

Drinking green tea to prevent artery explosion

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Abdominal aortic aneurysm develop less frequently in rats that drank green tea polyphenol, says new research by a Kyoto University team. Without treatment, abdominal aortic aneurysms eventually rupture and lead to death 50 percent of the time. Credit: Kyoto University

Japan's favorite beverage might be offering more than just a relaxing tea break.

According to new research, green tea could prevent a deadly condition in the body's [main artery](#). A Kyoto University team has found that abdominal aortic aneurysm—a condition in which the main artery becomes overstretched and bloated—developed less frequently in [rats](#) that drank green tea polyphenol, a major component of green tea.

Without treatment, [abdominal aortic aneurysms](#) eventually rupture and lead to death 50% of the time.

"Abdominal aortic aneurysms often go unnoticed because there are no symptoms until they burst," says Kenji Minakata, an author of the study. "If a patient is lucky and bloating is found before rupture, it needs to be treated surgically, such as by transplanting an artificial blood vessel or inserting a stent graft. At the moment there are no pharmacological treatments."

Recent research has pointed to a host of health benefits from drinking green tea, including the prevention of cancer, cardiovascular disease, inflammation, and oxidation.

"The type of polyphenol found in green tea has recently been shown to regenerate elastin, an essential protein that gives the artery its stretchy, yet study, texture," explains lead author Shuji Setozaki. "Considering that abdominal arterial aneurysms are caused by inflammation and the degradation of elastin components in the arterial wall, we thought drinking green tea may show promise for treatment."

In the study, the team treated rats with enzymes that induce abdominal aortic aneurysm, and found that the condition developed less in rats that drank green tea polyphenol. They also saw less inflammation and more

elastin production, protecting the artery from rupture.

"Japanese people have the longest lifespan in the world, and studies show that 80% of the population drink green tea on a daily basis," says co-author Hidetoshi Masumoto. "We believe daily intake of [green tea](#) should be considered as a new preventative strategy for abdominal aortic aneurysm; the focus of future studies will be to investigate optimal doses."

More information: Shuji Setozaki et al, Prevention of abdominal aortic aneurysm progression by oral administration of green tea polyphenol in a rat model, *Journal of Vascular Surgery* (2016). [DOI: 10.1016/j.jvs.2016.06.003](https://doi.org/10.1016/j.jvs.2016.06.003)

Provided by Kyoto University

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