

## **New Study Reveals Why African Americans Are 5Xs More Likely To Suffer From Cardiovascular Disease**

**African Americans suffer from cardiovascular disease at a rate about five times higher than the rest of the U.S. population. In a new study, scientists may have found the culprit: a serious defect of nitric oxide, a small molecule vital in the regulation of blood flow and blood pressure.** The research team, led by *Ohio University* biochemist Thadeusz Malinski, examined the blood vessel cells of 12 white and 12 black healthy female subjects.

Using a system of nanosensors, they discovered that **the cardiovascular systems of African American subjects as young as 20 years of age could show signs of an unbalanced nitric oxide system that could become increasingly worse as they grow older**, according to research published in a recent issue of *Circulation*, a journal of the *American Heart Association*. “What we found was the basic mechanism of the cardiovascular dysfunction at the molecular level,” said Malinski, the Marvin and Ann Dilley White Professor of Biochemistry at *Ohio University*.

In the early 1990s, Malinski, a leading expert on nitric oxide and its physiological functions, developed nanosensors capable of detecting the nitric oxide and other molecules in single cells and neurons. Nitric oxide performs critical functions throughout the body, but survives only a few seconds after it is created by cells and neurons.

Malinski and other researchers have since proven that nitric oxide is a fundamental regulator of bodily functions—such as blood pressure, beating of the heart and the relaxation of blood vessels—and that imbalance between levels of nitric oxide and oxidative stress can be a sign of dysfunction and disease.

In the new study, the scientist found that the cardiovascular system of **black subjects has more enzymes to produce nitric oxide and can be more efficient than those of white subjects. However, black subjects did not produce enough of the amino acid L-arginine to complete the process of nitric oxide production.** Instead the enzyme produces another oxidative molecule, superoxide, which reacts with nitric oxide to create even more powerful and damaging oxidant, known as peroxynitrate.

**Peroxynitrate not only attacks cell DNA and RNA, making black subjects more susceptible to cancer and various dysfunctions, but it gobbles up ever-increasing amounts of nitric oxide, which can lead to hardening of the blood vessels, increase in blood pressure and other cardiovascular problems.**

As the balance in the system shifts to greater amounts of peroxynitrite relative to nitric oxide, the danger of cardiovascular dysfunctions and diseases increases as well, said Malinski, whose research was supported in part by *Ohio University's* Marvin and Ann Dilley White Professorship Endowment.

**“At the age of 20, African Americans can have perhaps twice as much of these oxiant as in other ethnic groups, and that causes an acceleration of aging and the dysfunction of the entire cardiovascular system,” Malinski said. “The final outcome is a heart attack or stroke.”**

Malinski and his colleagues argue, however, that this new understanding of nitric oxide and related molecules’ behavior in the African American cardiovascular system can point to better treatment and prevention of diseases.

**“What is amazing is that this system has a great potential to produce nitric oxide and can be corrected very efficiently and at a relatively early age,”** Malinski said. “Based on our research, a diagnosis of this dysfunction of the system will be possible—probably very soon—and will be treatable with some existing cardiovascular drugs.

.....

### **Response by Dr. Harry Elwardt, N.D., Ph.D.**

Over the past six months, I have performed at least a couple thousand tests with the **Digital Pulsewave Analyzer**. What I have always been amazed by is how poorly black Americans scored compared to white Americans in the same age bracket. I have always theorized that it is because of their diets and the pigment of their skin, which prevents the absorption of critical vitamin D provided through exposure to sunlight. But now this paramount study, done at *Ohio University*, sheds new light on a genetic dysfunction, which could be the real culprit.

Let’s review this groundbreaking study and show some critical points of discovery:

1. The dysfunction of an increased production of the oxiant, peroxy-nitrate, begins in black Americans at the early age of 20 and the production of this oxiant leads to cardiovascular diseases like high blood pressure, diabetes, heart attack or stroke at five times the National average.
2. Black Americans actually have an increased production of the enzyme critical for the production of nitric oxide, which can prevent and reverse cardiovascular disease. However, because black Americans do not produce enough L-arginine, this in turn leads to the production of destructive oxiant, peroxy-nitrate, instead of the miracle molecule known as nitric oxide.
3. Dr. Malinski concludes his research by saying that **black Americans have a greater potential for creating more nitric oxide than white Americans, and cardiovascular disease can be corrected very efficiently, if this can be started at an early age.** And someday very soon, there will be a way to measure this dysfunction in the cardiovascular system and a drug to treat this dysfunction.

I am truly encouraged by this study because we do now have a simple, non-invasive and affordable way to measure this dysfunction of the cardiovascular system and a proven way to actually reverse any negative findings that the test might reveal.

The **Digital Pulsewave Analyzer** is the device used to measure for cardiovascular dysfunction and supplementation with the simple amino acid L-arginine is the missing link for an increase in the production of nitric oxide, which *Nobel Prize* winning research shows is the '**Cardiovascular Cure.**'

We have Dr. Malinski and his fellow researchers to thank for this groundbreaking study. It is unfortunate that his conclusion was to wait for a drug to be created that would reverse the body's production of peroxynitrate and increase the body's production of nitric oxide, when right in his study he states that it is a lack of L-arginine.

I like what Dr. Louis Ignarro, who is one of three 1998 *Nobel Laureates* in Medicine, says in his book '**No More Heart Disease and Stroke,**'

*"You do not have to wait for the rest of the world to see the light and the drug companies to put new **Nitric Oxide**-based prescription drugs on the market—in order to take advantage of what **Nitric Oxide** has to offer. Even if you have high blood pressure, have suffered a heart attack, or are at high risk...You can beat the odds. The power to lead an entirely new and healthier life is in your hands. Carpe Diem—Seize the day! Start boosting your **Nitric Oxide** production right now!"*

**Can the answer to reversing cardiovascular disease be this simple?** My answer, which is based on having thousands of people, from all ethnic backgrounds supplementing with L-arginine over the past four years—**Is a resounding YES!** And because of a genetic disposition, **supplementing with L-arginine has even greater potential for improved cardiovascular health in African Americans!**