

PREVENTION OF DECAY WITH XYLITOL

Xylitol is no longer a new topic. Xylitol is an essential ingredient in protocols to prevent caries.

Your daily oral health program recommendations are to:

- 1: Use 100% xylitol sweetened products,
- 2: Strive for five xylitol exposures each day,
- 3: Shop for xylitol products in a health food store.

EARLY STUDIES

In two short pilot studies, researchers asked subjects to refrain from all oral hygiene and gave them xylitol several times a day as a sweetener in coffee, caramels, and sweet rolls. In just four days, plaque levels were reduced by 50%. When the study was repeated over five days, the results were the same – 50% reduction in plaque.

Long-term studies are essential to confirm the outcomes of shorter studies. Researchers from Finland and the University of Michigan undertook a 40-month study in Belise City, including every fourth grader in the city. Several chewing gums were tested- 100% xylitol-sweetened, sucrose-sweetened gum and a combination of xylitol and sorbitol in a chewing gum. The study results confirmed the caries preventive benefits of 100% xylitol-sweetened chewing gum were better than sucrose, sorbitol, and xylitol plus sorbitol. Both sorbitol and sucrose provide a nutrient source for bacteria, allowing bacteria to produce acid necessary to stick together in a biofilm on the teeth and to dissolve enamel leading to caries.

These early studies created a foundation for a wide variety of xylitol studies and repeatedly showed chewing gums and other candies and products sweetened only with xylitol provided the greatest caries prevention. Products with only a small amount of xylitol will not provide the same benefits. This is a key point to remember when recommending xylitol products, be sure they are sweetened **only** with xylitol.

Mothers, Children, and Xylitol Use

A mother's oral flora needs to be low in strep mutans and high in lactobacillus. Several studies confirm that 100% xylitol chewing gum used by mothers for a period of two years, prior to tooth eruption in their infants, leads to 70% less need for restorative care. When researchers went back several years after completion of the study, a long-term effect was measured. The children of mothers who chewed 100% xylitol-sweetened gum were five times less likely to have strep mutans colonized in their mouths and still had 70% percent less caries than children whose mothers received several applications of either fluoride or chlorhexidine varnish over two years. Chewing gum sweetened only with 100% xylitol provided an oral flora conducive to health for both mothers and their children. Looking across the board at many xylitol chewing gum studies, caries rates are reduced from 40% to 85%.

Hundreds of xylitol research studies over the past 40 years demonstrate the ability of 100% xylitol-sweetened products used several times each day reduce both caries and periodontal pathogens, stimulate salivation, enhance remineralization, and reduce bad breath.

STRIVE FOR FIVE XYLITOL EXPOSURES EACH DAY

The key to achieving the results in the research is to use the products sweetened only with xylitol and to use these products several times throughout the day. Research has demonstrated that it's not the total amount consumed, but rather the frequency of exposure throughout the day.

TARGET GROUPS

Children can use xylitol gel to prevent caries. Xylitol use will raise the pH of the mouth, reducing the potential for caries.

Adults will benefit from a reduction of oral pathogens associated with both caries and periodontal disease. Patients investing in restorative and cosmetic dentistry will protect their investment with xylitol products that prevent recurrent caries around restoration margins. The elderly are the least able to perform adequate oral hygiene on a daily basis, so xylitol products will help them reduce bacterial biofilm levels, stimulate saliva flow, raise pH and reduce bad breath.

SHOP FOR XYLITOL PRODUCTS IN HEALTH FOOD STORES

Chewing gums, available at the grocery store checkout are not sweetened with 100% xylitol. These popular chewing gums advertise xylitol on their packaging, but the list of ingredients that will often read sorbitol, mannitol, aspartame, acesulfame K, and sucralose, often listed below xylitol. In some products, xylitol is listed as less than 2%. The chewing gums do not reduce plaque formation, but instead provide a nutrient source for the bacteria and the acid production continues. The benefit of the other "sugar-free" chewing gums is salivary stimulation, not bacterial reduction.

Chewing gums, candies, and other oral health products sweetened only with xylitol are available in health food stores, not grocery or drug stores. Find a good health food store in your area, visit them and see if they carry 100% xylitol-sweetened products such as Spry or Xlear products. You can also visit www.xlear.com and type in your zip code to get a list of health food stores that carry those products.