

Xylitol and Oral Care

[Dental caries \(tooth decay\)](#) is among the most common preventable chronic disease worldwide. Clinical studies have demonstrated that xylitol can significantly reduce new dental caries, as well as arrest and reverse existing dental caries. More than a mere sugar substitute, xylitol appears to be a valuable strategy for promoting good oral health and general well-being.

ABOUT XYLITOL

Xylitol is a naturally occurring sugar alcohol derived from plants and agricultural materials. It has been used as a sweetener since the 1940s. This sweetener is widely available in a variety of forms from chewing gum to bulk sweetener. It differs from other sugar substitutes, such as saccharin and aspartame, which are chemically produced.

IMPACT ON ORAL HEALTH

Consumption of xylitol has been shown to reduce tooth decay and the incidence of [periodontal \(gum\) disease](#).

- Reduces decay-causing bacteria: Xylitol slows the growth of *Streptococcus mutans*, a key bacteria involved in tooth decay, and reduces the production of acids that cause dental caries.
- Helps protect tooth enamel: By neutralizing pH levels in saliva and plaque, xylitol helps prevent enamel demineralization and reduces the ability of harmful plaque biofilm to adhere to tooth surfaces.
- Supports saliva production: Xylitol stimulates salivary flow, which helps manage xerostomia ([dry mouth](#)) and further supports the prevention of tooth decay.
- May reduce gum inflammation: Research suggests xylitol may also affect *Porphyromonas gingivalis*, a bacteria associated with periodontal disease, by limiting bacterial growth and inflammation.

RISK FACTORS

- Excessive consumption of xylitol may cause gastrointestinal discomfort, such as bloating, abdominal distress, or diarrhea.



- While xylitol offers oral health benefits for people, it is toxic to pets and can be life-threatening if ingested, particularly for dogs.

TREATMENT/HOME CARE

Upon discussion with your registered dental hygienist, a personalized oral health plan can be developed for you. This plan may include the use of xylitol-containing products as part of your daily routine.

Xylitol may be found in products such as chewing gum, mints, lozenges, toothpastes, and mouth rinses.

A total daily intake of 5 to 10 grams of xylitol, divided into 3 to 5 small doses per day, after meals or snacks, is considered optimal for preventing dental caries. Xylitol mints or lozenges can be used instead of chewing gum by those with temporomandibular disorders or chewing difficulties.

Be sure to check ingredient lists to confirm that the product contains xylitol.

ROLE OF REGISTERED DENTAL HYGIENISTS

Registered dental hygienists play an essential role in helping clients maintain good oral health and prevent dental caries. They provide education on the benefits of xylitol for teeth and gums and may recommend xylitol-containing products as part of an individualized oral care plan.

Registered dental hygienists also offer guidance on healthy nutrition choices, including snacks and beverages that are lower in sugar, and reinforce the importance of effective daily home care practices, such as proper brushing and flossing to remove plaque.

As professional health-care providers, registered dental hygienists are primarily concerned with promoting good oral health. Dental hygiene is among the largest of the regulated healthcare professions in the province. In Ontario all dental hygienists are registered with the College of Dental Hygienists of Ontario, which regulates the profession to ensure the public receives safe and ongoing comprehensive oral care.

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