

Take charge of your health today. Be informed. Be involved.

What is prediabetes?

This month, the "Take Charge of Your Health Today" page focuses on prediabetes. Bee Schindler, community engagement coordinator with the University of Pittsburgh's Clinical and Translational Science Institute, and Esther L. Bush, president and CEO of the Urban League of Greater Pittsburgh, spoke about this topic.

BS: Good morning, Ms. Bush. I thank you for the chance to talk with you today about prediabetes, a condition that affects folks whose blood sugar level is higher than normal but is not at the level used as a benchmark for diagnosing type II diabetes.

EB: Yes, Bee. This is a very important topic—mostly because 90 percent of people who have prediabetes are unaware that they have it and, therefore, miss a critical

window of time to make change. Those who are overweight or obese are at a higher risk of developing prediabetes. Checking in with your health care provider is a good start in finding out your risk for developing prediabetes.

BS: Absolutely! Catching prediabetes before it develops into type II diabetes can mean reducing the risk of it evolving into heart disease, having a stroke or developing kidney and eye problems, according to Dr. Dorothy Becker, professor of pediatrics, University of Pittsburgh School of Medicine, and director of the Diabetes Program, UPMC Children's Hospital of Pittsburgh. Research to date about the evolution of prediabetes to diabetes has mostly been done with white people—a problem when



ESTHER BUSH

diagnosing and treating these conditions for nonwhite folks.

EB: That's important to mention because diabetes looks different in African Amer-

icans, and marginalized folks are often forced to advocate for their health needs. Taking charge of one's health will lead to being able to make better health decisions. That can start with more African Americans taking part in research to make treatment plans relevant to them and knowing whether or not they have any signs of prediabetes.

BS: Right—research shows that prediabetes is reversible. Finding ways that can reduce your risk, like healthy eating options, keeping off excess weight and exercising as much as possible—can mean the difference in whether or not you develop diabetes.

EB: Thank you so much having this conversation with me, Bee. We've provided some great information and ways that readers can take charge of their health today. I look forward to next month as we discuss disparities in breast cancer outcomes.

Healthy eating, diet and exercise can reverse prediabetes

Diabetes is a disease that affects how the body uses food for energy. Our bodies break down the food we eat into glucose (also known as blood sugar). Blood sugar is released into the bloodstream. A hormone, insulin, allows blood sugar to enter the cells from the bloodstream so our bodies can use it as energy. Without insulin, blood sugar stays in the bloodstream, which can cause serious health problems. Millions of people in the United States have diabetes that is caused by either their bodies not making



DOROTHY BECKER, MD

insulin at all or by having trouble using the insulin they make.

There are two major types of diabetes. In type I diabetes, the body cannot make insulin. People with type I have to take insulin every day in order to survive. No cure exists

for type I, but people who have it can live long lives with proper management. People with type II diabetes make insulin, but their bodies do not use it properly, and it is hard to keep blood sugar levels normal. According to the Centers for Disease Control and Prevention (CDC), 90 percent of people with diabetes in the United States have type II.

Unlike type I, type II diabetes can develop over a long period of time. One criterion for diagnosing type II diabetes is a blood sugar level of 200 or a fasting level above 125. But people whose blood sugar is not yet at these levels but who have higher-than-normal levels have a condition called prediabetes. Usually this occurs in people who are overweight and who often have a family history of type II diabetes. Prediabetes is commonly associated with high cholesterol levels and high blood pressure. If some or all of these factors are present, the risk of developing diabetes is extremely high. The CDC reports that about 84 million adults in the United States have prediabetes and that 90 percent of them are unaware they have it. If so many people do not even know they have it, is prediabetes a problem?

Yes. Prediabetes is the body's signal that something is wrong but that there is time to do something about it.



Many who have prediabetes don't know it. (Mark Lennihan/AP Photo)



Losing weight and increasing physical activity can help prevent type 2 diabetes. (AP Photo/M. Spencer Green)

"The official definition of diabetes is sort of artificial," says Dorothy Becker, MD, professor of pediatrics, University of Pittsburgh School of Medicine, and director of the Diabetes Program, UPMC Children's Hospital of Pittsburgh. "Even if your blood sugar is less than 200, high blood sugar levels are already affecting the body."

Dr. Becker says that there is a strong connection between prediabetes and people being overweight or obese. The combination of being overweight, whatever is causing the body not to make enough insulin and a family history of the disease are strong indicators for prediabetes. High cholesterol and high blood pressure are associated with these problems. Prediabetes is a strong risk factor for developing type II diabetes, heart disease, strokes or kidney and eye problems. Dr. Becker believes that not as many people know the increased risk for heart problems for people with diabetes.

"Diabetes makes heart issues worse," says Dr. Becker. "High blood sugar is terrible for blood vessels. Cholesterol is also affected by abnormal insulin levels. It's a double whammy. People with diabetes who are also overweight are more likely to have heart attacks, strokes or cancer than people who are overweight but do not have diabetes."

It is important to note that African Americans, Latinx Americans, American Indians, Pacific Islanders and some Asian Americans are at higher risk for developing prediabetes than white populations. But, in the past, much of the diabetes research was being done on white populations.

"Diabetes looks different in African Americans than it does in white people," Dr. Becker says. "The insulin, degree of excess weight and liver all look different. We can't say that research and medications that work in white people will also work in African American people. The only way we're going to have treatment that works in all people is by doing research with all people."

It is also important to emphasize that type II prediabetes is reversible. It is our bodies' sign that blood sugar levels are too high and that we need to take action. To prevent prediabetes and diabetes, Dr. Becker suggests keeping body weight within a healthy range, losing some or all excess weight, eating healthfully and getting as much exercise as possible.

Warning...Watch out for prediabetes

(NNPA)—The battle of the bulge is a lifelong challenge for many women. This is largely because our bodies are designed to store fat more easily than men's bodies to protect a potential fetus during the childbearing years. We have more enzymes for storing fat and fewer enzymes for burning fat.

This struggle with weight gain gets more challenging as we age. Estrogen declines, cortisol (the stress hormone) increases and our metabolism slows, enabling more weight gain. And after age 40, we start to lose muscle mass. Body fat usually replaces that muscle.

Being overweight comes with chronic disease risks, such as higher cholesterol and higher blood pressure. These increase the risk of developing other diseases, including diabetes, which is at epidemic levels in the Black community. We are almost two times as likely to develop the disease as our white counterparts.

Prediabetes: the Diabetes precursor
When blood glucose levels are higher than normal, but not yet high enough to be diabetes, you are said to have prediabetes. Though it's not full-blown type 2 diabetes, it still endangers your health. With prediabetes, your risk of heart attack is 1.5 times higher than normal. (It's two to four times higher with diabetes.) And long-term cardiovascular damage could be happening already.

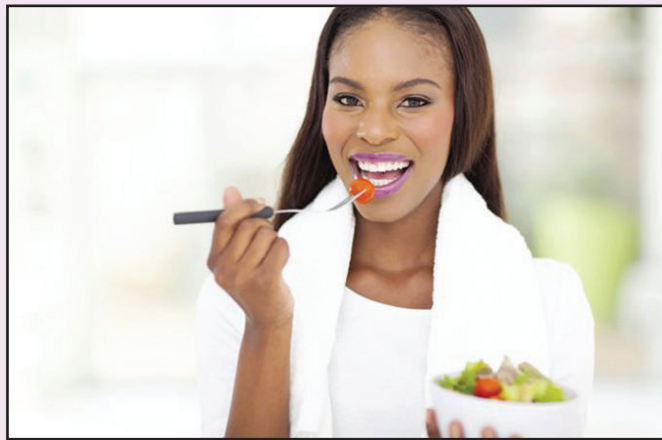
People who develop type 2 diabetes almost always start out with prediabetes, according to the American Diabetes Association. [http://www.diabetes.org/are-you-at-risk/prediabetes/] Without preventive measures, prediabetes can become full-blown type 2 diabetes in three to 10 years. But this doesn't have to happen.

Diabetes can be prevented—even if there's a family history of the disease.

Know your numbers

To protect yourself from developing type 2 diabetes or prediabetes, you'll need to get a blood test. Blood sugar tests are as important for women in mid-life as regular mammograms and bone density screenings.

You have prediabetes when:
•Hemoglobin A1c levels are 5.7 to 6.4



Eating healthy helps to prevent diabetes

percent;
•Fasting blood sugar is 100 to 125; and
•Two-hour glucose is 140 to 199 after a glucose challenge.

Beginning at age 45, you should have a blood test every three years so you can track your scores and

offset any warning signs of diabetes right away. Start earlier if you:

- Have a family history of diabetes;
- Have high blood pressure or high cholesterol;
- Had gestational diabetes; or
- Gave birth to a baby weighing more than 9 pounds.

Preventive measures

To prevent prediabetes, keep your weight in check. You don't need to go all dramatic and drop half your body weight; losing just 10 to 15 pounds can make a big difference. You can slash your risk of diabetes in half if you:

Eat a low-carbohydrate, low-fat diet. Choose mostly fresh fruits and vegetables, whole-grain breads and cereals, skim milk and yogurt, and lean meats. Limit soda, sweets, snack foods, fruit juices and alcohol.

Do moderate-to-intense exercise 35 minutes a day, five days a week. Walk briskly, swim, dance, lift weights or do other activities that keep you moving.

Don't obsess about your weight. Refrain from hopping on the scale every day. Just weigh yourself once a week and track your progress on a calendar. Try to do this on the same day and time every week (for example, Tuesday mornings).

Set easily attainable goals. Say, "I will walk for 15 minutes every day" instead of "I will lose 30 pounds." Celebrate with a non-food treat when you reach your goals. Build on your successes by adding to your goals each week.

Medications can lower your blood sugar, but lifestyle changes work best, lowering your chance of developing full-blown diabetes by more than 50 percent. Additionally, they can improve your blood pressure and reduce your overall cholesterol—all while helping you look and feel better than ever! And who doesn't want that?

Type 1 Diabetes TrialNet

Where are you on the Pathway to Prevention?

Researchers at the University of Pittsburgh and UPMC Children's Hospital of Pittsburgh have partnered with the Type 1 Diabetes TrialNet Research Network to enroll individuals that have a family member with Type 1 Diabetes.

This research study is aimed to identify, prevent or delay type 1 diabetes in those at high risk.

To speak with a Diabetes Research Nurse about this study, please contact David Groskost, RN at 412-692-7241 or David.groskost@chp.edu