



Dietary supplements:

Can I prevent cancer or cardiovascular diseases with vitamin D?



No benefits: Additional vitamin D – beyond what you normally get from your diet – can prevent neither cancer nor cardiovascular diseases.

	without additional vitamin D	with additional vitamin D
People aged 53 to 84 years	per 100	per 100
Heart attack or coronary artery disease	6	6
Stroke or disease of the brain vessels	5	5
Cancer	6	6
Deaths	17	17

Explanations and sources



Side effects: Vitamin D as a dietary supplement taken in combination with calcium can lead to more gastrointestinal disorders.

100

People without additional vitamin D and calcium

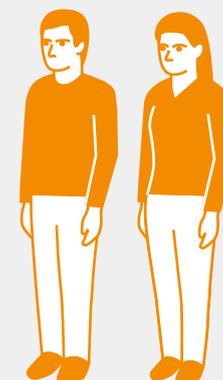
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People with additional vitamin D and calcium

Gastrointestinal symptoms

18

19



Explanations and sources

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Many scientific studies have been done on vitamin D in recent years. But they were unable to demonstrate that vitamin D has any convincing impact on the prevention of cancer, diabetes, cardiovascular diseases, diseases of the nervous system or infections.

The figures in the table show that of every 100 people aged on average 53 to 84, 17 died within an average period of 4 years. 6 had cancer; 6 others had myocardial infarction or coronary artery disease, which is detectable for one through paroxysmal pain in the chest; 5 had a stroke or disease of the brain vessels. Therefore, it made no difference whether these people systematically took vitamin D as a dietary supplement during the period concerned – one to seven years, depending on the study. The data are rounded.

Sources: Bolland et al. (2014). *The Lancet Diabetes & Endocrinology*, 2, pp 307–320.

The data on myocardial infarction and ischemic heart diseases are based on seven studies with approx. 12,200 participants, the data on strokes and diseases of the brain vessels are based on six studies with approx. 10,000 participants and that on cancer on six studies with approx. 11,900 participants. The data on mortality are based on 18 studies with approx. 30,900 participants.

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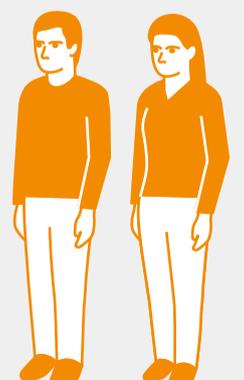
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Many scientific studies have been done on vitamin D in recent years. But they were unable to demonstrate that vitamin D had any convincing impact on the prevention of cancer, diabetes, cardiovascular diseases, diseases of the nervous system or infections. Furthermore, taking vitamin D in combination with calcium poses a slight risk of gastrointestinal symptoms, kidney stones and renal impairment.

The figures in the diagram indicate that out of every 100 people who took no additional vitamin D and calcium, 18 showed gastrointestinal symptoms. However, for those taking a combination of vitamin D and calcium over a period of two to seven years, 19 out of 100 showed gastrointestinal symptoms. In two separate studies, which took place exclusively with women, less than 2 in 100 taking no additional vitamin D and calcium had kidney disease. However, in a group taking both vitamin D and calcium over a period of two to seven years, the number rose to more than 2.

In other studies, 1 out of every 100 people who took neither vitamin D nor calcium as a dietary supplement showed a steep rise in calcium concentration in their blood (hypercalcaemia) compared to 2 out of 100 taking both vitamin D and calcium over a period of two to four years. The data are rounded.

Sources: Avenell et al. (2014). [Cochrane Database of Systematic Reviews, Fourth edition, Art. No.: CD000227](#). The data on gastrointestinal symptoms are based on four studies with approx. 40,000 participants; the data on kidney diseases are based on two studies with approx. 40,000 participants. The data on hypercalcaemia are based on nine studies with approx. 6,900 participants.

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The AOK, the federal association of health insurance funds, is developing its fact boxes together with Prof. Dr. Gerd Gigerenzer, director of the Harding Centre for Risk Literacy at the Max Planck Institute for Human Development in Berlin.

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