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## Behavior Modification:

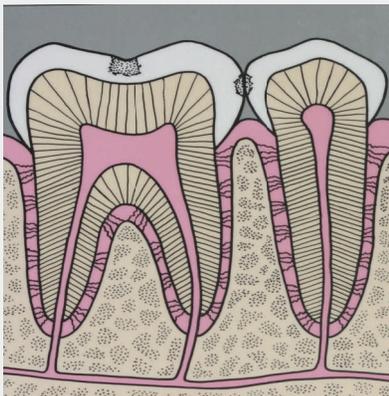
### Frequency of sugar Brushing & Flossing

Reducing the **frequency of sugar** between meals is absolutely critical to change the balance of the equation from demineralization to remineralization. It turns out that having sugar **3 or more** times between meals makes cavity formation more likely. Cavity causing sugar can come from many sources such as:

- Sports drinks — any drink with high fructose corn syrup
- Soda (even diet carbonated beverages can be harmful because they contain acid)
- Breath mints (Tic Tacs, Altoids, etc.)
- Coffee (with sugar)
- Gum (with sugar)

Each time sugar is ingested, bacteria in your mouth convert it into acid. The frequency of these acid attacks is the most important factor in driving demineralization. It is better to have one large acid attack than many small acid attacks. Having a drink with sugar while studying, watching TV, or playing a video game can be one long acid attack. Popping breath mints with sugar many times each day can also lead to demineralization and cavity

The decay process has started



formation. Frequent sugar intake will increase the number of acid producing bacteria, which increases the amount of acid produced each time sugar is ingested.

**Brushing** is most important to remove the bacteria near the gums. The most effective way to remove the plaque is to allow the ends of the toothbrush bristles get between the tooth and gums. Brushing at least twice a day decreases the number of bacteria present on the outside and inside parts of your teeth.

**Flossing** is aimed at reducing the bacteria levels between the teeth. This is critical because it is between the teeth that demineralization of the tooth is taking place. Effective flossing reduces the number of bacteria present to convert the sugar to acid which causes demineralization the tooth. Brushpicks, flosspicks, proxy-brushes, rubber tips, etc. are also useful in reducing bacteria between the teeth.

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Treat Tooth Decay  
*...without a drill...*  
*Remineralization Therapy*

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## Winnetka Contemporary Dentistry

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*Dentistry for all ages*

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**Dental caries** is a condition where the natural process of demineralization and remineralization of the tooth is out of balance. When this occurs, the tooth can lose so much of its mineral content that a cavity forms. The **good guys** in this process are **saliva** and **fluoride**. Saliva has properties that cause minerals to become incorporated into the tooth driving **remineralization**. Fluoride can become part of the tooth making it stronger and more acid resistant. The **bad guys** are **sugar**, **bacteria** and **acid**. Bacteria love a warm, moist environment like the mouth and grow at an exponential rate. Their numbers double and double and double so that very quickly they number in the millions. Certain bacteria (mutans streptococci and lactobacillus) love sugar. They convert this sugar into acid, which causes minerals to be leached out of the tooth causing **demineralization**. This process actually starts below the surface of the enamel. If this process is out of balance, eventually the surface will cave in and a cavity forms. The good news is that if the surface is intact **the process is reversible**. It turns out that demineralization is a process that takes a long time to form a cavity; the process of remineralization is even slower. We have several medical therapies available to drive remineralization of the tooth. We may recommend some, many or all of the following:

### **Perioguard (Chlorhexadine)**

Perioguard is an antimicrobial mouth rinse. Its purpose is to reduce the number of bacteria in your mouth. With fewer bacteria present, less acid can be produced from ingested sugar. I recommend rinsing with 15ml (1 tablespoon) of perioguard each night for **1 week each month**. This should be done for 3 to 6 months.

### **Prevident 5000**

Prevident 5000 is prescription strength toothpaste. It has 5 times as much fluoride as over the counter toothpastes. It should be used every time you brush your teeth. Many people like the way it tastes and feels but if you don't, simply put a small amount (pea size) on your toothbrush along side of whatever toothpaste you like. This will provide a fluoride boost and help strengthen your teeth. This toothpaste should be used for **many years**.

### **Prevident gel applied in custom trays**

Daily application of fluoride gel in custom trays is the ultimate way to introduce fluoride into the tooth and provide the greatest availability for remineralization. I recommend placing a small ribbon of Prevident gel into each fluoride tray and place them on your teeth for a minimum of 1-4 minutes. Only a small amount of fluoride can be absorbed by the tooth each application so it is important to apply the gel for **many years**.

### **Fluoride varnish**

Fluoride varnish is an extremely concentrated form of fluoride. It is painted on the teeth in our office. It drives remineralization providing long-term benefits to the teeth. Once it is applied to your teeth it is important to avoid hard foods, brushing and alcohol (beverages, oral rinses) for at least 4 hours to allow for optimum absorption. The effects can last many months.

### **MI Paste**

MI Paste is amorphous calcium phosphate - a milk product that is applied to the teeth one or two times each day. The presence of calcium and phosphate drives remineralization of the teeth

### **Over the counter fluoride mouth rinses**

Act, Fluoroguard or other mouth rinses containing fluoride are helpful because they provide another source of fluoride to become part of the tooth.

### **Xylitol Gum**

Chewing gum sweetened with Xylitol as its only sugar has many beneficial effects. Xylitol can inhibit the growth of cavity causing bacteria (mutans streptococci and lactobacillus). Chew 2 pieces of Xylitol gum after meals for at least 5 minutes. Xylitol gum can be purchased at our office (Thera gum) or at health food stores such as Whole Foods (Spry gum)