

ORIGINAL RESEARCH COMMUNICATION

Whole- and refined-grain intakes and the risk of hypertension in women^{1,2,3}

Lu Wang, J Michael Gaziano, Simin Liu, JoAnn E Manson, Julie E Buring and Howard D Sesso

¹ From the Divisions of Preventive Medicine (LW, JMG, SL, JEM, JEB, and HDS) and Aging (JMG, JEB, and HDS), Department of Medicine, Brigham and Women's Hospital, Boston, MA; the Department of Epidemiology, Harvard University School of Public Health, Boston, MA (JEM and JEB); and the Department of Epidemiology, University of California at Los Angeles School of Public Health, Los Angeles, CA (SL)

Background: Prospective studies linking whole- and refined-grain intakes with the risk of hypertension, a major cardiovascular disease risk factor, remain limited.

Objective: We aimed to determine whether baseline intake of whole or refined grains is associated with subsequent development of hypertension.

Design: We conducted a prospective cohort study in 28 926 female US health professionals aged ≥ 45 y who were free of baseline cardiovascular disease, cancer, and hypertension in 1992. Baseline whole- and refined-grain intakes were assessed from semi-quantitative food-frequency questionnaires. We identified 8722 incident cases of hypertension from annual questionnaires during 10 y of follow-up.

Results: After adjustment for known hypertension risk factors, the relative risks (RRs) (and 95% CIs) of incident hypertension were 1.00 (reference), 0.96 (0.89, 1.03), 0.95 (0.88, 1.02), 0.92 (0.85, 0.99), and 0.89 (0.82, 0.97) across the increasing quintiles of baseline whole-grain intake (P for trend = 0.007). When functional cutoffs were used, women who consumed 0.5 to <1 , 1 to <2 , 2 to <4 , and ≥ 4 whole-grain servings/d had multivariate RRs (95% CIs) of 0.93 (0.87, 1.00), 0.93 (0.87, 0.99), 0.92 (0.85, 0.99), and 0.77 (0.66, 0.89), respectively, compared with those who consumed <0.5 whole-grain servings/d. In contrast, refined-grain intake was not associated with the risk of hypertension. The multivariate RRs of hypertension across the increasing quintiles of refined-grain intake were 1.00, 0.97, 0.94, 0.99, and 0.97 (P for trend = 0.80).

Conclusion: Higher whole-grain intake was associated with a reduced risk of hypertension in middle-aged and older women, which suggests a potential role for increasing whole-grain intake in the primary prevention of hypertension and its cardiovascular complications.

Key Words: Dietary intake • whole grains • refined grains • hypertension • epidemiology

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