# Dictionary of dentistry

- No.4 - "Other ways to prevent cavities"

## \*Using xylitol

When you ingest sugar, the mutans streptococci in your mouth generate acids as metabolites to absorb the sugar. These acids dissolve the surface of your teeth, creating cavities. But xylitol doesn't promote the generation of cavity-causing acids because mutans streptococci can't absorb xylitol. Using xylitol over a long period can reduce the quantity of mutans streptococci in your mouth, making cavities less likely to form. Remember that the quantity of mutans streptococci will rebound when you stop using xylitol – it's vital to keep using it on a daily basis. Products such as "POsCAM" and "Recaldent" that contain xylitol also include ingredients such as calcium (Ca) and phosphoric acid (P), substances essential for recalcification.



## \*Using xylitol

Fluoride promotes recalcification. The crystals on your teeth absorb fluoride and change from hydroxyapatite to acid-resistant fluoroapatite. Fluoride also kills bacteria. Although high concentrations of fluoride can be poisonous, fluoride toothpaste is safe, even if swallowed. Some recently-introduced toothpastes and mouthwashes contain xylitol as well as fluoride.



#### \*Using your own saliva

Saliva has the following functions:

- Buffering: Maintains a neutral pH in the oral cavity.
- Autopurification: Cleans food from tooth surfaces.
- Antibacterial: Inhibits bacterial growth.
- $\boldsymbol{\cdot}$  Mucous membrane protection: Keeps mucous membranes moist and protects them from external stimuli
- · Digestion: Breaks down starch into glucose.

Of these functions, the buffering effect is intimately related to cavity prevention. Saliva's buffering effects (attributable to the bicarbonates found in saliva) neutralize the acidity in your mouth after you eat. Since more saliva is secreted when the salivary glands have been stimulated than at other times, simply chewing your food well is an effective way to prevent cavities.

#### \*Limiting sugar intake

Snacking several times during the day creates conditions that make it easier for cavities to form.



Compared to the case shown in Illustration 1, frequent snacking (as shown in Illustration 2) prolongs decalcification times and results in inadequate recalcification.