

# Low-meat and meat-free diets associated with lower overall cancer risk

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Eating meat five times or less per week is associated with a lower overall cancer risk, according to a study published in the open access journal *BMC Medicine*.

Cody Watling and colleagues from the University of Oxford, UK investigated the relationship between [diet](#) and [cancer](#) risk by analysing data collected from 472,377 British adults who were recruited to the UK Biobank between 2006 and 2010. Participants, who were aged between 40 and 70 years, reported how frequently they ate meat and fish and the researchers calculated the incidence of new cancers that developed over an average period of 11 years using health records. They accounted for diabetes status and sociodemographic, socioeconomic and lifestyle factors in their analyses. 247,571 (52%) of participants ate meat more than five times per week, 205,382 (44%) of participants ate meat five or less times per week, 10,696 (2%) ate fish but not meat, and 8,685 (2%) were vegetarian or vegan. 54,961 participants (12%) developed cancer during the study period.

The researchers found that the overall cancer risk was 2% lower among those who ate meat five times or less per week, 10% lower among those who ate fish but not meat, and 14% lower among vegetarians and vegans, compared to those who ate meat more than five times per week. When comparing the incidence of specific cancers with participants' diet, the authors found that those who ate meat five times or less per week had a 9% lower risk of colorectal cancer, compared to those who ate meat more than five times per week. They also found that the risk of prostate cancer was 20% lower among men who ate fish but not meat and 31% lower among men who followed a [vegetarian diet](#), compared to those who ate meat more than five times per week. Post-menopausal women who followed a vegetarian diet had an 18% lower risk of breast cancer than those who ate meat more than five times per week. However, the findings suggest that this was due to vegetarian women tending to have a lower body mass index (BMI) than women who ate meat.

The researchers caution that the observational nature of their study does not allow for conclusions about a [causal relationship](#) between diet and [cancer risk](#). Additionally, as UK Biobank dietary data was collected at a

single time-point, rather than over a continuous period of time, it may not be representative of participants' lifetime diets.

The authors suggest that future research could investigate the associations between diets containing little or no [meat](#) and the risk of individual cancers in larger populations with longer follow-up periods.

**More information:** Cody Watling, Risk of cancer in regular and low meat-eaters, fish-eaters, and vegetarians: a prospective analysis of UK Biobank participants, *BMC Medicine* (2022). [DOI: 10.1186/s12916-022-02256-w](#). [www.biomedcentral.com/articles ... 6/s12916-022-02256-w](#)

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