

Effect of natural sweetener Xylitol in preventing tooth decay still unproven

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New research from The University of Manchester out today concludes that there is limited evidence to show that xylitol is effective in preventing dental cavities in children and adults.

Xylitol is a natural sweetener that is widely promoted globally, and can be found in wide range of everyday products including sugar-free chewing gum, toothpaste, gels, lozenges and [sweets](#).

Xylitol is a popular sugar substitute in sweets and it is already known to cause less damage to teeth than sugar. It has also been suggested that the addition of xylitol to products may help to prevent [tooth decay](#) by stopping the growth of decay-producing bacteria. However, according to new evidence published in the *Cochrane Library* there is little high quality evidence that it is beneficial in the fight against tooth decay, which affects up to 90% of [children](#) and most adults worldwide.

The authors gathered together data from 5,903 participants in ten different studies. In most cases, the studies used such different methods that the researchers could not combine the results to create a summary effect estimate. Based on information from 4,216 school children who took part in two Costa Rican studies, they found low quality evidence that levels of tooth decay were 13% lower in those who used a fluoride toothpaste containing xylitol for three years, compared to those who used a fluoride-only toothpaste. For other xylitol-containing products, such as xylitol syrup, lozenges and tablets, there was little or no evidence of any benefit.

Lead researcher, Philip Riley of the School of Dentistry at The University of Manchester, said, "This Cochrane review was produced to assess whether or not xylitol could help prevent tooth decay in children and adults. The evidence we identified did not allow us to make any robust conclusions about the effects of xylitol, and we were unable to prove any benefit in the natural sweetener for preventing tooth decay.

"The limited research on xylitol-containing toothpastes in children may only be relevant to the population studied."

He added, "For other products containing xylitol we were unable to determine whether they were beneficial. We were particularly surprised to see such a lack of [evidence](#) on xylitol-containing chewing gums."

Several of the studies included in the Cochrane review did not report sufficient information on the side effects of [xylitol](#), which can include bloating, diarrhoea and laxative effects. Philip Riley remarked, "We expected all studies to report adverse effects as an outcome. Sugar-free gums, sweets, mints and other products are well-known for their gastrointestinal effects and these should be clearly reported in future studies."

More information: Riley P, Moore D, Sharif MO, Ahmed F, Worthington HV. Xylitol-containing products for preventing dental caries in children and adults. *Cochrane Database of Systematic Reviews* 2015 Issue 3. Art. No.: CD010743. [DOI: 10.1002/14651858.CD010743.pub2](#)

Provided by University of Manchester

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