K-State student aims to spread awareness of high blood pressure risks

Wang says hypertension affects the body’s organs beyond the heart or brain

By Pat Melgares, K-State Research and Extension news service

MANHATTAN, Kan. – Many Americans understand that high blood pressure – also known as hypertension – heightens their risk of heart attack or stroke. Yanli Wang says it can be even more serious than that.

“Hypertension,” said Wang, a doctoral student in Kansas State University’s Department of Food, Nutrition, Dietetics and Health, “causes problems to many parts of the body.”

As part of her dissertation research, Wang recently conducted focus groups with adults who were mostly unaware that high blood pressure can negatively affect many of the body’s organs – including eyes, kidneys, lungs, brain and heart – as well as bones and the reproductive system.

She’s currently developing educational workshops that will help spread the word about the many dangers of high blood pressure.

In 2017, the American Heart Association and American College of Cardiology revised its guideline for what is considered normal blood pressure, the first such shift in 14 years. The groups re-defined ‘normal’ as readings of less than 120 for the systolic blood pressure measurement, and less than 80 for the diastolic measure.

The previous normal was considered 130/80, and before that, it was 140/90.

What that means is that those once in the range of 130/80 are now considered at risk for hypertension or pre-hypertension, signaling a need for many Americans to take measures to reduce blood pressure or face health risks.
Wang notes that the shift made a huge impact on the statistics of Americans currently considered to have high blood pressure – from about 1 in 3 (or 32%) to nearly 1 in 2 (or 46%).

There is good news, though. The American College of Cardiology reports that controlling high blood pressure is the second-most preventable way to avoid heart disease or stroke deaths (quitting smoking is No. 1).

Wang’s study will combine educational workshops with non-pharmacological approaches – that is, therapies that are not primarily based on medication – to help Americans reduce their risk.

“The non-pharmacological approach involves diet and physical activity, and a weight loss aspect,” Wang said. “It’s not just about what you eat and what you do, or reducing alcohol consumption and smoking. Those are only part of it. We are taking into consideration all of those aspects together.”

Tanda Kidd, Wang’s supervisor and head of the Department of Food, Nutrition, Dietetics and Health, said an important aspect of the project so far is understanding that people often don’t know the dangers of high blood pressure beyond risk to the heart.

“To me, that is the strongest piece coming from her project and something that’s not commonly understood…the impact high blood pressure has on organs besides the heart and brain,” Kidd said. “So, her non-pharmacological approach will include not only outlining how high blood pressure affects you, but also what you can do to control or manage that with little to no medication.”

Kidd said high blood pressure also affects an individual’s ability to recover from injury or surgery: “If your blood pressure is up or down, it impacts how well and how fast someone heals,” she said.

Wang, who earned a small grant from K-State’s graduate school and a dissertation award from the College of Health and Human Sciences to conduct some of her work, will soon announce four workshops aimed at raising awareness of high blood pressure; explaining how it affects the body’s organs; the effects of nutrients in raising, lowering and managing high blood pressure; and non-pharmacological ways to manage the disease.

“One thing we can tell people (who have high blood pressure) is don’t expect improvements to happen overnight. It won’t happen,” Wang said. “It takes time to get there. What we will do is help people understand how to keep a healthy lifestyle, incorporating healthy habits one at a time. And in the long run, they will see the benefits of it.”

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