

20th Global Conference on Diabetes, Endocrinology and Primary Healthcare

April 27-28, 2022 | Webinar

Volume: 08

Associations between physical activity and risk factors for type ii diabetes in prediabetic adults

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Abstract should give clear indication of the objectives, scope, results, methods used, and conclusion of your work. One figure and one table can be included in your results and discussions. Diabetes is a national healthcare crisis related to both macrovascular and microvascular complications. We hypothesized that higher levels of physical activity are associated with lower total and visceral fat mass, lower systolic blood pressure, and increased insulin sensitivity. Participant inclusion criteria: 21-50 years old, BMI ≥ 30 kg/m², hemoglobin A1C 5.7-6.4, fasting glucose 100-125 mg/dL, and HOMA IR ≥ 2.5 . Exclusion criteria: history of diabetes, hypertension, HIV, renal disease, hearing loss, alcoholic intake over four drinks daily, use of organic nitrates or **PDE5 inhibitors**, and decreased cardiac function. Total physical activity was measured using accelerometers, body composition using **DXA**, and insulin resistance via fsIVGTT. Clinical and biochemical cardiometabolic risk factors, blood pressure and heart rate obtained using a **calibrated sphygmomanometer**. Anthropometric measures, fasting glucose, insulin, lipid profile, C-reactive protein, and BMP analyzed using standard procedures. Within our study, we found correlations between levels of physical activity in a heterogenous group of prediabetic adults. Patients with more physical activity had a higher degree of insulin sensitivity, lower blood pressure, total visceral adipose tissue, and overall lower total mass. Total physical activity levels showed small, but significant correlations with systolic blood pressure, visceral fat, lean mass and insulin sensitivity. After normalizing for race, age, and gender using multiple regression, these associations were no longer significant considering our small sample size. More research into prediabetes will decrease the population of diabetics overall. In the future we could increase sample size and conduct cross sectional and longitudinal studies in various populations with prediabetes.

Biography

Rukia Isabel Yosuf and m she is from Nashville, Tennessee. She is a 4th year medical student at The University of Toledo College of Medicine and Life Sciences. She graduated from Vanderbilt University with a degree in Biological Sciences. She has a passion for serving and helping others, especially minority and immigrant populations like my own. she went to nursing school before medical school and have used my ability to speak 6 languages to aid diverse patient populations.

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