

USPSTF Bulletin

An independent, volunteer panel of national experts in prevention and evidence-based medicine

Task Force Issues Draft Recommendation Statement on Vitamin, Mineral, and Multivitamin Supplements to Prevent Heart Disease and Cancer

Task Force recommends against vitamin E and beta-carotene; more research needed to make a recommendation for most vitamins and minerals

WASHINGTON, D.C. – May 4, 2021 – The U.S. Preventive Services Task Force (Task Force) today posted a draft recommendation statement on the use of vitamin, mineral, and multivitamin supplements to prevent heart disease and cancer. The current evidence is insufficient to determine the benefits and harms of taking most vitamin, mineral, and multivitamin supplements to prevent heart disease and cancer. **These are**I statements. However, the Task Force did find evidence on vitamin E and beta-carotene and recommends against taking them for this purpose. **This is a D recommendation**.

Grades in this recommendation:

- **I:** The balance of benefits and harms cannot be determined.
- D: Not Recommended.

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Vitamins and minerals are two of the main types of nutrients that your body needs to stay healthy. Many people get most of the nutrients they need through a balanced diet. People often take vitamins and mineral supplements with the goal of improving or maintaining overall health. This recommendation is focused specifically on the use of vitamins and minerals to prevent heart disease and cancer.

"Because heart disease and cancer are the two leading causes of death in the U.S., we want to look at whether taking vitamins and minerals help prevent these important diseases," says Task Force member Chyke Doubeni, M.D., M.P.H. "However, there is not enough evidence to know if taking vitamin, mineral, and multivitamin supplements prevent these conditions, so the Task Force is calling for more research."

In the absence of evidence, clinicians should talk to their patients about their risks and preferences and discuss other proven and effective ways to prevent heart disease and cancer, including a healthy diet and exercise.

While the evidence is unclear about taking most vitamin and mineral supplements to prevent heart disease and cancer, there is evidence that taking vitamin E or beta-carotene does not reduce the risk of these diseases. The Task Force found that there is no benefit to taking vitamin E and that there are harms associated with taking beta-carotene.

"The Task Force recommends against the use of vitamin E or beta-carotene for the prevention of heart disease and cancer," says Task Force member John Wong, M.D. "The evidence shows there is no benefit to taking vitamin E and that beta-carotene can be harmful because it increases the risk of lung cancer in people already at risk, such as those who smoke, and also increases the risk of dying from heart disease or stroke."

This recommendation applies to healthy adults who do not have a known or suspected nutritional deficiency or special nutritional needs. It does not apply to people who are or may become pregnant. The Task Force has a separate recommendation that all persons who are planning or capable of becoming pregnant should take folic acid supplements.

The Task Force's draft recommendation statement and draft evidence review have been posted for public comment on the Task Force website at www.uspreventiveservicestaskforce.org. Comments can be submitted from May 4, 2021, through June 1, 2021, at www.uspreventiveservicestaskforce.org/tfcomment.htm.

The Task Force is an independent, volunteer panel of national experts in prevention and evidence-based medicine that works to improve the health of people nationwide by making evidence-based recommendations about clinical preventive services such as screenings, counseling services, and preventive medications.

Dr. Doubeni is a family physician and the inaugural director of the Mayo Clinic Center for Health Equity and Community Engagement Research, which addresses health disparities throughout the life course and advances the ideal of health equity locally and globally through research and community engagement.

Dr. Wong is chief scientific officer, vice chair for Clinical Affairs, chief of the Division of Clinical Decision Making, and a primary care clinician in the Department of Medicine at Tufts Medical Center. He is also director of comparative effectiveness research for the Tufts Clinical Translational Science Institute and a professor of medicine at Tufts University School of Medicine and the Tufts University School of Graduate Biomedical Sciences.

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