

Call for action on cutting sugar

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A study by Newcastle University researchers into the effects of sugars on our oral health recommends cutting down on the sweet additive as part of a global initiative to reduce tooth decay.

Since 1990 the World Health Organisation (WHO) has recommended that intake of "free sugars" should be less than 10% of total energy (calorie) intake. Free sugars are sugars that are added to foods by the manufacturer, cook, or consumer; plus those naturally present in honey, syrups, fruit juices and fruit concentrates.

The Newcastle University study, commissioned by the WHO and published today in the *Journal of Dental Research* recognises the benefit of this threshold, by showing that when less than 10% of total calories in the diet is made up of free sugars there are much lower levels of tooth decay. And the research findings go even further, suggesting that halving this threshold for sugars to less than 5% of calories – around five teaspoons a day - would bring further benefits, minimising the risk of dental cavities throughout life.

Halve the sugars to keep teeth for life

Professor Paula Moynihan, Professor of Nutrition and Oral Health at Newcastle University said: "People now expect to keep their teeth into old age and given that the effects of sugars on our teeth are lifelong then limiting sugars to less than 5% of the calories we eat would minimise the risk of [dental caries](#) throughout life.

"In the past, judgements on recommended levels of free sugars intake were made based on levels associated with an average of three or fewer decayed teeth in 12 year olds. However, tooth decay is a progressive disease - by looking at patterns of tooth decay in populations over time, we now know that children with less than three cavities at age 12, go on to develop a high number of cavities in adulthood.

"Part of the problem is that sugary foods and drinks are now staples in many people's diet in industrialised countries, whereas once they were an occasional treat for a birthday or Christmas. We need to reverse this trend."

Considering the studies which examined the influence of fluoride, the experts found that while it does protect teeth, people living in areas with fluoridated water and or using fluoride toothpaste still got dental caries. Professor Moynihan explained: "Fluoride undoubtedly protects the teeth against decay but it does not eliminate tooth decay and it does not get rid of the cause – dietary sugars. Moreover, not everyone has good exposure to fluoride through drinking water and or toothpastes containing fluoride."

Funded by Newcastle University's Centre for Oral Health Research, Professor Paula Moynihan, Professor of Nutrition and Oral Health at Newcastle University and Dr Sarah Kelly (now at Cambridge University) scrutinised all the studies which had looked at relationships between amount of sugars consumed and levels of dental caries ([tooth decay](#)). They found 55 relevant studies worldwide, dating back to 1950.

The robust systematic review considered the overall quality of evidence using the GRADE process (Grading of Recommendations Assessment Development and Evaluation system GRADE working group 2004) which takes into consideration factors including the consistency of results across the available studies, the size of effect, evidence of a dose

response and the strength of association. Combined analysis of the data was limited because of the variation in how the data were reported but there was strong consistency across studies and evidence of a large size effect.

Professor Moynihan added: "The public need better information on the health risks of sugary foods and drinks and there needs to be clearer information on the levels of sugars in our foods and drinks. We need to make it easier for people to make healthier choices when it comes to sugars by ensuring that options lower in added sugars are made widely available in schools, shops and the workplace."

More information: Effect on Caries of Restricting Sugars Intake: Systematic Review to Inform WHO Guidelines. P.J. Moynihan and S.A.M. Kelly. *Journal of Dental Research*, 0022034513508954, first published on December 9, 2013. jdr.sagepub.com/content/early/.../34513508954.abstract

Provided by Newcastle University

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