

High dietary antioxidant intake might cut pancreatic cancer risk

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Increasing dietary intake of the antioxidant vitamins C, E, and selenium could help cut the risk of developing pancreatic cancer by up to two thirds, suggests research published online in the journal *Gut*.

If the association turns out to be causal, one in 12 of these cancers might be prevented, suggest the researchers, who are leading the Norfolk arm of the European Prospective Investigation of Cancer (EPIC) study.

Cancer of the [pancreas](#) kills more than a quarter of a million people every year around the world. And 7500 people are diagnosed with the disease every year in the UK, where it is the six commonest cause of [cancer death](#).

The disease has the worst [prognosis](#) of any cancer, with just 3% of people surviving beyond five years. [Genes](#), smoking, and [type 2 diabetes](#) are all [risk factors](#), but diet is also thought to have a role, and may explain why rates vary so much from country to country, say the authors.

The researchers tracked the health of more than 23,500 40 to 74 year olds, who had entered the Norfolk arm of the EPIC study between 1993 and 1997.

Each participant filled in a comprehensive food diary, detailing the types and amount of every food they ate for 7 days, as well as the methods they used to prepare it.

Each entry in the food diary was matched to one of 11,000 [food items](#), and the nutrient values calculated using a specially designed computer programme (DINER).

Forty nine people (55% men) developed pancreatic cancer within 10 years of entering the study. This increased to 86 (44% men) by 2010. On average, they survived 6 months after diagnosis.

The nutrient intakes of those diagnosed with the disease within 10 years of entering EPIC were compared with those of almost 4000 healthy people to see if there were any differences.

The analysis showed that a weekly intake of [selenium](#) in the top 25% of consumption roughly halved their risk of developing pancreatic cancer compared with those whose intake was in the bottom 25%.

And those whose vitamins C, E, and selenium intake was in the top 25% of consumption were 67% less likely to develop pancreatic cancer than those who were in the bottom 25%.

If the link turns out to be causal, that would add up to the prevention of more than one in 12 (8%) of pancreatic cancers, calculate the authors.

Antioxidants may neutralise the harmful by-products of metabolism and normal cell activity—free radicals—and curb genetically programmed influences, as well as stimulating the immune system response, explain the authors.

Other trials using antioxidant supplements have not produced such encouraging results, but this may be because food sources of these nutrients may behave differently from those found in supplements, they say.

"If a causal association is confirmed by reporting consistent findings from other epidemiological studies, then population based dietary recommendations may help to prevent pancreatic cancer," they conclude.

More information: Dietary antioxidants and the aetiology of pancreatic cancer: a cohort study using data from food diaries and biomarkers, Banim PJR, Luben R, McTaggart A, et al. *Gut* (2012). [doi:10.1136/gutjnl-2011-301908](https://doi.org/10.1136/gutjnl-2011-301908)

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