

# Sugar reduction + oral health benefits: erythritol's multi-faceted appeal



With zero calories, sugar-like sweetness and versatile functionality, erythritol has long been a valuable tool for sugar reduction. Scientific research also suggests that it may contribute to better oral health.

## Sweetness without sugar



**Zero calories**



**Clean, sugar-like taste**



**Suitable for people with diabetes**



**Synergies with stevia; masks off-flavors**

## Promoting brighter smiles

Studies over the past several decades have found that erythritol does not contribute to tooth decay – and can offer distinct advantages compared to other polyols.<sup>1</sup>

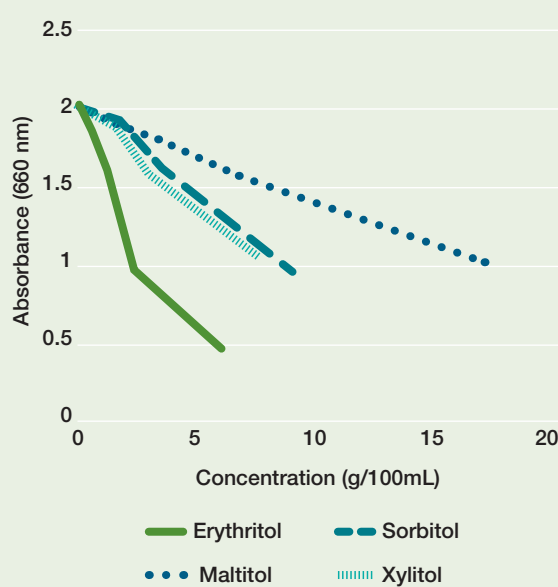
### Reduces 3 factors contributing to tooth decay:<sup>2</sup>

- 1 Inhibits growth of bacteria** that produce dental plaque and can cause dental caries
- 2 Reduces bacterial adhesion and weight** of dental plaque on teeth
- 3 Decreases production of acids** that can weaken tooth enamel



### More effective at inhibiting bacterial growth

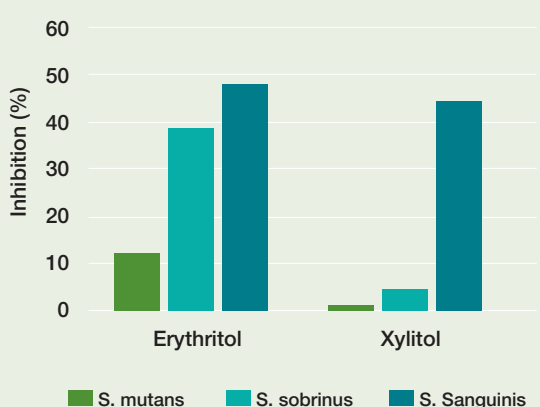
**Fig 1. Effects of erythritol and polyols on growth inhibition of *S mutans* in vitro after 5 hours**



Adapted from Makinen, et al; 2005 and Makinen, et al; 2001.

### Reduces biofilm formation,<sup>3</sup> adhesion<sup>4</sup>

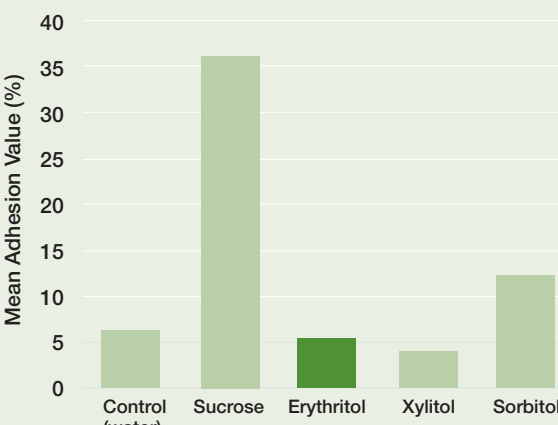
**Fig 2. Effects of erythritol and xylitol on biofilm formation (2% concentration)**



*S. mutans, S. sobrinus, S. sanguinis* are common cariogenic bacteria.

Adapted from Ghezalbash, et al; 2012.

**Fig 3. Effects of erythritol & polyols on bacterial surface adherence**

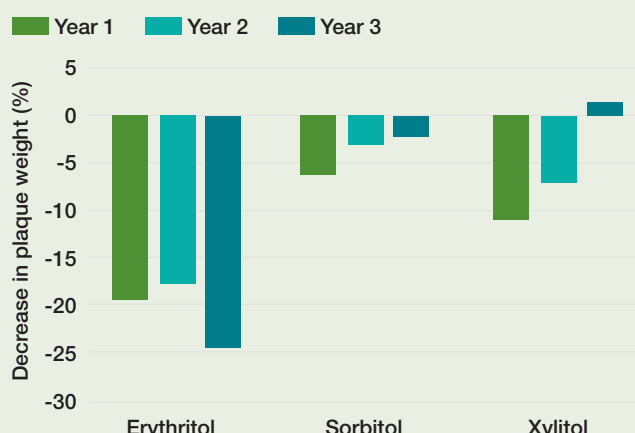


Adapted from Park, et al; 2014.

### Clinical study suggests long-term benefits<sup>5</sup>

Randomized, double-blind, controlled trial of 374 children aged 8–9 years at beginning of trial.

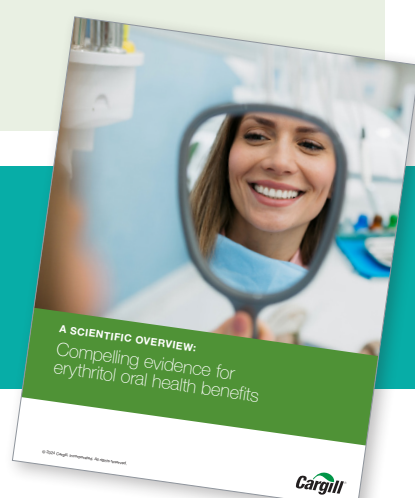
#### Effects of erythritol on fresh plaque weight



Adapted from Honkala, et al., 2014.

#### Over the 3-year period, erythritol group had:

- ✔ Significantly fewer tooth surfaces developing into enamel or dentin caries
- ✔ 143 fewer dental treatments/restorations compared to control



Learn more – get the full report.

[A scientific overview: Compelling evidence for erythritol oral health benefits](#)

#### SOURCES:

- Makinen, KK; Saag, M; Isotupa, KP; et al. "Similarity of the Effects of Erythritol and Xylitol on Some Risk Factors of Dental Caries," *Caries Research*, vol. 39, no. 3, pp. 207–215, 2005.
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- Ibid, Makinen, et al.
- Ghezalbash, GR; Nahvi, I; Rabbani, M. "Comparative Inhibitory Effect of Xylitol and Erythritol on the Growth and Biofilm Formation of Oral Streptococci," *African Journal of Microbiology Research*, vol. 6, no. 20, pp. 4404–4408, 2012.
- Štšepetova, J; Truu, J; Runnel, R; Nõmmela, R; Saag, M; Olak, J; Nõlvak, H; Preem, JK; Oopkaup, K; Kijutškov, K; Honkala, E; Honkala, S; Mäkinen, K; Mäkinen, PL; Vahlberg, T; Vermeiren, J; Bosscher, D; de Cock, P; Mändar, R. "Impact of Polyols on Oral Microbiome of Estonian Schoolchildren." *BMC Oral Health*. 2019 Apr 18;19(1):60. doi: 10.1186/s12903-019-0747-z. PMID: 30999906; PMCID: PMC6471963.