

- **Xylitol tastes great!**
- **Xylitol is clinically proven to fight cavities**
- **Xylitol is all natural**
- **Xylitol is available in gels, rinses, gum, and wipes**



### **Xylitol . . . the super sweetener!**

Xylitol is a sweetener found in many fruits and vegetables and is even produced by the human body during normal carbohydrate metabolism. Xylitol is typically manufactured from birch trees or other natural xylan-rich sources

### **Xylitol Is Clinically Proven**

In scientific studies over more than 30 years, dental researchers have pointed to xylitol as a key ingredient in the fight against tooth decay. Found in natural sources, such as fruits and vegetables, xylitol is a familiar sweetener in sugar-free products such as chewing gum. Xylitol not only adds a pleasant taste, but also reduces the incidence of tooth decay.

### **Xylitol Tastes Good**

Xylitol has the same sweetness and bulk as sucrose, with 40% less calories and no aftertaste. In fact, xylitol is the sweetest of all bulk sugar substitutes. Plus, it has a very pleasant cooling sensation when it dissolves in the mouth, making xylitol a great partner in applications with mint and citrus flavours.

### **Xylitol Is In Many Products Already**

Xylitol is widely approved for use in foods, pharmaceuticals and cosmetics in many countries around the world. Current xylitol products include chewing gum and other confectionery, pharmaceuticals (syrops and chewable tablets), and oral hygiene products such as toothpastes and mouthwashes, and dietetic and diabetic foods.

### **Can Anybody Use Xylitol?**

Xylitol is a low-glycemic sweetener and is metabolised independently of insulin. Xylitol does not cause the sharp increase in blood sugar levels or the associated serum insulin response which is usually seen following consumption of other carbohydrates. Thus, xylitol can be recommended as a sugar-free sweetener suitable for diabetics as well as for the general population seeking a healthier lifestyle.

### **Dental Benefits of Xylitol**

Despite the improvement in dental health achieved through the use of fluoride, caries incidence is still widespread and a cause for concern in many countries. Decreasing sugar intake and finding practical means of combating its detrimental effects remains a priority in controlling the incidence of caries.

One way to achieve this goal is to provide confectionery sweetened with dentally safe sugar substitutes. Xylitol is particularly recommended for this purpose since in addition to not causing cavities it actually:

-

Helps reduce the development of cavities (dental caries)

-

Resists fermentation by oral bacteria

-

Reduces plaque formation

-

Increases salivary flow to aid in the repair of damaged tooth enamel (remineralisation)

-

Complements fluoride in oral hygiene products

Xylitol has been recommended by several dental associations worldwide through endorsement of sugar-free confectionery products in which xylitol constitutes at least 50% of the total sweetener.

### **How Xylitol Fights Tooth Decay**

Clinical studies conducted in populations with both high and low cavity incidence show that supplementing a normal diet with regular consumption of xylitol (e.g. sweetened chewing gum > 2 times/day) is of clear benefit to the teeth. When carbohydrate or sugars are consumed,

acid is produced in the mouth and the pH drops rapidly below pH 5.5, causing demineralisation of tooth enamel and potential cavities. Since xylitol is a five-carbon polyol, oral bacteria do not metabolise it and therefore no acid is produced. When xylitol products are used the pH balance in the oral mouth is quickly returned to a safe level above pH 5.5, minimising the erosion of enamel and enhancing the remineralisation process.

The pleasant sweetness also stimulates saliva flow, which helps to rinse away excess sugar residues and neutralise any acids that have been formed. When xylitol is consumed habitually for several months, the mutans streptococci are shed from plaque to the saliva. Although high numbers may still be found in saliva, they are less virulent and do not adhere as tightly to the teeth, and this means acid attack is not occurring at the tooth surface.

***In conclusion, xylitol is both non-cariogenic in that it does not contribute to caries formation and is cariostatic because it prevents or reduces the incidence of new caries. Xylitol actually reduces the amount of plaque and the number of mutans streptococci in plaque. No other sugar substitute has been shown to function in this way.***