

Study examines whether lower blood pressure reduces kidney disease progression

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Georgia Health Sciences University is enrolling patients in a federally funded study to determine if a lower blood pressure reduces the progression of kidney disease.

"The question is, if you have kidney disease, should your blood pressure goal be lower?" said Dr. Laura Mulloy, Chief of the GHSU Section of Nephrology and a principal investigator for the [Systolic Blood Pressure Intervention Trial](#), or SPRINT, funded by the National Institutes of Health.

The standard is to keep the systolic pressure – the top number indicating pressure inside blood vessels when the heart pumps – below 140 for those with signs of kidney damage. GHSU physician scientists will help about half of the 100 patients they enroll in the study get that number below 120.

Additionally, the study will measure the lower pressure's impact on cognitive function.

High blood pressure affects about 1 in 3 Americans. Often dubbed the "silent killer" many patients are unaware they are hypertensive until their kidneys begin failing.

Population-based and observational studies suggest lower blood pressure is healthier for the brain and the kidney but this is the first clinical study to objectively measure the impact.

High blood pressure is a major risk factor for stroke, kidney disease and other maladies but at a certain point low pressure can become problematic as well, Mulloy said. "You have to weigh the risk-benefit ratio," she said. "We would like for the blood pressure to be controlled optimally, but at the same time not have blood pressure so low that it impairs patients' ability to function."

Only about one third of Americans with unhealthy blood pressure achieve adequate blood pressure control. "We have to be vigilant in getting blood pressure to reach targeted goals," said Mulloy, citing the combination of a healthy, low-salt diet, exercise and often more than one medication.

"I think we can get people to goal," said Dr. Matt Diamond, GHSU nephrologist and SPRINT co-investigator, whose hypertension and [nephrology](#) service has helped close to 60 percent of its patients obtain good control. "It's clear that a better blood pressure slows the progression of kidney disease. We want to know if a lower blood pressure can do even better."

Participants in the SPRINT trial need to be age 55 and older with chronic kidney disease. Those already taking high blood pressure medication are eligible; participants will be placed or kept on commonly used drugs such as ACE inhibitors and diuretics. Diabetics are ineligible because of the condition's risk of kidney failure.

The researchers will follow study participants for up to six years, regularly checking baseline measures such as blood pressure; levels of creatinine, a breakdown product that can be measured in the blood as an indicator of kidney function; and cognitive function.

Nationally about 4,300 patients with chronic [kidney disease](#) will be followed. A parallel study is exploring the impact of a lower blood

pressure on cardiovascular disease.

Provided by Georgia Health Sciences University

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