.5	Underweight
18.5 – 24.9	Normal Weight
25.0 – 29.9	Overweight
>30.0	Obese

Because children and adolescents, ages two to 20 years, are still growing and have differences in body composition, their BMI is compared to the BMI's of other youth of the same sex and age in a reference population. The BMI's for children and adolescents are plotted by age on a sex-specific growth chart⁶ to find percentile for sex and age.⁷ Table 2 shows the BMI ranges and corresponding weight status categories (both former and current) applied to youth. The categories in the third column are the ones used throughout this report and reflect the revised nomenclature put forth by the Expert Committee on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity.⁸

Table 2: BMI Classification for Children 2-20 Years of Age

BMI for Age Percentiles	Former Terminology	Recommended Terminology ⁸
<5th percentile	Underweight	Underweight
5th to <85th percentile	Normal Weight	Normal Weight
85th to <95th percentile	At-risk for Overweight	Overweight
>95th percentile	Overweight	Obese

For the purposes of this report, adult BMI data are derived from self-reported height and weight measurements taken from the Behavioral Risk Factor Surveillance System (BRFSS). Alaska BRFSS also provides data on demographics, consequences of obesity — such as chronic disease prevalence, and the factors that contribute to overweight and obesity among Alaska adults.

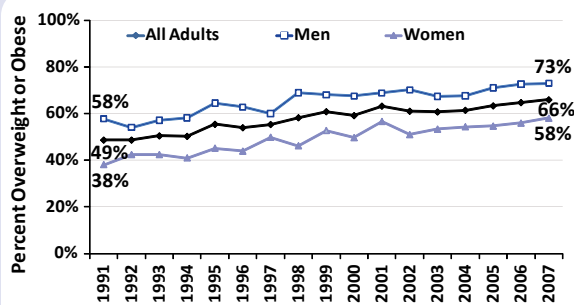
Data on youth BMI are derived from multiple sources, including self reported height and weight data from the Alaska Youth Risk Behavior Survey (YRBS), and objectively measured height and weight data from a variety of sources. The Alaska YRBS also provides data on demographics and factors that contribute to overweight and obesity among Alaska youth. Details on all data sources are included in the appendix. Bar charts display prevalence estimates and 95% confidence intervals.

Weight Status in Alaska

Adults

Data from the BRFSS show that between 1991 and 2007, the percentage of Alaskans above a normal weight (i.e., overweight or obese) went from about half (49%) to nearly two-thirds (66%) of the adult population (Figure 1). During this time obesity rates doubled (from 13% to 27%); rates of overweight remained relatively flat.⁹

Figure 1. Trend in Prevalence of Overweight/Obesity (BMI ≥ 25), by Sex, Alaska Adults, 1991-2007

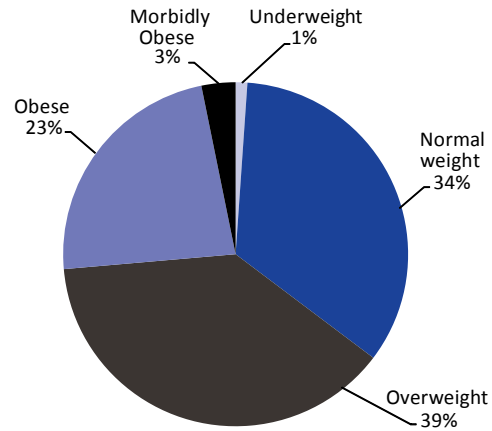


Source: AK BRFSS

Considering the three most recent years of data (2005-2007), 65% of Alaska adults are above a normal weight (Figure 2), a percentage that is similar to the rate in the United States overall during 2006 (62%).¹⁰



Figure 2. Weight Status, Alaska Adults, 2005-2007 (combined)

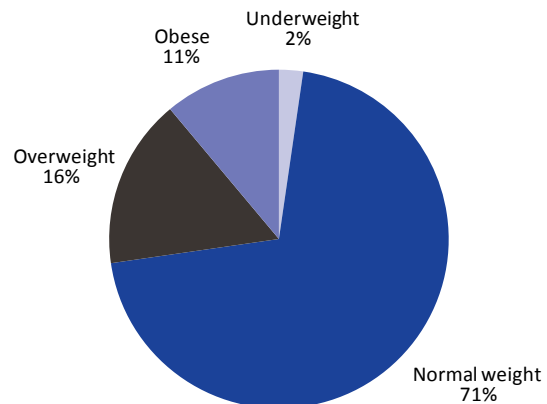


Source: AK BRFSS

High School Students

Statewide representative data on weight status of high school students come from the Youth Risk Behavior Survey (YRBS). The most recent YRBS data in Figure 3 show that 27% of students are above a normal weight. Sixteen percent are overweight and an additional 11% are classified as obese.

Figure 3. Weight Status, Alaska High School Youth, 2007



Source: AK YRBS

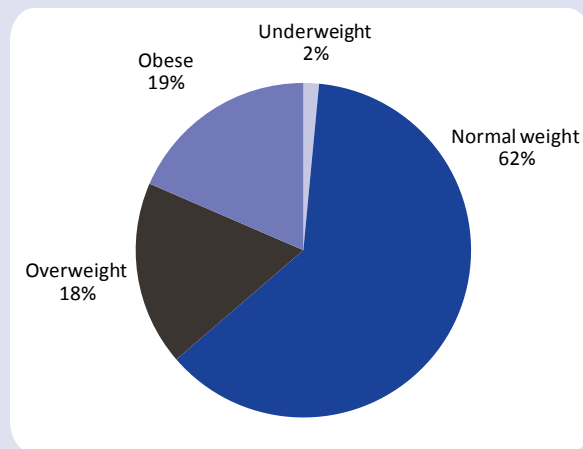
Weight Status in Alaska

Anchorage School District Students

The Anchorage School District (ASD) collects height and weight measurements from students as part of the school health screening process. Health information, including height and weight measurements, is recorded in an electronic database. In 2003, the ASD began a collaborative project with the State of Alaska Division of Public Health to analyze height and weight data and monitor trends in the weight status of the student population.¹¹

According to 2007-2008 school year data, 2% of students are underweight, 62% are at a normal weight, 18% are overweight, and 19% are obese (Figure 4). One-third (33%) of children entering kindergarten or first grade are above a normal weight, with 18% considered overweight and 15% obese.¹²

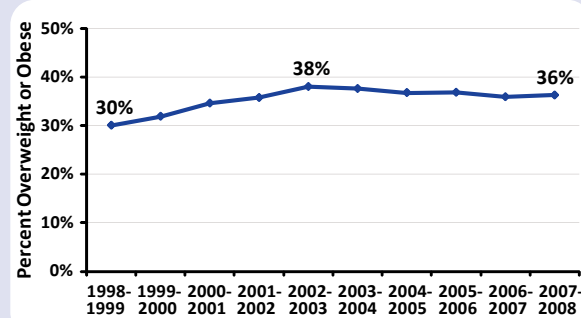
Figure 4. Weight Status, Anchorage School District Students (All Grades), 2007-2008



Source: Anchorage School District health records

The trend in Anchorage School District student weight status over the past 10 years is depicted in Figure 5. Over that time period, the percentage of students that were above a normal weight increased from 30% to 38% through 2002-2003 then leveled off.

Figure 5. Prevalence of Overweight/Obesity (BMI \geq 85th percentile), Anchorage School District Students, 1998-1999 to 2007-2008

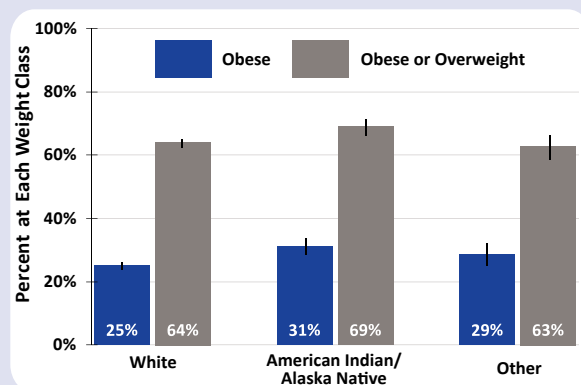


Source: Anchorage School District health records

Disparities

Overweight and obesity are seen in all demographic subgroups in Alaska; however, disparities do exist. American Indian/Alaska Native adults are significantly more likely to be both obese (31% vs. 25%) and above a normal weight — that is, overweight or obese — (69% vs. 64%) compared to White adults (Figure 6).

Figure 6. Prevalence of Obesity (BMI \geq 30) and Overweight/Obesity (BMI \geq 25), by Race, Alaska Adults, 2005-2007 (combined)



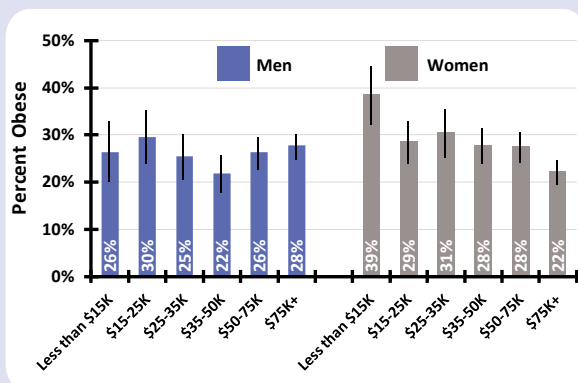
Source: AK BRFSS

Women with household incomes less than \$15,000 annually are significantly more likely to be obese (39%) compared to women with incomes over \$75,000 (22%) (Figure 7).

Weight Status in Alaska

Additionally, women with little educational attainment are significantly more likely to be obese (33% for women with less than a high school degree) compared to women who have graduated from college (22%).⁹

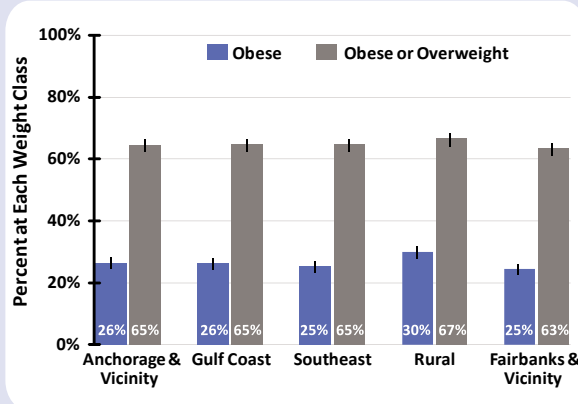
Figure 7. Prevalence of Obesity (BMI ≥ 30), by Income Level and Sex, Alaska Adults, 2005-2007 (combined)



Source: AK BRFSS

Alaskans living in rural Alaska (30%) are significantly more likely to be obese compared to those in all other regions (25%-26%) (Figure 8).

Figure 8. Prevalence of Obesity (BMI ≥ 30) and Overweight/Obesity (BMI ≥ 25), by Region, Alaska Adults, 2005-2007 (combined)

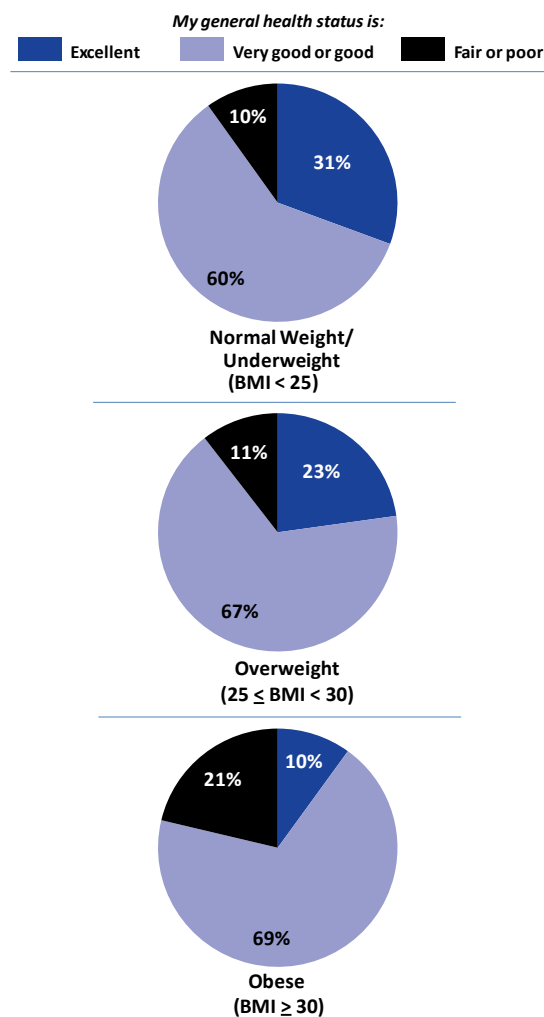


Source: AK BRFSS

Health Status

Obesity is an important health concern because it increases the risk of numerous debilitating health conditions. From BRFSS data we know that adults who are overweight and/or obese are also more likely to report an array of other health problems than are adults who are at a normal weight. Obese adults are twice as likely to report their health status as fair or poor (as opposed to good or excellent) compared to normal weight adults (21% vs.10%) (Figure 9).

Figure 9. Ratings of General Health Status, by Weight Class, Alaska Adults, 2005-2007 (Combined)

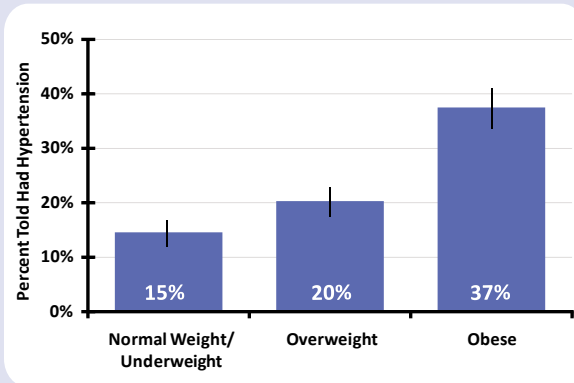


Source: AK BRFSS

Weight Status in Alaska

Figure 10 shows obese adults are more than twice as likely as normal weight adults to report being diagnosed with high blood pressure (37% vs. 15%).

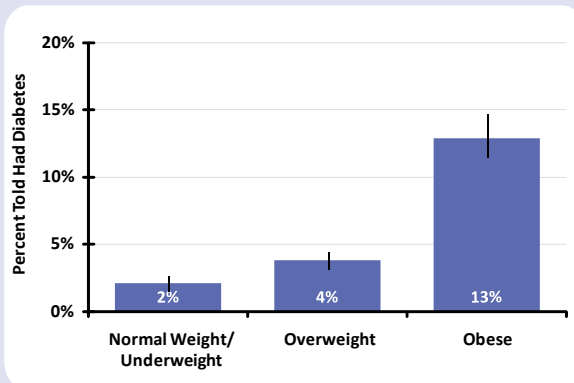
Figure 10. Prevalence of Hypertension, by Weight Class, Alaska Adults, 2005-2007 (combined)



Source: AK BRFSS

Obese adults are six times more likely to have non-gestational diabetes compared to normal weight adults (13% vs. 2%) (Figure 11).

Figure 11. Prevalence of Non-Gestational Diabetes, by Weight Class, Alaska Adults, 2005-2007 (combined)



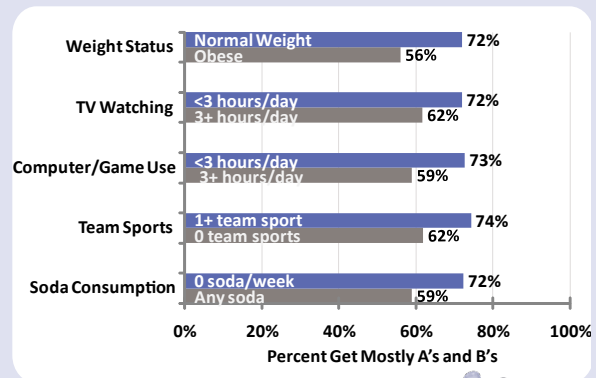
Source: AK BRFSS

Academic Performance

Student nutrition and physical activity have a direct link with academic performance, as evidenced by increased academic test scores,

improved daily attendance and better class participation.¹³⁻¹⁵ Research also suggests an association between obesity and lower academic abilities, lower teacher ratings of social-emotional well-being, and increased absenteeism.^{16,17} Data from the 2007 Alaska YRBS show that obesity and its contributors are linked to poor academic performance among Alaska high school youth. For example, 72% of normal weight students report getting mostly A's and B's, compared to only 56% of obese students (Figure 12).

Figure 12. Prevalence of Getting Mostly A's or B's, by Select Risk Factor Groups, Alaska High School Youth, 2007



Source: AK YRBS



Contributing Factors

Although individual weight status is determined by many factors, the primary causes of overweight and obesity in most individuals is an imbalance between nutrition and physical activity.³ The Centers for Disease Control and Prevention (CDC), Division of Nutrition, Physical Activity and Obesity recommends that efforts to prevent and control obesity target the following areas based on the best available evidence:^{1,2}

- increase physical activity
- decrease television viewing
- increase the consumption of fruits and vegetables
- decrease the consumption of sugar-sweetened beverages
- reduce the consumption of high energy-dense foods (high calorie foods)
- increase breastfeeding initiation, duration and exclusivity

The BRFSS and YRBS surveys collect information on adult and high school student nutrition and physical activity behaviors, while the BRFSS provides information on some of the social and environmental factors that contribute to physical inactivity and poor nutrition.

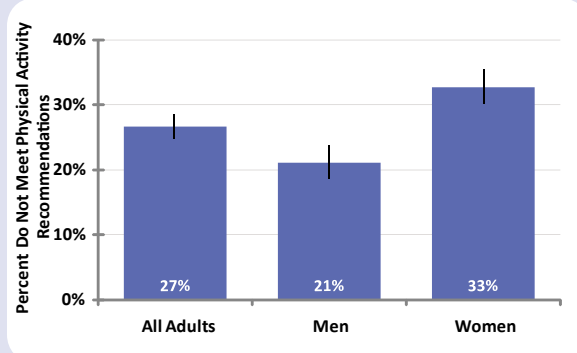
Physical Inactivity

In October 2008, the US Department of Health and Human Services released the first comprehensive physical activity recommendations published by the federal government.¹⁸ The 2008 Physical Activity Guidelines for Americans

recommends adults ages 18-64 get 150 minutes per week of moderate intensity activity, or 75 minutes per week of vigorous activity, or a combination of the two, to receive substantial health benefits. The recommendations for children and adolescents (6 to 17 years old) are 60 or more minutes of moderate to vigorous activity every day, with vigorous activity at least three days per week to promote a healthy body weight and achieve overall health benefits.

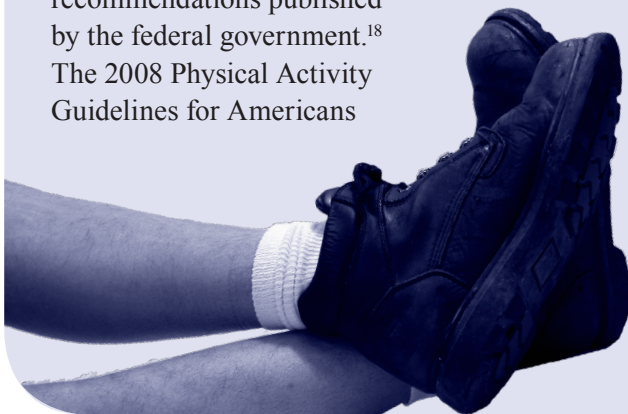
Twenty-seven percent (27%) of Alaska adults are not getting the recommended levels of physical activity; women are more likely than men to not meet the recommendations (Figure 13). The most common reason cited for not getting more physical activity is not having enough time.⁹

Figure 13. Prevalence of Not meeting Physical Activity Recommendations, by Sex, Alaska Adults, 2005 & 2007 (combined)



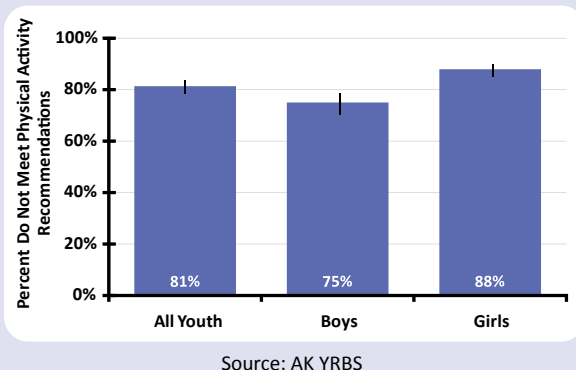
Source: AK BRFSS

Only 19% of high school students are getting the recommended 60 minutes of physical activity daily (Figure 14). In 2007, almost half (46%) of boys and 61% of girls reported having no PE class in the previous week. There has been no significant change in the amount of PE class time from 1995 to 2003.⁹



Contributing Factors

Figure 14. Prevalence of Not Meeting Physical Activity Recommendations (60 minutes daily) by Sex, Alaska High School Youth, 2007



TV and Screen Time

Television viewing and computer/video game playing (i.e., “screen time”) have been identified as a contributor to obesity, particularly among children.¹⁹ The American Academy of Pediatrics recommends limiting television and other screen time to no more than two hours per day for children ages two to 18.²⁰

One-third of Alaska adults (33%) and half of high school students (50%) have three or more hours of screen time (television time plus computer time not for work or school) daily (Figures 15 and 16).

Figure 15. Number of Hours of Screen Time per Day, Alaska Adults, 2005

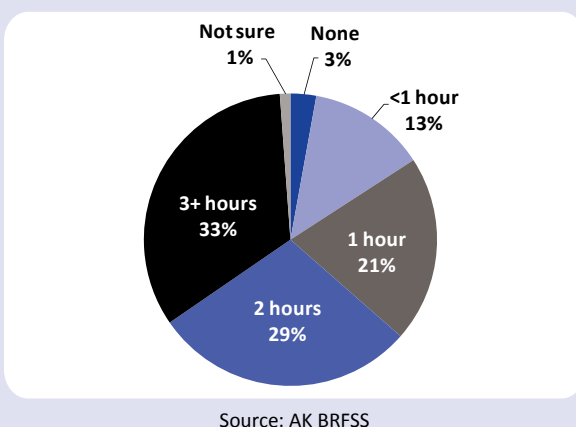
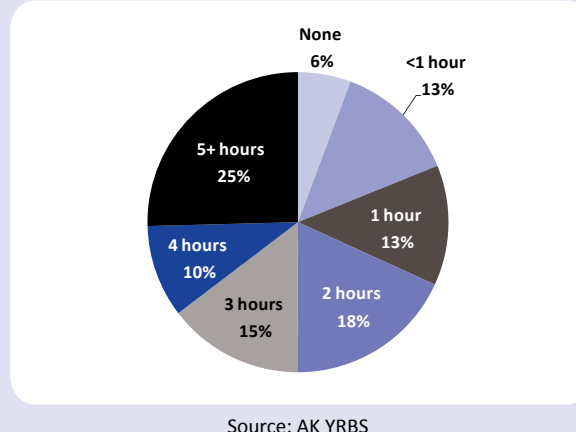
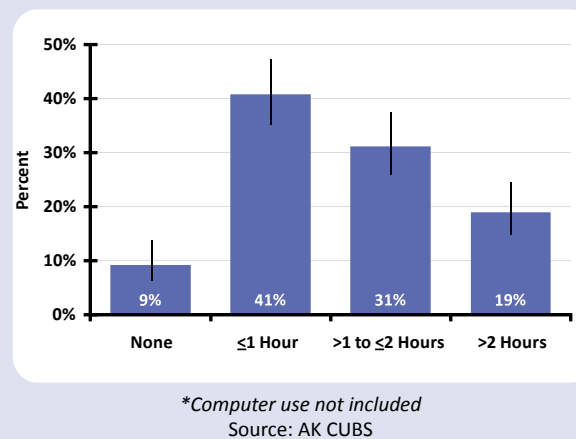


Figure 16. Number of Hours of “Screen Time” (Watched TV or Used a Computer, Not for School Work) during Average School Day, Alaska High School Youth, 2007



The Alaska Childhood Understanding Behaviors Survey²¹ (CUBS) asked mothers of 2-year-olds how many hours of television (including videos and DVDs) their child watched during the previous day. Nineteen percent (19%) of toddlers watch more than the recommended two hours per day (Figure 17).

Figure 17. Usual Number of Hours of Television Screen Time* (including videos and DVDs) Among 2-Year-Olds, (Alaska CUBS 2006)



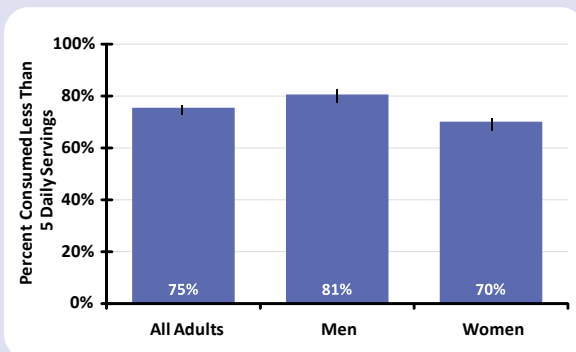
Nutrition

Fruit and Vegetable Consumption

Fruits and vegetables are promoted for the prevention of obesity because of their high water and fiber content, low fat content and low energy density, all effectively reducing energy (caloric) intake.²² The Dietary Guidelines for Americans, 2005 recommends at least five servings of fruits and vegetables each day.²³

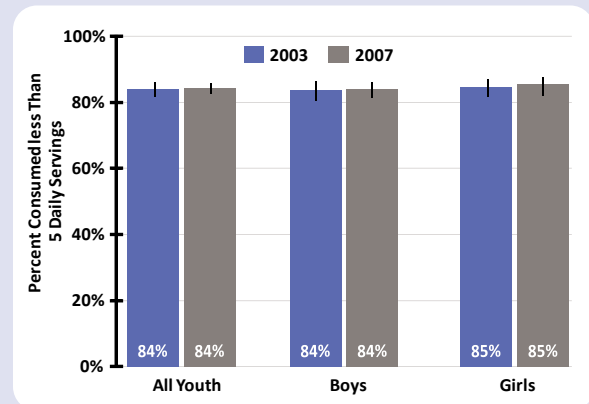
Three-quarters of adults (75%) and 84% of high school students eat less than the recommended amounts of fruits and vegetables daily (Figures 18 and 19). Youth fruit and vegetable consumption has not changed since 2003 (Figure 19). Fruit and vegetable consumption among adults does not differ significantly by age, income, or race and ethnicity.⁹

Figure 18. Prevalence of Consuming Less Than 5 Daily Servings of Fruits and Vegetables, by Sex, Alaska Adults, 2005 & 2007 (combined)



Source: AK BRFSS

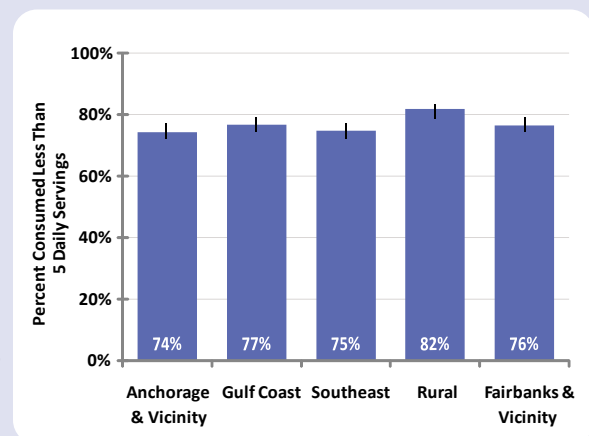
Figure 19. Prevalence of Consuming Less Than 5 Daily Servings of Fruits and Vegetables, by Sex, Alaska High School Youth, 2003 & 2007



Source: AK YRBS

Adults in rural Alaska are significantly more likely than those in Anchorage or Southeast Alaska to consume less than five daily servings of fruits and vegetables (Figure 20). No other regional differences in fruit and vegetable consumption are significant.⁹

Figure 20. Prevalence of Consuming Less Than 5 Daily Servings of Fruits and Vegetables, by Region, Alaska Adults, 2005 & 2007 (combined)



Source: AK BRFSS



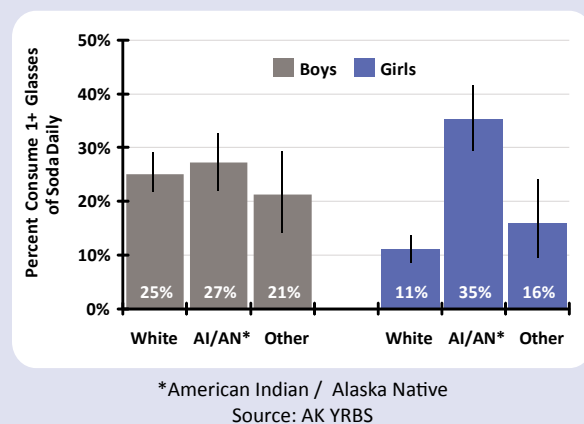
Nutrition

Sugar-Sweetened Beverage Consumption

Beverage consumption is also an indication of nutrition behavior. Sugar-sweetened beverages (carbonated and non-carbonated beverages sweetened with sugar, high-fructose corn syrup or other caloric sweeteners) are now a significant source of added sugars and calories in the diet of Americans.²⁴ Soda consumption has recently been identified as contributing to weight gain.²⁴

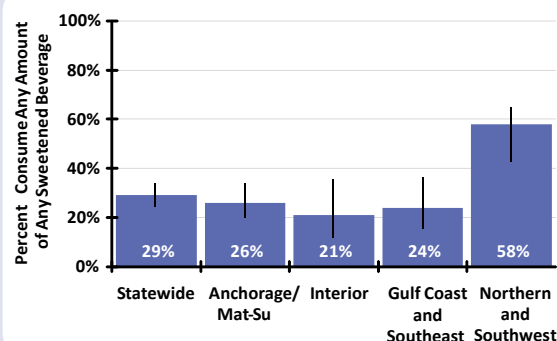
The 2007 YRBS asked high school students how many cans, glasses or bottles of soda (not including diet soda) they consume each day. Nearly one-quarter, (22%) of high school youth drink one or more non-diet soda per day¹²; American Indian/ Alaska Native girls are significantly more likely to do so (35%) than are White girls (11%) (Figure 21).

Figure 21. Prevalence of Drinking 1 or More Cans/Glasses of Soda (Excluding Diet) Daily, by Race and Sex, Alaska High School Youth, 2007



The CUBS surveyed mothers of 2-year-olds about their child's consumption of soda and other sweetened beverages. According to these mothers' reports, 29% of toddlers statewide and 58% in the northern and southwest parts of Alaska consumed some in the previous day (Figure 22).

Figure 22. Prevalence of Drinking Any Soda or Sweetened Beverages, by Region, Alaska 2-Year-Olds, 2006



Source: AK CUBS

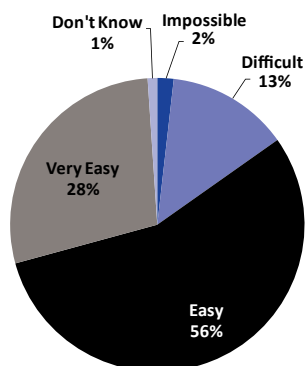
Nutrition Environment

Lack of access to local grocery stores and full-services restaurants (as opposed to fast-food restaurants) contributes to poor dietary patterns and obesity. Disparities in food access are greatest in lower income, minority, urbanized neighborhoods, as well as less populated rural areas.²⁵ The BRFSS includes a series of questions asking adults to rate ease of obtaining healthy food in various places within their communities. Access to healthy food in local stores is judged to be difficult or impossible for 15% of Alaska adults (Figure 23); 30% rate access to healthy food in local restaurants as difficult or impossible (Figure 24).



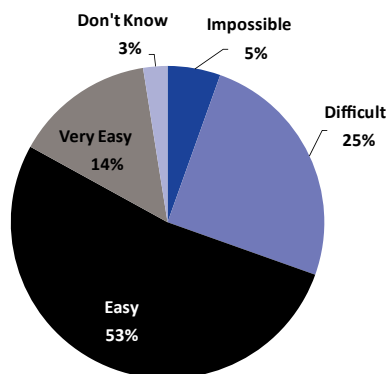
Nutrition

Figure 23. Ratings of Access to Healthy Food in Local Stores, Alaska Adults, 2005



Source: AK BRFSS

Figure 24. Ratings of Access to Healthy Food in Local Restaurants, Alaska Adults, 2005



Source: AK BRFSS

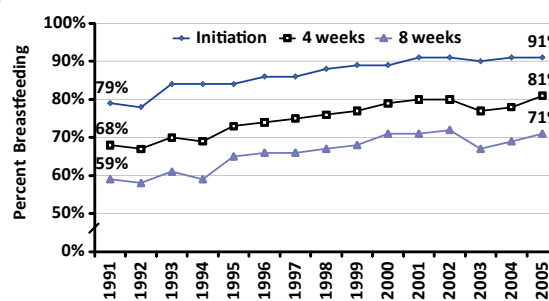
Breastfeeding

Breastfeeding has many documented benefits for mothers and babies, including evidence to suggest that any breastfeeding and breastfeeding for longer durations may protect against obesity in childhood.²⁶ The American Academy of Pediatrics recommends breastfeeding for obesity prevention.²⁷ Alaska currently has higher breastfeeding initiation and duration rates than the nation as a whole.²⁸ The Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) is an ongoing population-based survey that

collects self-reported information on maternal attitudes and experiences before, during, and after delivery of a liveborn infant. PRAMS data show that breastfeeding initiation and duration prevalences have increased significantly since 1991 (Figure 25).²⁹



Figure 25. Trends in Breastfeeding Initiation, at Four Weeks Postpartum and at Eight Weeks Postpartum, Women Delivering in Alaska, 1991-2005



Source: AK PRAMS

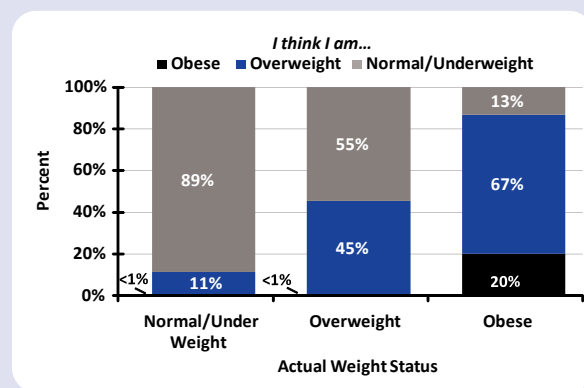
Strategies to Reduce Obesity

As noted by the Surgeon General, the Institute of Medicine, and other prominent health and science organizations, reducing obesity will require action on the part of individuals, organizations, and policy-makers in a wide variety of settings.^{3,20} The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity states that "successful efforts [to prevent overweight and obesity], must focus not only on individual behavioral change, but also on group influences, institutional and community influences, and public policy."²³ The BRFSS and YRBS collect information on what individuals are doing to manage their own weight, and also on support for more broad-based strategies.

Individual Strategies: Weight Management

For some, weight management begins with the perception that they are overweight. Data from the BRFSS reveal that many adults have an inaccurate perception of their weight status. For example, 55% of those who are overweight identify themselves as such, but only 20% of those who are obese see themselves as obese (Figure 26).

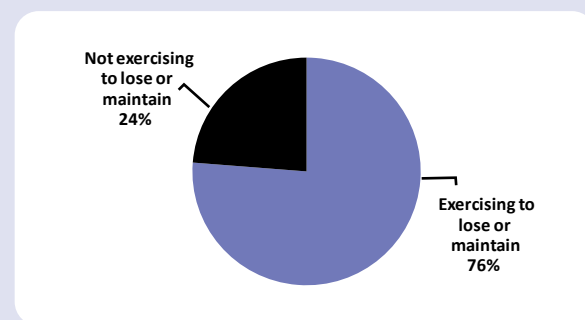
Figure 26. Perceived Weight Status, By Actual Weight Status, Alaska Adults, 2005



Source: AK BRFSS

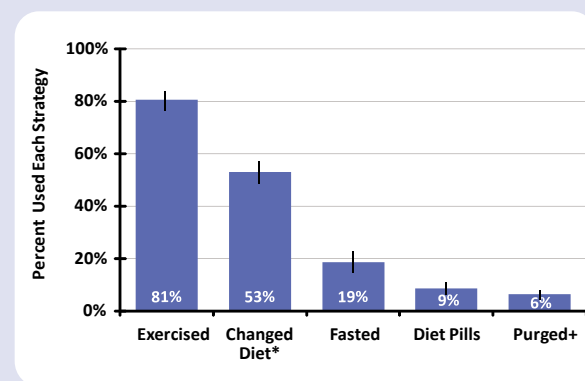
Most adults (75%) and high school youth (63%) are trying to lose weight or maintain their current weight⁹. Exercise is the most commonly reported strategy for weight management among both adults (76%) and youth (81%), as shown in Figures 27 and 28, followed closely by changes to diet (adults, 69%; youth, 53%; Figures 29 and 28).

Figure 27. Use of Exercise as a Weight Management Strategy, Alaska Adults Trying to Lose or Maintain Their Weight, 2003 & 2007 (combined)



Source: AK BRFSS

Figure 28. Prevalence of Various Weight Management Strategies Used in the Past 30 Days, Alaska High School Youth Reporting Trying to Lose or Maintain their Weight, 2007

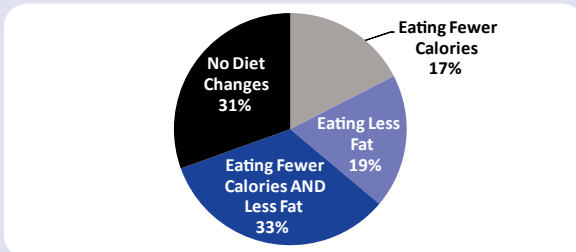


*ate less food or food lower in calories or fat;
+vomited or used laxatives

Source: AK YRBS

Strategies to Reduce Obesity

Figure 29. Use of Diet-Related Weight Management Strategies, Alaska Adults Trying to Lose or Maintain Their Weight, 2003 & 2007 (combined)

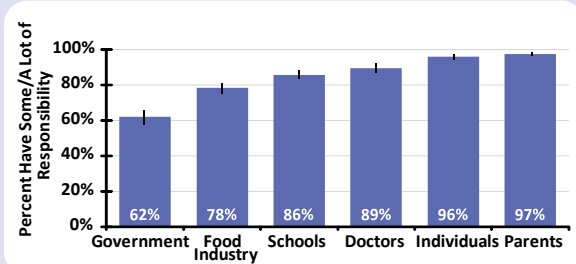


Source: AK BRFSS

Policy and Systems Strategies

Numerous organizations and individuals will need to play a role in addressing obesity, and a series of BRFSS questions asks adults to identify how much responsibility they believe various segments of society have for addressing obesity in the United States. Obesity and weight management are commonly portrayed as issues to be dealt with by individuals³, and that perception is common in Alaska as well, with over 95% of adults stating that parents and individuals have some or a lot of responsibility for addressing obesity. Recognition that other entities have a role to play in addressing obesity is also high, however, with well over half of adults reporting that government (62%), the food industry (78%), schools (86%), and doctors (89%) had some or a lot of responsibility for addressing obesity (Figure 30).

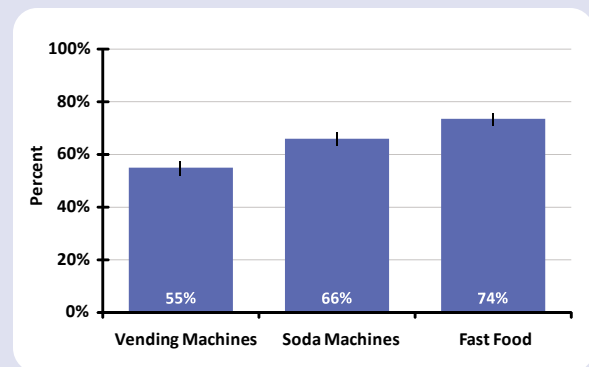
Figure 30. Percentage Who Believe Each Source Has Some or A Lot of Responsibility for Addressing Obesity in the US, Alaska Adults, 2005



Source: AK BRFSS

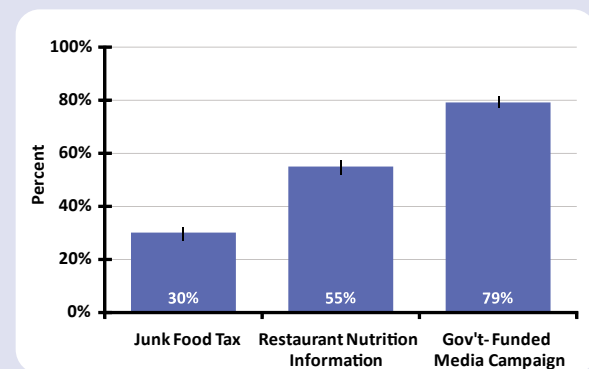
A majority of Alaska adults support school policies that would limit the availability of unhealthy foods in schools (Figure 31). In addition, 79% of Alaska adults support or strongly support a government-funded obesity prevention media campaign, and 55% support a law requiring restaurants to include nutrition information on their menus (Figure 32).

Figure 31. Percentage Who Say Vending Machines, Soda Machines, and Fast Food Should Not Be Allowed in Schools, Alaska Adults, 2005



Source: AK BRFSS

Figure 32. Percentage Who Support or Strongly Support Each Policy, Alaska Adults, 2005



Source: AK BRFSS

Recommendations

In Alaska overall, one in three adults is obese and more than one in four adolescents is above a normal weight; however, not every Alaskan is equally likely to be obese or to engage in obesity-related risk behaviors. The information presented in this report reveals disparities related to sex, age, region, race, and socioeconomic status. The high and increasing rate of obesity in Alaska, coupled with alarming data on disparities, calls for a comprehensive obesity prevention approach containing both population-wide and more targeted components.

Obesity is a public health problem. To address it effectively, local and statewide public and private partners must collaboratively implement public health strategies, such as:

Monitor the status of obesity through data collection and community health assessments. Identify populations who are the most at-risk for becoming obese.

- ❑ Direct resources to increase qualitative and quantitative data collection, interpretation and evaluation of obesity and obesity risk behaviors in disparate populations, and for those population subgroups (e.g., school-aged children) for whom representative data are scarce.

Inform, educate, and empower people about obesity issues.

- ❑ Design and implement culturally appropriate educational campaigns based on the social marketing model to include multiple components, such as community events, health screenings and mass media, to raise individual and community awareness and knowledge among disparate populations.

Mobilize community partnerships to identify and address obesity issues through local organizations, systems and networks.

- ❑ Partner with and support disparate communities in the development, implementation, and maintenance of effective obesity prevention programs.
- ❑ Strengthen and increase partnerships in multiple settings (school, healthcare systems, workplace, governments), organizations not usually associated with health (faith-based organizations, labor unions), all age groups (youth, adults, and seniors), and non-traditional partner organizations to maximize the impact of stakeholder efforts to prevent and reduce obesity and obesity risk behaviors in disparate populations.

Develop policies and plans based on current best practices that support individual and community efforts to address obesity. Identify and provide funding for communities to organize, develop and implement their plans.

- ❑ Secure funding that will adequately address obesity-related disparities within a comprehensive obesity prevention plan.

Advocate for state and local policy and environmental change strategies that promote good nutrition and increased physical activity.

- ❑ Engage disparate populations to promote obesity prevention policy, environmental, and systems change.

Recommendations

Link people to needed obesity prevention and control services and assure the provision of health care when otherwise unavailable.

Assure a competent public health and personal health workforce that is trained in the current prevention, diagnosis and treatment of obesity.

Evaluate effectiveness of intervention efforts, including within disparate populations, to determine what works and merits further resources and efforts.

Conduct and/or support research on new evidence-based obesity prevention interventions and innovative solutions to obesity.

A comprehensive list of prevention strategies for worksites, schools, healthcare, and communities can be found in Alaska in Action: Statewide Physical Activity and Nutrition Plan³⁰, which was developed by a statewide coalition of state, municipal, educational, tribal and community health organizations concerned about Alaska's growing obesity crisis.

To achieve the desired population-wide impact and reduce disparities, Alaskans must work together to address the many factors that contribute to overweight and obesity. These efforts must help children, adolescents and adults develop lifelong healthy habits and also ensure that the environments in which they live, attend school, work and play support healthy activity and eating choices.



Appendix

Description of Data Sources

Anchorage School District (ASD)

The Anchorage School District and the Alaska Division of Public Health have collaborated to assess the prevalence of overweight and obesity among children in the Anchorage School District.^{11,12} Height and weight measurements are routinely collected by school nurses for students in grades K-12. The data were used to classify student weight status using BMI-for-age values within each gender according to categories defined by the National Center for Health Statistics.

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is an anonymous telephone survey conducted by the Alaska Division of Public Health in cooperation with the Centers for Disease Control and Prevention (CDC). It aims to estimate the prevalence of behavioral risk factors in the general population that are known to be associated with the leading causes of morbidity and mortality in adults. The BRFSS has operated continuously in Alaska since it began in 1991.

The BRFSS uses a probability (or random) sample in which all Alaskan households have a known, nonzero chance of selection. The sample is stratified into five geographic regions, with roughly equal numbers of interviews conducted in each region. This method deliberately over-samples rural areas of the state. Respondents are randomly selected from among the adult (age 18 and older) members of each household reached through a series of random telephone calls. Those living in institutions (i.e., nursing homes, dormitories) are not surveyed. The BRFSS questionnaire covers such topics as general health status, health care access, nutrition, physical activity, tobacco use, diabetes, alcohol

use, women's health, injury prevention, HIV/AIDS awareness. There are also questions on the demographic characteristics of respondents.

Alaska presently conducts two BRFSS surveys: the standard BRFSS (sponsored by the CDC) and a modified BRFSS (sponsored by the State of Alaska). Both surveys are conducted throughout the year, using separate samples drawn using the same methodology. Both the standard and modified BRFSS are weighted (separately) to compensate for the over-representation or under-representation of persons in various subgroups. The data are further weighted to adjust the distribution of the sample data so that it reflects the total population of the sampled area.

Childhood Understanding Behaviors Survey (CUBS)

CUBS provides population-based data on preschool aged children in Alaska. During 2006, data were collected on 2-year-olds (however starting in 2008, data collection switched to focus on 3-year-olds). CUBS uses the methodology of re-interviewing mothers who responded to the Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) survey soon after their child was born. Although PRAMS is conducted in almost 37 states, Alaska is one of only four states that have a follow-up survey to PRAMS. The purpose of CUBS is to provide information on health conditions, health care utilization, child development and other health-related behaviors of young children and to evaluate the association between prenatal and immediate postnatal factors with early childhood health and welfare. CUBS asks questions about both the mother and her child. About 115 mothers are sent a CUBS survey in the mail every month. In 2006, the response rate was 51%.

Appendix

Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS is a population-based survey of Alaska women who have recently delivered a live-born infant. Administered since 1990 by the Alaska Division of Public Health, PRAMS is conducted in collaboration with the CDC in 37 states to gather information on the health risk behaviors and circumstances of pregnant and postpartum women. A systematic stratified sample is drawn each month from the state's live birth records for infants between two and six months of age. Sampled mothers receive a series of mailed questionnaires, and since 1997 telephone follow-up has been initiated among those who do not respond to the third mailed request. The PRAMS questionnaire addresses such topics as access to prenatal care, obstetric history, maternal use of alcohol, maternal tobacco use, nutrition, economic status, maternal stress, and early infant developmental and health status. Survey responses are weighted so that reported prevalences accurately describe Alaska women delivering a live-born infant during the year of the survey. In recent years the survey has had a response rate of approximately 77%.

Youth Risk Behavior Survey (YRBS)

The YRBS is a systematic survey of high school students investigating behaviors related to the leading causes of mortality, morbidity and social problems among youth. The Centers for Disease Control and Prevention sponsors national and state surveys every two years in odd years. Alaska first participated in the YRBS in 1995. The statewide survey obtained a statistically valid, representative sample in 1995, 1999, 2003, and 2007. Alaska was unsuccessful in its attempt to obtain a statewide representative sample in 2001 and 2005. The Alaska YRBS is conducted using a two-stage sampling design. Schools are selected first with a probability of inclusion proportional to the size of their enrollment. Once a school is chosen, classes are selected, with each student having an equal opportunity for inclusion. Since 2003, active parental consent was required for each student participating in the YRBS. On the appointed survey day students completed written questionnaires and returned them in class in unmarked, sealed envelopes. Data were weighted to reflect the true distribution of Alaska high school students by sex and grade level. Following CDC guidelines for YRBS data reporting, data are suppressed in subgroup analyses for which the actual number of respondents is fewer than 100.

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