

Recognizing the Link Can Save Your Life

Diabetes and Heart Disease

By Brigette Settles Scott, MA
Closing the Gap, Diabetes • September/October 2002

Last spring, just after her 46th birthday, Adrean Grant* found out that she had type 2 diabetes. At that time, she was asymptomatic and visiting her doctor for a routine physical exam. Yet, as she turned to leave the office, she learned that her life would never be the same.

“While I was at the doctor, they asked me for a urine sample—which they’ve always done. I was on my way out the door, and the nurse called me back and said that my urine sample indicated that I had a great deal of sugar in my urine,” said Grant. That, coupled with a finger prick, confirmed a diagnosis that she knew little about. She was completely unaware of even being at risk.

As an African American woman over 45, battling severe sleep apnea, managing high cholesterol, and a tad bit overweight—Grant had absolutely no idea she was actually a ticking time bomb. “I’ve been managing high cholesterol for several years, and didn’t know that my cholesterol level placed me at risk for diabetes,” she said.

Yet, Grant possessed nearly all of the risk factors associated with type 2 diabetes—her age, being overweight and having high cholesterol. The connection between her cholesterol level being a risk factor for both diabetes and heart disease, and cardiovascular disease being a major complication that can arise in diabetics was never discussed.

“When I was diagnosed with diabetes, I was given medication and was told to come back in two weeks. I was also referred to a dietician, and given a glucometer so that I could test my blood sugar everyday—but that was it,” said Grant. “Complications that I know about now, like heart disease and stroke, were never mentioned.”

Making the Connection

Cardiovascular disease poses the greatest threat to people with diabetes, killing 75 percent of all diabetics.

Traditionally, diabetes treatment has focused on the management of blood glucose. However, recent studies now show that managing blood pressure and cholesterol, in addition to controlling blood glucose levels, can save the lives of thousands of people with diabetes by preventing heart disease.

Many diabetes patients do not know they are at risk for cardiovascular disease, and that this risk can actually be reduced through better management and control of diabetes. High blood pressure and lipid abnormalities are among the conditions that contribute to an increased risk of cardiovascular disease. The majority of people with diabetes present with at least one of these conditions.

Diabetes tends to lower “good” HDL cholesterol, and raise both “bad” LDL cholesterol and triglyceride levels, increasing the risk of heart disease and stroke. Obesity, a condition that afflicts 80 percent of people with diabetes, is another risk factor for developing cardiovascular disease. In addition,

physical inactivity and smoking dramatically increase the risk of cardiovascular disease.

This means that people with diabetes are two to four times more likely to have a stroke or heart attack than are people without diabetes. Moreover, because diabetes can cause severe nerve damage to the heart, diabetics often experience painless heart attacks that are harder to diagnose and more likely to be fatal. People with diabetes are more likely to die from a second heart attack and are more likely than those without the disease to have a second cardiovascular event.

According to a study published in the Journal of the American Medical Association (1999), deaths from heart disease in the general population have shown a marked decrease, but deaths from heart disease in women with diabetes have increased 23 percent. Deaths from heart disease in diabetic men have decreased by only 13 percent, compared to a 36 percent decrease in men without the disease.

Cardiovascular disease is not only the deadliest complication of diabetes, but also the most expensive. In 1999, the Centers for Disease Control and Prevention reported that over \$7 billion of the \$44.1 billion in annual costs associated with diabetes went towards treating cardiovascular disease.

Increasing Awareness

There are several things people with diabetes can do to keep their disease under control, and to prevent cardiovascular disease. In fact, several organizations have stepped up to the plate to educate diabetics on how to prevent heart disease and other related complications.

The National Diabetes Education Program partnered with the American Diabetes Association and launched a comprehensive consumer education campaign—*ABCs of Diabetes*. The “A” stands for the A1c or hemoglobin A1c test, which measures average blood glucose levels; “B” is for blood pressure; and “C” is for cholesterol.

“We’ve expanded our education program from a singular focus on glucose control to include cholesterol and blood pressure management—all with the hopes of reducing the rates of cardiovascular disease among diabetics,” said NDEP’s information specialist, Joanne Gallivan.

The campaign outlines specific therapy goals for optimal diabetes management—A1c test results should measure less than 7 percent or an average blood glucose level of 150, blood pressure should be below 130/80, and LDL cholesterol should fall below 100.

“I tried to tell myself that I was going to be the poster child for diabetes control when I was first diagnosed, but I didn’t realize that it takes time. It’s a process, and although it doesn’t happen overnight, it is attainable.

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Initially, my A1c test score was 9.8—which is really bad, but I made some changes, began exercising everyday, and the next time I was tested, it was down to 7.5,” added Grant. “Now I go every three months to make sure that I’m progressing to my target range—below 7 percent.”

Later this year, NDEP will be tailoring this program to specifically focus on racial and ethnic minorities. “Minorities in general are at a higher risk for diabetes for a number of reasons, and are therefore at a greater risk of cardiovascular disease,” said Gallivan.

Fortunately, several approaches, such as weight control, increased physical activity, drug therapy and cholesterol lowering are each viable ways of controlling cardiovascular disease risk factors. Cholesterol management, in particular, should be addressed in much the same way by a person with diabetes as in a person diagnosed with heart disease.

Recognizing this fact, the National Cholesterol Education Program (NCEP) has recently amended its guidelines to better address the connection between diabetes and cardiovascular disease. “Diabetes has always been a known risk factor for cardiovascular disease, but has been elevated to a ‘coronary risk equivalent’ because people with diabetes are at equal risk for a heart attack as a person with heart disease,” said Dr. James Cleeman, coordinator, NCEP. “We now encourage people with diabetes to lower their LDL cholesterol under 100, the same as someone with cardiovascular disease.

NCEP underscores the connection between diabetes and cardiovascular disease in all of its publications, including its recent online educational campaign—*Live Healthy, Live Longer*. The site contains information about cholesterol lowering for people who want to lower their risk of cardiovascular disease—especially those with diabetes.

In addition, the campaign’s National Cholesterol Education Month Tool Kit features tips for reducing cardiovascular risk and heart healthy recipes—particularly African American and Latino favorites.

“There may be more educational efforts that are needed to address this issue in minority communities, but diabetes is an equal opportunity risk factor. We’ve taken an even-handed approach to this. The treatment is basically the same across minority lines,” Cleeman said, re-emphasizing the importance of lowering cholesterol levels.

“Living with diabetes can be easy if you surrender to it, recognize that you have it, and work towards tight control. If you don’t, you’re guaranteed to have problems. It takes more than knowledge to control your diabetes—it takes action, and keeping it in the forefront of your mind.” Grant concluded.

For more information on the link between diabetes and heart disease, visit the National Diabetes Education Program Web site at <http://ndep.nih.gov> or contact the American Heart Association at <http://www.americanheart.org> or call 800-AHA-USA1. To access the Live Healthy, Live Longer online educational materials, go to <http://www.nhlbi.nih.gov/chd>❖

*Name has been changed to protect privacy.

