Diabetes Partners in Prevention: A Publication of the Connecticut Department of Public Health

Winter 2009-2010

Diabetes and Poverty

Margaret M. Hynes, PhD, MPH, Epidemiologist 4, Connecticut Department of Public Health

An estimated 184,429 Connecticut adults, or 6.8% of the adult population, have diagnosed diabetes according to the 2008 Behavioral Risk Factor Surveillance System Survey data for Connecticut. Diabetes disproportionately affects people with lower incomes and less education. For example, 12.9% of Connecticut adults with household incomes under $25,000 report having diabetes compared with 4.2% of those earning $75,000 or more, a three-fold difference. About 14% of adults with less than a high school education report having diagnosed diabetes compared with 4.9% of adults who are college graduates, again a three-fold difference (2006-8 BRFSS data) [For more information on diabetes prevalence in Connecticut, see the webpage: www.ct.gov/dph/diabetesdata].

What are some of the underlying structural factors that put low-income, less-educated adults at higher risk for diabetes? Low-wage jobs that do not provide health insurance coverage leave adults with no regular source of preventive health care and less disposable income for high quality food. Low-income communities tend to have limited numbers of fresh food and grocery stores, and an abundance of low-cost, low-nutrient, fast food outlets. Low-income neighborhoods also tend to have fewer clean, safe public spaces such as parks and playgrounds that enable neighborhood residents to be physically active. All of these factors together help to increase the risk of diabetes and pre-diabetes in low-income communities.

How can some of these underlying factors be addressed to improve low-income communities' risk profiles? The Hartford Advisory Commission on Food Policy is one example of a group that has tackled problems of food security in a low-income, urban community. Established in 1991, the Commission is Hartford's "food advocate," an advisory body to city government whose stated purpose is to work with all city agencies and businesses to insure that Hartford residents can access fresh, affordable and nutritious food.

In its 2007 report *Top Five Action Steps to Fight Hunger in Hartford (*http://www.hartford.gov/government/FoodCommission/five_steps.pdf), the Commission identifies ways to expand residents' access to safe and nutritious food. This report is Hartford's action plan to improve nutrition and food quality, and as such, it is an essential part of the toolkit to prevent diabetes and its complications in Connecticut.

J. Robert Galvin, MD, MPH, MBA, Commissioner
Norma D. Gyle, RN, PhD, Deputy Commissioner
Cindy Kozak, RD, MPH, CDE, Diabetes Program Coordinator
860-509-7737 cindy.kozak@ct.gov

Diabetes Prevention & Control Program
410 Capitol Avenue, MS11APV
P.O. Box 340308
Hartford, CT 06134-0308

Depression and Insulin Sensitivity

Julie Wagner, PhD, Associate Professor, Behavioral Sciences & Community Health, University of CT Health Center

Prospective studies suggest that depression is a risk factor for new onset type 2 diabetes (T2DM). Depression may increase risk for diabetes *directly* by reducing insulin sensitivity, or *indirectly* by decreasing healthy behaviors such as exercise. Some data suggest that treating depression may improve insulin sensitivity and promote healthy behaviors. Robin Whittemore is the principal investigator on a diabetes prevention study, funded by the National Institutes of Health, that addressed these research questions. Whittemore worked with Drs. Julie Wagner from the University of Connecticut, Nancy Allen and Leah Swalley from Yale University, and Gail Melkus from New York University.

The study compared insulin sensitivity in 56 adults at risk for T2DM who were categorized as non-depressed, treated for depression with antidepressant medication, and untreated depressed. Results showed that depressed individuals showed significantly lower insulin sensitivity than non-depressed individuals. However, individuals taking antidepressant medications had insulin sensitivity similar to non-depressed individuals. Physical activity did not fully explain the association between depression and insulin sensitivity. It has long been known that reduced insulin sensitivity is the hallmark of T2DM. This study shows that treating depression is associated with improved insulin sensitivity.

Further research is needed to determine whether treating depression reduces risk for T2DM. Healthcare providers are encouraged to screen, treat, or refer their patients with depression for treatment. The study was presented at the 2009 annual scientific sessions of the American Diabetes Association, and was published in the journal *Diabetes Research and Clinical Practice.*

Seniors and Diabetes Screening: More Needs to Be Done

Julia L. Hoff, Government Account Executive, Novo Nordisk Inc.

Recently published data from The Center of Disease Control and Prevention (CDC), The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), Westat, Division of Adult and Community Health, National Center for Health Statistics, Social & Scientific Systems, and the Division of Diabetes Translation epidemiologists in *Diabetes Care* underscore the urgent need for screening seniors for diabetes. This new analysis of NHANES 2005-2006 data showed that approximately three of every four people age 65 and older have diabetes or pre-diabetes. Almost one-third of this age group has diabetes (total diagnosed and undiagnosed), and distressingly, about half (46%) are undiagnosed.

In 2005, Medicare began covering the cost of diabetes screening for anyone age 65 or older with one risk factor for diabetes, yet utilization of this benefit has been very low (9.6% in 2006). Seniors at-risk are eligible for one free screening per year (FPG or OGTT); if they are found to have pre-diabetes, they are eligible to be re-screened in six months[3].

To help increase awareness and use of the diabetes screening benefit, the Medicare Diabetes Screening Project (MDSP) was developed and implementation began in 2007. The MDSP is a national initiative co-led by the American Diabetes Association, the Health Care Leadership Council, and Novo Nordisk, and includes more than 20 partner organizations. Informational materials and an 8-minute explanatory video are available at www.screenfordiabetes.org.

Resources for above article

[1]Catherine Cowie, PhD, et al, "Full Accounting of Diabetes and Pre-Diabetes in the US Population in 1988-1994 and 2005-2006," *Diabetes Care*. 2009; 32:287-294.

[2]CMS web site, http://www.cms.hhs.gov/PrevntionGenInfo/20_prevserv.asp

[3]Department of Health and Human Services. *Quick Reference Information: Medicare Preventive Services*: CMS Fact Sheet; 2009.