Fresh fruit associated with lower risk of diabetes and related complications in Chinese adults

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People who often eat fresh fruit are at lower risk of developing diabetes and related major vascular complications than people who rarely eat fruit, according to new research published this week in PLOS Medicine. The findings come from a 7-year study of half a million adults in China where fresh fruit consumption is much lower than in the UK or US.

The health benefits of eating fresh fruit and vegetables are well-established: fruit is a rich source of potassium, dietary fibre and antioxidants, contains little sodium or fat and relatively few calories. However, the sugar content of fruit has led to concerns about its potential harm for people with diabetes and consequently Chinese people diagnosed with diabetes tend to restrict their fruit intake.

The prevalence of diabetes is rising rapidly in China and many other East Asian countries, and worldwide evidence on the effects of fruit consumption on the development, progression and complications of diabetes is currently limited.

Researchers from the University of Oxford, Peking University and the Chinese Academy of Medical Sciences studied 500,000 adults aged 35-74 years from 10 urban and rural areas across China, tracking their health through hospital records of illness and death registries. During 7 years of follow-up, the study found nearly 10,000 new cases of diabetes among participants who did not have the condition at the start of the study. Among over 30,000 participants with pre-existing diabetes when they joined the study, there were 3,400 deaths and 11,000 cases of vascular diseases.

About 20% of the study participants reported eating fresh fruit daily, (mainly apples or oranges) and 6% never or rarely ate fresh fruit. The proportion of non-consumers was about 3 times higher in people with previously diagnosed diabetes than in those without diabetes (19% vs 6%). Compared with non-consumers, those who ate fresh fruit daily had a 12% lower risk of developing diabetes. Among participants with diabetes, higher fresh fruit consumption also showed health benefits, with a 100g portion of fruit per day associated with 17% lower overall mortality, 13% lower risk of developing diabetes-related complications affecting large blood vessels (e.g. ischaemic heart disease and stroke) and 28% lower risk of developing complications affecting small blood vessels (e.g. kidney and eye diseases).

The study author, Dr Huaidong Du from the Nuffield Department of Population Health (NDPH), said “This is the first large prospective cohort study demonstrating clear beneficial associations of fresh fruit consumption with both development and progression of diabetes and the analyses have taken into account the potential impacts from a range of other socioeconomic and lifestyle factors.”

Professor Liming Li from Peking University, China, a co-author of the study, commented “Most Chinese adults only consume fresh fruit raw, whereas in many high-income countries many people consume processed fruit or fruit juice. This may explain in part the clear beneficial associations observed.”

Professor Zhengming Chen, a co-author from NDPH, said “Our study provides strong supporting evidence for the existing dietary guidelines, including those for diabetes patients, that recommend a higher level of
fresh fruit consumption. If this represents a real protective effect, it should help to improve prevention and management of diabetes in China and elsewhere.”

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Quotes are direct from authors, and cannot be found in the Article.
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