EFFECT OF NATURAL SWEETENER XYLITOL IN PREVENTING TOOTH DECAY STILL UNPROVEN

New research 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.”


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TEACHING CHILDREN IN SCHOOLS ABOUT SEXUAL ABUSE MAY HELP THEM REPORT ABUSE

Children who are taught about preventing sexual abuse at school are more likely than others to tell an adult if they had, or were actually experiencing sexual abuse. This is according to the results of a new Cochrane review published in the Cochrane Library today. However, the review's authors say that more research is needed to establish whether school-based programmes intended to prevent sexual abuse actually reduce the incidence of abuse.

It is estimated that, worldwide, at least 1 in 10 girls and 1 in 20 boys experience some form of sexual abuse in childhood. Those who are sexually abused as children are more susceptible to depression, eating disorders, suicidal behaviour and drug and alcohol problems later in life, and are more likely to become victims of sexual assault as adults. In many countries, children are taught how to recognise, react to, and report abuse situations through school-based programmes designed to help prevent sexual abuse.

The Cochrane researchers reviewed data from 24 trials in which a total of 5,802 children took part in school-based prevention programmes in the US, Canada, China, Germany, Spain, Taiwan and Turkey. Schools involved in the trials used a variety of methods to teach children about sexual abuse, including, teaching of safety rules, body ownership, and who to tell through films, plays, songs, puppets, books and games. In children who did not receive the intervention around 4 in 1,000 children disclosed some form of sexual abuse. This contrasts with 14 in 1,000 children in the intervention groups, who disclosed some form of sexual abuse.

Studies also suggested that programmes were effective in increasing children's knowledge about sexual abuse. Four trials assessed children's knowledge again up to six months after, and showed that they remembered much of what they were taught. Children who participated in programmes were also more likely than other children to try to protect themselves in a simulated abuse scenario in which they were asked to leave the school and go with someone they did not know.

The researchers suggest that there are many reasons why it is difficult to prove that children have learned the skills considered necessary for recognising and reporting sexual abuse. “Even if a child demonstrates that they know how to behave in a certain scenario, it doesn’t mean they will behave the same in a real situation where there is potential for abuse,” said lead author Kerryann Walsh of the Faculty of Education at Queensland University of Technology in Brisbane, Australia. “Tests cannot mimic real abuse situations very well. For example, we know that most sexual abuse is perpetrated by someone known to the child whereas in the test situations, unfamiliar actors or research assistants were used.”

There was little evidence to show that children experienced unnecessary worry as a result of sexual abuse prevention education, nor were there any other reported adverse effects.

“This review supports the need to inform and protect children against sexual abuse,” said Walsh. “But ongoing research is needed to evaluate school-based prevention programmes, and to investigate the links between participation and the actual prevention of child sexual abuse. To really know whether these programmes are working, we need to see larger studies with follow-up all the way to adulthood.”


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