

Antagonistic people may increase heart attack, stroke risk

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Antagonistic people, particularly those who are competitive and aggressive, may be increasing their risk of heart attack or stroke, researchers report in *Hypertension: Journal of the American Heart Association*.

Researchers for the U.S. National Institute on Aging (NIA), a component of the National Institutes of Health (NIH), studied 5,614 Italians in four villages and found that those who scored high for antagonistic traits on a standard personality test had greater thickening of the neck (carotid) arteries compared to people who were more agreeable. Thickness of neck [artery walls](#) is a risk factor for heart attack and stroke.

Three years later, those who scored higher on antagonism or low agreeableness — especially those who were manipulative and quick to express anger — continued to have thickening of their artery walls. These traits also predicted greater progression of arterial thickening.

Those who scored in the bottom 10 percent of agreeableness and were the most antagonistic had about a 40 percent increased risk for elevated intima-media thickness, a measure of arterial wall thickness. The effect on artery walls was similar to having [metabolic syndrome](#) — a known risk factor for cardiovascular disease.

"People who tend to be competitive and more willing to fight for their own self interest have thicker arterial walls, which is a risk factor for cardiovascular disease," said Angelina Sutin, Ph.D., lead author of the

study and a postdoctoral fellow with the National Institute on Aging, NIH, in Baltimore, Md. "Agreeable people tend to be trusting, straightforward and show concern for others, while people who score high on antagonism tend to be distrustful, skeptical and at the extreme cynical, manipulative, self-centered, arrogant and quick to express anger."

The SardiNIA Study of Aging, supported by the NIA, was conducted in the Sardinia region of Italy. Participants' ages ranged from 14 to 94 years (average 42) and 58 percent were female. They answered a standard personality questionnaire, which included six facets of agreeableness: trust, straightforwardness, altruism, compliance, modesty and tender mindedness.

Researchers used ultrasound to determine the intima-media thickness of the carotid arteries in the neck at five points. Participants also were screened for other risk factors for cardiovascular disease such as high blood pressure, cholesterol levels, triglycerides, fasting glucose and diabetes.

In general, men had more thickening of the artery walls. But if women were antagonistic, their risk quickly caught up with the men, Sutin said. "Women who scored high on antagonism related traits tended to close the gap, developing arterial thickness similar to antagonistic men. Whereas women with agreeable traits had much thinner arterial walls than men with agreeable traits, antagonism had a much stronger association with arterial thickness in women."

Though thickening of the artery walls is a sign of age, young people with antagonistic traits already had thickening of the artery wall, she said. Lifestyle factors may contribute, but the association persisted after controlling for risk factors such as smoking.

Physicians may want to examine [antagonism](#) and other facets of personality traits when considering [risk factors](#) such as smoking, weight, cholesterol levels and diabetes, Sutin said. The results of this study could also help determine who might benefit from targeted interventions such as providing coping mechanisms and anger management.

"People may learn to control their anger and learn ways to express anger in more socially acceptable ways," Sutin said.

The findings may apply to others in the world, whether they live in smaller towns or cosmopolitan areas, she said. "This may not be unique to Italians."

Provided by American Heart Association

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