

vices and domestic labor, diversification of supply, and food preparations.

Key words: poverty, nutritional status, food strategies, households

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PORTUGUESE FOOD AND NUTRITION ACTION PLAN

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Background and objectives: In Portugal there is a coexistence of high prevalence of obesity with high levels of food insecurity. Food insecurity may lead to the increasing of health inequalities, namely by an unequal distribution of obesity and other diet-related chronic diseases through the most vulnerable groups. This situation prompted the Portuguese Health Ministry to define the National Program of Healthy Eating as a priority program, which aims to improve the population's nutritional status by promoting availability and physical/economic access to healthy foods thus creating conditions for all citizens to valorize, consume and integrate them into their daily routines.

Methods: Launched on March 2012, after consultation with partners and civil society, this is the first formal food and nutrition action plan in Portugal. Until that date, Portugal did not have a formal and integrated strategy.

Results: The strategy determined five objectives: (1) increase knowledge about food consumption and nutritional status of the population, its determinants and consequences (2) improve the consumer's knowledge to make them able to do more informed decisions (3) improve the availability of certain types of foods, particularly in schools, workplaces and other public institutions (4) identify and promote integrated and crossed-actions with other society sectors that encourage the consumption of healthy foods and (5) improve the qualification of professionals who can influence knowledge, attitudes and behaviours in the food field. This strategy aims to combine economic growth with improving the nutrition situation and intends to integrate the local health regions and municipalities in a solid and structured nationally program, paying special attention to health inequalities.

Conclusions: This program follows the recent recommendations of the WHO and EC, and pretends to be a multisectorial program, involving stakeholders on healthy eating promotion, addressing the current challenges of the double burden of malnutrition and the health inequalities.

Key words: food and nutrition policy, health promotion, Portugal.

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EFFECT OF WATER INTAKE ON RESTING ENERGY EXPENDITURE IN HUMANS

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Background and objectives: Drinking water is commonly espoused in weight loss regimens and is regarded as healthy. Recently, drinking water has been associated with a temporary increase in resting energy expenditure. However, the concept of a thermogenic effect of water is controversial because other studies have found that water drinking does not increase energy expenditure. The objective of the study was to test whether drinking water affects resting energy expenditure (REE) in humans.

Methods: In 33 healthy male volunteers (age: 23,8+/-2,5 years), normal-weight (body mass index (BMI): 23,7+/-1,9 kg/m²), we measured the effect of drinking 500 ml at room temperature (22°C) water on REE by indirect calorimetry before and 45 min after the drinks. All data are given as means +/-SD. REE after drinking of water was compared with the corresponding baseline value by a paired t test. The statistics were performed using statistical software (Statistica version 10). The level of statistical significance was set at P < 0,05.

Results: Drinking 500 ml water increase REE by 8,5+/-6,7% after 45 minutes (5,76+/-0,81 kJ/min vs 6,23+/-0,90 kJ/min; P < 0,0001). It was reported that drinking half a liter of water at room temperature increased resting energy expenditure by 30% in normal-weight healthy subjects and by 24% in overweight and obese healthy subjects on no medications after an hour. However previously and later published studies did not confirm this finding.

Conclusions: Drinking water at room temperature increase resting energy expenditure. It is necessary to confirm whether the temporary thermogenic effect of drinking water exists over a longer period throughout the day. If confirmed in other studies may be a useful adjunctive treatment in overweight and obese individuals to attain an increase in energy expenditure.

Key words: water, resting metabolic rate, thermogenesis.