

# Beta-blockers and stroke -- new insights into their use for older people

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A University of Leicester-led study may have uncovered the reason why Beta-blockers are less effective at preventing stroke in older people with high blood pressure, when compared to other drugs for high blood pressure.

The research, carried out by Bryan Williams, Professor of Medicine at the University of Leicester, and his colleague Dr. Peter Lacy, has been published in the prestigious [Journal of the American College of Cardiology](#) and has been cited on the MDLinx.com site as currently the world's number one leading finding in its field.

Professor Williams' research shows that lowering heart rate in older people, as [Beta blockers](#) do, can have a potentially detrimental effect on central aortic pressures (pressures in the large [arteries](#) close to the heart).

He commented: "Such findings can help define the template for optimal treatment strategies and highlight why new methods to estimate central aortic pressures are providing new insights into the pathogenesis of cardiovascular disease and how new drugs can be tailored to limit the damage.

"Leicester is acknowledged as one of the leading centres in the world in this field of research."

This study used analysis of the pulse wave measured at the wrist to

estimate pressures in the large artery near to the heart, in people with [high blood pressure](#). It shows that reducing heart rate in older people with high blood pressure can result in a higher than expected pressure in the large arteries.

This may be the reason why drugs such as Beta-blockers, a widely used drug to treat high blood pressure, have been shown to be less effective than other treatments at preventing stroke. In 2006, NICE recommended that Beta-blockers should no longer be used as a routine treatment for high blood pressure because they appeared somewhat less effective than other types of blood pressure lowering drugs at reducing the risk of stroke, especially in older people.

Professor Williams, who is also consultant physician with the University Hospitals of Leicester NHS Trust, suggests that the present study provides important insights into the mechanism. "There is no doubt that by better understanding of how modern drugs work in reducing the risk of stroke and heart disease, we will be able to continually refine treatments for the future," he said.

Should patients taking Beta-blockers stop them? Professor Williams emphasised: "No they should definitely not stop them. Beta-blockers are prescribed for a number of medical conditions, including angina and heart disease and in this context they are very beneficial.

"The new study is specifically exploring the reasons why Beta-blockers or other drugs that lower [heart rate](#) may be less effective at preventing stroke than some of the other drugs we use to lower blood pressure."

Source: University of Leicester ([news](#) : [web](#))

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