

# Current evidence does not support selenium for preventing heart disease in well-nourished adults

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A systematic review published today in *The Cochrane Library* finds that in well-nourished adults current evidence does not support selenium for preventing heart disease. The review suggests that taking selenium supplements does not reduce a person's risk of developing heart disease, although most evidence is currently limited to healthy American adults.

Diet is a key factor influencing [heart disease risk](#). Selenium is one dietary element that could potentially play a role in preventing [heart disease](#) by protecting against oxidative stress and inflammation. It is a common [food supplement](#) and is often given to guard against heart disease, but with little evidence that it works. In addition, there is concern that consuming too much selenium could increase a person's risk of [type 2 diabetes](#) in individuals with high selenium status.

The researchers analysed data from 12 trials that together involved 19,715 people. Compared to placebos, taking selenium supplements did not lead to any statistically significant difference in the risk of death due to heart disease or any cause, or in the occurrence of [heart problems](#). Although supplements were associated with a small increase in the risk of type 2 diabetes, this increase was not large enough to be statistically significant. Side effects included alopecia and dermatitis.

"The limited evidence available at this time does not support the use of selenium supplements in the primary prevention of heart disease in well-

nourished populations," said one of the authors Saverio Stranges of Warwick Medical School at the University of Warwick in Coventry, UK. "Taking selenium supplements is probably neither beneficial nor harmful, but given the lack of trials to date, we cannot rule out some low level of increased risk of type 2 diabetes, at least in individuals with high selenium status."

Most current evidence on selenium and heart disease risk is limited to American adults who are already getting adequate levels of selenium in their daily diets. The trials the researchers reviewed involved healthy individuals rather than groups that might be predisposed to selenium deficiency. "We need to know what effect selenium supplements have in less well-nourished populations where dietary intake of the element is lower," said Stranges. "However, the indiscriminate and widespread use of [selenium supplements](#) in individuals and populations with adequate or high selenium status is not justified and should not be encouraged."

**More information:** Rees K, Hartley L, Day C, Flowers N, Clarke A, Stranges S. Selenium supplementation for the primary prevention of cardiovascular disease. Cochrane Database of Systematic Reviews 2013, Issue 1. Art. No.: CD009671. [DOI: 10.1002/14651858.CD009671.pub2](https://doi.org/10.1002/14651858.CD009671.pub2)

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