

Californians face weight and health care crisis



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The United States is facing a health care crisis that will only worsen if current trends in childhood and teen overweight and obesity are not reversed. National estimates from the 1999-2002 National Health and Nutrition Examination Survey reveal that more than 15%

of children and teens from 6 to 19 years old are overweight. Increasing across all social and ethnic populations, rates of childhood obesity are generally highest for Latino and Native American children of both sexes and for African American girls. While some children may be more genetically susceptible to becoming overweight, all children are at risk for poor quality diets and a sedentary lifestyle.

These trends are particularly alarming because the same ethnic groups most vulnerable to obesity may also be genetically more susceptible to type 2 diabetes. Correlated with the obesity trend, rates of diabetes have increased dramatically in the past decade. The prevalence of diabetes nationwide has increased 33% in this period — and its incidence in California has increased by 67%. This increase is due in part to aging of the population, and also to improved screening and detection. In addition, type 2 diabetes, once considered “adult-onset,” is now being diagnosed among children and teens.

The economic implications of these trends are profound. A report by the former U.S. Surgeon General put the economic cost of obesity in the United States at about \$117 billion in 2000 — second only to tobacco as a cause of increased national health care expenditures. The current estimated direct and indirect costs of diabetes to the nation are over \$105 billion annually or more than 10% of the nation’s health care bill. Diabetes is a progressive, chronic, costly disease that cannot be cured, can damage almost every major organ, and can shorten the life span by an average of 10 to 15 years. The obesity/diabetes epidemic represents an unprecedented health crisis for California and the nation.

Nutritionists from UC and elsewhere have identified a number of changes over the past 30 years that have contributed to these problems. Daily caloric intake has increased in both children and adults. Inexpensive fast food is readily available. Portion sizes are two to four times the standard sizes recommended by USDA. Schools raise funds by selling high calorie snacks and placing vending machines in the corridors, competing with standard school lunch meals. Aggressive and sophisticated marketing campaigns promote such snacks to children and teens.

At the same time, there are fewer opportunities in daily life for children and adults to burn calories. Schools have replaced or cut back on physical education and sports. Neighborhood parks may be considered unsafe places to play.

Some neighborhoods even lack sidewalks. Children watch an average of 3 to 4 hours of television daily. Walking and cycling have been replaced by automobile travel for all but the shortest distances, and the workplace has become increasingly automated.

However, there is scientific evidence that diabetes can be reversed through lifestyle changes, such as moderate exercise and weight loss (see p. 8). The best long-term solution to this problem is to create home, work and school environments that promote healthy food choices and regular physical activity. This can only be achieved by a focused, collaborative effort by all agencies and organizations concerned with the nation’s health.

Toward this end, scientists at UC Davis and UC Berkeley are investigating an array of fundamental questions. UC Davis nutritionists are developing information to help individuals deal with obesity more effectively, performing studies on nondiet interventions and clarifying the physiological processes that underlie diabetes.

At the Agricultural Research Service’s Western Human Nutrition Research Center at UC Davis, research in the next 5 years will examine the effects of dieting on mineral metabolism and develop approaches to ease negative side effects of dieting such as impaired mental functioning, compromised immunity and lower bone density. Other scientists at the Center hope to identify factors that predispose individuals to excess body weight gain and make them resistant to weight loss.

UC Berkeley researchers are analyzing the degree to which eating patterns developed in early childhood contribute to childhood obesity. Another study focuses on the contribution of teenage pregnancy to body-fat changes and distribution. Researchers are examining the effect of removing highly sweetened beverages from high school vending machines and snack bar shelves. Berkeley nutritionists are also attempting to elucidate the contributions of obesity and high-insulin production to colon cancer.

Agriculture and Natural Resources (ANR) workgroups are extending research findings to the appropriate clientele (see pp. 7–12). A research study in eight counties is looking at the paradoxical relationship between overweight and hunger in low-income Latino families. Results may ultimately be used to evaluate the effects of state and national food assistance and poverty programs.

Through such avenues of research, as well as outreach programs such as the Center for Weight and Health, UC is setting the standard for a comprehensive approach to this multifaceted problem. With 60% of Americans overweight, obesity and its constellation of associated diseases is our number one nutrition problem. The nation must broaden its approaches to prevention, recognizing that obesity is rooted not only in our automated and sedentary lifestyles, but also in our vast food marketing and distribution systems. Only then can we foster a changed environment that will enable our diverse citizenry to adopt healthier ways of life.