

# Physician

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The American Diabetes Association's (ADA) slogan is "Stop Diabetes." If this is really possible, why is the prevalence of diabetes increasing at epidemic proportions? The number of people with diabetes in the United States increased by 17 million people from 1958 to 2010, according to the U.S. Department of Health and Human Services; more than 8 percent of the American population has type 2 diabetes now, and one in three children born after 2000 will develop diabetes unless strong preventive steps are taken. Furthermore, due to the insidious nature of the disease, by the time the diagnosis is made, many people have had the disease for anywhere from nine to 12 years, resulting in the presence of complications in as many as 39 percent of those with newly diagnosed diabetes. And we know that those who are *at risk* for diabetes are at similar risk for cardiovascular disease and peripheral vascular disease as those who *have* diabetes.

The Minnesota Department of Health (MDH) reports that every year 20,000 Minnesotans are newly diagnosed with diabetes. Our goal is to bend the curve on the rising incidence of diabetes.

There are a number of reasons to work hard at preventing diabetes. One important reason is the cost of hav-

## Bending the curve on diabetes

*Physician engagement can improve outcomes*

By Maggie Powers, PhD, RD, CDE; Teresa Pearson, MS, RN, CDE, FADE; and Rita Mays, MS, RD, LN

ing diabetes, including the cost of health care visits and tests, diabetes medications, and supplies.

Additionally, people with diabetes often have more health problems than those without diabetes. Other health problems associated with the disease increase the cost of health care, as they may require more expensive tests, medications, and hospitalizations. In Minnesota, diabetes costs almost \$3 billion a year—about \$12,000 for every person with diabetes. According to the ADA, health care costs for people with diabetes are three to four times higher than the costs for people without diabetes.

There are also emotional costs associated with diabetes. In fact, 20 percent of Minnesotans who have diabetes also have depression, which can negatively influence diabetes management and self-care behaviors.

Health professionals who care for people with diabetes understand the harm and costs of diabetes. At the same

time they may be frustrated that they have little time to spend on diabetes care when patients present with multiple health issues. Identifying people at risk of developing diabetes—i.e., those with prediabetes—and knowing what resources are available can help physicians work with patients before the most serious complications of the disease develop.

### Warning signs of type 2 diabetes and prediabetes

There is strong evidence that type 2 diabetes can be prevented or delayed. The warning signs of diabetes listed in the patient handout on the next page help identify which adults and children are at risk.

In Minnesota, the most frequent risk factor is being overweight.

More than 1 million people in Minnesota have prediabetes, but only 20 percent know they have it. That means 80 percent do not know that they have this health problem, are not

addressing it, and are at increased risk of developing type 2 diabetes. Table 1 lists the latest criteria for diagnosing diabetes and prediabetes.

### Evidence for preventing diabetes

The National Institutes of Health-sponsored Diabetes Prevention Program (DPP) was stopped early because the results in one of the treatment groups were so dramatic that it would be irresponsible if the successful intervention was not offered to all study participants. The intervention that decreased participants' risk of developing type 2 diabetes by 58 percent was a 16-session lifestyle education/support program. The primary goals were for participants to:

- lose 5 to 7 percent of current body weight—about 10 pounds
- moderately exercise for a total of 30 minutes a day, five days a week

Some people think this is easy, but for most people it is not easy. Structured programs that guide and support individuals have proven to be very helpful.

### Patients' perspectives

A 2009 ADA survey showed that people at high risk of developing diabetes report they follow a poor diet (67 percent), maintain an unhealthy weight (62 per-

cent), and avoid doctors' visits (50 percent). Admittedly, changing unhealthy behaviors is not easy for many people, yet research shows that change can occur when knowledge and barriers are addressed. In the 2009 survey, more than half of the responders mistakenly stated that "eating too much sugar" is a risk factor for diabetes. On their own, patients may try to eliminate sugar yet end up consuming more calories because they consume more high-fat foods. Others may mistakenly replace sugary soda pop with fruit juice, unaware that regular juice is very high in sugar, and thus achieve no reduction in sugar, carbohydrate, or caloric intake.

If losing body weight was easy, two-thirds of the American population would not be overweight or obese. Providing accurate information and support can help patients develop healthier eating and activity patterns that can reduce their risk—and physicians do not need to do all of this themselves.

### Minnesota action

The Minnesota Diabetes Plan 2015 focuses on stemming the tide of the diabetes epidemic and improving diabetes care. The plan encompasses expanding and easing access to care, education, and food, and increasing accountability for care coordination, referring patients to appropriate resources, supporting diabetes self-management skills in prevention of type 2 diabetes, and making effective diabetes prevention programs (DPPs) available statewide.

Minnesota has been a leader in piloting prevention programs. The state is now facilitating access to these programs while also actively supporting additional programs so all Minnesotans have easy access to diabetes prevention services. The Diabetes Program at the MDH provides a current listing of

**Patient handout: Warning signs of type 2 diabetes**

Do you have any of these warning signs of diabetes? If you do, talk to your doctor about how you can prevent or delay getting diabetes.

- I have a close family relative (mother, father, brother, or sister) with diabetes.
- I am not very physically active. I exercise fewer than three times a week.
- I have high blood pressure or blood pressure equal to or greater than 140/90 mmHg.
- I have low HDL cholesterol (the good cholesterol)—less than 35 mg/dL.
- I have high triglyceride levels (fat in the blood)—more than 250 mg/dL.
- I have an A1c (a special blood sugar test) equal to or greater than 5.7 percent.
- I have had heart disease/problems.
- I am very overweight.
- I have acanthosis nigricans (a skin reaction that darkens the skin around the neck and under the arms).
- I am a woman and have had gestational diabetes or a baby weighing more than 9 pounds.
- I am a woman, and have PCOS (polycystic ovary syndrome).
- I am part of an ethnic group that has a higher number of people with diabetes—Latino, Hispanic, African American, Asian American, American Indian, Pacific Islander.

**TABLE 1. ADA diagnostic criteria for prediabetes and diabetes**

	Normal	Prediabetes	Diabetes
A1c	≤5.6	5.7–6.4	≥6.5
Fasting plasma glucose (mg/dL)	<100	100–125	≥126
2 hr 75 gm OGTT (mg/dL)	<140	140–199	≥200
Random plasma glucose (mg/dL)	<140	N/A	>200 and classic diabetes symptoms

Confirm diagnosis of diabetes on a subsequent day unless there is evidence of unequivocal hyperglycemia.

group diabetes prevention programs in Minnesota, including contacts, dates, locations, and costs of participation (go to [www.icanpreventdiabetes.org/groups.html](http://www.icanpreventdiabetes.org/groups.html)).

Three 16-week DPP programs currently are offered in Minnesota:

- Lifestyle Balance for American Indians (offered through the Indian Health Board in Minneapolis and tribal communities)
- I CAN Prevent Diabetes (offered throughout the state with coordination by MDH)
- Y-DPP (offered by the metro-area, Willmar, and Alexandria YMCAs)

The I CAN Prevent Diabetes program has demonstrated that people who attend 80 percent or more of the 16-week session are more


successful than those that don't. The average weight loss for people who attend 13 or more sessions has been 6 percent but only 4 percent for those attending 12 or fewer sessions.

Other prevention programs are available in Minnesota and may be offered by registered dietitians, diabetes education programs, or community groups. Although the effectiveness of these programs may be untested or less vigorously tested, many have been successful.

### Action steps for physicians

Behavior change is a long-term process and physician engagement in setting expectations, making a referral, providing support and monitoring attendance, process and outcomes is key to success. Here are steps physi-

cians and their staffs can take to help patients with prediabetes or diabetes achieve desired outcomes.

1. Identify patients who have risk factors for diabetes and/or pre-diabetes.
2. Set clear expectations for patients with prediabetes based on the DPP recommendations to:
  - a. lose 5 to 7 percent of body weight and
  - b. be active 30 minutes, five days a week.
3. Provide patients with resources to make healthy lifestyle choices to reach their goals and help patients address barriers.
  - a. Ask patients what would most help them be successful; what support/resources previously resulted in behavior change.
  - b. Refer patients to a registered dietitian for medical nutrition therapy or to attend a group DPP lifestyle intervention program. If these resources are not available in your clinic or community, consider collaborating with others to make needed resources available.
  - c. Offer encouragement!
4. Establish a system to check in with patients between physician visits.
5. Celebrate successes, large and small. 

**Maggie Powers, PhD, RD, CDE**, is a research scientist at the International Diabetes Center at Park Nicollet, Minneapolis. **Teresa Pearson, MS, RN, CDE, FADE**, is a health care and clinical consultant with Hallelund Habicht Consulting, LLC, Minneapolis. **Rita Mays, MS, RD, LN**, is a diabetes prevention planner at the Minnesota Department of Health.