

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

Hypertension

This month, the "Take Charge of Your Health Today" page focuses on hypertension. Erricka Hager, health advocate at the Urban League of Greater Pittsburgh, and Esther L. Bush, president and CEO of the Urban League of Greater Pittsburgh, spoke about this topic.

EB: Good morning, Erricka. Although hypertension, or high blood pressure, is a health topic that we've covered before, I'm eager to learn if researchers have made progress in understanding more about this chronic disease. I'm glad we're taking the time today to discuss hypertension research.

EH: Yes. This month's page is filled with beneficial information about how our behaviors and lifestyle choices affect our blood pressure. We even feature a research study that is examining the relationship between physical activity at work and elevated blood pressures. Not only can this study benefit the communities we serve but also improve the health of our Urban League staff as well. I'm also excited to discuss hypertension because, not only does it affect my



ESTHER BUSH

loved ones, but it greatly affects the communities we serve. The American Heart Association has updated the recommendations for healthy blood pressure, which is now 120/80 mmHg or less. This means that more African Americans are now considered to have high blood pressure. We know that hypertension greatly affects African American communities. However, researchers are still unsure why it affects our communities more than others. Dr. Amber Johnson talks about this, including how researchers are even trying to understand

why certain treatments may be different.

EB: That's correct, Erricka. The communities we serve might not always know exactly where to get information or even feel comfortable talking to their doctors about their hypertension. It's difficult for both staff and community members to keep up with not only the medical advances related to hypertension but other chronic diseases affecting African Americans. That's why it's important for us to continue to have these conversations about research and health to continue to educate and empower the African American community. In his overview, Dr. Evan Ray provides some really easy-to-understand information about blood pressure and how to prevent and control it. Getting more active and eating healthy are effective ways that African Americans can have a positive impact on lowering blood pressure.

EH: I agree. This conversation couldn't have happened at a better time because we, at the Urban League, are currently



ERICKA HAGER

challenging our staff to get more active during the workday. We even invited a local chef to come and talk with the staff about the benefits of eating healthy. Also, the RESET-BP research study you mentioned is a perfect opportunity for our staff members to take charge of their health. Staff and Courier readers are encouraged to utilize the resources our free Health Education Office to not only have their blood pressure checked but get information

about changing their diet and ways to get active. We now even have a blood pressure machine in our building. Knowing and monitoring your blood pressure numbers are important.

EB: I second that! Thanks for having this chat with me, Erricka. We've provided some great information and ways that readers can take charge of their healthy today. I look forward to chatting with you next month as we discuss the All of Us Pennsylvania Research Program and precision medicine.

High Blood Pressure...The Silent Killer

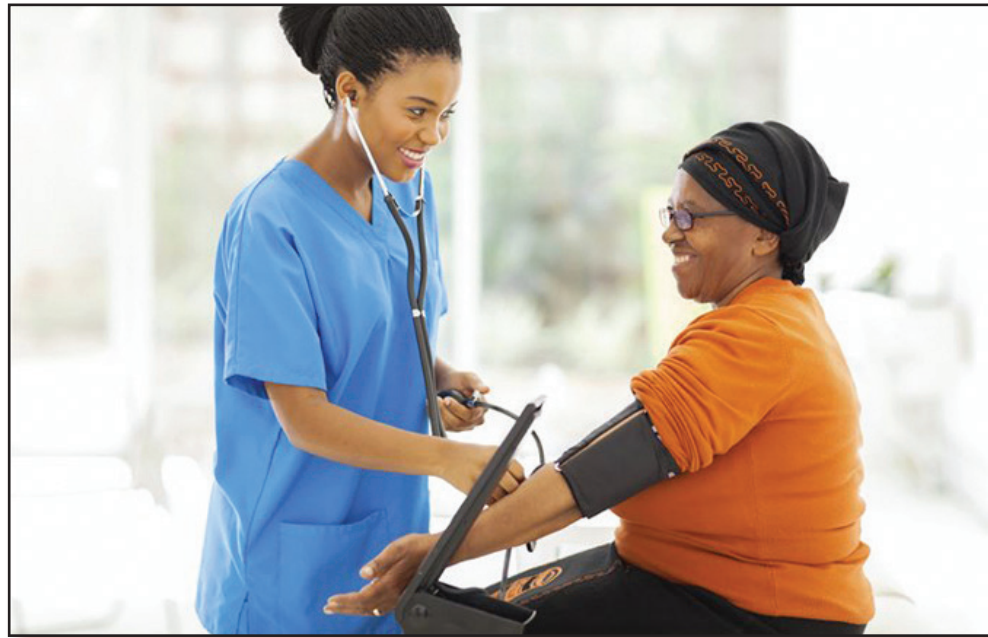
by Evan C. Ray, MD, PhD, FASN

Blood pressure is a measure of the force of blood against a person's arteries as the heart pumps blood through the body. High blood pressure—also called hypertension—is associated with increased risk of heart attacks, strokes and kidney disease. Treating high blood pressure either with a healthy lifestyle or with medication significantly reduces the risks of these health problems.

How many people have high blood pressure? About one-third of all people in the United States have high blood pressure. But African Americans are even more likely to experience it. Nearly two-thirds of people over age 60 have high blood pressure. New recommendations from the American Heart Association state that a healthy blood pressure is 120/80 mmHg or less. This means even more people are now considered to have high blood pressure. Elevated blood pressure is the most common problem addressed in primary care doctors' offices.

What are the symptoms of high blood pressure? Most people with high blood pressure do not feel any effects until they experience a heart attack, stroke or kidney failure. About half of people in the United States with high blood pressure are unaware of their condition.

What causes high blood pressure? The way people eat has a dramatic influence



Nine in 10 people with high blood pressure can control it, but half don't. Brandpoint Photo

on blood pressure. Research shows that too much sodium in the diet is associated with elevated blood pressure. The Food and Drug Administration recommends limiting sodium intake to 2.3 grams per day. Although the American Heart Association recommends even less, the average Amer-

ican eats much more than this. Processed foods and food from restaurants, especially fast food, are especially high in sodium.

Although many people are aware that sodium affects blood pressure, fewer realize that getting too little potassium also raises blood pressure. Potassium is found in fresh fruits and vegetables like citrus, melons, squash, tomatoes and root vegetables. Boiling food or processing food for large-scale production often removes much of the potassium. The National Academy of Medicine estimates that 98 percent of people in the United States do not get enough potassium. This finding suggests that potassium deficiency could be the most common nutritional deficiency in the United States. Researchers in the renal-electrolyte division at the University of Pittsburgh School of Medicine are currently working to better understand how potassium influences blood pressure.

Many other factors also influence blood pressure. These include:

Alcohol—Too much alcohol can also increase blood pressure. The American Heart Association recommends fewer than one drink per day for women and two drinks a day for men.

Weight—Being overweight increases blood pressure. Each year, the percentage of overweight people in the United States increases, which likely contributes to more people having high blood pressure.

Exercise—Not getting enough exercise also contributes to higher blood pressure.

Exercise that is vigorous enough to cause breathlessness tends to open up blood vessels, which lowers blood pressure.

Other—Other conditions like high cholesterol and smoking cause stiffening of blood vessels and also increase blood pressure. Importantly, increased blood pressure also stiffens blood vessels, meaning that having high blood pressure makes it likely that a person's blood pressure will go up in the future. The good news is that lowering blood pressure now reduces the risk that blood pressure will increase more.

How is high blood pressure different in African Americans? The reasons high blood pressure is more common in people with African heritage remain unclear. Blood pressure in African Americans appears to be more sensitive to sodium. This makes it even more important for African Americans to eat a healthy diet, rich in fruits and vegetables, with limited sodium.

How can high blood pressure be prevented or controlled? Healthy eating is one of the best ways to prevent or treat high blood pressure. Eating less sodium and more potassium by replacing processed foods with fresh fruits and vegetables can improve blood pressure as much as being on one blood pressure-lowering medication. One of the most effective ways to eat less sodium and more potassium is to cook at home. Restaurants often use processed ingredients that have removed potassium and replaced it with sodium. Losing weight also lowers blood pressure. Research has shown that for every 20 pounds lost, blood pressure decreases by 10 mmHg—similar to the decrease with some blood pressure medications. Finally, an active lifestyle with regular exercise can reduce blood pressure. When these measures fail to lower blood pressure enough, medication may be necessary.

Elevated blood pressure affects most people in the United States as they age. Preventing or treating high blood pressure reduces the risk of heart attacks, strokes and kidney disease, making it important to see a doctor regularly to make sure blood pressure levels stay in the healthy range.

What studies are ongoing? The RESET-BP study at the University of Pittsburgh is examining whether increased activity at work, through the use of a standing desk, can improve blood pressures. Researchers are looking for adults who work at a desk and have elevated blood pressure but who are not currently on blood pressure medication.

Evan C. Ray, MD, PhD, FASN, is Assistant Professor of Medicine, Renal-Electrolyte Division, UPMC



DO YOU KNOW YOUR BLOOD PRESSURE? DO YOU SIT TOO MUCH AT WORK?

Men and women ages 21–65 who have a desk job and are not currently taking blood pressure medication may be eligible to participate in a University of Pittsburgh research study to determine if sitting less during the workday can lower blood pressure and improve heart health.

All participants who complete the study will receive a fitbit and may choose to receive \$200 or a sit-stand desk attachment.

To find out if this study could be right for you, call

412-383-4750

or email resetbp@pitt.edu



Precision medicine offers solution to treat different medical problems

by Amber E. Johnson, MD, MBA, FACC

Hypertension can be hard to treat. Different patients respond differently to medications. A treatment that works for one patient may not work for everyone. Large drug trials cannot explain how each individual will respond to treatment. Large trials do not study findings in diverse groups. Scientists want to understand what causes hypertension, and doctors want to prevent and treat the disease. Data suggest that high blood pressure is different for everyone. Newer research strategies can determine how best to treat individual patients.

Precision medicine can determine a person's genetic and lifestyle risk for high blood pressure. Precision medicine has three aims. The first aim is to find out what causes the disease. Next, we must find how each person can keep from getting high blood pressure. The third aim is to find out which medications work based on



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an individual's unique profile. The medical community will need to understand the factors that make everyone unique. For precision medicine to work best, we will need information from lots of diverse people.

Researchers at the University of Pittsburgh want to create programs so that diverse groups benefit from precision medicine. Researchers have partnered with the University of Illinois at Chicago. We will help providers

talk about precision medicine with patients and the community. Researchers are also working to predict heart disease outcomes based on genetic and lifestyle risk. Precision medicine is a solution to treating difficult medical problems. In the future, precision medicine should help everyone, including those who have historically been underrepresented in medical research.

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