

What we know about nutrition in American Samoa

Adults

Not consuming enough daily fruits and vegetables is a common and critical risk factor for developing non-communicable diseases such as heart disease, diabetes and cancer. Nearly half of American Samoa's adult population is diabetic, 43% of women and 52% of men, one of the highest rates in the world. When starchy vegetables are excluded, 87% of adults ages 25-64 do not consume the daily recommended 5 servings of fruit and vegetables. Women eat an average of 1.7 fruit and 2.4 vegetable servings a day. Men usually eat 1.7 fruit and 2.4 vegetable servings daily (1). Differences in diet have a direct correlation on obesity rates when comparing American Samoa to independent Samoa. American Samoans consume more carbohydrates, protein, and fat resulting in an obesity rate of 93.5% compared to 80.4% in Samoa (2).

College Students

A survey of 114 students ages 18-24 attending the American Samoa Community College showed 75% eat three full meals a day and at least 1 snack. Average college student consumption of 5 daily servings of fats/sweets greatly exceeds food pyramid guidelines due largely to snacking on chips, cookies, cake, ice-cream, candy and soda. Higher BMI and waist circumference correlates with more soda consumption (3).

College students feel the main barriers to healthy eating are both environmental and social/cultural including few nutritious foods on campus, lack of choices at home where foods are chosen by parents, and social unacceptability of refusing to eat. Students with high BMI are less likely to feel their family usually eats healthy foods and more likely to say they are 'too busy' to eat healthy (3). College students also rightfully perceive that healthy foods cost more. Less nutritious foods such as sweets and snacks cost \$1.76 per 1,000 calories compared to \$18.16 per 1,000 calories for nutrient dense foods such as fruits and vegetables (3, 4).

Youth

Foods high in carbohydrates with a high glycemic index are the most commonly consumed by youth--breads, rice, sweets and soda (5, 6). Low GI foods help control appetite by delaying hunger. High GI foods cause spikes in blood sugar and insulin levels which encourages heart disease and diabetes (6). According to the 2007 Youth Risk Behavior Survey of 3,625 public high school students in grades 9-12, about three-quarters report eating fruits and vegetables weekly, but only 27% eat the recommended 5 daily servings (7). Food availability is a strong determinant of food choices in adolescents (5) but the most popular fruits and vegetables amongst this group--apples, oranges, carrots and cabbage--are all imported foods (6). More than one third of students drink at least one soda one or more times a day (7). Half of public high school students can correctly identify the most nutritious food from a choice of 3 food labels and have tried to eat foods fewer in calories or fat to keep from gaining weight in the past 30 days (6, 7). A study involving 203 students from Fagaitua High School found that milk and 100% fruit juice are more likely to be consumed at school, while soda and other sugary drinks are most popular at home. Students also have more access to cookies, candy, cake and doughnuts outside of school. Vegetable consumption is equal in school and at home. Boys consume more of all types of foods except chips, soda, sweets and canned meats which are the frequent favorites of girls. Most students understand that poor food choices can lead to obesity and other health problems but taste is what dictates their food choices. The majority feels they do not get 'enough to eat' at the cafeteria but over half have been observed not finishing a main course or a fruit serving at school (5). Two-thirds of students say their teachers encourage nutritious eating (5), but friends are more likely than family members to encourage healthy eating habits (8).

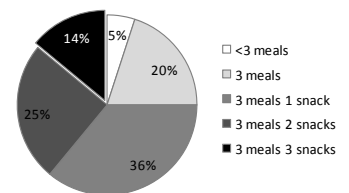
College Student Food Consumption Compared to USDA Food Pyramid

Source: S. Samoa, 2009

Food Category	USDA Recommended Daily Servings	Average College Student Daily Servings
bread, pasta, rice	6-11	5
fruits	2-5	≤1
vegetables	3-5	≤1
milk	2-3	≤1
meat & eggs	2-3	4
fats & sweets	<1	5

College Student Food Consumption

Source: S. Samoa, 2009



Sources

(1) American Samoa NCD Risk Factors STEPS Report. World Health Organization. March 2007. (2) Galanis, DJ, et al. Dietary Intake of Modernizing Samoans: Implications for Risk of Cardiovascular Disease. *Journal of American Diet Association*, 1999:184-90. (3) Samoa S. *Motivations and barriers of college student healthy eating habits for a healthy weight*. American Samoa Community Cancer Network Community Cancer Investigator Program presentation given May 13, 2009. American Samoa Community College. NCI # U01CA114590 (4) Vargo D. *Prevalence of Overweight in American Samoan Schoolchildren, 2007/2008 School Year: Report to the Directors Department of Health and Department of Education*. June 2008. (5) Stevens A. *Assessing Adolescent Dietary Behaviors & access to Nutritional foods/snacks at school*. Community Cancer Network Community Cancer Investigator Program presentation given May 13, 2009. American Samoa Community College. NCI # U01CA114590 (6) Vargo D. *Prevalence of Overweight in American Samoan Schoolchildren, 2006/2007 School Year: Report to the Directors Department of Health and Department of Education*. August 2007. (7) American Samoa Youth Risk Behavior Survey summary, 2007. Centers for Disease Control and Prevention and American Samoa Department of Education. (8) Faaiuas G. *Obesity in American Samoa's female adolescents*. Community Cancer Network Community Cancer Investigator Program presentation given May 13, 2009. American Samoa Community College. NCI # U01CA114590