

The Dental Benefits of Polyols

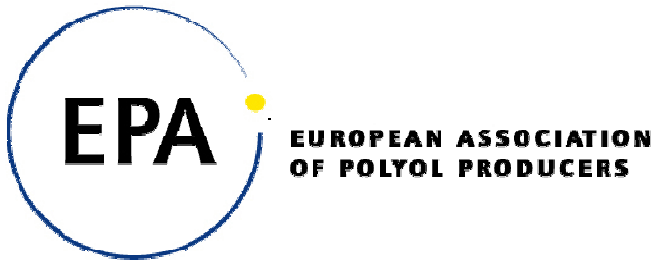
Despite significant advances in dental hygiene and medicine, tooth decay (or dental caries) remains one of the most prevalent human diseases. Polyols, or sugar-free sweeteners, can play a key role in helping to reduce tooth decay.

In simple terms, tooth decay is caused by micro-organisms that live in the mouth. These micro-organisms live on sugars (fermentable carbohydrates) that they ferment into acid waste products. It is these acids that cause tooth decay by dissolving the tooth enamel (a process called demineralisation).

Research has shown that polyols do not have the same effect on teeth as sugar because they are a poor source of energy for the micro-organisms that cause tooth decay. This means that, unlike sugars, polyols are not fermented into decay-causing acids. For this reason, they have been described as ‘tooth friendly’ or ‘non cariogenic’ sweeteners. Most of polyols have been permitted ingredients in sugar-free products in the EU since the existence of the EU Sweetener Directive (1994) and prior to 1994 at a national level in many EU member states.

Saliva in the mouth can help to wash away the bacteria of the dental plaque and reduce the level of acid in the mouth – again reducing the risk of tooth decay. Chewing gum, in which polyols are used very successfully both as sweeteners and texturisers, increases saliva flow and therefore helps with this process. It is also thought that the sweet taste of polyols in other sugar-free products can enhance salivation. This saliva is rich in calcium and phosphate and promotes remineralisation of damaged enamel. In other words, by chewing a sugar-free gum or sweet containing a polyol between meals, a person can actually reverse the initial stages of tooth decay by stimulating their salivary flow, which promotes the process of remineralisation.

Polyols also help to prevent tooth decay through their ability to limit plaque formation due to the fact that, unlike sucrose, they are not used by oral bacteria to form plaque.



In summary, polyols give the same excellent sensorial properties and taste to foods as sucrose but they are much less likely to promote tooth decay. People can therefore continue to enjoy their favourite foods, with no compromise on eating enjoyment, in tooth-friendly versions.

For more information on polyols visit www.polyols-eu.com