Associations between adherence to the Danish Food-Based Dietary Guidelines and cardiometabolic risk factors in a Danish adult population: the DIPI study - DTU Orbit (16/10/2019)

Associations between adherence to the Danish Food-Based Dietary Guidelines and cardiometabolic risk factors in a Danish adult population: the DIPI study

Diet is recognised as one modifiable lifestyle factor for ischaemic heart disease (IHD). We aimed at investigating the associations between adherence to the Danish Food-Based Dietary Guidelines (FBDG) indicated by a Dietary Quality Index (DQI) and selected cardiometabolic risk factors in a cross-sectional study with 219 Danish adult participants (59 % women; age 31-65 years) with a minimum of one self-rated risk marker of IHD. Information regarding diet was obtained using web-based dietary assessment software and adherence to the Danish FBDG was expressed by a DQI calculated from 5 food and nutrient indicators (whole grain, fish, fruit and vegetables, energy from saturated fat and from added sugar). Background information, blood samples and anthropometrics were collected and blood pressure was measured.

Linear regression analyses were used to evaluate the association between DQI and cardiometabolic risk factors. DQI was inversely associated with LDL:HDL ratio and TAG (-0.089 per unit; 95 % CI -0.177, -0.002 and -5 % per unit; 95 % CI -9, 0, respectively) and positively associated with HDL-cholesterol (0.047 mmol/l per unit; 95 % CI 0.007, 0.088). For men, DQI was inversely associated with BMI (-3 % per unit; 95 % CI -5, -1), trunk fat (-1 % per unit; 95 % CI -2, -1), high-sensitivity C-reactive protein (-30 % per unit; 95 % CI -41, -16 %), HbA1c (-0.09 % per unit; 95 % CI -0.14, -0.04), insulin (-13 % per unit; 95 % CI -19, -7) and homoeostatic model assessment-insulin resistance (-14 % per unit; 95 % CI -21, -7). In women, DQI was positively associated with systolic blood pressure (2.6 mmHg per unit; 95 % CI 0.6, 4.6). In conclusion, higher adherence to the current Danish FBDG was associated with a more beneficial cardiometabolic risk profile in a Danish adult population with a minimum of one self-rated risk factor for IHD.

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