

Implementation of the DASH (Dietary Approaches to Stop Hypertension) intervention program in an Australian community setting

C Margerison, CA Nowson

School of Health Sciences, Deakin University, Burwood, VIC, 3125

The DASH (Dietary Approaches to Stop Hypertension) study (1) was a large dietary intervention study conducted in the US, which provided all food to participants for 8 weeks and effectively lowered blood pressure. The feasibility and effectiveness of this dietary modification in free-living individuals is not known.

The differences in nutrient content between the published DASH diet (US food database) (2) and the DASH diet using an Australian food database were assessed and an appropriate diet for Australians (OZDASH) was devised. The composition of the DASH diet for an energy intake of 8,820 kJ was analysed using the Australian food database.

The nutrient content of the DASH diet calculated using the Australian food database was lower in iron, potassium, energy, % energy from carbohydrate and magnesium, and was higher in vitamin C and calcium (see table). The DASH diet specifies 7 serves of grains, 5 of fruit, 4 of vegetables, 2.7 of dairy products (low fat), 2.5 of fats/oils, 0.5 of red meat, 0.6 of poultry, 0.5 of fish, and 0.6 of legumes/nuts per day.

Our newly developed OZDASH diet specifies 7 serves of grains, 4 of fruit, 5 of vegetables, 3 of low fat dairy and 2 of fats/oils per day as well as 1 serve of legumes, 3.5 of nuts/seeds, 3 of red meat, 3 of white meat and 3 of fish per week. The OZDASH diet is slightly lower in vitamin C and iron, and marginally higher in calcium and phosphorous than the DASH (US food data) (see Table). The iron content of the US diet appears to be higher than Australia for the same intake of foods, probably due to extensive iron fortification in the US.

	DASH diet (US food database)	DASH diet (Aus food database)	OZDASH diet (Aus food database)
E (kJ)	8820	8011	8563
% E from CHO	58	47	52
% E from fat	27	32	27
Fe (mg)	20.2	11.4	15.8
K (mg)	4589	3938	4409
Mg (mg)	465	388	470
Vit C (mg)	266	336	236
Ca (mg)	1220	1319	1332
P (mg)	1481	1752	1945

Nutrient intakes differ between countries, and are dependent on the food supply. The OZDASH diet was matched to the DASH on the basis on fat sources and % energy from fat, whilst maintaining high intakes of fruits, vegetables and dairy products in quantities acceptable to the general population. This has resulted in some nutrient differences between the DASH and the OZDASH diets. The OZDASH diet is currently being tested in a group of free-living individuals (hypertensives and normotensives).

References

1. Appel LJ *et al.* A clinical trial of the effects of dietary patterns on blood pressure. DASH Collaborative Research Group. *N Engl J Med* 1997; 336: 1117–24.
2. Karanja NM *et al.* Descriptive characteristics of the dietary patterns used in the Dietary Approaches to Stop Hypertension Trial. *J Am Diet Assoc* 1999; 99: S19–27.

Key words: DASH, blood pressure, diet