

# META ANALYSIS: HYPERTENSION AS RISK FACTOR OF STROKE

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## ABSTRACT

**Background:** Globally, elevated blood pressure (BP) is the strongest modifiable risk factor for cardiovascular disease (CVD) and related disabilities. High blood pressure (hypertension) can quietly damage the body for years before symptoms develop. It is assumed that uncontrolled high blood pressure can lead to disability, a poor quality of life, or even a deadly heart attack or stroke. The purpose of this meta-analysis was to investigate correlation between hypertension and stroke.

**Subjects and Method:** This study performed a systematic search using Google Scholar, ProQuest, Pubmed, and ScienceDirect databases. The PICO for studies' selection is presented as Population: patients aged 18-70 years, Intervention: hypertension, Comparison: normotension, and Outcome: stroke. The basic terms for literature search were as follows: "Risk Factors" AND "Hypertension" AND "Stroke" AND "Case Control". The inclusion criteria were English full text, case control study, and published between 2012 and 2022. Articles selection using PRISMA flow chart guideline. Selected articles were assessed on Review Manager 5.3.

**Results:** 9 case control studies from Asia, America, Australia, and Europe continents were involved for meta-analysis. This study showed that hypertension elevated the risk of stroke 3.33 times and it was statistically significant (aOR= 3.33; 95% CI= 2.34 to 4.73;  $p < 0.001$ ).

**Conclusion:** Hypertension elevates the risk of stroke.

**Keywords:** hypertension, risk factor, stroke, case control, meta-analysis

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