
Genetically Predicted Insomnia and Risk of Sepsis



Insomnia, a common sleep disorder, has been linked to various adverse health outcomes, including altered immune function and elevated systemic levels of inflammatory markers, which may affect women more than men. Dysregulated immune responses can lead to conditions like sepsis, which has high morbidity and mortality.

A study was conducted to determine if insomnia is associated with risk of sepsis. Researchers also sought to estimate how much of this association is mediated through cardiometabolic risk factors like body mass index (BMI), smoking, type 2 diabetes (T2D), and cardiovascular disease (CVD).

The study used data from a genome-wide association study, identifying 555 independent genetic variants strongly associated with insomnia. Additional analyses, including mediation and sex-stratified analyses, were conducted. The study included data of 2.4 million individuals of European ancestry and data for 462,918 individuals of for sepsis.

The study included data from 593,724 individuals with insomnia and 10,154 cases of sepsis. Findings show that a doubling in the population prevalence of genetically predicted insomnia was associated with a 37% higher risk of sepsis. Approximately one-third of this association was attributed to cardiometabolic risk factors, including BMI, T2D, smoking, and CVD. The association between insomnia and sepsis was more pronounced among women than men.

The consistency of these results with previous studies indicates that there may be a causal association between insomnia and the risk of sepsis. Thus, insomnia could be a potentially preventable risk factor for sepsis. Further research should explore this association, including in populations beyond European ancestry.

Source: [JAMA](#)

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