

August 8, 2009

Blacks' Diseases get Coriell's Focus

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Floyd White reluctantly agreed to start taking prescription medicine for borderline hypertension in June. The 48-year-old minister had already spent a year trying to control it through diet and exercise.

His doctor prescribed what he believes is the best medicine for White. However, the Mount Laurel man must wait about three months before his doctor can evaluate its effectiveness.

In one of the first large-scale projects involving African American patients, the Coriell Institute in Camden and the National Institutes of Health collaborated on an 18-month project that found five genetic links for hypertension among African-Americans.

The discovery could lead to new drugs for treating high blood pressure, which could develop into other serious conditions, including heart disease, stroke, congestive heart failure and kidney disease.

"There has been very few studies of the African-American population in the genome area," said Dr. Michael Christman,

president and CEO for Coriell Institute, a leader in genetic research. "Almost everything we know about genetic diseases comes from studies of western European ancestry or Caucasian population. The big picture is not the specific finding. We need more genetic studies of the African-American population because different ethnicities may respond differently to different prescription drugs and their risk of complex diseases may be also different."

The Coriell Institute has completed a genetic research project that could eliminate the guesswork in prescribing medication. It could make it easier for doctors to eliminate certain types of drugs as treatment options, based on the root cause of the patient's medical condition.

"That's called personalized treatment," Christman said. "As a country, we need to ensure that all ethnicities and all members of society benefit from the improved health care that will eventually come from improved genomics. And this is one of the first attempts to do that."

Research into genetic links of two other diseases prevalent among African-Americans,



The Rev. Floyd White of Mount Laurel tries to control his hypertension with diet and exercise.

(DOUGLAS M. BOVITT/Courier-Post)

obesity and adult-onset diabetes, is ongoing and results will be released later.

More than 1,000 African-American adults from the Washington, D.C., metropolitan area and adults from Nigeria and Ghana in West Africa participated in the study.

The findings showed that genetic causes for hypertension found earlier in people of Asian and European descent was also common to African-Americans.

"That's very important for our work. It shows it's not just a fluke," said Dr. Charles Rotimi, director of the Center for Research on Genomics and Global Health.

Rotimi said the study's findings hold promise for people from all races because it shows that high blood pressure is controlled by the same factors and their responses are similar across the board, except for minor variations "here and there."

The point of the research is to find out how much environmental risk factors or genetic predisposition play in whether someone develops high blood pressure.

The research showed that the balance of water and sodium in the blood and the presence of blockers that prevent calcium from entering the heart both play a role in high blood pressure.

Rotimi and Christman both said that there are drugs on the market that target the genes responsible in both cases, offering promise for effective treatment.

According to the Centers for Disease Control, more than 50 million people in the United States have hypertension, affecting mostly black women with black men trailing closely behind.

African-American patients were recruited for testing at Howard University, a historically-black college in Washington, D.C., under the auspices of the National Institutes of Health.

The Coriell Institute conducted genetic studies of testing data, which included vital statistics and other measurements, plus blood and urine samples.

The W.W. Smith Foundation, based in Wayne, Pa., provided \$500,000 in funding toward the genetic research.

More large-scale genetic studies of African-Americans could be conducted within the next two years. Christman also predicted that the findings could change the process that doctors use in prescribing medicine within five years.

Rotimi would not specify a timeline because many variables could come into play. But he called the study's findings "very promising," and acknowledged that "the tests are taking us in that direction."

A clinical trial would be needed to verify the findings of this new study, Christman said.

White said he was excited by the potential of the study.

"It's wonderful. Any information or data that can make it become as close to exact science as possible will be very beneficial for the African-American population," White said.

"This should really enhance the physical capabilities of individuals. It's going to be very helpful to me. As you grow older, you deal with different issues at some point," he said.

White, who is minister for the Woodland Presbyterian Church in Camden, said high blood pressure runs in the family.

He is trying to manage his symptoms by exercising three days per week and avoiding fatty and salty foods. He is eating more salads and broiled food.

His doctor wanted to prescribe medication for him before his borderline hypertension worsens.

"Just the thought of being on medication," White said. "I've never been on medication in my life. I wasn't fearful. I just felt if I did a few things differently, the pressure would reduce itself.

"I was thinking like a layman, not a doctor," he said.

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