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Association between sedentary behavior and diabetes mellitus in the prevalence of middle-aged and elderly people

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Objective This study aims to explore the relationship between sedentary behavior and the diabetes mellitus prevalence of middle-aged and elderly people.

Methods we conduct a questionnaire survey and physical examination for a total of 3,000 middle-aged and elderly people (≥ 45 years old), analysing by the software of SPSS21.0 and Stata12.0.

Results The logistic regression analysis shows that the risk of diabetes is 1.617 (95% CI, 0.762-1.789, $P < 0.05$) at 2-4h, 4-6h, 6-8h, ≥ 8 h, = 0.003), 1.235 (95% CI, 0.818-1.865, $P = 0.034$), 3.420 (95% CI, 2.241-5.218, $P = 0.000$), 5.014 (95% CI, 3.049-8.247, $P = 0.000$). With each additional one-hour sedentariness the risk of diabetes increases by 23% (OR1.23, 95% CI 1.18-1.29, $p < 0.0001$).

Conclusions The sedentary behavior is an independent risk factor for diabetes. The prevalence of diabetes is gradually increasing with the increase of sedentary time, which indicates the longer sedentary time, the higher prevalence of diabetes.