

# Asthma as kid, stiffer arteries as an adult?

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Having asthma as a child is associated with developing stiff arteries earlier in adulthood, according to a new study.

The study, published Monday in the journal *Hypertension*, sought to explore the link between asthma, a [chronic lung disease](#) that makes breathing difficult, and stiff arteries, which is associated with [heart disease](#) and stroke.

"Abundant evidence has linked adulthood asthma with cardiovascular disease, but whether or not a history of asthma from childhood influences arterial stiffness was largely unknown," said the study's lead author Dr. Dianjianyi Sun, a postdoctoral research fellow and senior biostatistician at Tulane University's School of Public Health and Tropical Medicine in New Orleans.

Researchers used a well-known non-invasive test to measure arterial stiffness in 1,746 young and middle-age adults living in Bogalusa, Louisiana.

After a median follow-up of 11 years, people with a history of [childhood asthma](#) not only were more likely to have stiff arteries, but they developed the condition earlier in life than those without asthma. That was particularly true among people who were overweight or had high blood pressure.

"Our study indicates that a history of asthma from childhood is associated with accelerated aortic stiffness in adults and potentially an increased risk of future heart disease," Sun said.

"It's a well-designed study and a call for earlier attention, for both doctors and [asthma patients](#)," said Dr. Stephen Archer, a cardiologist, researcher and the head of medicine at Queen's University in Canada.

"Patients should be proactive in recognizing that asthma is probably a modest but important risk factor for [cardiovascular disease](#), and staying healthy is therefore that much more important," said Archer, who was

not involved in the new study.

The test used, called pulse wave velocity, can play an important role in identifying who has stiff arteries and might need to be more careful about their heart health, he said.

"When we're young, our blood vessels are very elastic. They absorb energy when our heart beats and give it back to the bloodstream," Archer explained. "Just like other parts of your body like your joints or your back your blood vessels usually get stiffer when you're older, but some get stiff early on in life."

An estimated 24.6 million Americans had asthma in 2015, including 6.2 million children, according to the American Lung Association.

The study didn't investigate why asthma might cause vessels to stiffen earlier in life than normal, but it's a topic Sun said he'd like to explore in future studies. Archer speculates the cause might have to do with inflammation.

"It's increasingly clear that inflammation can drive major cardiac events, and there's biologic plausibility that the inflammatory nature of asthma is translating into premature vascular aging," Archer said.

He said that no matter what's causing the stiff arteries, the study underscores the idea that people with asthma should get their blood pressure checked regularly and follow recommendations for heart health, including not smoking, controlling cholesterol, losing excess weight, eating a healthy diet and exercising regularly.

The study also serves as a reminder about [asthma](#) prevention, said Archer, noting that the condition has been linked to air pollution.

"We are literally changing the function of our genes by what we're breathing," he said.

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