OP26.1

Effects of a randomised culturally adapted lifestyle intervention on cardio-metabolic outcomes in diabetes-prone Iraqi immigrants to Sweden

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Background and Aim: Middle-Eastern immigrants constitute a growing proportion of the Swedish population and run a high risk of type 2 diabetes. This calls for an even more proactive approach for dealing with diabetes risk in this group than is currently the case in Swedish primary health care. The aim was to examine changes in lifestyle habits and cardio-metabolic outcomes comparing an intervention group, participating in a culturally adapted lifestyle intervention programme, and a control group under usual care.
Methods: Citizens of Malmö, Sweden born in Iraq and at high risk of type 2 diabetes (n=636) were invited. Participation rate was 16.4%. 96 participants were randomised to the intervention group (n=50) or to the control group (n=46). The intervention group was offered six group sessions addressing healthy diet and physical activity habits and three cooking classes. Changes in body weight, physical activity levels and cardio-metabolic outcomes were evaluated using a linear mixed-effects model. (Trial registration number: NCT01420198).
Results: The mean follow-up time was 3.9 and 3.5 months in the intervention and control groups respectively. There was a significant reduction in body weight and BMI (0.4%, p=0.004) and increase in the insulin sensitivity index (10.4%, p=0.005) per month in the intervention group compared to the control group. 14.3% in the intervention group lost ≥5% of body weight and 85.7% were moderately active on the last visit. The drop-out rate from baseline to the last visit was 30% (n=29) in both groups.
Conclusions: In this first randomised intervention study for diabetes-prone Iraqi immigrants in Sweden, the efficacy of a culturally adapted lifestyle intervention was successfully tested. Participants in the intervention arm showed improvement in insulin sensitivity accompanied by a reduction in body weight. This translates into a reduced risk of progression to type 2 diabetes and a lowering of the cardiovascular risk.