

# Comparative effect of antihypertensive drugs in improving arterial stiffness in hypertensive adults (RIGIPREV study). a protocol for network meta-analysis

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## Abstract

(1) Background: Arterial stiffness is closely and bi-directionally related to hypertension and is understood as both a cause and a consequence of hypertension. Several studies suggest that antihypertensive drugs may reduce arterial stiffness. Therefore, effective prescription of antihypertensive drugs should consider both blood pressure and arterial stiffness. The aim of this protocol is to provide a review comparing the effects of different types of antihypertensive drug interventions on the reduction of arterial stiffness in hypertensive subjects. (2) Methods: The literature search will be performed through the MEDLINE, EMBASE, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, and Web of Science databases. Randomised clinical trials assessing the effect of antihypertensive drug interventions on arterial stiffness measured in subjects with hypertension will be included. A frequentist network meta-analysis will be performed to determine the comparative effects of different antihypertensive drugs. (3) Results: The findings of this study will be published in a peer-reviewed journal. (4) Conclusions: This study will provide evidence for health care professionals on the efficacy of different antihypertensive drugs in decreasing arterial stiffness; in addition, it will analyse the efficacy of the drugs not only in terms of arterial stiffness but also in terms of blood pressure treatment. © 2021 by the authors. Licensee MDPI, Basel, Switzerland.

## Author keywords

Antihypertensive drugs; Arterial stiffness; Hypertensive adults; Network meta-analysis