

MEDICAL BREAKTHROUGHS

RESEARCH SUMMARY

TOPIC: TAMBE STOPS THE AORTA'S SILENT ASSASSIN
REPORT: **MB #4945**

BACKGROUND: An abnormal bulge which occurs in the wall of the aorta that carries blood from the heart to the body is known as an aortic aneurysm. These aneurysms can occur anywhere in the aorta and may be tube-shaped or round. Aortic aneurysms include abdominal aortic aneurysms which occur along the part of the aorta that passes through the abdomen, and thoracic aortic aneurysms which occur along the part of the aorta that passes through the chest cavity. An aortic aneurysm increases the risk of developing an aortic dissection. This is when a tear develops in the inner layer of the wall of the aorta and causes one or more of the layers to separate, which weakens the wall of the aorta. Having an aortic aneurysm also increases your risk that the aneurysm can rupture.

(Source: <https://www.mayoclinic.org/diseases-conditions/aortic-aneurysm/symptoms-causes/syc-20369472>)

RISK FACTORS: Certain risk factors and lifestyle choices increase the risk of developing an aortic aneurysm. These include hypertension, age, gender, smoking, elevated cholesterol and triglycerides, inactive lifestyle, and obesity. There are specific factors that can increase the risk including a history of arterial aneurysms in other blood vessels, family history of aneurysms (especially in families that have a genetic predisposition), bicuspid aortic valve, or a history of chronic inflammatory disease. For aneurysms that are small and slow growing, the risk remains low for rupture. However, for larger aneurysms, the risk becomes much higher. It's like when you first begin blowing up a balloon. The more you expand the balloon, the easier it becomes to make it larger. But, if you blow it up just a little too much, the wall becomes too thin, and it will eventually pop. Other risk factors that make rupture more likely include atherosclerosis, or the buildup of plaque on the artery walls. Of the lifestyle factors that increase the risk of rupture, smoking is the most dangerous.

(Source: <https://www.verywellhealth.com/aortic-aneurysm-causes-and-risk-factors-4160835>)

NEW RESEARCH TO SLOW GROWTH: A team at the University of Kentucky College of Medicine is studying the cause behind thoracic aortic aneurysms in hopes of leading to a new treatment. "We hope this research program will contribute to providing new medical options so that watching, and waiting won't be the only option," said Alan Daugherty, PhD, chair of the UK Department of Physiology, Gill Foundation Chair in Preventative Cardiology, and director of the Saha Cardiovascular Research Center and Saha Aortic Center in the UK College of Medicine. "This grant gives us an opportunity to find pathways for a drug therapy to stop the aneurysm from growing so patients can avoid surgical intervention." The key may be in a material called extracellular matrix, which binds aortic tissue together. The extracellular matrix is what degrades to weaken the tissue in an aneurysm, and researchers currently have little understanding about what makes that happen."

(Source: <https://uknow.uky.edu/research/uk-research-could-lead-treatment-aortic-aneurysms>)

FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com