

# Eating flavonoids protects men against Parkinson's disease

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Men who eat flavonoid-rich foods such as berries, tea, apples and red wine significantly reduce their risk of developing Parkinson's disease, according to new research by Harvard University and the University of East Anglia (UEA).

Published today in the journal *Neurology*, the findings add to the growing body of evidence that regular consumption of some flavonoids can have a marked effect on human health. Recent studies have shown that these compounds can offer protection against a wide range of diseases including [heart disease](#), hypertension, some cancers and [dementia](#).

This latest study is the first study in humans to show that flavonoids can protect neurons against diseases of the brain such as Parkinson's.

Around 130,000 men and women took part in the research. More than 800 had developed [Parkinson's disease](#) within 20 years of follow-up. After a detailed analysis of their diets and adjusting for age and lifestyle, male participants who ate the most flavonoids were shown to be 40 per cent less likely to develop the disease than those who ate the least. No similar link was found for total flavonoid intake in women.

The research was led by Dr Xiang Gao of Harvard School of Public Health in collaboration with Prof Aedin Cassidy of the Department of Nutrition, Norwich Medical School at UEA.

"These exciting findings provide further confirmation that regular consumption of flavonoids can have potential health benefits," said Prof Cassidy.

"This is the first study in humans to look at the associations between the range of flavonoids in the diet and the risk of developing Parkinson's disease and our findings suggest that a sub-class of flavonoids called anthocyanins may have neuroprotective effects."

Prof Gao said: "Interestingly, anthocyanins and berry fruits, which are rich in anthocyanins, seem to be associated with a lower risk of Parkinson's disease in pooled analyses. Participants who consumed one or more portions of berry fruits each week were around 25 per cent less likely to develop Parkinson's disease, relative to those who did not eat berry fruits. Given the other potential health effects of berry fruits, such as lowering risk of hypertension as reported in our previous studies, it is good to regularly add these fruits to your diet."

[Flavonoids](#) are a group of naturally occurring, bioactive compounds found in many plant-based foods and drinks. In this study the main protective effect was from higher intake of anthocyanins, which are present in berries and other fruits and vegetables including aubergines, blackcurrants and blackberries. Those who consumed the most [anthocyanins](#) had a 24 per cent reduction in risk of developing Parkinson's disease and strawberries and blueberries were the top two sources in the US diet.

The findings must now be confirmed by other large epidemiological studies and clinical trials.

Parkinson's disease is a progressive neurological condition affecting one in 500 people, which equates to 127,000 people in the UK. There are few effective drug therapies available.

Dr Kieran Breen, director of research at Parkinson's UK said: "This study raises lots of interesting questions about how diet may influence our risk of Parkinson's and we welcome any new research that could potentially lead to prevention.

"While these new results look interesting there are still a lot of questions to answer and much more research to do before we really know how important diet might be for people with Parkinson's."

**More information:** "Habitual intake of dietary flavonoids and risk of Parkinson's disease" by X Gao (Harvard), A Cassidy (UEA), M Schwarzschild (Massachusetts General Hospital), E Rimm (Harvard) and A Ascherio (Harvard) is published on April 4 by *Neurology*.

Provided by University of East Anglia

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