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Concurrent Session 15: Metabolism

Food groups as predictors of abdominal fat in females
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Background – Increased abdominal fat is associated with cardiovascular risk, but the influence of different foods on abdominal fat is not clear.

Objective – To examine the association between food group intake and percent abdominal fat in women.

Design – A cross-sectional study was conducted in 262 younger women (YW, aged 18-40 y) and 200 older women (OW, aged 41-68 y) who were twins and sisters involved in bone health studies. Food group intake was estimated from one four-day food record. Dual energy X-ray absorptiometry (DEXA) was used to estimate the percent abdominal fat (%AF). Generalised linear modelling (GenMod) was performed to identify the associations between predictor and outcome variables, adjusting for twin/sister clustering, age, energy intake, lifetime cigarette smoking and current physical activity level.

Outcomes – The % AF was 22.6% (95% CI, 21.2 - 23.9) in YW compared to OW 29.8% (28.3 - 31.3) (P < 0.0001). In YW a higher intake of breads/cereals (β = 0.004 (se 0.002)) and meat (β = 0.008 (0.003)) was positively associated with %AF. However there was no association of lean red meat (% lean or 100 minus % fat) to % AF (β = −0.12 (0.007)). Using GenMod, OW who drank alcoholic beverages (60%) had 1.7% (0.4) (P = 0.0001) greater %AF than those who did not drink. In OW a higher intake of fruit, vegetables and pulses combined (β = −0.003 (se 0.001)) was associated with lower % AF, but intake of red meat, regardless of the fat content, was not associated with %AF (β = 0.0003 (0.004), P = 0.33).

Conclusion – Consumption of lean red meat was not related to %AF. In OW central adiposity was minimised through consumption of fruits, vegetables and pulses, whereas it increased with alcohol intake. These results confirm the current dietary recommendations to increase fruits and vegetables, include protein sources such as lean red meat, and reduce alcohol intake to minimise deposition of abdominal fat.

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