### Association of Physical Activity level with Risk of Type 2 Diabetes in Residents of South of Tehran: A Population-Based Study

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**Abstract:**

**Background:** Physical activity has shown to prevent type diabetes 2. However, the type, intensity and amount of effective physical activity as well as individuals' needs according to level of their risk for type 2 diabetes have not been clarified comprehensively. This study investigated a relation between moderate aerobic physical activity ≥150 minuets/week with decreased risk of type 2 diabetes among obese and non-obese residents of south of Tehran.

**Methods:**

This study which was a part of the Cardiovascular Risk Factors Survey in Tehran population Lab region was designed and conducted based on MONICA/WHO project. 1552 adult inhabitants of 17th district of Tehran were enrolled in this cross-sectional study. Physical activity was assessed by MONICA Optional Study of Physical Activity questionnaire. Diabetes was defined as a history of a prior diagnosis of diabetes or fasting serum glucose ≥126 mg/dl.

**Results:**

In a multivariate model, moderate aerobic physical activity ≥150 minuets/week was significantly associated with decreased risk of type 2 diabetes in all and non-obese subjects [OR=0.56; 95%CI: 0.35-0.91 and OR=0.50; 95%CI: 0.26-0.94, respectively]. There was no significant relation between the physical activity and type 2 diabetes risk in obese subjects [OR=0.64; 95%CI: 0.30-1.39].

**Conclusion:** Moderate aerobic physical activity ≥150 minuets/week was significantly associated with decreased risk of type 2 diabetes in non-obese people and could be an acceptable exercise goal for these individuals. However, obese people should be investigated more to produce a tailored exercise guideline to this population at high risk of type 2 diabetes.