

Review Article Association Between Self-Reported Snoring and Hypertension: A Systematic Review and Meta-Analysis ☆

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Highlights

- Persons with snoring often suffer from hypertension.
- Snoring is considered as an independent predictor of essential hypertension in both men and women.
- People who snore frequently should pay attention to their blood pressure to prevent essential hypertension.

Abstract

Objectives

The purpose of this study is to summarize the evidence for the association between snoring and hypertension and the effect of snoring on hypertension in men and/or women.

Methods

We searched the articles in the Cochrane Library, PubMed, Scopus, Web of Science and Embase published up to 12 November 2020 to evaluate the association between snoring and hypertension. Studies were selected according to the predefined screening criteria and their qualities were assessed by Newcastle-Ottawa Quality Evaluation Scale. The odds ratio and 95% confidence interval were used as effective indicators. It was registered in PROSPERO with the number: CRD42021224912.

Results

According to the inclusion/exclusion criteria, 11 studies including eight prospective cohort studies and three cross-sectional studies were included. The results showed that compared with non-snoring participants, snoring significantly increased the risk of hypertension in both men and women [odds ratio (OR) =1.32, 95% confidence interval (CI), 1.23-1.42; men: odds ratio (OR) = 1.32; 95% confidence interval (CI), 1.18-1.49; women: odds ratio (OR) =1.26; 95% confidence interval (CI), 1.14-1.40]. Besides, the risk of hypertension was significantly increased when the snoring frequency was ≥ 4 [frequency ≥ 4 : odds ratio (OR) =1.42; 95% confidence interval (CI), 1.21-1.66; 4>frequency>0: odds ratio (OR) =1.23; 95% confidence interval (CI), 1.13-1.34].

Conclusions

Snoring is considered as an independent predictor of hypertension in both men and women, which may play a role in the prevention and control of hypertension. People who snore frequently should pay close attention to their blood pressure levels to prevent hypertension.

Keywords

Snoring

Hypertension

Meta-analysis

☆

Lirong Guo will handle correspondence at all stages of refereeing and publication, also post-publication.

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Yirou Niu and Xin Sui equally contributed to the study and should be considered as co-first authors.

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