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Child and Adolescent Overweight and Obesity in Alaska

Since the 1970s, the prevalence of obesity has more than doubled for preschool children ages 2-5 years and adolescents ages 6-11 years, and it has more than tripled for children ages 12-19 years.[1] A recent report from the Institute of Medicine estimates that approximately nine million children over six years of age are currently obese.[2]

Although poor eating habits and lack of activity are the primary causes of overweight and obesity, the factors contributing to the overweight epidemic are complex and include genetic, metabolic, behavioral, environmental, cultural, and socioeconomic factors. Children with overweight or obese parents are more likely to become overweight or obese adults. A child with one overweight parent is 3 times more likely to become an overweight adult and a child with both parents overweight is 10 times more likely to become an overweight adult. Furthermore, rapid infant weight gain during the first year of life increases the risk of adult overweight and obesity, particularly for infants born small for gestational age.[3]

Seriousness

Healthy People 2010 Targets and National Data

Indicator	Alaska 98-03†	Nation 99-02^	Healthy People 2010 Goal*
Percentage of children and adolescents ages 6-11 years that are overweight or obese			
Boys	19%	16.9%	5%
Girls	16%	14.7%	5%
Percentage of children and adolescents ages 12-19 years that are overweight or obese			
Boys	19%	16.7%	5%
Girls	17%	15.4%	5%

Note: Data for Alaska represents the Anchorage School District only.

- The prevalence of overweight and obesity among children in the Anchorage school district is more than 3 times higher than the Healthy People 2010 goal.
- The prevalence of overweight and obesity among these Alaskan students was similar to national prevalence estimates, however, slightly higher among Alaskan youth.

Severity

Overweight children have a higher rate of low self-esteem, type 2 diabetes, sleep apnea, bone and joint problems, and gall bladder disease.[4]

Adolescent obesity (and high non-HDL cholesterol levels) is an independent risk factor for adult atherosclerosis and also operates by contributing to other risk factors such as diabetes and hypertension.

Urgency

In Alaska, the Anchorage School District and the Alaska Division of Public Health assessed the prevalence of overweight among 41,261 children enrolled in the Anchorage School District during 1998-2003.[5]

- Over the five-year time period, 2% of students were underweight, 62% were at a normal weight, 18% were at-risk for becoming overweight, and 18% were overweight.
- More than one-third of the students assessed were overweight or at-risk of overweight.
- Of students entering kindergarten or first grade, 32% were overweight or at-risk for becoming overweight.

Data from the 20003 Alaska Youth Risk Behavior Survey (YRBS) showed similar findings for the prevalence of overweight among Alaska high school students in grades 9-12.[6]

- Among Alaskan high school students, 11% were overweight and 14% were at-risk of becoming overweight – combined, 1 in 4 Alaskan youth in grades 9-12 were at-risk or already overweight.[6]
- Approximately 2 in 5 high school females in Alaska described themselves as slightly or very overweight and 3 in 5 were trying to lose weight.[6]
- To lose weight or to keep from gaining weight, nearly 40% of Alaskan high school students ate less food or foods low in fat; 59.9% exercised; 9.1% went without eating for 24 hours or more; 6.3% took diet pills, powders, or liquids; and 5.1% vomited or took laxatives.[6]

Disparities

National data indicate that overweight and obesity has increased across all subgroups of the population, however, it is more common among minority groups. Furthermore, the proportion of adolescents from poor households who are overweight or obese is twice that of adolescents from middle- and high-income households.[1] Data from the Anchorage School District showed similar findings. Students of a race or ethnic background other than white were more likely to be overweight or at-risk for becoming overweight than white students.[5]

Data from the 2003 Alaska YRBS indicated that the prevalence of overweight was significantly associated with sex; however, at-risk of overweight did not differ between males and females.[6]

- Although Alaskan high school males were significantly more likely to be overweight than females (13.7% and 8.1%, respectively), females were twice as likely to describe themselves as overweight and twice as likely to be trying to lose weight as males.[6]

Economic Loss

According to a report from the Institute of Medicine, the obesity-associated annual hospital costs for children and youth more than tripled over two decades, increasing from $35 million in 1979-1981 to $127 million in 1997-1999. After adjusting for inflation and converting to 2004 dollars, the national healthcare expenditures related to obesity and overweight in adults alone range from $98 billion to $129 billion annually.[2]

Interventions & Recommendations

The AAP recommends parent's encouragement of healthy eating during toddler and early childhood years, increased activity, and decreased television viewing. Furthermore, the AAP recommends exclusive breastfeeding for the first six months of life and continued breastfeeding for one year, which may prevent obesity later in life.[3]

The US Centers for Disease Control and Prevention has recently reviewed the literature on interventions to increase the amount of physical activity among the US population.[7] They strongly recommend that large-scale, high-intensity communitywide campaigns with sustained visibility be implemented. Components of previous successful interventions have included public service messages in a variety of media (television, radio, newspaper, and movie trailers), support and self-help groups, physical activity counseling, risk factor screening and education, community events, and creation of enhanced and easily accessed exercise areas such as community walking trails. Other interventions that were strongly recommended included individually adapted health behavior change programs, social support interventions in community settings, and school-based physical education.

Many schools in Alaska do not require physical education as part of the routine curriculum and many offer unhealthy food in cafeterias or sodas from soft drink dispensers, primarily to raise money for under-funded activities. The following data from the 2003 Alaska YRBS support these findings.[6]

- Approximately 18% of Alaska high school students (regardless of weight status) reported participating in daily school physical education.[6]

- Less than 20% of high school students consume the recommended 5 servings of fruits and vegetables daily.[6]

Additional factors that may contribute to obesity include lack of awareness and mandatory reporting of health risks associated with food at many fast-food restaurants and increased time spent in sedentary activities such as television viewing, video gaming, and computers.

Intervention Effectiveness

Programs to reduce obesity have met with limited success as sustained weight reduction requires fundamental behavioral changes to reduce excess caloric intake and increase physical activity. For example, predictors of successful weight reduction include strong support from family and peers, consideration of psychological factors associated with obesity, young age (6 to 12 years) at the onset of intervention, frequent follow-up and reinforcement, and incorporation of regular exercise into the weight reduction program.[7,8]

Capacity

Propriety

Child and adolescent overweight and obesity is an important issue for Maternal Child Health. The monitoring of overweight and obesity among youth is an issue that falls within the overall mission of the Women's, Children's, and Family Health Section and decreasing overweight among youth is a national initiative (HP2010).

Economic Feasibility

Economic feasibility was not evaluated.

Acceptability

Acceptability was not evaluated.

Resources

Alaska Obesity Prevention and Control Program; Alaska Youth Risk Behavior Survey (YRBS) can be used to monitor the prevalence of overweight and obesity, identifying behaviors related to overweight and obesity, and identifying high risk groups.

Legality

Not an issue.

References

[1] Centers for Disease Control and Prevention. National Center for Health Statistics, National Health and Nutrition Examination Survey: NHANES 1999-2000. Prevalence of Overweight among U.S. Children and Adolescents.
[2] Institute of Medicine. Committee on Prevention of Obesity in Children and Youth. Preventing Childhood Obesity: Health in the Balance, 2005. Food and Nutrition Board, Board on Health Promotion and Disease.
[3] American Academy of Pediatrics. Prevention of Pediatric Overweight and Obesity. Pediatrics; 112(2):424-430. August 2003.
[4] US Dept Health and Human Services. Overweight and Obesity: Health Consequences. Rockville, MD: US Department of Health and Human Services, Public Health Service, Office of the Surgeon General.
[5] Peterson E, Utermohle C, Green T, Middaugh JP. Prevalence of Overweight among Anchorage Children: A Study of Anchorage School District Data: 1998-2003. State of Alaska Epidemiology Bulletin; 8(9). 2004.
[6] Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance Summaries – United States, 2003.MMWR; 53(SS-2). May 2004.
[7] Centers for Disease Control and Prevention. Increasing Physical Activity a Report on Recommendations of the Task Force on Community Preventive Services. MMWR; 50(RR-18). 2001
[8] Alaska Division of Public Health, Section of Epidemiology. The Burden of Overweight and Obesity in Alaska. April 2003.

Data Sources

† Anchorage School District 1998-2003 Data in: Peterson E, Utermohle C, Green T, Middaugh JP. Prevalence of Overweight among Anchorage Children: A Study of Anchorage School District Data: 1998-2003. State of Alaska Epidemiology Bulletin; 8(9). 2004.

^ National Health and Nutrition Examination Survey, 1999-2002 Data in: Centers for Disease Control and Prevention. Health United States, 2004.

* Healthy People 2010. U.S. Department of Health and Human Services. Healthy People 2010. 2nd ed. With understanding and improving health and objectives for improving health. 2 Vols. Washington, DC: U.S. Government Printing Office. 2000.

Notes

Using age and sex specific reference data from the 2000 CDC BMI-for-age growth charts, children and youth can be categorized as acceptable, underweight, at risk of overweight, or overweight. At age- and sex-specific BMI values below the 5th percentile, children may be underweight. From the 5th up to the 85th percentile, they may have an acceptable weight. From the 85th to 95th percentile, they are at risk of being overweight. At the 95th percentile and above, children and adolescents are classified as overweight.