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Higher potato consumption associated with increased risk of high blood pressure

But studying dietary patterns may be more useful than individual foods or nutrients

Higher intakes of boiled, baked, or mashed potatoes, and French fries is associated with an increased risk of developing high blood pressure (hypertension) in adult women and men, according to a study published by **The BMJ** today.

The US-based researchers suggest that replacing one serving a day of boiled, baked, or mashed potatoes with one serving of a non-starchy vegetable is associated with a lower risk of developing hypertension.

But a linked editorial argues that studying overall dietary patterns and risk of disease is more useful than a focus on individual foods or nutrients.

Potatoes are one of the world's most commonly consumed foods - and have recently been included as vegetables in US government healthy meals programs, due to their high potassium content. But the association of potato intake with hypertension has not been studied.

So researchers based at Brigham and Women's Hospital and Harvard Medical School set out to determine whether higher long term intake of baked, boiled, or mashed potatoes, French fries, and potato chips (crisps) was associated with incident hypertension.

They followed over 187,000 men and women from three large US studies for more than 20 years. Dietary intake, including frequency of potato consumption, was assessed using a questionnaire. Hypertension was reported by participants based on diagnosis by a health professional.

After taking account of several other risk factors for hypertension, the researchers found that four or more servings a week of baked, boiled, or mashed potatoes was associated with an increased risk of hypertension compared with less than one serving a month in women, but not in men.

Higher consumption of French fries was also associated with an increased risk of hypertension in both women and men. However, consumption of potato chips (crisps) was associated with no increased risk.

After further analyses, the researchers suggest that replacing one serving a day of boiled, baked, or mashed potatoes with one serving of a non-starchy vegetable is associated with a decreased risk of hypertension.

The authors point out that potatoes have a high glycaemic index compared with other vegetables, so can trigger a sharp rise in blood sugar levels, and this could be one explanation for the findings.

They also acknowledge some study limitations and say that, as with any observational study, no firm conclusions can be drawn about cause and effect.

Nevertheless, they say their findings “have potentially important public health ramifications, as they do not support a potential benefit from the inclusion of potatoes as vegetables in government food programs but instead support a harmful effect that is consistent with adverse effects of high carbohydrate intakes seen in controlled feeding studies.”

In a linked editorial, researchers at the University of New South Wales argue that, although diet has an important part to play in prevention and early management of hypertension, dietary behaviour and patterns of consumption are complex and difficult to measure.

“We will continue to rely on prospective cohort studies, but those that examine associations between various dietary patterns and risk of disease provide more useful insights for both policy makers and practitioners than does a focus on individual foods or nutrients,” they conclude.

[Ends]

Note to Editors

Research: Potato intake and incidence of hypertension: results from three prospective US cohort studies

<http://www.bmj.com/cgi/doi/10.1136/bmj.i2351>

Editorial: Are there bad foods or just bad diets?

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