Adolescent Health Brief: Nutrition and Physical Activity

The California Adolescent Health Collaborative (CAHC) is a public-private partnership with representatives from organizations throughout the state dedicated to improving adolescent health and well-being. In January, 2001, the CAHC released ***Investing in Adolescent Health: A Social Imperative for California's Future****, California's first comprehensive strategic plan for adolescent health. One of the strategic plan's outcome areas is nutrition and physical activity. This policy brief is designed to help policy makers, service providers, and communities implement comprehensive, youth-friendly nutrition and physical activity programs. Additional copies of this document are available at www.californiateenhealth.org.*

Poor diet and physical inactivity are second only to tobacco as preventable causes of death among adults living in the United States.[i] Childhood and adolescence are critical times in the development of lifelong healthy eating and exercise habits. Moreover, adolescent nutrition and physical activity are important for the development of bone density, the prevention of obesity and chronic diseases, and overall quality of life. In addition, physical activity can improve academic achievement by enhancing concentration[ii] and by helping students be more attentive.[iii]

The Challenge

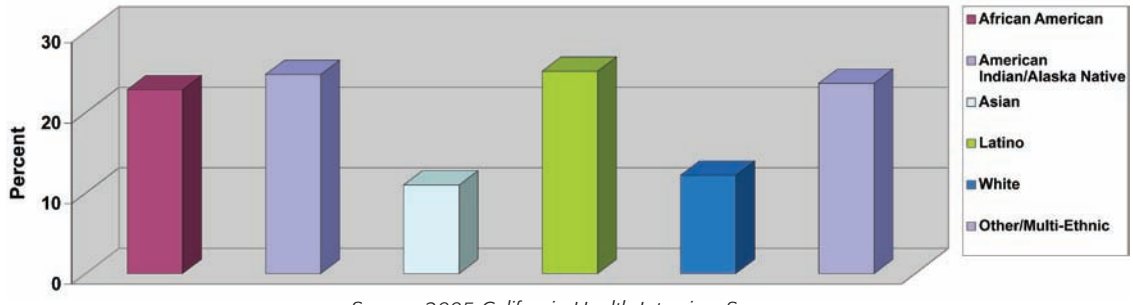
Overweight/Obesity

- Nationally, the incidence of obesity has increased almost two-fold over the past two decades, currently affecting approximately one out of six adolescents.[iv]
- Over one in five adolescents (23%) ages 15–19 years old (22% of males and 23% of females) report themselves to be "slightly overweight."[v]
- Rates for obesity and overweight vary among ethnic groups. Roughly a quarter of Latino (25%), Native American/Alaska Native (25%) and African-American (23%) youth ages 10-19 have a BMI of 25% or higher. Whites (12%) and Asians (11%) have the lowest rates. (Graph 1)
- The probability of obesity persisting into adulthood increases from 20% at age 4 to 80% by adolescence.[vi]
- Overweight adolescents face increased risk for developing type 2 diabetes, cardiovascular disease, asthma, orthopedic ailments, behavior problems, and depression.[vii]

Poor Diet Quality and Limited Access to Healthy Foods

- Data on dietary practices among adolescents suggest that further efforts are needed to promote consumption of: 1) minimally processed foods, such as fruits, vegetables and whole grains, and 2) low-fat or non-fat milk products or other calcium sources.[viii]
- Only 21% of California adolescents ages 15-19 years olds report eating the recommended five or more servings of fruits or vegetables per day.[ix]
- Access to nutritious, low-cost foods, particularly in low-income neighborhoods, is limited. In contrast, fast foods and junk foods are readily available through snack bars, restaurants, liquor stores, convenience stores, and vending machines. Schools offer a variety of healthier meals in their free lunch programs; however, because there is often stigma against school lunch food, older students tend to select packaged foods from vending machines.[x]
- Youth lack information and resources to make healthy dietary choices.[xi] Often, they do not connect diet with their health and well-being, and do not understand nutrition or the impact of poor nutrition.[xii]
- Many adolescents have dietary deficiencies.[xiii] Females, in particular, often have calcium, iron, and folate intakes that are below recommended values.[xiv] Adolescents in low-income families have less than average intakes of vitamin A, vitamin C, vitamin B10, folate, calcium, iron, and zinc than do adolescents from higher-income groups.[xv] These nutrients are all found in a variety of fruits, vegetables, and whole grains.

Graph 1 **Rates of Overweight and Obesity of California youth ages 10-19**



Source: 2005 California Health Interview Survey

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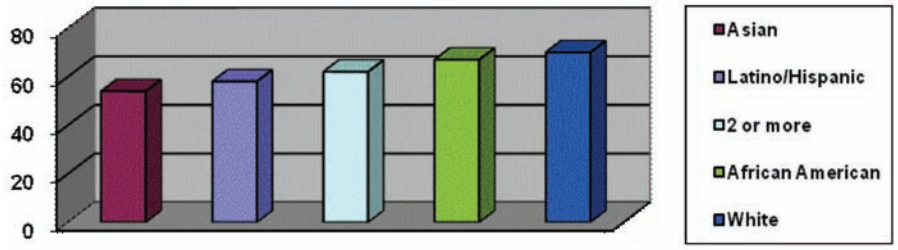
- A third of adolescents (42%) consume nutritional supplements. Although the most popular supplements consumed are multivitamin and mineral preparations, many adolescent males are consuming protein supplements to enhance sports performance and/or gain weight, while young women are consuming herbal supplements for weight control.[xvi]
- The onset of over three fourths of eating disorders (76%) occurs between the ages of eleven and twenty.[xvii]

Physical Inactivity

- There are disparities among racial/ ethnic groups and their levels of physical activity: 54% of Asian, 58% of Latino/Hispanic, 62% of 2 or more races, 67% of African American, and 70% of White adolescents report participating in vigorous physical activity at least three days per week[xviii] (Graph 2)

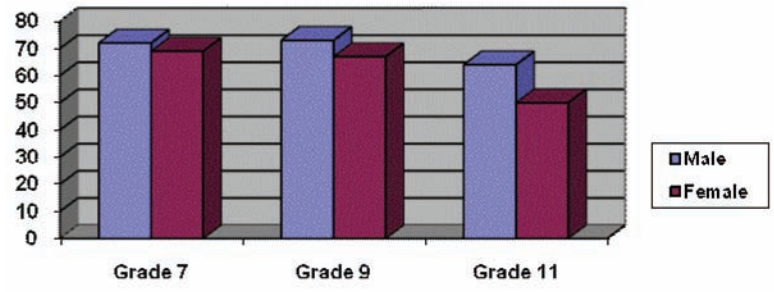
Graph 2 Self Reported Amounts of Vigorous Physical Activity Three or More Days Per Week for California Adolescents



Source: 2005 California Health Interview Survey

- Two thirds (62%) of adolescents have a bedroom television, which is associated with more television viewing time, less physical activity, poorer dietary habits, fewer family meals, and poorer school performance.[xix]
- Physical activity drops off sharply as students age.[xx] (Graph 3)

Graph 3 Self Reported Amounts of Physical Activity for California Students



Source: 2004-2006 California Healthy Kids Survey

- There are significant gender differences in physical activity, with females reporting substantially less physical activity and sports team participation than males. On average, about two-thirds (67%) of all adolescents (73% of males and 59% of females) participated in vigorous physical activity 3 days per week.[xxi]
- Although the California Education Code contains specific regulations for the number of minutes of physical education required per week, 27% of 15-19 year olds report that they were not required to take physical education in school and 15% reported that their school neither requires nor offers physical education.[xxii] Thus, nearly one million adolescents get less than the recommended levels of physical activity, including 240,000 who get no physical activity.[xxiii] In addition, 34% of adolescents ages 15 to 19 years old did not participate in any sports teams or physical activity outside of school.
- Access to safe outdoor spaces is a major problem in many urban communities. Almost 825,000 California adolescents report that they had no safe parks near their homes.[xxiv] Those who live in neighborhoods with high concentrations of low-income households, high rates of crowding, high unemployment rates and lower levels of education lack access to parks and get less physical activity relative to adolescents living in more advantaged neighborhoods.[xxv]

Action Steps to Improve Nutrition and Physical Activity

Increase opportunities and support for healthy eating within families, schools, and communities

Families

- Encourage families to eat meals together. Parental presence at mealtimes predicts higher intakes of fruits and vegetables, while lowering soda consumption.[xxvi] Regular family meals also play a protective role for extreme weight control behaviors in adolescent girls.[xxvii]
- Encourage adolescents to receive the sleep that they need through individual and family education. Sleep deprivation is linked with increased appetite,

chiefly for high-carbohydrate and calorie-rich foods. Research has shown that lack of sleep is a bigger risk factor for overweight and obesity than parental obesity, family income, or computer and television screen time.[xxviii]

Schools

- Enhance participation in school food programs, particularly in the under-utilized school breakfast and summer food programs.[xxix] Pilot strategies, such as improving food quality and creating a pleasant cafeteria environment, have worked to eliminate the stigma associated with participation in subsidized food programs.[xxx]
- Increase availability of fast, low-cost, and appealing healthy food options in school lunches, fundraising activities, rewards, snacks served and/or sold at after-school activities and other public spaces, such as movie theaters.
- Create a farm-to-school and school garden programs to bring farm-fresh produce into school meals.[xxxi]
- Assess the prevalence of eating disorders and create school-based programs that address eating disorders and different types of diets common among adolescents.
- Work with schools to offer cooking classes as an elective and educate families on how to incorporate more whole foods into their meals. Ensure that the curriculum contains information on the nutrition of and cooking with a variety of fruits, vegetables, and whole grains.

Communities

- Conduct a community needs assessment of the food and physical activity environment to identify strengths and opportunities for improvement.
- Help corner markets and local grocery stores incorporate and prominently display fresh produce and whole grain products, while moving packaged items to a less prominent location.
- Work to create and promote a neighborhood farmers' market, and ensure that they accept Electronic Benefit Transfer (EBT) cards.
- Provide training to staff of after-school programs to lead activity sessions, offer healthy foods for snacks, and model positive eating. Engage parents to participate so that they can be involved in changing the family context.

Increase opportunities and support for physical activity within families, schools, and communities.

Families

- Encourage families to support their adolescent's participation in physical activity, to be physically active role models, and to include physical activity in family events.

Schools

- Work with school boards to provide the required number of minutes of physical education in schools, and to ensure that classes are taught by credentialed physical education specialists.

Communities

- Expand safe park and recreational facilities to create a range of free and/or low-cost, developmentally appropriate, community sports and recreation/fitness programs.
- Encourage schools and other organizations, such as religious organizations and community groups, to make their facilities available after hours.
- Enhance bike and pedestrian safety by creating well-lit and accessible bike and footpaths. Residents of highly walkable neighborhoods report approximately twice as many walking trips than those in poorly walkable areas.[xxxii]
- Ensure that safe places to exercise are available. Easy access to safe physical activity areas, such as parks, basketball courts, and gyms, can increase the number of people exercising at least 3 times a week by 25%. [xxxiii]

Promote social norms that support healthy eating and physical activity

- Reduce the presence of advertising on school campuses and in communities that encourages youth to drink sodas and eat fast food.
- Promote appealing physical activity, such as dancing, which involves social interaction among friends and is fun and easy to do. Communities can also offer other "fun" physical activities that are age-appropriate (e.g., skating, climbing, and rollerblading).
- Encourage health care providers to talk routinely to adolescents about the importance of physical activity and healthy eating.

Acknowledgements

The California Adolescent Health Collaborative is funded by the California Wellness Foundation, The California Endowment, the McKesson Foundation, and the Maternal, Child and Adolescent Health (MCAH) program of the California Department of Public Health.

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This brief was created in collaboration with The National Adolescent Health Information Center, University of California, San Francisco's Division of Adolescent Medicine, Department of Pediatrics and Institute for Health Policy Studies.

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