

Contribution of physical activity and sedentary behaviour to glycaemic status in urban women

Waidyatilaka, P.H.I.U.; de Silva, A.; Lanerolle, P.; Wickremasinghe, R.; Somasundaram, N.; Atukorala, S.

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Abstract:

INTRODUCTION: Physical activity plays a significant role in the development of Type 2 diabetes mellitus and the role of sedentary behaviour is gaining importance. This association may exist even in persons meeting exercise guidelines. **AIMS:** To assess percentage fat mass (FM%), waist circumference (WC), physical activity (PA) and sedentary behaviour (sitting time) in relation to glycaemic status in urban women. **METHODS:** Newly diagnosed diabetic and non diabetic urban women (30-45 years) were recruited in a community based cross sectional study following screening using fasting blood sugar (n=425). HbA1c was used to categorise "worn en as normoglycaemic (n=182) or dysglycaemic (n=243). PA and sitting time were assessed by the International Physical Activity Questionnaire (IPAQ). WC was measured and FM% was determined by Bio-impedance analysis. Means were used to describe variables and Spearman correlation coefficients and multiple linear regression analysis were used to test for associations. **Results:** Mean age of women was 37.7±4.0 years. Compared with normoglycemics, dysglycaemics had significantly higher WC(70.7±7.1 vs 80.7±7.5cm), FM% (32.0±5.6 vs 37.0±4.7%), and sitting time (144±66 vs 311±120 minutes/day)(p<0.001 for each variable). PA (7252±2935 vs 2769±1762METminutes/week) was significantly lower (p<0.001) in dysglycemics. WC(rs=0.575, p<0.001), sitting time (rs=0.712, p<0.001) were significantly correlated with HbA1c. PA (rs=- 0.719, p<0.001) was negatively correlated with HbA1c. WC and sitting time were significantly associated with glycaemic status (F=69.3, p<0.001) after adjusting for PA. **CONCLUSIONS:** WC, sitting time and PA are significantly associated with glycaemic status. Independent of PA, WC and sedentary behaviour are associated with dysglycaemia.

Description:

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