

# Regular takeaways linked to kids' heart disease and diabetes risk factors

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Kids who regularly eat take-away meals may be boosting their risk factors for heart disease and diabetes, suggests research published online in the *Archives of Disease in Childhood*.

And they are also more likely to be consuming too many calories and fewer vitamins and minerals than kids who eat home cooked food, the findings indicate.

In the UK, the consumption of 'take-aways' rose by more than a quarter between 1996 and 2006 alone, a pattern of behaviour that has been made even easier with the advent of online apps and dedicated meal delivery services, say the researchers.

The available evidence indicates that among adults, a high take-away count is associated with poorer quality diet, more body fat, and a higher risk of type 2 diabetes and [heart disease](#). And the researchers wanted to find out if a similar diet in kids might be storing up similar problems.

They therefore quizzed 1948 ethnically diverse 9-10 year olds from 85 primary schools in London, Birmingham, and Leicester about their usual diets, including the source of their meals, and how often they ate take-aways.

The schools were part of the Child Heart And health Study in England (CHASE), which looked at the potential prompts for heart disease and diabetes [risk factors](#) in pre-teens from a wide range of ethnic backgrounds.

Photos of common foods were used to aid the children's recall and estimate portion size. Energy density and nutrient levels of the foods eaten were calculated from their responses.

The children's height, weight, waist circumference, skinfold thickness, and body fat composition (bioelectrical impedance) were all measured. Their blood pressure was taken, as well as a blood sample to discover levels of circulating [blood fats](#) (total and low:high density cholesterol).

Their parents also filled in questionnaires on their employment status and job roles. Around a quarter of them were in managerial/professional posts, with a similar proportion in clerical/admin roles (intermediate occupations). Some 29 per cent did routine/manual jobs, while 16 per cent were either unemployed or home makers.

One in four children (499; 26%) said they never or rarely ate take-away meals; nearly half (894; 46%) said they ate a take-away less than once a week; and 555 (28%) said they ate this type of meal at least once a week.

Boys were more frequent consumers of take-aways than girls as were children from less affluent backgrounds.

There were no differences in [blood pressure](#) or insulin resistance between those who regularly ate take-aways and those who didn't.

But skinfold thickness, body fat composition, and blood fats all tended to be higher in regular consumers of take-aways. The differences in blood fats were similar across all ethnic groups.

The foods eaten were more energy dense while protein and starch intakes were lower among regular consumers of take-aways, and intakes of vitamin C, iron, calcium and folate were also lower.

If this dietary pattern were to be sustained, it could store up subsequent health problems, warn the researchers.

A separate analysis, comparing the nutrient intake of the previous evening's meal in relation to its source, showed that take-aways were more energy dense, and contained more fat and saturated fat than meals prepared at home.

This is an observational study so no firm conclusions can be drawn about

cause and effect, and further research would be needed to explore causal links, caution the researchers.

But they point out: "The higher total cholesterol and LDL [low density or 'bad'] cholesterol concentrations observed in the frequent take away meal group, if sustained, are sufficiently large to increase long term [[coronary heart disease](#)] risk by around 10%."

And they go on to say: "These results suggest that further increases in take away meal consumption (and marketing directed at encouraging such increases) are likely to have adverse public health consequences and should be actively discouraged.

"The government should be considering health protection initiatives to reverse the current trends in take away meal consumption, in the context of broader efforts to improve childhood diet and nutrition in home and school settings."

**More information:** Angela S Donin et al. Takeaway meal consumption and risk markers for coronary heart disease, type 2 diabetes and obesity in children aged 9–10 years: a cross-sectional study, *Archives of Disease in Childhood* (2017). [DOI: 10.1136/archdischild-2017-312981](#)

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