

ARTICULATOR

New - It's Like A Mogwai Turned Gremlin 6

Lasers: An Emblazoned Discussion
Between A Panel Of Metro
Denver Periodontists 8

Sugar That Reduces Tooth Decay? 14

Find It, Arrest It, Kill It,
Don't Let It Get Away 19

Ask A Professional 24

LASERS, SUGAR, and the FUTURE



METROPOLITAN DENVER
DENTAL SOCIETY



PRSRST STD
U.S. POSTAGE
PAID
DENVER CO
PERMIT 2882



SUGAR THAT REDUCES TOOTH DECAY?

Practical Guidelines For Using Xylitol To Help Prevent Decay In Children

*By Dr. Nelle Barr, DMD, Dr. Betty Barr, DMD
and Dr. Sean Whalen, DDS*

It may seem strange to hear that “sugar” can help prevent caries in children, but it’s true. Xylitol is a sugar substitute commercially used in numerous products such as gums, mints, syrups, candies, jellies, baked goods, children’s vitamins and dental products. It is endorsed by the American Academy of Pediatric Dentistry as a product that, with daily use, can be helpful in preventing dental caries. As pediatric dentists, we first became interested in xylitol ten years ago after reading a pilot study by Autio and Courts evaluating the acceptance and compliance of xylitol chewing gum in a Head Start program. These researchers cited numerous field

studies that show chewing xylitol gum reduced the incidence of dental caries by lowering strep mutan counts. As researchers continued their efforts, they mounted a body of evidence showing indisputably that regular use of xylitol reduces the prevalence of decay. However, the minimal dosage and frequency were still undetermined. In 2008, Ly, Milgrom and Rothen from the University of Washington confirmed through a series of studies that a dose of two to three grams, used three times daily, is effective in reducing strep mutan counts.

These research findings are significant because dental decay is the number

one chronic disease of childhood, with 50 percent of all children having decay when they start kindergarten. In our Westminster office we often see these unfortunate children with severe decay, pain and swelling, and we find that treating them is challenging. The children have to be managed delicately to give them the best experience possible to protect their developing psyches. In addition, dental treatment is stressful, time consuming and expensive for the parents.

Obviously, we need to treat the decay, but we also need to manage the disease. We counsel parents and work with them to manage their children’s decay

just like a diabetic would manage their diabetes or an asthmatic would manage their asthma. Managing decay is tough. Of course, we emphasize a healthy, low sugar, low carbohydrate diet and place sealants where they are indicated. We encourage good home care, but these children are often young; they don't like to brush, don't like the taste of the toothpaste and don't cooperate for brushing or flossing. We stress the use of fluoride toothpastes, rinses, gels and varnish; however, a growing percentage of parents don't want to use fluoride products because of their concern about fluoride's negative health effects. Plus, the child that won't cooperate with brushing and flossing often hates the fluoride gel, making home compliance another battle.

Even if home compliance was easier and more successful, the evidence shows that fluoride treatments reduce lesions by only 30 percent, whereas habitually using xylitol can prevent 50 to 70 percent of decay. Of all our preventive strategies, xylitol shows the most promise. Milgrom et al. showed xylitol pediatric topical oral syrup (8 grams per day) divided into two or three doses given during primary tooth eruption in children aged 15 to 25 months reduces tooth decay up to 70%. Xylitol is also good for cancer patients or patients that have difficulty complying with tooth brushing because of a disability. It is safe for diabetics and hypoglycemics because of its low glycemic index. It is also safe for nursing and pregnant women. Xylitol has one-third less calories than sugar, so it's also fine for the

obese child. It's affordable, easy to use, good tasting and, as Autio and Courts' study showed, children will comply. Finally, xylitol does not carry with it the negative public concerns that fluoride does, which makes it an easy sell.

Xylitol is naturally occurring in some fruits and vegetables. For example, one cup of ripe raspberries contains one gram of xylitol.

Xylitol is naturally occurring in some fruits and vegetables. For example, one cup of ripe raspberries contains one gram of xylitol. To be effective it has to be in a food source that is released into the mouth and lingers, allowing therapeutic levels in the saliva to be reached. There is some promising research showing that xylitol in gummy bears could be effective at reducing strep mutan levels.

Xylitol does have its drawbacks. Habitual, long-term compliance is understandably an issue. In very young children syrup is the vehicle of choice because mints and gums can be a choking hazard. In addition, gum is not permitted in all settings. If xylitol is consumed in quantities four to five times what is needed for caries prevention, it can cause osmotic diarrhea. In addition, xylitol is dangerous for dogs.

In order for xylitol to be most effective, parents need to understand how to implement xylitol into their children's daily

routine. We give parents in our practice a handout as a guideline to follow. You can access this handout online at the MDDS website – mddsdentist.com. Xylitol is safe and effective at helping our patients manage decay. We hope you consider xylitol for your patients, especially those at high risk for dental caries. ■

SUGAR THAT REDUCES TOOTH DECAY?

Practical Guidelines For Using Xylitol To Help Prevent Decay In Children
By Dr. Nellie Barr, Dr. Betty Barr, Dr. Susan Whalen

Xylitol
Xylitol is a delicious sweetener that occurs naturally in many fruits and vegetables and is safe for children and adults. Xylitol looks like sugar and tastes as sweet, but has 37% fewer calories, 75% fewer carbohydrates and a much lower glycemic index of 7, making it safe and beneficial for diabetics, hypoglycemics and everyone concerned with achieving and maintaining an ideal body weight.

How can Xylitol help prevent caries?
Scientific studies show that xylitol inhibits caries, keeping bacteria from adhering to teeth and tissues of the mouth. Years of clinical research confirms that using xylitol regularly helps reduce dental plaque and promotes better oral health. Xylitol is rated safe by the FDA and World Health Organization.

Using Xylitol to Prevent Decay

GUMS		
Brand	Amount of Xylitol	Where to Purchase
Ice Breaker™ "Ice Cubes" gum	1.0 gram/piece	Retail store
"Candy Cakes" gum	1.0 gram/piece	Retail store
Spears Xylitol gum	1.00 gram/piece	Online at www.spears.com
Yello Xylitol gum	1.0 gram/piece	Online at www.yello.com
Arctic Blast gum	1.0 gram/piece	Online at www.arcticblast.com
Arctic Blast gum	1.0 gram/piece	Online at www.arcticblast.com

Chew 3 pieces of gum of the same brand about 1 to 2 times a day to help prevent decay.

MINTS		
Brand	Amount of Xylitol	Where to Purchase
Arctic Blast Mints	1.0 gram/piece	Online at www.arcticblast.com
Arctic Blast Mints	1.0 gram/piece	Online at www.arcticblast.com
Spears Xylitol Mints	1.0 gram/piece	Online at www.spears.com
Yello Xylitol Mints	1.0 gram/piece	Online at www.yello.com
Arctic Blast Mints	1.0 gram/piece	Online at www.arcticblast.com
Arctic Blast Mints	1.0 gram/piece	Online at www.arcticblast.com

Chew 3 to 4 of the Spears or Yello mints for 1 to 2 times a day to help prevent decay.

SYRUP		
Brand	Amount of Xylitol	Where to Purchase
Arctic Blast Syrup	1.0 gram/teaspoon	Online at www.arcticblast.com
Arctic Blast Syrup	1.0 gram/teaspoon	Online at www.arcticblast.com
Arctic Blast Syrup	1.0 gram/teaspoon	Online at www.arcticblast.com

Syrup is the vehicle of choice for young children. It is safe for children as young as 9 months of age.

Arctic Blast Syrup is safe for use in children as young as 9 months of age.

Chew 1 to 2 pieces of gum or 1 to 2 pieces of mint 3 to 4 times a day.

mddsdentist.com Articulator May/June 2011

For more information visit page 17 to view the usage chart for Xylitol.

Want to contribute an article to the MDDS Articulator?

We would love to hear from you!

Contact Jason Mauterer at jmauterer@mddsdentist.com or call 303.488.9700 x3270



Practical Guidelines For Using Xylitol To Help Prevent Decay In Children

By Dr. Nelle Barr, DMD, Dr. Betty Barr, DMD and Dr. Sean Whalen, DDS

Xylitol

Xylitol is a delicious sweetener that occurs naturally in many fruits and vegetables and is safe for children and adults.

Xylitol looks like sugar and tastes as sweet, but has 33% fewer calories, 75% fewer carbohydrates and a much lower glycemic index of 7, making it safe and beneficial for diabetics, hypoglycemics and everyone concerned with achieving and maintaining an ideal body weight.

How can Xylitol help prevent caries?

Scientific studies show that xylitol inhibits caries, keeping bacteria from adhering to teeth and tissues of the mouth. Years of clinical research confirm that using xylitol regularly helps reduce dental plaque and promotes better oral health. Xylitol is rated safe by the FDA and World Health Organization.

Using Xylitol to Prevent Decay

GUM

Gum	Amount of Xylitol	Where to Purchase
Ice Breakers "Ice Cubes" gum	1.0 gram/piece	Retail stores
"Carefree Koolerz" gum	1.5 gram/piece	Retail stores
Epic Xylitol gum	1.06 gram/piece	Online at epicdental.com
Zellies Xylitol gum	1.0 gram/piece	Online at zelliescleanwhiteteeth.com
Ricochet Xylitol Gum	1.0 gram/piece	Online at emeraldforestxylitol.com a Broomfield, CO company
Chew 2 pieces of any of the gums listed above for 5 minutes 3 times a day to help prevent decay.		

MINTS

Mints	Amount of Xylitol	Where to Purchase
Ricochet Xylitol Mints	1.0 gram/mint	Online at emeraldforestxylitol.com
Suck on 2 of the Ricochet mints for 5 minutes 3 times a day to help prevent decay.		
Epic Xylitol Mints	.50 grams/mint	Online at epicdental.com
Spry Mints	.50 grams/mint	Online at xlear.com/spry
Zellies Xylitol Mints	.50 grams/mint	Online at zelliescleanwhiteteeth.com
Suck on 4 of the Epic, Spry or Zellies mints for 5 minutes 3 times a day to help prevent decay.		

SYRUP

Syrup is the vehicle of choice for young children. It is safe for children as young as 9 months of age.

Syrup	Amount of Xylitol	Where to Purchase
Maple Flavored Syrup 8.5 oz. gluten free syrup	4.0 grams/1 tsp.	Online at globalsweet.com
Give 1 tsp. 2 times a day		