moderate-vigorous, in METs.min/day) and sedentary time (hour/d) were evaluated using validated questionnaires. Adherence to the MedDiet was evaluated using a 17-item energy-restricted (er) MedDiet screener. The chair test was used to estimate the muscle strength. VAT accumulation was assessed with DXA-CoreScan. Multivariable adjusted linear regression models were used to assess the association between our exposures and outcome.

Results: Total leisure-time PA (change in VAT per 100 METs.min/day: −24·3 g, 95% CI −36·7; −11·9), moderate-vigorous PA (−27·8 g, −4·8; −14·8), and chair test repeats (change in VAT per repeat −11·5 g, −20·1; −2·93) were associated with lower VAT accumulation (all *P*-values less than 0·001). Light PA, sedentary time and adherence to the 17-item erMedDiet were not significantly associated with VAT. However a significant interaction between PA and sedentary time was observed (*P* for interaction 0·012), with the greatest reduction in VAT (−251 g, −369; −135) observed in those with highest PA (above median) and lowest sedentary time (below median), compared to the opposite category.

Conclusions: In older subjects with overweigh/obesity and metabolic syndrome, PA (total and moderate-to-vigorous) and muscle strength were associated with VAT accumulation, mostly in those with fewer time spent on sedentary behaviours.

P137-T | Longitudinal analysis of changes in diet and changes in weight and waist circumference in an elderly population at high cardiovascular risk

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Background: Consumption of certain foods is associated with lower long-term weight gain and abdominal fat accumulation in healthy, young, non-obese participants. Whether the same foods prevent weight and waist gain in elderly, high-risk population is less known. We investigated how changes in dietary factors in the PREDIMED trial were associated with annual weight and waist circumference (WC) changes in elderly population.

Methods: A total of 7009 participants aged 55–70 years at high cardiovascular risk were included. Habitual diet was evaluated using a 137-items validated-FFQ, repeated yearly for five consecutive years. Foods, expressed as servings per day, were grouped into 31 food groups. Weight and WC were measured yearly (up to 5 years). The simultaneous association between yearly change in consumption of food groups and in weight and WC were evaluated using generalized estimated equations, adjusting for centre, age, sex, intervention arm, yearly measured energy intake and physical activity.

Results: Significant increments in weight were observed with change in consumption (in servings/d) of red meat (0·30 kg/y), alcoholic beverages (0·14), processed meat (0·14), other vegetable oils (0·10) and sweets (0·03); significant inverse associations with weight change were detected with change in the consumption of white meat (−0·20), low fat yogurt (−0·18), vegetables (−0·13), low fat milk (−0·08), fruit (−0·06) and extra-virgin olive oil (−0·03). Higher WC gain was observed with increment in consumption of snacks (0·31 cm/y), processed meats (0·28), artificially-sweetened (0·26) and sugar-sweetened (0·20) beverages, vegetables oils (0·19), alcoholic drinks (0·14), white bread (0·09), and sweets (0·04). Legumes (−1·32 cm/y), nuts (−0·35), vegetables (−0·33), natural juice (−0·26) and fruits (−0·11) significantly slowed down the gain in WC.

Conclusions: Ultra-processed foods, sodas, refined carbohydrates and red meats are associated with higher weight and WC gain, whereas plant foods and some dairy products are associated with less gain in weight and WC.