

• The

inextricable

connection

between

food

insecurity

&  
Diabetes

**M**ANY OF US UNDERSTAND DIABETES TO BE A CHRONIC CONDITION related to the production of insulin, which is associated with what we eat. What we may not appreciate is how food insecurity, or the lack of reliable access to food, is a major risk factor in the onset of diabetes. This policy brief describes the interplay between food insecurity and the onset and management of diabetes, and underscores the need for a comprehensive framework to alleviate poverty and increase access to healthy foods.

#### FOOD INSECURITY

The term “food insecurity” is used to describe the experience of not having the financial resources to regularly purchase food. At mild or moderate levels this situation results in anxiety, limited nutritional options, and trade-offs between food and other basic needs. In more severe cases, food insecurity results in hunger and extended periods of time without food. In California, almost 3 million low-income adults were food insecure in 2007.



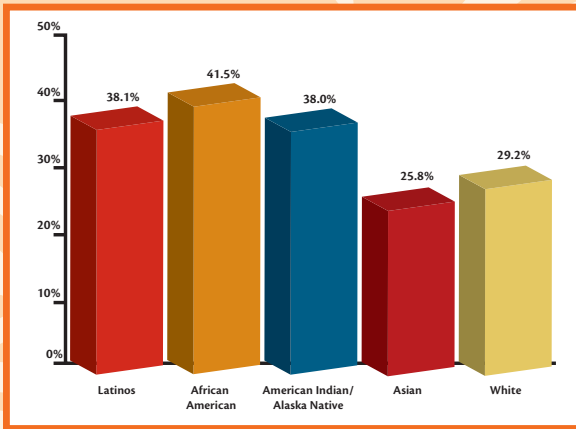
California Pan-Ethnic Health Network



## FOOD INSECURITY AND DIABETES

Limited resources for purchasing food has a dramatic impact on our health and our risk of developing chronic diseases such as diabetes. Like many health conditions, there are racial and ethnic differences in the prevalence of diabetes. For example, in California, among adults ages 50 and over, the prevalence of diabetes is 11.4% among Whites, and almost twice as high among communities of color; 22.2% among African

**Food Insecurity, by Race/Ethnicity, Adults under 200% Poverty Level, California 2007**



California Health Interview Survey, 2007

Americans, 23.2% among Latinos, and 24.8% for American Indian/Alaskan Natives. In addition, the prevalence of diabetes is twice as high among adults with less than an 8th grade education as among adults with a college education. What is even more concerning is that even after adjusting for these socio-demographic trends, adults living with the most severe levels of food insecurity have more than twice the risk of developing diabetes as adults who are not food insecure.

While the connection between food insecurity and heightened risk for diabetes may be counter intuitive, the pathway becomes clear when we examine how individual coping mechanisms interact with our food environment.

## THE PARADOX OF OBESITY AND HUNGER

To maintain caloric intake, adults who experience food insecurity limit the variety of their food and concentrate on a few low-cost, energy-dense, and nutritionally-poor foods such as refined carbohydrates and foods with added sugars, fats, and sodium. Calorie-for-calorie these foods cost less than nutritionally rich fruits, vegetables, and dairy products. For example, a dollar can buy 1200 calories worth of cookies, or 250 calories of carrots. The differential in supermarket prices of unhealthy and healthy foods has only widened over the last two decades. Between 1985 and 2000, the retail price of carbonated drinks rose 20%, fats and oils 35%, and sugars and sweets 46%, compared to a 118% increase in the price of fruits and vegetables.

## CYCLES OF BINGE-EATING AND DEPRIVATION

Food insecurity is often a cyclic phenomenon, with most food insecure households alternating throughout the year between times of having enough food and experiencing scarcity. This unstable relationship with food causes adults to become reliant on energy dense foods and to over consume when they are able to access food. While these behavioral adaptations for binge-eating and fat accumulation (efficient storage of energy)

*“In California, among adults ages 50 and over, the prevalence of diabetes is 11.4% among Whites, and almost twice as high among communities of color.”*

appear to be hardwired as a result of the food scarcity experienced by our ancestors, they are now harmful given our calorie-rich environment.



### FOOD DESERTS AND BOUNTIFUL HARVESTS

California produces almost half of the nation’s fruits, vegetables, and nuts. Despite this abundance, the paucity of supermarkets in low-income neighborhoods prevents many food-insecure families from purchasing healthy options. These “food deserts” have been observed across the country, in particular in low-income African American neighborhoods. A Los Angeles County study conducted in 2002 found that there was one grocery store for an average of 18,649 residents in the city, but in low-income neighborhoods the ratio was one grocery store for every 27,986 residents. The scarcity of grocery stores is compounded by the lack of access to transportation, further limiting food-insecure households’ access to healthy foods.

### FOOD INSECURITY JEOPARDIZES DIABETES MANAGEMENT

A person’s ability to maintain a healthy blood sugar level and manage their diabetes is dependent on their access to healthy foods. The cyclical eating habits of food-insecure adults with diabetes puts them at risk for having both blood sugars that are too high (hyperglycemia) and too low (hypoglycemia). During times that food is available, binge-eating and reliance on high calorie foods makes blood sugar levels rise. High blood sugar, when continued over time, puts

the diabetic at risk for blindness, amputations, and kidney failure. On the other end of the spectrum, periods of food scarcity can result in dangerously low blood sugar levels, a complication of diabetes treatment that significantly impairs quality of life, may affect long-term cognitive function, and can be fatal. In addition to oscillating blood sugar levels, food-insecure diabetics have to balance the competing financial needs of their medical care and food, further jeopardizing the management of their disease.



## Policy Implications and Recommendations

Food insecurity disproportionately impacts communities of color and is a critical factor in the widening racial and ethnic disparities in the incidence of diabetes. To turn the tide in these dual epidemics, we must address the economic factors driving food insecurity while simultaneously increasing access to affordable, healthy foods.

### INCREASE HOUSEHOLD INCOME

The link between health and wealth is never more apparent than in the direct connection between

poverty, food insecurity, and diabetes. Therefore, it is critical to ensure that everyone has enough resources to purchase healthy foods.

1. **Increase the minimum wage** so all workers make a living wage, and index it to inflation.
2. **Protect and increase public programs** that provide a safety net for those who need help, such as Supplemental Security Income (SSI), CalWORKS, and the Cash Assistance Program for Immigrants (CAPI).

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3. **Modernize the Federal Poverty Level** to reflect the true cost of living and geographic differences. A report by the California Budget Project found that a single adult in California requires an annual income of \$28,336 – more than double the amount of the Federal Poverty Level – to cover basic expenses.

### IMPROVE CALIFORNIA'S ADMINISTRATION OF FEDERAL NUTRITION PROGRAMS

The most direct response to food insecurity is to increase the percent of eligible households participating in national nutrition assistance programs, which will also bring more federal dollars to the state. According to the US Department of Agriculture, California ranks at the bottom of all 50 states in participation of the Supplemental Nutrition Assistance Program (SNAP) by our working poor.

4. **Simplify SNAP applications** by moving to a less bureaucratic semi-annual reporting schedule for families, rather than quarterly, and dropping expensive finger-printing systems that two state audits have found ineffective.
5. **Protect the California Food Assistance Program (CFAP)**, which offers SNAP benefits to legal immigrants not covered by federally-subsidized SNAP.

6. **Increase reimbursement rates for school meals** to cover increasing food, energy, and labor costs, and to help schools serve healthy, fresh meals to their students.

### INCREASE ACCESS TO HEALTHY, AFFORDABLE FOODS

California should take full advantage of its substantial agricultural system in addressing food insecurity.

7. **Increase access to healthy foods at farmers' markets** by allowing participating farmers to operate an Electronic Benefits Transfers payment system to accept SNAP benefits.
8. **Revise general plans and zoning requirements to support community gardens and farmers' markets**, such as allowing farmers' markets to be established in specific zones without requiring a permit.
9. **Incentivize healthy food retail in low-income neighborhoods**, such as providing tax credits, development assistance, and regulatory incentives.

CPEHN works to ensure that all Californians have access to quality health care and can live healthy lives. We gather the strength of communities of color to build a united and powerful voice in health advocacy. For more information about CPEHN and our work go to [www.cpehn.org](http://www.cpehn.org).

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