

Evidence-Based Nutrition: The Problem of Proof

Jeffrey B. Blumberg, PhD, FASN, FACN

References

1. Agostoni C, Bresson JL, Fairweather-Tait S, et al. Scientific opinion on the substantiation of a health claim related to cocoa flavanols and maintenance of normal endothelium-dependent vasodilation pursuant to Article 13(5) of Regulation (EC) No 1924/2006. *EFSA J*. 2012;10(7):2809-2829.
2. Age-Related Eye Disease Study Research Group. A randomized, placebo-controlled, clinical trial of high-dose supplementation with vitamins C and E, beta carotene, and zinc for age-related macular degeneration and vision loss: AREDS report no. 8. *Arch Ophthalmol*. 2001;119(10):1417-1436.
3. Assmann KE, Andreeva VA, Jeandel C, Hercberg S, Galan P, Kesse-Guyot E. Healthy aging 5 years after a period of daily supplementation with antioxidant nutrients: a post hoc analysis of the French Randomized Trial SU.VI.MAX. *Am J Epidemiol*. 2015;182(8):694-704.
4. Bach PB, Lewis RJ. Multiplicities in the assessment of multiple vitamins: is it too soon to tell men that vitamins prevent cancer? *JAMA*. 2012;308(18):1916-1917.
5. Benson K, Hartz AJ. A comparison of observational studies and randomized, controlled trials. *N Engl J Med*. 2000;342(25):1878-1886.
6. Age-Related Eye Disease Study 2 (AREDS2) Research Group, Chew EY, SanGiovanni JP, et al. Lutein/zeaxanthin for the treatment of age-related cataract: AREDS2 randomized trial report no. 4. *JAMA Ophthalmol*. 2013;131(7):843-850.
7. Concato J, Shah N, Horwitz RJ. Randomized, controlled trials, observational studies, and the hierarchy of research designs. *N Engl J Med*. 2000;342(25):1887-1892.
8. Fortmann SP, Burda BU, Senger CA, Lin JS, Whitlock EP. Vitamin and mineral supplements in the primary prevention of cardiovascular disease and cancer: an updated systematic evidence review for the U.S. Preventive Services Task Force. *Ann Intern Med*. 2013;159(12):824-234.
9. Gaziano JM, Sesso HD, Christen WG, et al. Multivitamins in the prevention of cancer in men: the Physicians' Health Study II randomized controlled trial. *JAMA*. 2012;308(18):1871-1880.
10. Grassi D, Draijer R, Desideri G, Mulder T, Ferri C. Black tea lowers blood pressure and wave reflections in fasted and postprandial conditions in hypertensive patients: a randomised study. *Nutrients*. 2015;7(2):1037-1051.

11. Guallar E, Stranges S, Mulrow C, Appel LJ, Miller ER 3rd. Enough is enough: stop wasting money on vitamin and mineral supplements. *Ann Intern Med*. 2013;159(12):850-851.
12. Harvey NC, Moon RJ, Sayer AA, et al. Maternal antenatal vitamin D status and offspring muscle development: findings from the Southampton Women's Survey. *J Clin Endocrinol Metab*. 2014;99(1):330-337.
13. Hill AB. The environment and disease: association or causation? *Proc R Soc Med*. 1965;58(5):295-300.
14. Hodgson JM, Puddey IB, Woodman RJ, et al. Effects of black tea on blood pressure: a randomized controlled trial. *Arch Intern Med*. 2012;172(2):186-188.
15. Dietary reference intakes: the essential guide to nutrient requirements. United States Department of Agriculture, National Agricultural Library website. https://www.nal.usda.gov/sites/default/files/fnic_uploads//DRIEssentialGuideNutReq.pdf
16. Lonn E, Bosch J, Yusuf S, et al. Effects of long-term vitamin E supplementation on cardiovascular events and cancer: a randomized controlled trial. *JAMA*. 2005;293(11):1338-1347.
17. Moyer VA; U.S. Preventive Services Task Force. Vitamin, mineral, and multivitamin supplements for the primary prevention of cardiovascular disease and cancer: U.S. Preventive services Task Force recommendation statement. *Ann Intern Med*. 2014;160(8):558-564.
18. Moyer VA, LeFevre ML, Siu AL. Vitamin D and calcium supplementation to prevent fractures in adults. *Ann Intern Med*. 2013;159(12):856-857.
19. Onakpoya I, Spencer E, Heneghan C, Thompson M. The effect of green tea on blood pressure and lipid profile: a systematic review and meta-analysis of randomized clinical trials. *Nutr Metab Cardiovasc Dis*. 2014;24(8):823-836.
20. Prentice RL, Pettinger MB, Jackson RD, et al. Health risks and benefits from calcium and vitamin D supplementation: Women's Health Initiative clinical trial and cohort study. *Osteoporos Int*. 2013;24(2):567-580.
21. Rautiainen S, Lee IM, Rist PM, et al. Multivitamin use and cardiovascular disease in a prospective study of women. *Am J Clin Nutr*. 2015;101(1):144-152.
22. Rautiainen S, Rist PM, Glynn RJ, Buring JE, Gaziano JM, Sesso HD. Multivitamin use and the risk of cardiovascular disease in men. *J Nutr*. 2016;146(6):1235-1240.

23. Rodriguez-Mateos A. Study design for acute bioactive intervention. University of Düsseldorf. 2015.
24. Sandoval-Acuña C, Ferreira J, Speisky H. Polyphenols and mitochondria: an update on their increasingly emerging ROS-scavenging independent actions. **Arch Biochem Biophys**. 2014;559:75-90.
25. Schroeter H, Heiss C, Balzer J, et al. (-)-Epicatechin mediates beneficial effects of flavanol-rich cocoa on vascular function in humans. **Proc Natl Acad Sci U S A**. 2006;103(4):1024-1029.
26. Sesso HD, Gaziano JM, VanDenburgh M, Hennekens CH, Glynn RJ, Buring JE. Comparison of baseline characteristics and mortality experience of participants and nonparticipants in a randomized clinical trial: the Physicians' Health Study. **Control Clin Trials**. 2002;23(6):686-702.
27. Sesso HD, Buring JE, Christen WG, et al. Vitamins E and C in the prevention of cardiovascular disease in men: the Physicians' Health Study II randomized controlled trial. **JAMA**. 2008;300(18):2123-2133.
28. Sesso HD, Christen WG, Bubes V, et al. Multivitamins in the prevention of cardiovascular disease in men: the Physicians' Health Study II randomized controlled trial. **JAMA**. 2012;308(17):1751-1760.
29. Whitehouse AJ, Holt BJ, Serralha M, Holt PG, Kusel MM, Hart PH. Maternal serum vitamin D levels during pregnancy and offspring neurocognitive development. **Pediatrics**. 2012;129(3):485-493.
30. Wu J, Cho E, Willett WC, Sastry SM, Schaumberg DA. Intakes of lutein, zeaxanthin, and other carotenoids and age-related macular degeneration during 2 decades of prospective follow-up. **JAMA Ophthalmol**. 2015;133(12):1415-1424.