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Letter

Eating more vegetables might explain reduced asthma symptoms

EDITOR—Anderson et al report a decrease in the prevalence of asthma symptoms among 12-14 year olds in the British Isles.¹

In a community survey in rural China we examined the risks of asthma and wheeze in relation to fresh vegetable consumption among lifelong non-smokers. All residents (n = 38 109) in three townships (Yijing, Huigong, Fushan) of Zongyang County were visited by trained interviewers in 1993, and those aged > 15 years (n = 21 649) completed a standard questionnaire about smoking habits, dietary intake, and respiratory symptoms.

Only 218 cases of doctor diagnosed asthma were identified in 16 460 children aged ≤ 14 years (prevalence 1.32%) and 290 in those aged 15-84 years (1.34% prevalence). Overall, 31.5% (160/508) of those with asthma had a history of allergy.

Among those aged 15-34 years, the prevalence of asthma increased with lower consumption of vegetables over the previous year (P for trend = 0.04). After adjustment for age, sex, educational level, body mass index, occupation, exposure to dust at work, presence of cooking oil smoke in bedroom, and type of fuel used, the odds ratio of diagnosed asthma was 1.5 (95% confidence interval 0.4 to 4.8) in those who ate vegetables twice or more weekly but less than once daily (3/389 subjects) and 3.5 (1.1 to 11.7) in those who ate vegetables once a week or less (3/172) compared with those who ate vegetables daily (44/8530). We found no such association in those aged 35-84 (6/436, 2/149, and 126/6961 respectively; multiple adjusted odds ratio 0.8 (0.4 to 1.9) and 0.7 (0.2 to 2.9)). Wheeze showed similar associations.

Our finding that the risk of asthmatic symptoms increased with low fresh vegetable consumption in young Chinese people, who would be more likely to have changed their dietary habits because of the rapid economic advances in China since 1978, further support the concept of a protective effect of vegetables and antioxidant vitamins on asthma.²⁻⁴ This, together with an increase in vegetable and fruit consumption in schoolchildren in the United Kingdom during the past decade,⁵ may partly explain both the low prevalence in countries with traditional dietary habits and the rise in asthma in Britain since the 1950s that is now decreasing.¹

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