Introduction: Diets high in protein with reduced carbohydrate content have been shown to produce weight loss and improve body composition. The randomized DiOGenes study found a weight maintaining effect of higher protein / low glycaemic index diet. Whether the effect is due to increased protein or reduced carbohydrate is uncertain, as is the role played by increased fat content.

Objectives: To determine if "protein as proportion of total energy" or "protein:carbohydrate (P:CHO) ratio" are equally predictive determinants of changes in body weight (BW) and composition after weight loss in obese and overweight adults in the DiOGenes study. Furthermore, to examine and compare P:CHO ratio and protein intake as predictors of BW regain.

Method / Design: The study consisted of an 8 week weight loss phase and 6 month weight maintenance phase (WM). During WM subjects were randomized to five diets, differing in protein and glycaemic index. Analyses were based on pooled data from all subjects.

Results: Increased P:CHO ratio was significantly associated with decreased BW regain (β = -0.48, p=0.006). A non-significant trend for decreased fat mass regain (kg) with increased P:CHO ratio was also observed (p=0.06). P:CHO ratio and protein intake (E%) were found to be equally strong predictors of body weight regain. Proportion of energy from fat increased with increasing P:CHO ratio. Increase in fat content up to ~30% of energy was positively associated with weight gain, but further increase in fat content was inversely associated with weight gain.

Conclusions: These results suggest that weight control can be achieved both by increasing protein content, and reducing carbohydrate intake to increase the ratio of protein to carbohydrate in the diet. An increase in fat content above ~30% of energy does not impair weight control, suggesting that inclusion of nutrient-dense fatty foods (e.g. fish, eggs, cheese, and meat) may be advantageous.

Keywords: (maximum 5): Obesity, protein, body weight, body composition

149/689. Food consumption of different meat consumer groups: Results of the German national nutrition survey II

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Introduction: High meat consumption has adverse effects on environment and human health. For the development of more sustainable and healthier diets, information about dietary patterns is needed.

Objectives: To investigate the food consumption of groups with different amounts of meat in their diet.

Method / Design: Data analysis is based on the German National Nutrition Survey II with 12.915 participants aged 18 to 80 years. Food consumption was assessed using two 24h-recalls. Meat consumers were classified into quintiles according to the amount of meat consumed and a group of vegetarians was identified by self-reporting. Food consumption among these groups was compared using arithmetic means and 95% confidence intervals. All calculations were done for absolute and energy-adjusted (regression method) food consumption stratified by sex.

Results: Among meat consumer groups, differences in mean food consumption were observed for 8/12 (men/women) out of 15 food groups. Men and women in higher meat consumption quintiles ate more bread, potatoes, fats/oils and sauces but less fruit, dairy products, fish and soups than those in lower quintiles. When comparing energy-adjusted values differences were found for 14/13 (men/women) food groups. Persons in energy-adjusted higher meat consumption quintiles consumed more potatoes and sauces and less of most other foods than persons with low meat consumption. Vegetarians consumed more cereals and soy products than meat consumers. Additionally, vegetarian women consumed more vegetables, fruits and nuts/seeds but fewer eggs. Compared to female low meat consumers, vegetarian woman ate more vegetables and soy products.

Conclusions: Food consumption varies considerably among groups with different amounts of meat in their diet. Persons with high meat consumption deviate much more in their total food consumption from the recommendations for a healthy and sustainable diet than persons with low meat consumption and vegetarians.

Keywords: (maximum 5): meat consumption, vegetarian diet

149/693. Dietary patterns in weight loss maintenance. Results from the MedWeight study.

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Introduction: The dietary habits contributing to weight loss maintenance are not sufficiently understood. Studying weight loss maintainers in comparison with regainers provides information on the behaviors differentiating the two groups.

Objectives: To identify and compare dietary patterns in weight loss maintainers and regainers. Additionally, to assess meal environment parameters potentially affecting maintenance of weight loss.

Method / Design: The MedWeight study is a registry evaluating the characteristics, and especially the diet, of weight loss maintainers and regainers, in a sample of Greek adults. Participants have intentio-

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