

Fast food linked to asthma and eczema

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(Medical Xpress)—A large international study led from The University of Auckland has shown that an increased risk of severe asthma, eczema and rhinitis in adolescents and children is associated with eating fast food three or more times a week.

The research, published this week online in the respiratory journal *Thorax*, also showed that the consumption of fruit three or more times a week was associated with a protective effect.

The two principal authors, Professor Innes Asher and Philippa Ellwood, both from The University of Auckland's Department of Paediatrics: Child and Youth Health, agree that the findings could have huge implications for public health.

Data was collected on more than 319,000 teenagers (13-14 year-olds) from 107 centres in 51 countries, and more than 181,000 children (6-7 year-olds) from 64 centres in 31 countries.

All the participants were involved in the International Study of Asthma and Allergies in Childhood (ISAAC), a collaborative research project which has been led by The University of Auckland for more than 20 years and now involves more than 100 countries and nearly two million children, making it the largest study of its kind.

The teenagers and the children's parents were asked about the prevalence of symptoms of asthma (wheeze), rhinoconjunctivitis (which produces a runny or blocked nose accompanied by itchy and watery eyes) and

[eczema](#), and about their weekly diet.

The focus was on the severity of symptoms over the preceding 12 months—including frequency, and interference with daily life and/or [sleep patterns](#)—and on certain types of food that had already been linked to protective or damaging effects on health.

These included meat, fish, [fruits and vegetables](#), pulses, cereals, bread and pasta, rice, butter, margarine, nuts, potatoes, milk, eggs, and fast food/burgers. Participants were asked to assign their consumption of each of these foods to one of the following categories: never; occasionally; once or twice a week; three or more times a week.

After taking account of factors likely to influence results, the analysis showed that fast food was the only food type to show the same associations across both age groups, prompting the authors to suggest that "such consistency adds some weight to the possible causality of the relationship".

It was consistently associated with current and severe symptoms of all three conditions among the teenagers—across all centres in the participating countries, irrespective of gender or levels of affluence.

The pattern among children was not as clear-cut, but a fast food diet was still associated with symptoms across all centres—except for current eczema—and poorer countries —except for current and severe asthma.

But this difference might also have to do with the fact that children have fewer options about their food choices, suggest the authors.

Three or more weekly servings were linked to a 39 percent increase in risk of severe asthma among teenagers and a 27 percent increase in risk among children, as well as to the severity of [rhinitis](#) and eczema overall.

On the other hand, fruit seemed to be protective in both age groups across all centres for all three conditions among children—both current and severe—and for current and severe wheeze and rhinitis among the teenagers.

Eating three or more weekly portions was linked to a reduction in symptom severity of between 11 percent and 14 percent among teens and [children](#), respectively.

The authors suggest there are plausible explanations for the findings: [fast food](#) contains high levels of saturated and trans-fatty acids, which are known to affect immunity, while fruit is rich in antioxidants and other beneficial compounds.

The authors emphasise that their results do not prove cause and effect, but they do warrant further investigation.

Provided by University of Auckland

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