

High blood pressure linked to common heart valve disorder

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For the first time, a strong link has been established between high blood pressure and the most common heart valve disorder in high-income countries, by new research from The George Institute for Global Health

at the University of Oxford.

The study, published in the journal *PLOS Medicine*, followed 5.5 million adults in the UK over 10 years. It found that higher blood pressure in early life was associated with a significantly greater future risk of [mitral regurgitation](#), a condition which makes the heart less efficient at pumping blood around the body, and in severe cases can lead to heart failure.

"Our research suggests this common and disabling valve disorder is not an inevitable consequence of ageing, as previously assumed, but may be preventable," said Professor Kazem Rahimi, lead author of the study and deputy director of The George Institute UK.

"Given the large and growing burden of [mitral valve disease](#), particularly among [older people](#), we believe these findings are likely to have significant implications for medical policy and practice around the world."

Mitral regurgitation leads to a backflow of blood into the heart, causing symptoms such as shortness of breath, tiredness, dizziness and chest pain. It is more common in older people, and may be associated with a greater risk of mortality.

Peter Williams, 59, of Oxfordshire, experienced the condition before having surgery to repair his mitral valve in 2016.

"I've always been an active person, but it slowed me down a lot," he said. "I was tired and short of breath, and struggling to walk distances that wouldn't normally have bothered me. My breathing was so noisy at night that it actually woke me up."

Despite significant advances in the understanding of valve disease, mitral

regurgitation has until now been largely considered a degenerative disorder, resulting from a weakening of the valve over time due to 'wear and tear'.

This has led medical practitioners to focus on treatment - namely surgery to repair or replace the valve - rather than prevention. The new study suggests further research is needed to test whether lowering blood pressure - through exercise, diet or blood pressure-lowering drugs - could reduce the risk of the disorder occurring.

"With worldwide ageing and population growth, we are likely to see an increasing number of cases of this condition," said Professor Rahimi. "We need to find effective and affordable measures to tackle it, and our study suggests one possible avenue for prevention, by reducing high [blood pressure](#)."

More information: Rahimi K, Mohseni H, Otto CM, Conrad N, Tran J, Nazarzadeh M, et al. (2017) Elevated blood pressure and risk of mitral regurgitation: A longitudinal cohort study of 5.5 million United Kingdom adults. *PLoS Med* 14(10): e1002404. doi.org/10.1371/journal.pmed.1002404

Provided by University of Oxford

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