PARTICULATE AIR POLLUTION AND THE RISK OF CARDIOVASCULAR DISEASE
Machová L¹, Horáková D¹, Kollárová H¹, Janoutová G¹, Čížek L¹, Janout V¹
¹Palacký University, Faculty of Medicine, Department of Preventive Medicine, Olomouc, Czech Republic

Key words: particulate air pollution, cardiovascular disease, air pollution epidemiology

Objective: Suspended particles are listed among the main air pollutants in the Czech Republic. In some studies, an association between increased particulate concentrations and cardiovascular health outcomes was described. The objective of this study, therefore, was to present a critical review of recent literature dealing with the association between particulate air pollution and cardiovascular morbidity and mortality.

Material and methods: A literature search was conducted, using the combination of terms “air pollution” and “cardiovascular disease”. Original articles written in English were included into further review. Quality of each study was assessed to estimate the weight attributable to respective study results.

Results: In methodologically sound studies, statistically significant positive association between particulate air pollution and hospital admissions/mortality due to cardiovascular disease was observed. Relative risk varied according to the type of study.

Conclusions: Due to its impact on cardiovascular morbidity and mortality and to the magnitude of exposure, particulate air pollution can be responsible for an important part of cardiovascular health outcomes in the Czech Republic.