

Dairy Foods Help Lower Blood Pressure Substantially With DASH Diet

Appel LJ et al. A clinical trial of the effects of dietary patterns on blood pressure. N Engl J Med 1997;336:1117-1124.

Study Design

Randomized controlled
11-week feeding trial

Participants

- 459 adults (not on hypertensive meds)
- 67% racial/ethnic minority
- Non-hypertensive and hypertensive participants with average baseline blood pressures:
 - < 160 mm Hg systolic
 - 80 to 95 mm Hg diastolic

Diets

Participants received prepared meals during:

- Run-in phase (3 weeks)
All subjects ate a control diet low in vegetables, fruit and dairy, typical of average American diet
- Intervention (8 weeks)
Subjects were then randomly assigned to one of three diets:
 - The control diet (same as during the run-in period)
 - A diet rich in vegetables and fruit but low in dairy foods
 - A combination (i.e., DASH) diet rich in vegetables, fruit and low-fat dairy foods (including ~30 g whole-fat cheese)
- The sodium content of each diet was similar at ~3 g/day

Objective

To assess the effects of dietary patterns – including a DASH (Dietary Approaches to Stop Hypertension) eating plan rich in fruits, vegetables, whole grains and low-fat dairy foods – on blood pressure.

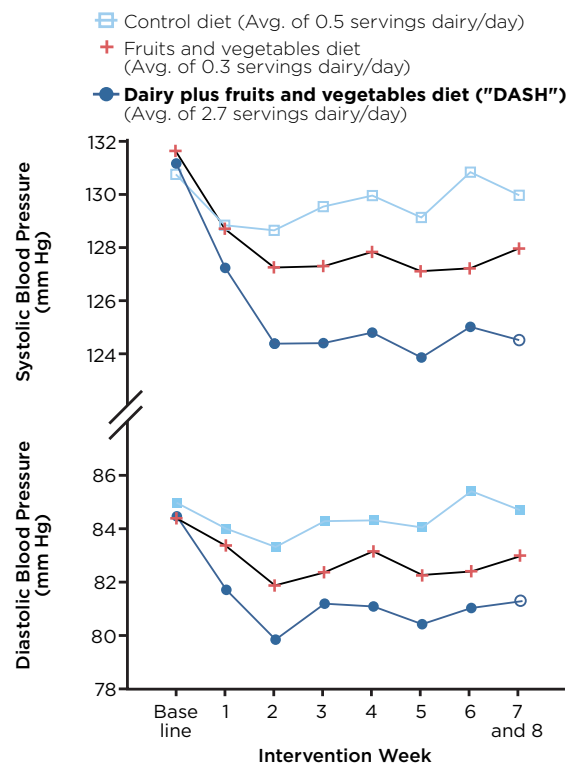
Results

The DASH diet, rich in vegetables, fruits **and low-fat dairy foods**:

- Lowered blood pressure more than the control or fruits and vegetables diet in subjects with or without hypertension (HTN)

- **Reduction in blood pressure with DASH was similar in magnitude to drug monotherapy for stage 2 HTN***

- Results indicate that following DASH may be an effective nutritional approach to preventing HTN
- Lower blood pressure was achieved within two weeks and sustained the length of the study



Conclusion

The original DASH trial demonstrates that a diet rich in fruits, vegetables, whole grains and low-fat dairy foods can substantially lower blood pressure.



http://bit.ly/DASH_blood_pressure

*This was considered "mild" HTN at time of publication.

Consuming Whole-Fat Dairy Foods as Part of Modified DASH Diet Improves Blood Pressure and Blood Lipids

Chiu S et al. Comparison of the DASH (Dietary Approaches to Stop Hypertension) diet and a higher-fat DASH diet on blood pressure and lipids and lipoproteins: a randomized controlled trial. Am J Clin Nutr 2016;103:341-347.

Study Design

Randomized crossover trial

Participants

- 36 generally healthy adults following similar diet protocol to the original landmark DASH diet, whole-fat replacing low-fat dairy foods
- Average baseline blood pressures:
 - < 160 mm Hg systolic
 - 80 to 95 mm Hg diastolic

Diets

Participants consumed each of three diets in random order (each separated by a two-week washout period):

- The control diet low in vegetables, fruit and dairy foods, typical of average American diet
- A standard DASH diet rich in vegetables, fruits, whole grains and low-fat dairy
- A modified whole-fat DASH diet, including whole-fat milk, cheese and yogurt

Objective

To assess the effects of substituting whole-fat for low-fat dairy foods in a modified DASH diet on blood pressure and blood lipids.

Results

The DASH diet **with whole-fat dairy**:

- **Lowered blood pressure** to the same extent as the standard DASH diet
- **Did not raise LDL-cholesterol (LDL-C) significantly**, despite a higher saturated fat content
- **Improved atherogenic dyslipidemia markers** compared to the standard DASH diet:
 - Reduced triglycerides
 - Reduced small, dense LDL-C particles

Conclusions

- Consuming whole-fat dairy foods (milk, cheese and yogurt) as part of a modified DASH diet reduced blood pressure as much as the “standard” DASH diet, with similar or better control of blood lipids.
- A modified DASH diet with whole-fat dairy is an effective option that offers more flexibility in food choices.



<http://bit.ly/HF-DASH>