**Sugary drinks associated with higher blood pressure**

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**Drinking sugar-sweetened beverages is associated with higher blood pressure, according to a study of over 2,500 people reported this week in the journal** [***Hypertension***](http://hyper.ahajournals.org/cgi/content/abstract/HYPERTENSIONAHA.110.165456v1)**.**

High blood pressure is a major risk factor for heart disease, which is the leading cause of death worldwide.

Someone with a blood pressure level in millimetres of mercury (mmHg) of 135 over 85 is twice as likely to have a heart attack or stroke as someone with a reading of 115 over 75.

The new research shows that for every extra can of sugary drink consumed per day, participants on average had a higher systolic blood pressure by 1.6 mmHg and a higher diastolic blood pressure by 0.8 mmHg.

This difference was statistically significant even after adjusting for factors such as weight and height.

The study did not examine the mechanism that might link sugary drinks with blood pressure.

However, the researchers suggest that raised uric acid, which has been linked to sugar-sweetened beverage consumption, might raise blood pressure by reducing the levels of nitric oxide, a chemical that relaxes the lining of the blood vessels.

The association between sugary drinks and higher blood pressure was especially strong in people who consumed a lot of salt as well as sugar.

Diet drinks were linked with lower blood pressure levels in some analyses, but the association was not consistent or strong.

[Professor Paul Elliott](http://www1.imperial.ac.uk/medicine/people/p.elliott/), senior author of the study, from the [School of Public Health](http://www1.imperial.ac.uk/publichealth/) at Imperial College London, said: "It's widely known that if you have too much salt in your diet, you're more likely to develop high blood pressure.

The results of this study suggest that people should be careful about how much sugar they consume as well."

The researchers analysed data from 2,696 volunteers aged between 40 and 59, in eight areas of the US and two areas of the UK.

On four separate occasions over a period of three weeks on average, the participants reported what they had eaten in the preceding 24 hours, as well as giving urine samples and having their blood pressure measured.

The volunteers were taking part in [INTERMAP](http://www1.imperial.ac.uk/publichealth/departments/ebs/projects/cdel/intermap/), the International Study of Macronutrients, Micronutrients and Blood Pressure.

The researchers also found that people who drink more sugary drinks tended to have more unhealthy diets in general.

As well as consuming more sugar, those consuming more than one sugar-sweetened beverage a day consumed more calories by 397 kilocalories per day on average, and less fibre and minerals.

Those who did not consume sugar- sweetened beverages had a lower body mass index (BMI) on average than those who consumed more than one drink per day.

"Individuals who drink a lot of sugar-sweetened beverages appear to have less healthy diets," said [Dr Ian Brown](http://www1.imperial.ac.uk/medicine/people/ian.j.brown/), the study's first author, also from the [School of Public Health](http://www1.imperial.ac.uk/publichealth/) at Imperial College London.

"They are consuming empty calories without the nutritional benefits of real food. They consume less potassium, magnesium and calcium."

"This is a population study," Dr Brown added.

"It can't say definitively that sugary drinks raise your blood pressure, but it's one piece of the evidence in a jigsaw puzzle that needs to be completed.

In the meantime, we would advise people who want to drink sugar-sweetened beverages should do so only in moderation."

The work was funded by Dr Brown's PhD studentship grant from the [Medical Research Council](http://www.mrc.ac.uk). INTERMAP received funding from the National Heart, Lung and Blood Institute (US), the National Institutes of Health (US), West Midlands National Health Service Research and Development, the Northern Ireland Chest, Heart and Stroke Association, and national agencies in China and Japan.

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**Notes to editors:**

1. Journal reference: I.J. Brown et al. "Sugar-sweetened beverage, sugar intake of individuals, and their blood pressure: International Study of Macro/Micronutrients and Blood Pressure" *Hypertension*, [published online](http://hyper.ahajournals.org/cgi/content/abstract/HYPERTENSIONAHA.110.165456v1) 28 February 2011.

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