

No cardiovascular disease reduction with intensive blood pressure lowering treatment

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Blood pressure lowering treatment does not reduce death or cardiovascular disease in healthy individuals with a systolic blood pressure below 140. This is shown in a systematic review and meta-analysis from Umeå University. The results, published in [JAMA Internal Medicine](#), support current guidelines and contradict the findings from the [Systolic Blood Pressure Intervention Trial \(SPRINT\)](#).

Blood pressure treatment goals have been intensively debated since the publication of the SPRINT study in 2015. While current guidelines recommend a [systolic blood pressure](#) goal cardiovascular disease reduction with a goal

A systematic review and meta-analysis from Umeå University, published today in *JAMA Internal Medicine*, contradicts these findings. The Umeå study shows that treatment does not affect mortality or cardiovascular events if systolic blood pressure is low blood pressure levels is limited to trials in people with coronary heart disease.

"Our findings are of great importance to the debate concerning blood pressure treatment goals," says Dr Mattias Brunström, researcher at the Department of Public Health and Clinical Medicine, Umeå University and lead author.

The study is a meta-analysis, combining data from 74 randomized clinical trials, including more than 300 000 patients. The researchers separated primary preventive studies from studies in people with

coronary heart disease or previous stroke. The analysis found that the treatment effect was dependent on how high blood pressure was in previously healthy individuals. If systolic blood pressure was above 140 mm Hg, treatment reduced the risk of death and cardiovascular disease. Below 140 mm Hg, treatment did not affect mortality or the risk of first-ever cardiovascular events.

"Several previous meta-analyses have found that blood pressure lowering treatment is beneficial down to levels below 130 mm Hg. We show that the beneficial effect of treatment at low [blood pressure](#) levels is limited to trials in people with [coronary heart disease](#). In primary preventive trials, treatment effect was neutral," says Mattias Brunström.

More information: *JAMA Internal Medicine* (2017). [DOI: 10.1001/jamainternmed.2017.6015](#)

Provided by Umea University

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