

Best Practices for Diabetes Prevention

Diabetes is a serious health issue that has lasting implications. Diabetes is a chronic disease in which the body does not produce or properly use insulin. About 90 percent to 95 percent of all diagnosed cases are Type 2 diabetes, otherwise known as adult-onset diabetes. Serious long-term complications include heart disease, stroke, kidney disease, blindness and limb amputation. Risk factors include older age, family history, obesity, physical inactivity and race and ethnicity.

Get the Facts

Nearly 26 million children and adults in the U.S. suffer from diabetes.

- About 79 million people have prediabetes.
- About 1.9 million new cases of diabetes were diagnosed in 2010 among people ages 20 and older.
- Diabetes is the seventh leading cause of death in the U.S.; in 2007, diabetes contributed to a total of 231,404 deaths.

Diabetes cost the U.S. \$174 billion in 2007.

Medical expenses for diabetics are more than two times higher than for people without diabetes.

- Direct medical costs of diabetes: \$116 billion; Indirect costs, such as lost productivity: \$58 billion

Evidence-based strategies for diabetes prevention

The most effective strategies against diabetes include policy and environmental improvements that create opportunities for healthy living within communities. Results from the three-year Diabetes Prevention Program national study found that lifestyle interventions are more cost-effective than medications at preventing and managing diabetes; lifestyle interventions to increase physical activity and lose weight decreased the development of Type 2 diabetes by 58 percent over a three-year period. The delay persisted for 10 years and was effective in all racial and ethnic groups studied. APHA fully supports the following strategies to prevent diabetes by targeting lifestyle and environmental determinants.

Strategy #1: Increase the availability and affordability of healthier food and beverage choices in public venues.

Research has shown an association between the availability of fruits and vegetables and increased consumption. Research has also established that decreasing the cost of healthier foods increases the purchase of healthier foods. Schools, after-school programs, child care centers, community recreational facilities, city and county buildings and juvenile detention centers are key venues for increasing access to healthier foods. Such venues can use the national Dietary Guidelines for Americans to set standards for foods sold or provided in their facilities.

Because healthier foods tend to be more expensive, their benefits can remain out of reach for many low-income residents. Possible strategies for increasing their affordability and incentivizing the purchase of healthier foods include the following:

- Lower the prices of healthier foods and beverages in vending machines and cafeterias.
- Provide discount coupons or vouchers redeemable for healthier foods.
- Use evidence-based pricing strategies for less healthy foods and beverages at concession stands.

Strategy #2: Improve access to supermarkets in underserved areas and incentivize the sale of healthier foods and beverages in underserved areas.

Research indicates an association between increased access to supermarkets and healthier eating behaviors. Although full-service grocery stores have a wider selection of healthy foods at lower prices, many low-income, minority and rural communities tend to have fewer supermarkets and more corner or convenience stores. A year study by the Reinvestment Fund found that increasing the number of supermarkets in underserved neighborhoods led to an increase in real estate values, economic activity and employment, and a decrease in food prices. Strategies for attracting supermarkets to underserved areas or persuading convenience stores to sell healthier items include:

- pricing benefits and discounts;
- loan guarantees or grants to cover start-up and investment costs;
- supportive zoning and technical assistance to small businesses on how to start and maintain sales of healthier items.

Strategy #3: Increase access to outdoor recreational facilities and proximity to commercial areas and enhance walkability and bikeability.

Increasing the proximity of outdoor recreational facilities to schools or homes and improving their cost and hours of operation could increase a community's level of physical activity. Community-scale and street-scale urban design and land use policies and practices are proven effective physical activity interventions. In addition to providing public parks, fields, pools and playgrounds, creating an infrastructure that supports walking, such as sidewalks, trails, crosswalks, street lighting, etc, and biking — bike lanes, shared-use paths, bike racks, etc — is an important element of the built environment that would encourage physical activity. Research supports the correlation between access to outdoor facilities and increased physical activity and has found a strong association between bicycling infrastructure and frequency of biking. Zoning for mixed-use development is a land use policy that allows residential, commercial and institutional establishments to be located near one another. By decreasing the need to drive, this strategy increases nonrecreational walking and biking.

Strategy #4: Improve personal and traffic safety in areas where people are physically active.

Safety is an important environmental determinant to consider in diabetes prevention efforts. Both crime and traffic safety influence decision-making, and perceptions of neighborhood safety and crime rates affect the amount of time spent outdoors, walking or biking. Strategies to enhance safety include the following:

- Increase police presence, improve street lighting and decrease the number of abandoned buildings.
- Increase the number of speed bumps, traffic circles and raised crosswalks.

Sources: Centers for Disease Control and Prevention's National Diabetes Fact Sheet, 2011; Centers for Disease Control and Prevention's Morbidity and Mortality Weekly Report, July 24, 2009