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Outdoor Physical Activity and Self-Reported Infections in Midlife – A Population-Based Northen Finland Birth Cohort 1966 Study

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Purpose: Regular physical activity has been associated with better immunity and lower risk of infections, and frequent nature contact has been linked with better immune functioning. However, population-based studies, considering the associations of nature contact by outdoor physical activity with infections, are lacking. The aim of this study was to evaluate how regular physical activity outdoors is associated with the occurrence of self-reported severe lifetime infections among urban and rural middle-aged residents. We hypothesised that the frequency of infections would be lower among those reporting regular outdoor physical activity and especially among those residing in urban areas.

Methods: Cross-sectional associations between regular outdoor physical activity (at least 12 times/month) and self-reported lifetime severe infections were analysed with binary logistic regression analysis among participants from the population based Northern Finland Birth Cohort 1966 living in urban and rural areas in midlife (n = 4,474). Sex, marital status, household income, self-reported sleep, alcohol consumption, smoking, body mass index, accelerometer-measured moderate-to-vigorous physical activity, and diet quality were adjusted for.

Results: In urban areas 85.4% and in rural areas 89.0% of the participants reported outdoor physical activities at least 12 times per month. A little over a fourth of the respondents in both areas reported any severe lifetime infections. Participants living in urban areas who regularly engaged in physical activities outdoors had lower odds of reporting infections than those who engaged in outdoor physical activities less often (adjusted odds ratio (OR) 0.75; 95% confidence interval (CI) = 0.60–0.95).

Conclusion: Living in urban areas and regular outdoor physical activity was associated with lower risk of severe infections. Participation in outdoor activities should be encouraged especially among urban residents to enhance nature contact and related health benefits. Provision of natural areas and nature elements should be emphasised in urban planning for providing health promoting environments to all urban residents.

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