

Understanding Calcium Intake and Cardiovascular Disease Risk

There have been questions concerning whether calcium intake is beneficial or harmful to vascular health. Until recently, there was insufficient evidence to answer these concerns.

Based on a new evidence report from Tufts University, the National Osteoporosis Foundation (NOF) and the American Society of Preventative Cardiology (ASPC) have recently published a [new clinical guideline](#) to provide health professionals with evidence-based recommendations about the health risks and benefits of calcium intake. The thorough study helps address some of the issues reported in previous research.

Summary of Results

- NOF and ASPC position: there is moderate quality evidence (B level) that calcium with or without vitamin D intake from food or supplements has **no relationship (beneficial or harmful)** with the risk for cardiovascular and cerebrovascular disease, mortality, or all-cause mortality in generally healthy adults
- Calcium intake from food and supplements that does not exceed 2000 to 2500 mg/d of calcium should be considered safe from a cardiovascular standpoint
- Discontinuation of supplemental calcium for safety reason is **NOT** necessary and may be detrimental to bone health when intake from food is suboptimal

Calcium Intake and CVD Risk: Evidence Report

Objective

- To update and reanalyse two systemic reviews to examine the effects of calcium intake on cardiovascular disease (CVD) among generally healthy adults

Details

- Randomized and prospective cohort and nested case-controlled studies with data on dietary or supplemental intake of calcium, with or without vitamin D, and cardiovascular outcomes
- Four randomized controlled trials, 1 nested case-controlled study and 26 cohort studies included

Outcomes

- Overall risk of bias low for the 4 randomized trials (in 10 publications) and moderate for the 27 observational studies
- No statistically significant differences in CVD risk or mortality between groups receiving calcium or calcium plus vitamin D vs. those receiving placebo
- No consistent dose-response relationship between total, dietary, or supplemental calcium intake levels and cardiovascular mortality
- Highly inconsistent dose-response relationships between calcium intake and risks for total stroke or stroke mortality

Conclusion

“Calcium intake within tolerable upper intake levels (2000 to 2500 mg/d) is not associated with CVD risk in generally healthy adults.”



Clinical Guideline

Objective

- To provide healthcare professionals with an evidence-based recommendation about the health risks and benefits of calcium intake from food or supplements on cardiovascular and cerebrovascular disease, mortality and all-cause mortality in generally healthy adults

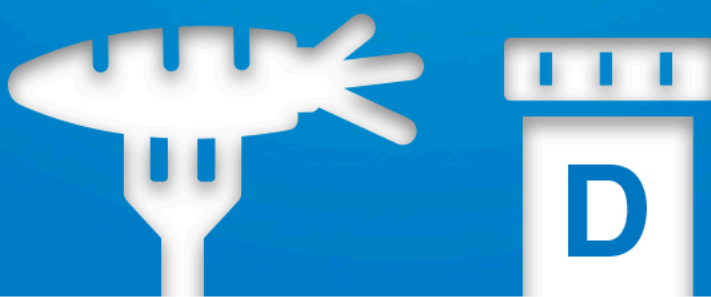
Details

- Evidence report developed by the evidence review team at Tufts University reflects the peer-reviewed literature as of July 1, 2016.
- The guideline was based largely on this report

Recommendations

- Calcium with or without vitamin D intake from food or supplements has no relationship (beneficial or harmful) to the risk of cardiovascular and cerebrovascular disease, mortality, or all-cause mortality in generally healthy adults (B level evidence)
- According to available evidence, calcium intake from food and supplements that does not exceed 2000 to 2500 mg/d of calcium should be considered safe from a cardiovascular standpoint
- Calcium from food sources is preferred. Supplemental calcium can be safely used to correct shortfalls
- Discontinuation of supplemental calcium for safety reasons is not necessary and may be harmful to bone health when intake from food is suboptimal
- Currently, no established biological mechanism supports an association between calcium and cardiovascular disease

Calcium with or without vitamin D intake from food or supplements has no relationship (beneficial or harmful) to the risk of cardiovascular and cerebrovascular disease, mortality, or all-cause mortality in generally healthy adults.



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