

Alaska Department of Health and Social Services

Childhood Obesity in Alaska



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Alaska Department of Health and Social Services
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Letter from the Chief Medical Officer

Dear Alaskans:

I am pleased to share with you the following report on Childhood Obesity in Alaska. This report presents information from various sources to provide the most complete picture available in Alaska of childhood obesity and the behaviors that contribute to obesity.

The information presented in this report indicates the need for 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. Only the synergistic work of all these stakeholders will ensure that Alaska has a strong and healthy future.

Alaska's youth obesity prevalence would have to decrease by more than 50% and overweight prevalence would have to decrease by more than 25% to meet our Healthy Alaskans 2010 target. Despite the many benefits of physical activity and good nutrition, too many Alaskan children today grow up without developing positive physical activity and nutrition habits. As this report shows, they consume excessive soda and sugar-sweetened beverages, eat too few fruits and vegetables, and spend more time looking at screens than being physically active.

Positive change will occur if Alaskans work together to support policy and environmental changes that result in the healthy choice becoming the easy and affordable choice for everyone. I hope this report mobilizes government leadership and community partnerships to play a role in reducing obesity in Alaska's children by adopting a comprehensive, long-term approach to solve this problem.

Sincerely,

A handwritten signature in black ink, appearing to read "Jay Butler". The signature is fluid and cursive, with a large initial "J" and "B".

Jay Butler, MD
Chief Medical Officer
State of Alaska, Health and Social Services

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Executive Summary

Obesity is a threat to all generations of Alaskans. Two-thirds (66%) of Alaskan adults are overweight or obese, and many of these adults are dealing with obesity-related health issues, such as diabetes, heart disease, cancer and high blood pressure. However, obesity is not just limited to adults and Alaska's youth are becoming part of the rapidly rising obesity rate. Increasingly more children in Alaska will be facing significant obesity-related chronic diseases in their future.

At this time, there are no comprehensive statewide data on childhood obesity in Alaska. The *Childhood Obesity in Alaska* report has gathered existing data from a variety of sources to provide the best estimates we have currently of overweight and obesity among Alaska's children and adolescents. Some key findings include:

- 11% of Alaskan high school students are obese (95th percentile or higher); more than twice the *Healthy Alaskans 2010* obesity target for adolescents of 5%.
- 36% of K-12th grade students in the Anchorage School District (ASD) are above a normal weight (85th percentile or higher).
- 32% of children entering kindergarten and 1st grade in the ASD are above a normal weight.
- 40% of children ages 2 to 4 enrolled in the Women, Infants and Children (WIC) Program are above a normal weight; twice the *Healthy Alaskans 2010* target for WIC children.

This report also examines data on key physical activity and nutrition behaviors that contribute to childhood overweight and obesity. Findings include:

- 58% of 2 year-olds in the Northern and Southwest regions of Alaska consume at least some sweetened beverage on an average day compared to 21-26% of toddlers living in other regions of the state.
- Only 16% of high school students meet the recommendation of 5 or more servings of fruits and vegetables every day.
- Only 19% of high school students meet the new guideline of 60 or more minutes of physical activity every day; only 5% of Alaska Native girls meet the recommendation.
- 50% of high school students report more than 2 hours of screen time (TV and computers away from school work) per day; 25% report 5 or more hours per day.

Reversing the increasing trend of obesity will require time and a comprehensive obesity prevention program model that combines educational, clinical, environmental, and social strategies. This report presents recommendations and strategies from the *Alaska in Action: Statewide Physical Activity and Nutrition Plan*, a plan developed by a statewide coalition of state, municipal, educational, tribal and community health organizations. A comprehensive, long-term approach to the childhood obesity problem could help reduce the ever-increasing number of Alaskans who suffer poor quality of life, disability, chronic illness, and even premature death as a result of obesity-related illnesses.

Similar to the rest of the nation, Alaska is experiencing an obesity epidemic that will have serious health, social and economic impacts for decades to come. In Alaska, 66% of adults are overweight or obese, increasing their risk of chronic diseases and conditions such as heart disease, diabetes, stroke, hypertension, some cancers and premature death.^{1,2} In the past overweight, obesity and chronic health conditions were considered adult onset problems, occurring as people age. Today, with the high rates of overweight and obesity among children and adolescents, world health experts are predicting that this generation of children will be the first to live shorter lives than their parents.³

An ever increasing number of children and adolescents will enter adulthood with serious health risks. Since 1980, the national overweight and obesity rates have tripled for youth, with 34% of 2 to 19 year-olds above a normal weight.^{4,5} In Alaska, 27% of high school students are overweight or obese and one-third (33%) of children entering kindergarten in Alaska's largest school district are above a normal weight.^{6,7} Obese children and adolescents are more likely to become obese adults and to develop chronic diseases.⁸ Almost 40% of obese children already have at least two cardiovascular disease risk factors, such as high blood pressure or high blood cholesterol.⁹ In most cases, as these children age, their health risks will increase in number and severity.

Childhood obesity is a public health problem. *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."¹⁰ Preventive approaches must help children and adolescents develop lifelong

habits to maintain a healthy weight and prevent chronic diseases, but must also ensure that the environments in which they live, attend school, work and play support healthy activity and eating choices.

The *Childhood Obesity in Alaska* report presents a picture of the problems and possible solutions to the burden of child and adolescent overweight and obesity in our state. This report contains data on the extent of overweight and obesity in child and adolescent populations, as well as data on key physical activity and nutrition behaviors that contribute 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.¹¹ Health, academic and economic consequences of childhood obesity are described. This report presents recommendations and strategies from the *Alaska in Action: Statewide Physical Activity and Nutrition Plan*, a plan developed with the expertise and experience of many state and local obesity prevention and control partners.¹² The *Childhood Obesity in Alaska* report provides Alaska-specific solutions for a comprehensive strategy to reduce child and adolescent obesity.

Introduction

Body Mass Index (BMI)

The body mass index (BMI) is used to estimate a person's risk of weight-related health problems and is calculated using weight and height. Because children and adolescents, ages 2 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. BMI's for children and adolescents are plotted by age on a sex-specific growth chart to find percentile for sex and age.¹³

BMI surveillance data are a reliable tool used to describe trends in weight status over time among populations and subpopulations. BMI is the most widely used measure because it is relatively easy, inexpensive, noninvasive, and quick to obtain. BMI is not a direct measure of body fat but has been shown to significantly correlate with body fat. It is important to note that BMI should not be used alone to diagnosis a child as overweight or obese. Rather, BMI should be used to identify children and adolescents who need to be examined further by a medical care provider to obtain an informed diagnosis.^{13, 14}

In March 2007, the Expert Committee on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity recommended the use of the terms "overweight" and "obese" in place of the terms "at-risk for overweight" and "overweight" used for children and adolescents (Table 1).¹⁴ The cutoff points remain the same; however, the committee changed the terms to reflect more appropriate clinical descriptions, provide continuity with adult definitions, and avoid the vagueness of "at-risk for overweight". The new terminology, "overweight" and "obese", is used for consistency in this report.

Table 1: BMI Classification for Children 2-20 Years Old

BMI for Age Percentiles	Former Terminology	Recommended Terminology ¹⁴
<5 th	Underweight	Underweight
5 th to 84 th	Normal Weight	Normal Weight
85 th to 94 th	At-risk for Overweight	Overweight
≥95 th	Overweight	Obese

Healthy Alaskans 2010

Healthy Alaskans 2010 reflects Alaska's priorities and objectives for improving health.¹⁵ *Healthy Alaskans 2010* is used throughout the decade to track changes in the health status of Alaskans and to serve as a point of reference for health policy development. As the year 2010 draws closer, child and adolescent overweight and obesity rates have moved farther away from, rather than closer to the objectives to reduce the incidence of childhood obesity.

- By 2010, reduce the proportion of low-income children who meet the criteria for overweight from 12% to 10%.
- By 2010, reduce the proportion of low-income children who meet the criteria for obese from 13.9% to 10%.
- By 2010, reduce the proportion of adolescents who meet the criteria for overweight from 17% (boys) and 14% (girls) to 12% (both genders).
- By 2010, reduce the proportion of adolescents who meet the criteria for obesity from 7% (total) and 9.1% (Alaska Native) to 5%.

Status of Child and Adolescent Overweight and Obesity in Alaska

Statewide, representative data for children younger than high school age are not available, as there is no survey or data collection system for younger youth populations. Several different programs or organizations in the state maintain or collect height and weight records for children served by their programs; however, these data are not representative of all Alaskan children in these age groups. These data are presented here to provide the best estimates of childhood overweight and obesity in Alaska.

Women, Infants, and Children Program (WIC)

The Women, Infants, and Children (WIC) Program serves low-income pregnant and postpartum women, infants and children under 5 years old who are at nutritional risk. Records for 2001-2005 show that 40% of children ages 2 to 4 enrolled in WIC are above a normal weight (overweight and obese combined); twice the *Healthy Alaskans 2010* target for WIC children (Figure 1).¹⁶

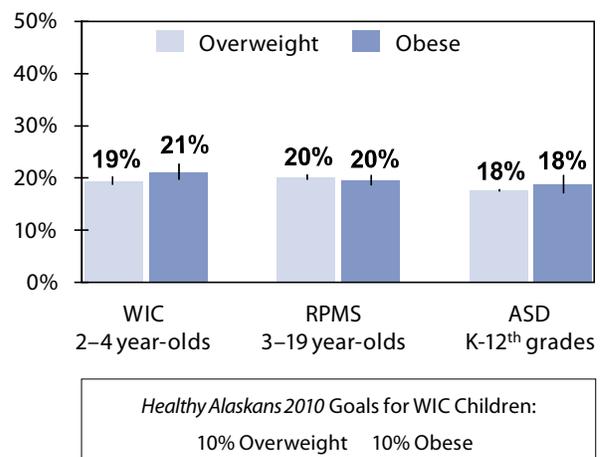
Resource Patient Management System (RPMS)

The Resource Patient Management System (RPMS) data come from medical records of children who visit a State of Alaska Public Health Nurse or Alaska Native Health Facility. Height and weight data for children ages 3 to 19 in the years 2000-2005 show 40% are above a normal weight (Figure 1).¹⁷

Anchorage School District (ASD)

School nurses with the Anchorage School District (ASD) measure height and weight of students as part of the school health screening process. To assess the scope of the obesity epidemic among children and adolescents in Anchorage, the Anchorage School District and the Alaska Division of Public Health collaborated to analyze this existing data for the 1998 to 2003 school years.¹⁸ Findings from this analysis showed 36% of kindergarten through 12th grade students were overweight or obese. An updated analysis for the 2003 to 2005 school years shows similar results, with 36% of students above a normal weight (Figure 1).⁷ The percentage of students who are overweight or obese is high even among young children just entering school; nearly one-third (32%) of children entering kindergarten or first grade in the 2007-2008 school year are above a normal weight (data not shown).

Figure 1: Prevalence of Overweight and Obesity Among Children Enrolled in the Women, Infants and Children Program (WIC)¹⁶; Resource Patient Management System (RPMS)¹⁷; and Anchorage School District (ASD)⁷ (Alaska, 2000-2005)



Status of Child and Adolescent Overweight and Obesity in Alaska

High School Students in Alaska

The Alaska Youth Risk Behavior Survey (YRBS) provides statewide, representative data for the high school population, grades 9 – 12.⁶ In 2007, YRBS data show that 27% of Alaskan high school students are overweight or obese, which is comparable to the 29% of overweight or obese high school youth nationally.¹⁹ Eleven percent (11%) of high school youth are classified as obese, over twice the *Healthy Alaskans 2010* objective for adolescents (Figure 2). Boys are significantly more likely to be above normal weight than girls; 30% of boys are overweight or obese, compared to 24% of girls (Figure 3). The only previous YRBS weight data was obtained in 2003 and show the number of Alaskan high school students above a normal weight increased by 7.5% between 2003 and 2007.



Figure 2: Weight Status of High School Youth (Alaska YRBS, 2007)

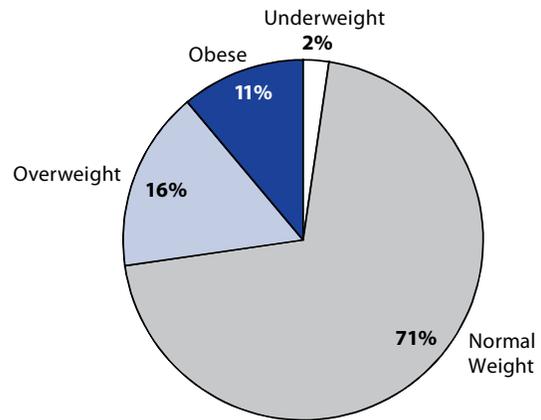
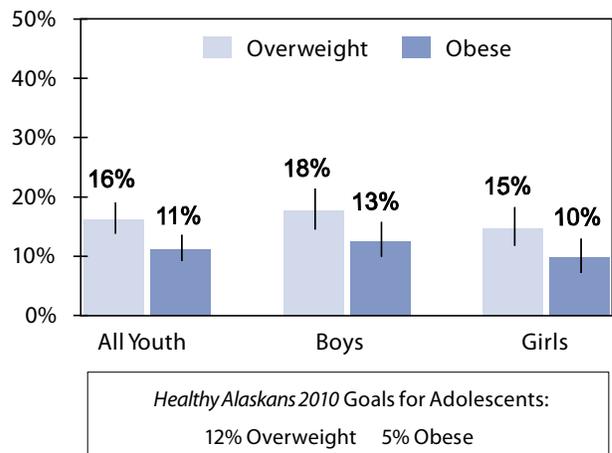


Figure 3: Prevalence of Overweight and Obesity Among High School Youth, by Sex (Alaska YRBS, 2007)



Self-Reported versus Measured Height and Weight

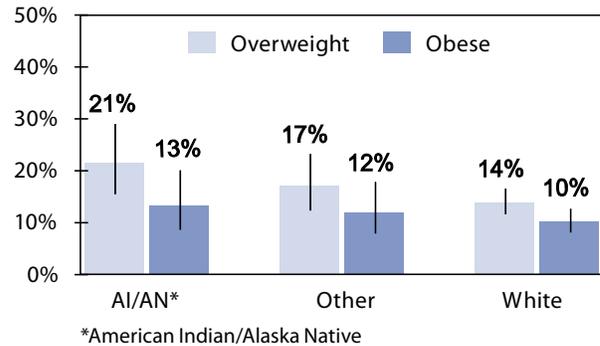
It is important to note that YRBS data on weight status are self-reported by high school students, which has been shown to under-represent actual measured weight.²⁰ A comparison of Anchorage School District objectively measured data to Anchorage YRBS self-reported data show obesity was 6% higher for females and 7% higher for males when measured versus self-reported. Thus, it is likely that the statewide overweight and obesity prevalence estimates obtained from the YRBS are underestimates.

Status of Child and Adolescent Overweight and Obesity in Alaska

Race and Ethnicity

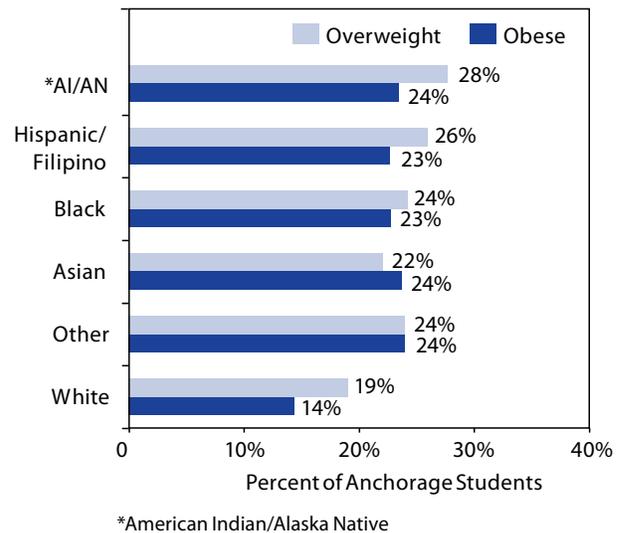
Although childhood overweight and obesity is a problem among all populations regardless of age, gender, race or ethnicity, certain groups are disproportionately affected. Nationally, differences have been shown between racial/ethnic groups, with higher rates among Mexican American and non-Hispanic Black children and adolescents.⁴ No national data exist for American Indian/Alaska Native children; however, American Indian/Alaska Native adults show higher rates of obesity and overweight compared to White adults.²¹ According to the 2007 Alaska YRBS, White high school youth (24%) have a lower rate of overweight and obesity combined compared to Alaska Native youth (35%) and youth of other race/ethnic backgrounds (29%); however, due to the small sample size this difference is not statistically significant (Figure 4). The 2005-2006 Anchorage School District data show lower rates of overweight and obesity among Whites compared to all other racial and ethnic groups (Figure 5). Data from the Alaska Native Epidemiology Center shows a high prevalence of obesity among Alaska Native pediatric patients, finding that 30% of active clinic patients ages 2 to 5 years are obese.²² While these are not statewide representative data, they do suggest a higher prevalence of overweight and obesity among minority populations in Alaska.

Figure 4: Prevalence of Overweight and Obesity Among High School Youth, by Race/Ethnicity (Alaska YRBS, 2007)



Healthy Alaskans 2010 Goals for Adolescents:
12% Overweight 5% Obese

Figure 5: Prevalence of Overweight and Obesity Among Anchorage School District Students, by Race/Ethnicity, (2005-2006 School Year)⁷



Consequences of Child and Adolescent Overweight and Obesity

Health and Psychosocial Consequences

Obesity, diet and physical inactivity account for an estimated 365,000 deaths in the US annually, second only to tobacco-related deaths.²³

Overweight and obesity increases the risk of developing chronic diseases and conditions such as heart disease, diabetes, stroke, hypertension and some cancers, and can result in premature death.² Many of these adult diseases begin in childhood; almost 40% of obese children already have at least two cardiovascular disease risk factors, such as high blood pressure or high blood cholesterol.⁹ Obese children and adolescents can also experience health consequences prior to adulthood. Obese youth have a higher risk than normal weight youth of developing type 2 diabetes mellitus, asthma, obstructive sleep apnea, orthopedic problems, nonalcoholic fatty liver disease, depression and low self-esteem.² Obese children and adolescents are more likely to become obese adults; one-third of obese preschool children were obese as adults and one-half of obese school-age children were obese as adults.⁸

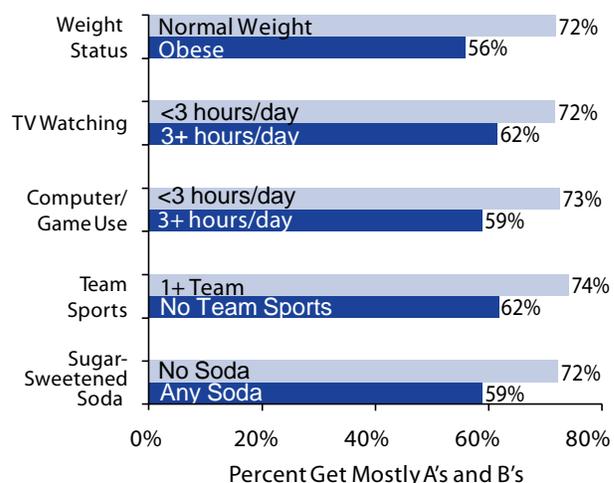
Academic Consequences

Many studies show a direct link of good nutrition and physical activity with academic performance, such as increased academic test scores, improved daily attendance and better class participation. Research also suggests an association between obesity and lower academic abilities, lower teacher ratings of social-emotional well-being, and increased absenteeism.^{24, 25}

Data from the 2007 Alaska YRBS show that, compared to their normal weight peers, obese students are significantly less likely to report receiving mostly A's and B's (Figure 5). Higher grades are reported by students who watch fewer than 3 hours of TV, spend fewer than 3 hours on the computer or playing video games, play on at least one team sport, and do not drink soda. While

these associations do not prove causation, the data do suggest an important link between healthy behaviors and academic achievement.

Figure 6. Prevalence of Getting Mostly A's or B's Among High School Youth, by Select Risk Factor Groups (Alaska YRBS, 2007)



Economic Consequences

Obesity costs Alaskans an estimated \$195 million annually in obesity-related direct medical expenditures, including \$46 million in Medicare/Medicaid costs.²⁶ Obesity-related conditions, such as asthma, gall bladder disease, sleep apnea and type 2 diabetes, are increasing in children and adolescents. Nationally, hospital discharges for obesity-associated diseases increased for children between the ages of 6 and 17 from 1979 to 1999 and hospital costs more than tripled (study used year 2001 constant US dollars for comparing costs per year).²⁷ Obese children are more likely to become overweight or obese adults, thus contributing to reduced life-expectancy, reduced earning potential and increased health care expenditures in the future.

Factors Affecting Child and Adolescent Overweight and Obesity

Numerous factors contribute to childhood overweight and obesity, which make studying and addressing this issue a considerable challenge. The Centers for Disease Control and Prevention (CDC), Division of Nutrition, Physical Activity, and Obesity (DNPAO) recommends that efforts to prevent and control obesity target the following areas based on the best available evidence¹¹:

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

The following sections provide the Alaska-specific data available for each of the CDC target areas.

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 overweight in childhood.²⁸ The American Academy of Pediatrics recommends breastfeeding for obesity prevention.²⁹

Alaska currently has higher breastfeeding initiation and duration rates than the nation.³⁰ The Alaska Pregnancy Risk Assessment Monitoring System (PRAMS) 2005 data show the overall prevalence of breastfeeding initiation and breastfeeding for at least 4 weeks and 8 weeks continues to remain high (Figure 7).³¹ While data from previous years show non-Native mothers were significantly more likely to initiate and continue breastfeeding than Alaska Native mothers, the 2005 PRAMS data show that this gap may be decreasing (Figure 8).

Figure 7: Prevalence of Breastfeeding Initiation, at 4 Weeks Postpartum and at 8 Weeks Postpartum (Alaska PRAMS, 1991-2005)³¹

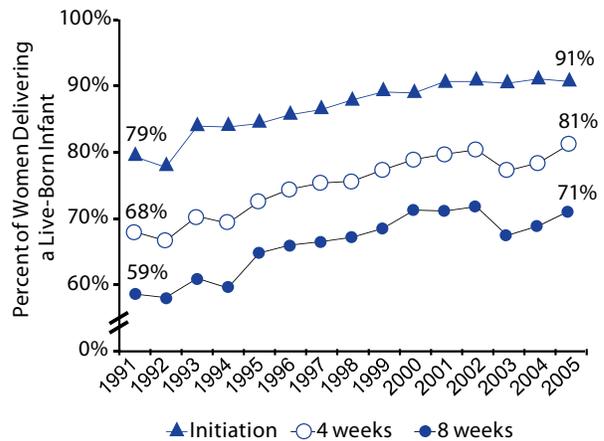
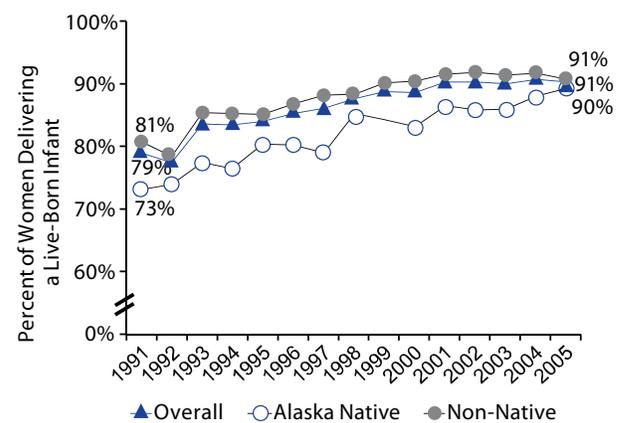


Figure 8: Prevalence of Breastfeeding Initiation by Race (Alaska PRAMS, 1991-2005)³¹



These successful breastfeeding rates can be attributed to strong education, public awareness and policy efforts by groups such as the Alaska Breastfeeding Coalition and the Alaska WIC Program. Significant initiatives to increase breastfeeding among Alaskan women include peer counseling, Loving Support to Build a Breastfeeding Friendly Community, Loving Support Breastfeeding Peer Counseling Training, and a law supporting breastfeeding in a public place.^{16,30} Breastfeeding promotion efforts have addressed individual behaviors, community and social norms, and policy and environments to achieve success, providing a model for addressing other areas of childhood obesity prevention.

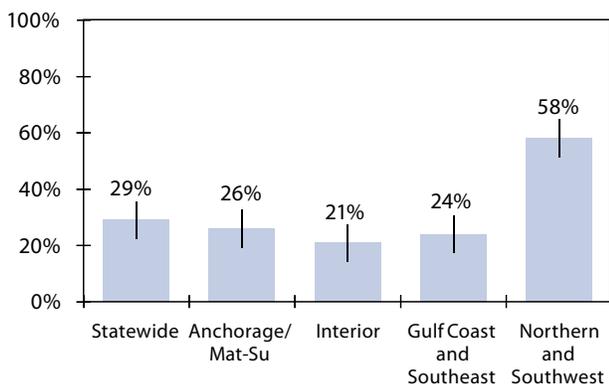
Factors Affecting Child and Adolescent Overweight and Obesity

Soda and Sugar-Sweetened Beverage Consumption

Sugar-sweetened beverages (carbonated and non-carbonated soft drinks, energy drinks, sports drinks and fruit drinks 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. Evidence strongly supports a positive association between the intake of sugar-sweetened beverages and body fat in children.³²

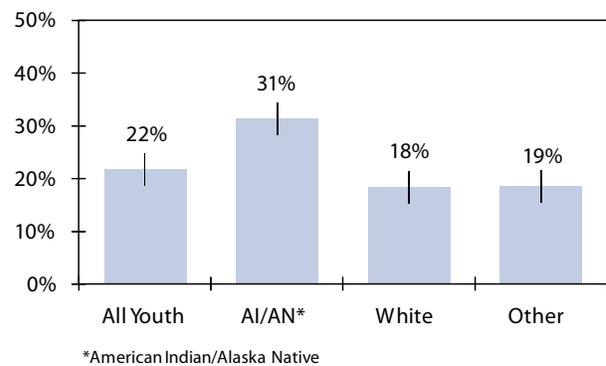
The Childhood Understanding Behaviors Survey (CUBS) surveyed mothers of 2 year-old children born in Alaska in 2004 and still living in Alaska in 2006.³³ These mothers reported that 15% of toddlers had consumed 1 or more cups of soda or other sweetened beverages, such as Kool-Aid or Tang, the day before the survey. Those toddlers consuming the most sweetened beverages lived in the Northern and Southwest regions of Alaska, with over half (58%) of the 2 year-olds in those regions consuming at least some sweetened beverage on an average day compared to 21-26% of toddlers living in other regions of the state (Figure 9).

Figure 9: Prevalence of Daily Consumption of Any Soda or Sweetened Beverages Among Two Year-Olds, by Region (Alaska CUBS, 2006)³³



The 2007 YRBS asked high school students how many cans, glasses or bottles of soda (not including diet) they consume each day. Nearly one-quarter (22%) of students report drinking 1 or more cans of regular soda each day, with 15% of students drinking 2 or more cans daily. More Alaska Native youth (31%) report drinking soda daily than White youth (18%) (Figure 10). The YRBS did not ask students about their consumption of other sugar-sweetened beverages, such as sports drinks or energy drinks.

Figure 10: Prevalence of Consuming One or More Glasses/Cans/Bottles of Soda Daily Among High School Youth, by Race (Alaska YRBS, 2007)

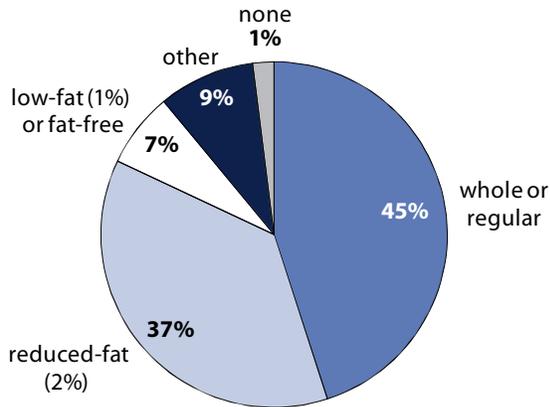


There is concern that sugar-sweetened beverages are replacing milk as the main beverage for children, thereby reducing their intake of important nutrients, such as calcium, vitamin A and vitamin D.³⁴ Some evidence suggests that lower intakes of dairy products and/or calcium are associated with obesity in children.³²

The 2005 *Dietary Guidelines for Americans* recommends 2 cups of fat-free or low-fat (1%) milk, or equivalent milk products, every day for children ages 2 to 8.³⁵ Fat-free or low-fat milk is recommended to reduce calorie and saturated fat intake. The mothers in the CUBS survey reported 80% of the toddlers drank 2 or more cups of milk daily; however, only 7% were drinking fat-free or low-fat milk and 45% of the toddlers were drinking whole milk (Figure 11).

Factors Affecting Child and Adolescent Overweight and Obesity

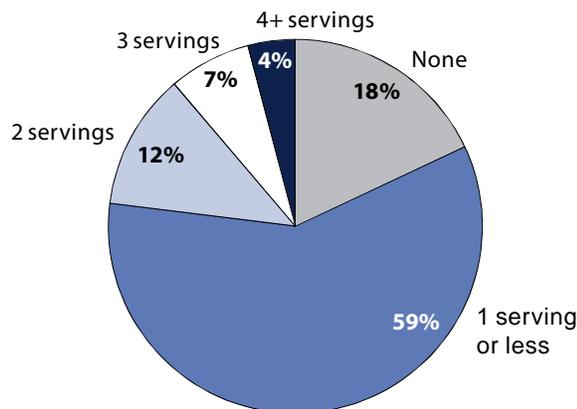
Figure 11: Usual Type of Milk Consumed Among Two Year-Olds (Alaska CUBS, 2006)³³



Recommended: Low-fat (1%) or fat-free

High school students were also asked about milk consumption. Eighteen percent (18%) of students report that they did not consume any milk in the past week (Figure 12). The 2005 *Dietary Guidelines for Americans* recommends 3 daily servings of dairy for adolescents. Only 11% of students report drinking 3 or more glasses of milk per day, with boys (14%) drinking more milk than girls (8%). The YRBS did not ask about other sources of dairy, such as yogurt and cheese, or the type of milk consumed, such as whole, low-fat or non-fat.

Figure 12: Number of Servings of Milk Consumed Daily Among High School Youth (Alaska YRBS, 2007)



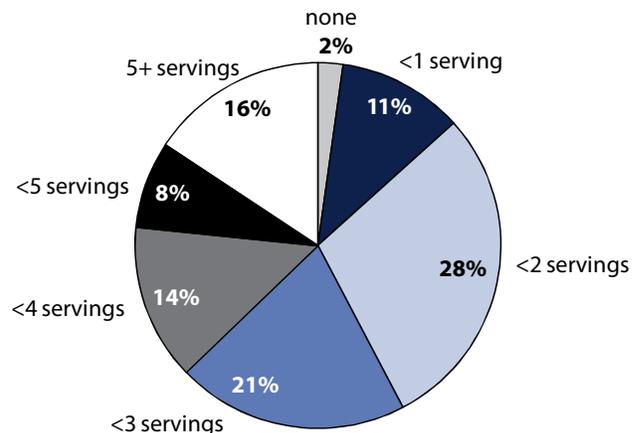
Recommended: 3 servings every day

Fruit and Vegetable Consumption

Fruit and vegetable intake may protect against increased weight gain in children. Fruits and vegetables are promoted for the prevention of childhood obesity because of their high water and fiber content, low fat content and low energy density, all effectively reducing energy (caloric) intake.³² The 2005 *Dietary Guidelines for Americans* recommends at least 5 servings of fruits and vegetables each day.

Fruit and vegetable consumption is low among Alaskan high school students, with only 16% of high school students meeting the recommendation of 5 or more servings of fruits and vegetables every day (Figure 13).

Figure 13: Number of Servings of Fruits and Vegetables Consumed Daily Among High School Youth (Alaska YRBS, 2007)



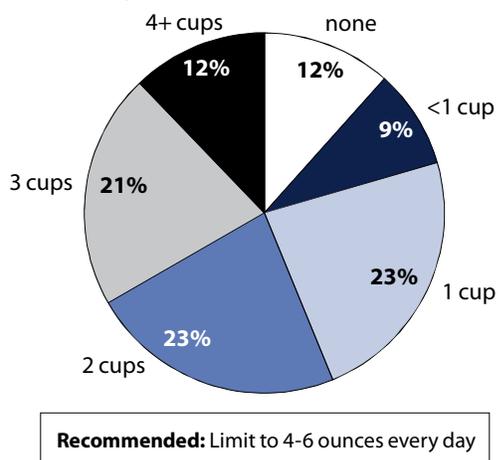
Recommended: 5 or more servings every day

It is important to note that excess fruit juice consumption may actually contribute to overweight and obesity because fruit juice is more calorie-dense and has less fiber than whole fruits. Fruit juice is easily over-consumed by children, increasing their energy (caloric) intake.³² The American Academy of Pediatrics recommends all sweetened beverages, including naturally sweet beverages, such as fruit juice,

Factors Affecting Child and Adolescent Overweight and Obesity

should be limited to 4 to 6 ounces (less than 1 cup) per day for children 1 to 6 years old, and 8 to 12 ounces (1 to 1½ cups) per day for children 7 to 18 years old.³⁶ Data from the Alaska CUBS survey indicate that only 21% of 2 year-olds meet this recommendation, with all others consuming more than the recommended amount (Figure 14).

Figure 14: Number of Servings of Fruit Juice Consumed Daily Among Two Year-Olds (Alaska CUBS, 2006)³³



High Energy-Dense Food Consumption

The current US food supply is flooded with high energy-dense foods. Energy density refers to the amount of energy (calories) per amount of food, with high energy-dense foods providing more calories in a smaller amount than lower-energy dense foods. High energy-dense foods are often high in refined grains and added sugar and fats.³² Because diets high in energy-dense foods have a strong correlation with higher BMI, the American Academy of Pediatrics recommends limiting consumption of energy-dense foods and limiting eating at restaurants, particularly fast food restaurants, for the prevention of childhood obesity.³⁷

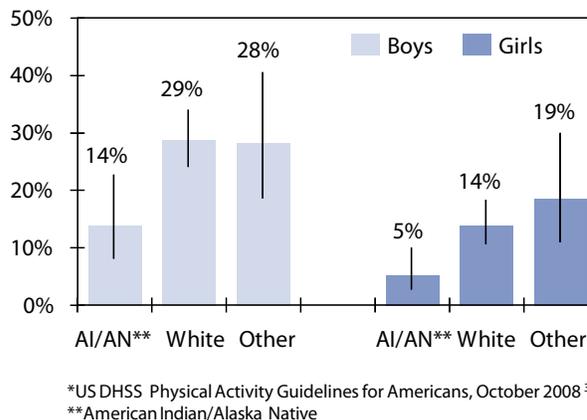
Currently there are no Alaska-specific data on the consumption of high energy-dense foods in children and adolescents.

Physical Activity

The evidence is strong that daily moderate to vigorous physical activity helps reduce body fat in overweight and obese youth. The US Department of Health and Human Services released the *2008 Physical Activity Guidelines for Americans* in October 2008.³⁸ For children and adolescents (6 to 17 years old) the new guidelines recommend 60 or more minutes of moderate-vigorous activity every day, with vigorous activity at least 3 days per week to promote a healthy body weight and achieve overall health benefits.

Data on the physical activity levels of Alaska high school youth are available from the 2007 YRBS. Only 19% of high school students meet the new guideline of 60 or more minutes every day. Boys (25%) are significantly more likely to meet the recommendation than girls (12%). Alaska Native students are significantly less likely than White students to meet the physical activity recommendation, especially Alaska Native girls, with only 5% meeting the recommendation (Figure 15).

Figure 15: Prevalence of Meeting Physical Activity Recommendations (60 minutes Every Day*) Among High School Youth, by Race/Ethnicity and Sex (Alaska YRBS, 2007)



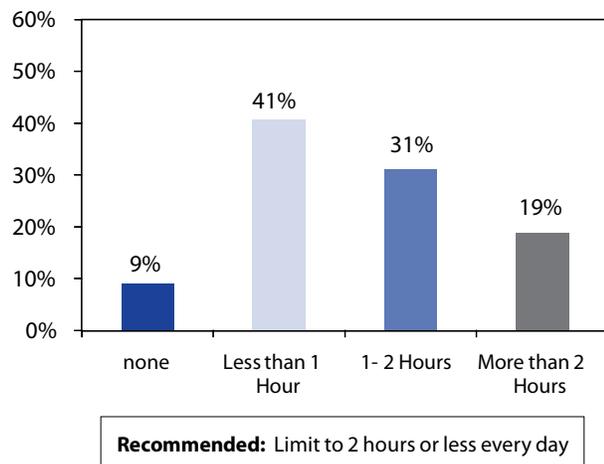
Factors Affecting Child and Adolescent Overweight and Obesity

TV and Screen Time

Evidence supports a strong association between sedentary behaviors, such as watching television and playing video/computer games, and higher BMI in children. The American Academy of Pediatrics recommends that children watch no more than 2 hours of television a day.³⁹

The Alaska CUBS survey 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 16).

Figure 16: Usual Number of Hours of Screen Time (Including Videos and DVDs) Among Two Year-Olds (Alaska CUBS, 2006)³³



The 2007 Alaska YRBS provides information on the amount of screen time among high school students; that is, television watching, playing video games or using a computer for other than school work. Half (50%) of students report more than 2 hours of screen time per school day, with 25% reporting 5 or more hours (Figure 17). Overweight and obese students (61% each) are significantly more likely to have 3 or more hours of screen time compared to normal weight students (46%) (Figure 18). Television viewing

rates were similar for boys and girls (23% for watching 3 or more hours for each); however, boys spend significantly more time playing video games or on the computer (29% spending 3 or more hours) than girls (18%). (data not shown).

Figure 17: Number of Hours of Screen Time (TV plus Computer) During Average School Day Among High School Youth (Alaska YRBS, 2007)

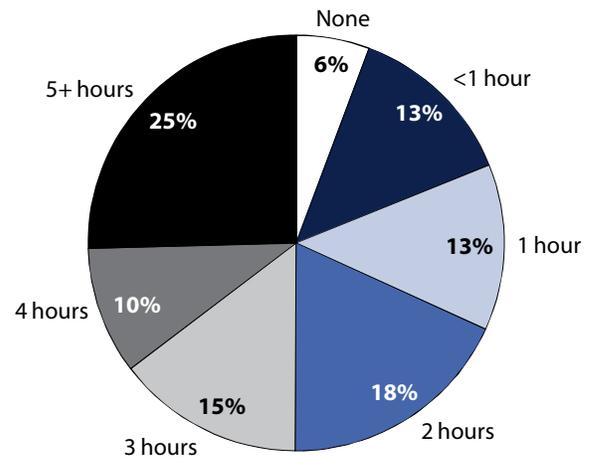
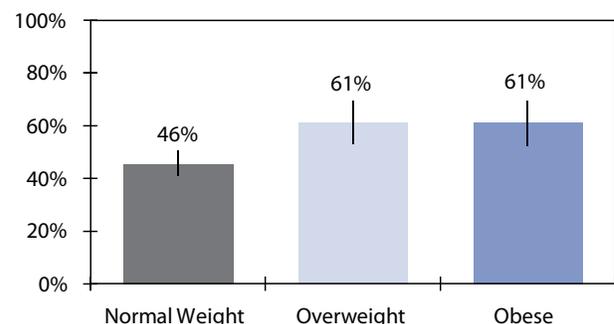


Figure 18: Prevalence of 3 or More Hours of Screen Time During the Average School Day Among High School Youth, by Weight Class (Alaska YRBS, 2007)



Food Marketing to Children

Food marketing is a predominant part of television advertising for children, and is prevalent throughout our daily culture. Young people are exposed to a substantial amount of messages promoting foods high in fat, salt and sugar, with very limited exposure to countervailing health messages promoting good nutrition and physical activity.

After an extensive review of research concerning the relationship between food marketing and children’s diets, the Institute of Medicine (IOM) concluded that “television advertising influences the food preferences, purchase requests, and diets, at least of children under age 12 years, and is associated with the increased rates of obesity among children and youth.”⁴⁰ The American Academy of Pediatrics has called for a ban on ads for what they called “junk food” in shows aimed at young children.⁴¹

A study by the Kaiser Family Foundation showed half (50%) of all ad time on children’s shows are for food.⁴² Of these food ads, 34% are for candy and snacks, 28% are for cereal, and 10% are for fast food. There are no advertisements for fruits or vegetables, only 4% are for dairy products and 1% for fruit juices. Among all food ads targeting children, only 15% depicted a physically active lifestyle. Although there are public service announcements (PSA) on fitness and nutrition, their impact is quite limited. Adolescents 13 to 17 years old see one PSA on fitness or nutrition for every 130 food ads (Table 2).

Table 2: Children’s Annual Exposure to Food Advertising and Healthy Public Service Announcements (PSAs) on TV⁴²

Age	Food Ads	Healthy PSAs	Ratio of PSAs to Food Ads
2 - 7	4,427	164	1 : 27
8 - 12	7,609	158	1 : 48
13 - 17	6,098	47	1 : 130

Many types of non-traditional marketing methods are growing increasingly popular, such as product placements, “buzz” marketing, adver-gaming, web-based cross promotions, cell phone/text messaging, viral video, commercializing online communities, avatars, and instant messaging. Children are no longer just accessible through TV or print media but now can be reached through numerous outlets.



School Health Profiles

The *School Health Profiles* is a system of surveys assessing school health policies and programs in states and large urban school districts conducted by the Centers for Disease Control and Prevention.⁴³ *Profiles* surveys are conducted biennially among representative samples of middle and high school principals and lead health education teachers. *Profiles* monitors the current status of a variety of health issues, including health education requirements and content, physical education requirements, and nutrition-related policies and practices. Obesity-related data from the 2006 Alaska *School Health Profiles* are listed in Table 3.



Table 3: 2006 Alaska School Health Profiles⁴³

Health Education
<ul style="list-style-type: none"> • 44% of schools required students to take two or more health education courses.
<ul style="list-style-type: none"> • 43% of schools taught 14 nutrition and dietary behavior topics in a required health education course.
<ul style="list-style-type: none"> • 28% of schools taught 13 physical activity topics in a required health education course.
Physical Education and Physical Activity
<ul style="list-style-type: none"> • 65% of schools required students to take two or more physical education courses.
<ul style="list-style-type: none"> • Among schools that required a physical education course, 50% did not allow students to be exempted from taking a required physical education course for certain reasons.*
<ul style="list-style-type: none"> • 69% of schools offered opportunities for students to participate in intramural activities or physical activity clubs.
School Nutrition Environment
<ul style="list-style-type: none"> • In 15% of schools, students could purchase fruits or vegetables.[^]
<ul style="list-style-type: none"> • In 50% of schools, students could purchase soda pop or fruit drinks that are not 100% juice.[^]
<ul style="list-style-type: none"> • In 41% of schools, students could purchase chocolate candy.[^]
<ul style="list-style-type: none"> • In 42% of schools, students could purchase other kinds of candy.[^]
<ul style="list-style-type: none"> • In 44% of schools, students could purchase salty snacks that are not low in fat, such as regular potato chips.[^]
<ul style="list-style-type: none"> • In 53% of schools, students could purchase sports drinks.[^]
<ul style="list-style-type: none"> • 70% of schools did not allow students to purchase candy; snacks that are not low in fat; soda pop, sports drinks, or fruit drinks that are not 100% juice; or 2% or whole milk during school lunch periods.

* Enrollment in other courses, participation in school sports, participation in other school activities, participation in community sports activities, high physical fitness competency test score, participation in vocational training, and participation in community service activities.

[^] From vending machines or at the school store, canteen, or snack bar.

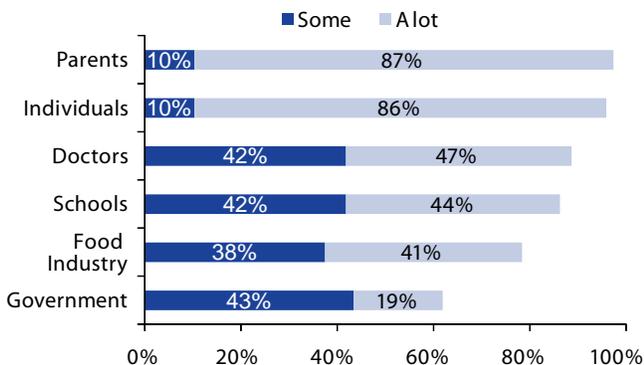
What Can We Do?

Reversing the increasing trend of obesity will take time and a comprehensive obesity prevention program model that combines educational, clinical, environmental, and social strategies similar to successful tobacco prevention and control efforts. Home, work, school, and clinical environments all influence the choices that children and parents make regarding food and physical activity. Successful interventions must address not only individual knowledge and behaviors, but must also ensure that the social and physical environment supports the healthy choice as the easy, affordable and logical choice.

What Do Alaskans Think We Should Do?

Alaskans agree that individuals and many other stakeholders will need to play a role in addressing obesity. The 2005 Behavioral Risk Factor Surveillance System (BRFSS) surveyed Alaskan adults and found that nearly 90% agree that parents and individuals have “a lot” of responsibility for addressing obesity. However, a large percentage of adults also agree that organizations, such as government (62%), the food industry (79%) and schools (86%) have “some” or “a lot” of responsibility for addressing obesity (Figure 19).

Figure 19: Adult Opinions on Obesity-Related Policy: Responsibility for Addressing Obesity in the US (Alaska BRFSS, 2005)



Initial obesity prevention efforts in the United States and Alaska have focused on school policies as ways to address childhood obesity. Many Alaskan adults support school policies that would limit the availability of unhealthy foods in schools, such as limiting vending machines (55%), soda machines (66%) and fast food (74%) (Figure 20). Many states are also implementing community-wide obesity prevention policies. The majority of Alaskans support two obesity prevention strategies that various cities and states have adopted. Over half of Alaskan adults (55%) support more nutrition information in restaurants and over three-quarters (79%) support a government-funded media campaign (Figure 21).

Figure 20: Adult Opinions on Obesity-Related Policy: Support Limiting Unhealthy Food Options in Schools (Alaska BRFSS, 2005)

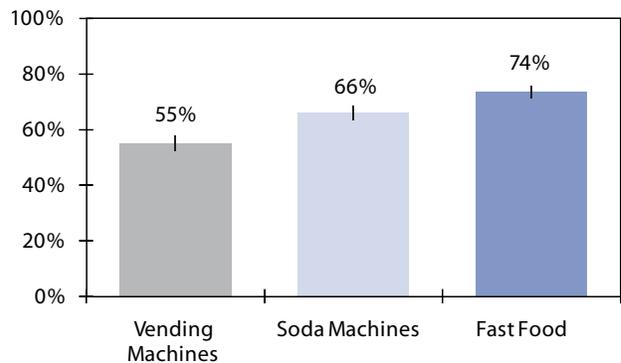
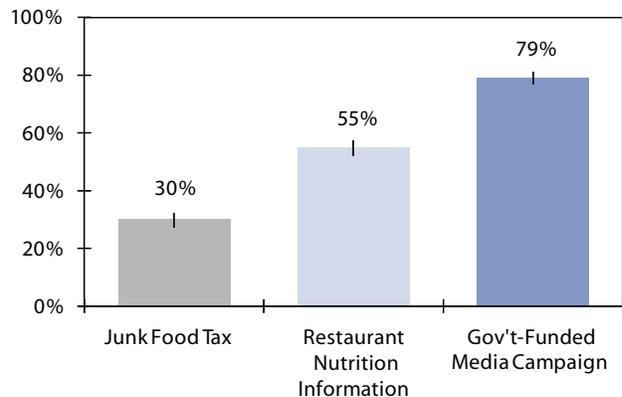


Figure 21: Adult Opinions on Obesity-Related Policy: Support/Strongly Support Obesity-Related Policies (Alaska BRFSS, 2005)



What Can We Do?

Recommendations

Childhood obesity is a public health problem. To achieve the desired population-wide impact, local public and private partners must collaborate to address childhood obesity with public health strategies, such as:

- Monitor the status of childhood obesity through data collection and community health assessments. Identify populations who are the most at-risk for developing obesity.
- Inform, educate, and empower people about childhood obesity issues. Social marketing is a proven multi-component approach to raise individual and community awareness and knowledge.⁴⁴
- Mobilize community partnerships to identify and address childhood obesity issues through local organizations, systems and networks.
- Develop policies and plans based on current best practices that support individual and community efforts to address childhood obesity. Identify and provide funding for communities to organize, develop and implement their plans.
- Advocate for state and local policy and environmental change strategies that promote good nutrition and increased physical activity, such as providing safe sidewalks and bike trails.
- 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 childhood obesity.
- Evaluate effectiveness of intervention efforts to determine what works and merits further resources and efforts.

- Research new evidence-based interventions and innovative solutions to childhood obesity.

The *Alaska in Action: Statewide Physical Activity and Nutrition Plan* was developed with the expertise and experience of many state and local partners working on obesity-related issues.¹² *Alaska in Action* provides numerous strategies for schools, healthcare, communities and mass communication to address adult and childhood obesity. *Alaska in Action* strategies targeting children and adolescents are presented in Appendix I and can provide significant contributions to the development of a comprehensive plan to reduce childhood obesity in Alaska.

Many national organizations also agree that childhood obesity must be addressed comprehensively. The American Academy of Pediatrics provides recommendations for physicians and allied health care at the patient, practice and community levels to prevent childhood obesity.³⁷ These recommendations are listed in Appendix II.

Alaska is experiencing an obesity epidemic that will have serious consequences for decades to come. Childhood obesity is a complex problem that needs to be addressed at the individual, community, state and national levels. From the success Alaska breastfeeding promotion and tobacco control efforts have seen, we know that a comprehensive approach that includes individual behaviors, community and social norms, policies and environments can work. Investing in the development of Alaskan-specific strategies to prevent and reduce obesity will take time. We need to start this process now to slow and eventually reverse our childhood obesity trends.

Appendices

Appendix I: Child and Adolescent Obesity Goals, Aims and Strategies from the *Alaska in Action: Statewide Physical Activity and Nutrition Plan*¹²

Goal 1: Increase the percentage of Alaskans who recognize the need to address the issue of overweight and obesity

Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
1.1: Alaskans are aware of the health and economic consequences of overweight and obesity	Communication/ mass media campaign around the risks and the healthcare costs of overweight/ obesity		
1.2: Students, families, teachers, and administrators are aware of the health consequences of childhood overweight and the importance of school-based efforts to address overweight	Education of parents, students, staff, and administrators on rates and health risks of overweight, as well as the positive impact of good nutrition and physical activity on school performance	Implementation of family nutrition & fitness nights	Obtain consent for data collection efforts related to overweight

Goal 2: Increase the percentage of Alaskans who are physically active

Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
2.2 Community environments provide and support opportunities for physical activity	Education on importance of promoting community opportunities for physical activity	Affordable activity-based recreational programs offered	Policies requiring snow and ice removal from sidewalks
	Education on importance of incorporating physical activity opportunities into transportation planning and community design	Public access to school facilities after school hours increased	Trail system development coordinated with state trail organizations
	Provide school district Representatives with information on opportunities to acquire and/or enhance environmental supports for physical activity	Schools sponsor or participate in physical activity related events like fun runs/walks and family fitness nights	Incentives for walking, bicycling, or using public transportation Sufficient funds available for the maintenance of school facilities

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Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
2.2 (Continued)	Compile and distribute information on successful collaborative efforts to build and improve environmental supports for physical activity	<p>School districts and schools to promote activity-based programs available through parks and recreation or other community-based organizations</p> <p>Schools complete the School Health Index to determine need for physical activity environmental supports</p>	<p>Health/fitness clubs donate equipment to schools when upgrading</p> <p>Community planning designs establish new schools within established population centers</p>
<p>2.3: Alaskan students participate in quality* school-based physical education classes</p> <p>*As defined by National Association for Sport and Physical Education (NASPE)</p>	<p>Education on positive impact of physical activity on student performance</p> <p>Physical education curriculum follows the National Association for Sport and Physical Education guidelines for physical activity for infants and toddlers</p>	Quality physical education programs in schools	<p>Statewide Physical Education Coordinator</p> <p>National Association for Sport and Physical Education based content standards for physical education</p> <p>Require one credit of physical education and one credit of health for high school graduation</p> <p>Require physical education at elementary and middle school levels</p> <p>Increase the number of physical education teachers that are certified or trained</p> <p>Policies prohibiting exemptions from physical education courses for any reason other than debilitating injury or illness</p>

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Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
<p>2.4: Students have opportunities for daily physical activity in addition to time spent in physical education class</p>	<p>Education on the benefits of walking to school</p> <p>Education on the benefits of unstructured play (recess)</p> <p>Education on walk-to-school programs</p> <p>Education on strategies for incorporating physical activity into each school day</p>	<p>Implement the Kids Walk-to-School Program</p> <p>Established crossing guard programs</p> <p>Complete walking/ biking inventories</p> <p>Administration of before- and after-school intramural sports programs and activity-based clubs</p>	<p>Recess for children grades K-6</p> <p>Students who live within one mile of schools can safely walk or bicycle to school</p> <p>Allow schools without facilities for physical activity access to community facilities</p> <p>Physical activity incorporated across the curriculum</p>

<p>2.5: Healthcare professionals promote and support daily physical activity for their patients and incorporate physical activity into the treatment of overweight and obese patients</p>	<p>Education for healthcare professionals on relationship between inactivity and negative health consequences</p> <p>Distribute “Bright Futures in Practice- Physical Activity”</p>	<p>Healthcare providers evaluate and counsel around physical activity</p> <p>Providers refer patients to physical activity resources and programs in the community</p>	<p>Continuing Education Units available for physical activity courses</p> <p>Healthcare providers advocate for policy and environmental changes that support physical activity</p>
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Goal 3: Increase the percentage of Alaskans who make healthy food choices

Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
<p>3.1: Alaskans are aware of healthy eating strategies</p>	<p>Social marketing campaigns around eating as a family, being a role model for healthy eating, healthy food options and portion sizes</p> <p>Education campaign encouraging use of traditional foods</p>	<p>Distribute materials on how to gather and preserve traditional foods safely</p>	<p>Encourage inclusion of traditional foods in dietary recommendations</p> <p>Limited promotion and advertisement of foods low in nutritional value and high in cavity-causing carbohydrates</p>

Appendices

Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
<p>3.2: Healthcare professionals promote and support healthy eating among their patients and appropriately incorporate nutrition education in the treatment of overweight and obese patients</p>	<p>Provider reference card on nutrition education</p> <p>Provide information on community nutrition education resources</p>	<p>Professional and continuing education programs on nutrition counseling available</p> <p>Referrals to community nutrition resources</p>	<p>Reimbursement policies include nutrition and obesity counseling</p> <p>Continuing Education Units available for nutrition counseling</p>
<p>3.3: Alaskan students receive age and culturally appropriate nutrition education in schools and childcare settings</p>	<p>Nutritional information posted in schools</p> <p>Nutrition education materials specific to traditional foods</p>	<p>Nutrition education lessons in pre-schools and childcare centers</p> <p>“Cavity Free Kids” curriculum for children and families incorporated into Head Start/ Early Head Start and WIC programs</p>	<p>Statewide nutrition education curriculum</p> <p>Policies requiring inclusion of nutrition education into health courses</p> <p>Continuing education opportunities in nutrition education</p>
<p>3.4: Healthy food choices are available in schools</p>	<p>Education on need for healthy nutrition options in schools</p> <p>Education on creation and implementation of comprehensive nutrition policies</p> <p>Distribution of Federal nutrition guidelines and culturally sensitive sample recipes</p>	<p>School participation in community wide social marketing efforts such as “More Matters” and “1% or less” milk campaign</p> <p>Creation of nutrition-based social clubs for students</p> <p>Teachers and staff serve as role models for healthy eating</p>	<p>Modify pouring contracts between beverage companies and schools</p> <p>Creation and enforcement of comprehensive school nutrition policies</p> <p>National School Lunch and School Breakfast Program meals meet or exceed federal standards</p> <p>Lunch hour includes 30 minutes near midday in a pleasant eating environment</p> <p>Nutritious food choices offered in school stores, vending machines, and other in-school locations where food is served</p>

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Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
<p>3.5: Healthy foods are available in community settings, including restaurants and stores</p>	<p>Education of store and restaurant owners on importance of healthy food availability</p>	<p>Point of purchase campaigns in grocery stores</p> <p>“Healthy menu option” programs in restaurants</p> <p>Recognition program for restaurants offering and promoting healthy food choices</p>	<p>Competitively priced healthy food and beverage choices available in vending machines in public areas</p> <p>Posted calorie and nutrient content</p> <p>Reasonable portion sizes available</p>
<p>3.7: Alaskan mothers breastfeed their infants and toddlers</p>	<p>Social marketing and media campaigns highlighting benefits of breastfeeding</p>	<p>Collaboration with Alaska Breastfeeding Coalition and Alaska WIC Program Loving Support Social Marketing Campaign</p> <p>Healthcare systems incorporate breastfeeding education and peer support</p>	<p>Worksite policies that support breastfeeding</p> <p>Healthcare systems implement policies that support and encourage breastfeeding</p>
<p>3.8: Alaskans of all ages consume the recommended amount of fruits and vegetables</p>	<p>Education campaign promoting consumption of fruits and vegetables, either fresh, canned, or frozen, including “5-a-Day the Alaskan Way”</p> <p>Distribution of recommendations incorporating fruits and vegetables into daily eating routines</p>	<p>Increased marketing of fruits and vegetables throughout the state</p>	<p>Competitive pricing of fruits and vegetables</p> <p>Increased availability of fruits and vegetables in schools and worksites</p> <p>Incentives for using food stamps for fruit and vegetable purchases</p>

Goal 4: Increase the percentage of Alaskans who maintain a healthy weight

Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
<p>4.1: Targeted media strategies are used to convey the importance of physical activity and healthy food choices as a means of achieving and maintaining a healthy weight</p>	<p>Integrate the concept of healthy weight into all activities designed to increase physical activity and improve nutrition</p> <p>Promote and support healthy weight role models</p>	<p>Workshops and training to increase advocacy, public relations and social marketing skills</p>	<p>Empower decision makers at local, state and organization levels to address the prevention and reduction of obesity</p>
<p>4.3: Alaskan youth engage in efforts to maintain a healthy weight</p>	<p>Accurate information on healthy weights and weight management principles provided to children available to administrators, teachers, and parents</p> <p>Education campaign addressing healthy weight, healthy food choices, and physical activity</p>	<p>Coordinated school health program including education on nutrition and physical activity</p> <p>Healthy weight classes such as Hugs, Tailoring Your Taste, etc.</p> <p>Eat Smart Play Hard Campaign</p> <p>Weight management curriculum developed and distributed</p>	<p>Coordinated school health program including opportunities for healthy eating and physical activity during the school day</p> <p>Weight management principles incorporated into health curriculum</p> <p>School staff trained in weight management principles</p>
<p>4.4: Healthcare systems promote and support the achievement and maintenance of healthy weights among patients</p>	<p>Distribute recommendations on clinical treatment of obesity for children</p> <p>Social marketing messages that convey respect for diversity and body shape</p> <p>Geographically specific matrix specifying weight management, physical activity, and counseling resources</p>	<p>Promote referrals to Registered Dietitians for overweight and obesity</p> <p>Healthy lifestyle classes offered to overweight and obese patients and parents</p> <p>Trainings for healthcare professionals on discussing weight-related issues with patients and parents</p>	<p>Continuing education units available for courses addressing the risks, diagnosis, and treatment of overweight and obesity</p> <p>Multidisciplinary system for obesity prevention and treatment implemented within and between healthcare settings</p> <p>Physical activity and nutrition indicator data included in healthcare data management systems</p>

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Aim	Educational Strategies	Program Strategies	Policy and Environmental Strategies
<p>4.5: Television viewing time reduced among Alaskan adults and children</p>	<p>Disseminate information on the association between increased time spent watching television and the prevalence of overweight among youth</p> <p>Promote increased physical activity as an alternative to television watching/screen time</p>	<p>Reduction of television time incorporated into coordinated school-based programs</p> <p>Healthcare professionals promote alternatives to television as a component of weight management programs</p>	<p>Parents develop and implement consistent rules around television watching and other screen time for their children</p>
<p>4.6: Physical activity and nutrition interventions are accessible to all Alaskans</p>	<p>Culturally relevant obesity prevention education for Alaskans living in rural areas</p> <p>Clearinghouse of overweight/ obesity data, resources and information on existing programs</p>	<p>Community-based obesity programs targeting high-risk populations</p> <p>Culturally relevant obesity prevention programs</p>	<p>Decrease cultural, economic and geographic barriers to obesity-related services</p>

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Appendix II: American Academy of Pediatrics' Recommendations for the Prevention of Childhood Obesity³⁷

Patient-Level Interventions

1. The expert committee recommends that physicians and allied health care providers counsel the following for children 2 to 18 years of age whose BMI is 5th to 84th percentile:
 - a) limiting consumption of sugar-sweetened beverages
 - b) encouraging diets with recommended quantities of fruits and vegetables
 - c) limiting television and other screen time by allowing no more than 2 hours per day, and removing television and computer screens from children's primary sleeping areas
 - d) eating breakfast daily
 - e) limiting eating at restaurants, particularly fast food restaurants
 - f) encouraging family meals in which parents and children eat together
 - g) limiting portion sizes
2. The expert committee also suggests that providers counsel families to engage in the following behaviors:
 - a) eating a diet rich in calcium
 - b) eating a diet high in fiber
 - c) eating a diet with balanced macronutrients (energy from fat, carbohydrates, and protein in proportions appropriate for age, as recommended by Dietary Reference Intakes)
 - d) initiating and maintaining breastfeeding
 - e) participating in 60 minutes of moderate to vigorous physical activity per day for children of healthy weight (the 60 minutes can be accumulated throughout the day, rather than in single or long bouts; ideally, such activity should be enjoyable to the child)
 - f) limiting consumption of energy-dense foods.

Practice- and Community-Level Interventions

1. The expert committee recommends that physicians, allied health care professionals, and professional organizations:
 - a) advocate for the federal government to increase physical activity at schools through intervention programs from grade 1 through the end of high school and college and through the creation of school environments that support physical activity in general
 - b) support efforts to preserve and to enhance parks as areas for physical activity, inform local development initiatives regarding the inclusion of walking and bicycle paths, and promote families' use of local physical options by making information and suggestions about physical activity alternatives available in doctors' offices.
2. The expert committee recommends the use of the following techniques to aid physicians and allied health care providers who may wish to support obesity prevention in clinical, school, and community settings:
 - a) actively engaging families with parental obesity or maternal diabetes, because these children are at increased risk for developing obesity even if they currently have normal BMI
 - b) encouraging an authoritative parenting style (authoritative parents are both demanding and responsive) in support of increased physical activity and reduced sedentary behavior, providing tangible and motivational support for children
 - c) discouraging a restrictive parenting style (restrictive parenting involves heavy monitoring and controlling of a child's behavior) regarding child eating

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- d) encouraging parents to model healthy diets and portions sizes, physical activity, and limited television time
- e) promoting physical activity at school and in child care settings (including after-school programs) by asking children and parents about activity in these settings during routine office visits

Appendix III: Description of Data Sources

Anchorage School District (ASD).

The Anchorage School District and the Alaska Division of Public Health collaborated to assess the prevalence of overweight among children in the Anchorage School District. 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. These data were summarized in a jointly released State of Alaska Epidemiology Bulletin in 2004 entitled, "Prevalence of Overweight Among Anchorage Children: A Study of Anchorage School District Data: 1998-2003." These data were augmented by measurements through the 2005-2006 academic year.

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 pre-school 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.

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Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS is a population-based survey of Alaskan 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 stratified systematic 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 to solicit a response, 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 development and health status. Survey responses are weighted so that reported prevalences accurately describe Alaskan women delivering a live-born infant during the year of the survey. In recent years the survey has had a response rate of approximately 80 percent.

Resource and Patient Management System (RPMS)

RPMS is the statewide information system used by the Section of Public Health Nursing, Alaska Division of Public Health for patient services data. This system is a database of selected patient visit information originating from visits to regional Alaska Native hospitals, community health centers, and village clinics. Management information taken from the data can be used for program planning and evaluation. Height and weight are measured and recorded during clinic visits. The system includes demographic and patient health encounter data. RPMS is located at 23 sites and is shared by the Indian Health Service.

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.

Women, Infants, and Children (WIC) Nutrition Program

WIC is a supplemental food and nutrition program for pregnant and breastfeeding women and their children from birth to age five. Alaska WIC provides nutrition information, counseling, and periodic health screening, along with supplemental food vouchers for infant formula and healthy foods. Children's height and weight are measured and recorded at clinics as part of the application and renewal process.

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