

Arginine & Diabetes

Today, the 2.5 million Californians with diabetes are urged by Mayor Jim Hahn to Take Diabetes to Heart and learn more about their risk for heart disease -- the leading cause of diabetes-related deaths. California has one of the highest rates of diabetes in the country, with an estimated eight percent of the state's population affected by the disease. In addition, as the number one cause of death in the United States, cardiovascular disease claims the lives of more Californians than any other single cause.

Actress Phylicia Rashad, best known for her role as Clair Huxtable on "The Cosby Show," is spearheading the Take Diabetes to Heart!(tm) educational campaign because of her personal connection to diabetes and heart disease. Today, Ms. Rashad is addressing the employees of Southern California Edison in Los Angeles about the importance of long-term diabetes management. Mayor Hahn has declared August 1 as Take Diabetes to Heart!(tm) Day to urge all people with diabetes in the state to take action to manage the disease.

"My father, who had diabetes, died of a heart attack. When I read his death certificate I learned that the root cause of the heart attack was diabetes. I had never made the association between heart disease and diabetes," said Ms. Rashad, a two-time Emmy Award nominee and People's Choice Award winner. "So few people with diabetes realize how strongly these diseases are linked, and the importance of working with their healthcare team to actively and effectively manage their type 2 diabetes."

Take Diabetes to Heart!(tm), led by the American Association of Diabetes Educators (AADE) and the Association of Black Cardiologists (ABC) and sponsored by GlaxoSmithKline, will seek to address the growing epidemic of type 2 diabetes. Type 2 diabetes affects an estimated 16 million Americans -- approximately 6 percent of the population -- and several million more remain undiagnosed. This chronic disease is also one of the most costly health problems in the U.S. In California alone, total costs of diabetes were estimated at \$19.4 billion in 1999. This is due, in part, to its potentially serious complications, such as cardiovascular disease, blindness, limb amputation and kidney failure.

The Heart of Diabetes-Related Cardiovascular Disease

Heart disease is one of the most serious complications of type 2 diabetes, causing two out of three diabetes-related deaths. In fact, people with type 2 diabetes are two to four times more likely to suffer from heart disease or stroke than people without the disease. Research indicates that cardiovascular disease and type 2 diabetes may share a common link -- insulin resistance. Insulin resistance occurs when the body does not respond properly to its own natural insulin, a substance critical for blood sugar to enter the body's cells and be converted into energy. Insulin resistance may be linked to heart disease because

of its association with a group of risk factors that include increased blood clotting, high blood pressure and abnormal blood lipid profile ("bad"cholesterol vs."good"cholesterol).

Insulin Resistance affects African-Americans and Hispanic/Latino-Americans at higher rates than Caucasians, placing these populations at an increased risk for type 2 diabetes and related complications.

Control Can Reduce the Risks

Tight blood sugar control is critical to reducing the risk of complications such as heart disease. The best indication of whether a person is effectively managing type 2 diabetes is the A1C test, which provides a "picture" of how well blood sugar has been controlled over a period of two to three months. Experts recommend target A1C levels of 6.5 percent to

7 percent. People with type 2 diabetes should take an A1C test at least twice a year, and those who are above target or undergoing a change in therapy should be tested at least every three months.

"People with diabetes need to understand the risk associated with uncontrolled A1C levels. For every one percent increase above the target A1C level, a patient's risk for developing heart disease increases significantly," said Kathy Berkowitz, R.N., C.S., F.N.P., C.D.E. and AADE president. "It is therefore crucial that people with type 2 diabetes manage the disease through proper meal planning, physical activity and, if necessary, medications, including those that target insulin resistance. We hope that the campaign's message will incite Californians with diabetes to take action in the management of this disease."

One Diabetic Doctor Finds Hope

I had been doing all the things that are in National guidelines, getting most the patients' HbA1c into 7.0 or less and feeling proud. It was not enough. We sent 1/3 of the patients, 240 people in one year, off to visit the cardiologists in 1993 for various studies and treatments. I was so ashamed.

I turned to the studies from Stanford in the 1970's using vitamins and aspirin and worried less about the HbA1c. With this we cut the cardiology referral rate in half. Somehow the world thought this was good and I began on the talk circuit along with Victor Dzau, then Chief of the Division of Cardiology.

"I'm working on something really good that will help those with diabetes too" he said. I went to search for what he had published and found 30 papers on arginine and the reversal of hardening of the arteries -in rats.

"What is the arginine dose in humans," I asked at the going away party for him as he left to become the Chairman of the Department of Medicine at Harvard. "I

don't know" he replied, "Ask John Cooke. He is doing all the work in humans". So we began to work with John Cooke.

So now I'm very proud of what we do. I still work to get the HbA1c to 7.0, but since starting my patients on a six gram arginine supplementation program, we send only about one patient every two years (under age 65) to the cardiologists, instead of the 240 I was sending year after year. I consider myself to still be good friends with the heart, kidney and nerve specialists, even if I don't speak with them as often.

Dr. Joe Pendergrast, M.D., The Diabetes Doctor