

A Semiannual Publication of the Massachusetts Dental Society

The Tooth About Your Diet

### word of mouth



The Massachusetts Dental Society (MDS) is pleased to make this publication available to our member dentists as a way of communicating important dental health information to their patients.

Information in Word of Mouth comes from dental healthcare professionals of the MDS and the American Dental Association. If you have any questions about specific content that may affect your oral health, please contact your dentist. For timely news regarding oral health, visit the Public section of the MDS Web site at www.massdental.org.

Your comments and suggestions regarding this publication are always welcome. All correspondence and requests for additional copies may be sent to Melissa Carman, Manager, Print and Electronic Publishing, Massachusetts Dental Society, Two Willow Street, Suite 200, Southborough, MA 01745-1027, or email mcarman@ massdental.org.

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# The Tooth

t's difficult to live in this health-conscious day and age and not be aware that what you eat can adversely affect your overall health. A poor diet resulting in excess weight gain can lead to diabetes, heart disease, and other potentially debilitating or fatal diseases. But did you know that your overall health includes your oral health, and that a poor diet can affect your teeth and gums? And like a double-edged sword, your oral health can affect your overall health; for example,

> research points to a possible link between incidences of periodontal disease and cardiovascular disease. So it's more than just your waistline in jeopardy when you grab that high-calorie snack.

> > Just how does your diet impact your oral health? When you eat anything, the bacteria that are already present in your mouth convert the sugar and starch in this food into acids. These acids, in turn, attack the enamel on your teeth and begin the decaying

process. The more often you eat foods that contain sugars and starches, and the longer these foods remain in your mouth before you brush your teeth, the greater your risk for tooth decay.

And beware of the so-called "healthy" snacks. Some of the snacks that appear to be healthy are just as bad for your teeth as candy. Chewy and sticky foods like granola bars, fruit rolls, and even raisins contain sugar that sticks to your teeth until you brush again.

### Sugar, AKA . . .

It is commonly known that eating nonnutritious foods and drinking beverages that have a high sugar content—such as soda and sweetened fruit juice-can cause cavities and lead to tooth decay. What you may not realize is that, even if you swear off the candy and cookies, sugar can still creep its way into your diet and silently chip away at your oral health.



## About Your Diet

But you didn't eat anything with sugar in it, you say? Are you sure? Sugar is contained in many foods that you'd least suspect. Besides serving as an ingredient in fruit, cereal, and sports drinks, it also lurks in some foods you wouldn't think you'd find it in, such as milk, yogurt, salad dressing, ketchup, and even some vegetables (carrots, beets, and onions, for example). Fruit juices can be loaded with sugar and sometimes contain only trace amounts of actual fruit. Even that trendy nutritional bar you snack on to hold you over until dinner can sometimes be nothing more than a glorified candy bar.

Sugar by any other name is still sugar, and it still can cause tooth decay. The next time you read the ingredient list on that box of "all-natural" granola, you may need to know that sugar could be disguised as one or more of the ingredients. Among sugar's many aliases are: fructose, dextrose, lactose, glucose, sucrose, galactose, polydextrose, corn syrup, honey, sorbitol, xylitol, high-fructose corn syrup, and malodextrin. (One rule of thumb: If it ends in "ose," it's probably sugar!)

### Starching Up

Sugar's not the only ingredient you need to watch out for in maintaining good oral health. Starch is another element in food that, when combined with the bacteria in your mouth, can wreak havoc with your teeth and gums.

Some of the more common examples of starchy foods are bread and rolls, cereal, pasta,

and beans. But like sugar, starch can also be found in such unexpected places as

bananas, canned soup, prepared spaghetti sauce, salad dressings, and even some vegetables (corn, potatoes, and peas, for example).

It's not necessary, however, to completely eliminate these types of foods from your diet, although low-carb diet followers may disagree. (To learn more about how a low-carb diet can adversely affect your breath, see "Is a Low-Carb Diet Taking Your Fresh Breath Away?" on page 5.) The key is moderation; too much of anything is not a good thing.

### The Heart-Tooth Connection

A trip to the dentist may reveal more than just poor oral health: Studies have found evidence linking gum disease—also known as periodontitis —and cardiovascular disease, which can include heart attacks and strokes.

A recent study published in the *Journal of Periodontology* indicates that people with periodontal disease are almost twice as likely to suffer from coronary artery disease as those without periodontal disease. The study also found that 91 percent of patients with cardiovascular disease suffered from moderate to severe periodontitis.

Another study, published in *Stroke: The Journal* of the American Heart Association, states that tooth loss caused by gum disease could be an indicator of cardiovascular disease, even before



other symptoms appear. This ongoing study found a correlation between the number of missing teeth and the prevalence of plaque in the carotid arteries. Forty-five percent of subjects missing nine or fewer teeth had carotid artery plaque, whereas 60 percent of subjects with 10 or more missing teeth had artery plaque buildup.

While an exact cause of the association between periodontal and coronary diseases is still unknown, research studies like these will continue to help dental and other healthcare professionals understand the relationship between good oral healthcare and overall health.

### The Bottom Line

So what does this all mean to you and your dietary habits? What can you do to ensure your overall health?

- It's not just *what* you eat, it's *when* you eat. Try to limit the amount of sugary and starchy foods you consume, especially between meals when you are least likely to brush after eating. If you do snack, brush with fluoride toothpaste immediately.
- Read the nutritional labels on the foods you buy, and watch out for how much hidden sugar and starch you are actually consuming.

• Snack on healthier fare. Some good choices include cheese, vegetables, and fruit. Crunchy fruit contains sugar but also has a high water content, which dilutes the effects of the sugar and stimulates the flow of saliva, an aid in washing away food particles.

• Watch what you drink. Try to limit your intake of soda and fruit juices, and drink plenty of water, which will help rinse any food particles from between your teeth. And if you're drinking bottled water, pay close attention to what's in—or isn't in the water. Not all bottled water is fluoridated. • Take a daily multivitamin to ensure that you are getting all the nutrients your body needs. Calcium and vitamin D are essential for good tooth and bone development.

Adapt these guidelines to your daily life, and your waistline *and* 

your teeth will thank you.  $oldsymbol{O}$ 

### You're Eating All Your Veggies . . . Now What?

While a vegetarian diet can have great overall health benefits, including lower fat and cholesterol levels, vegetarians need to be aware of how this lifestyle choice can affect their oral health. By eliminating certain food groups, vegetarians can risk missing out on essential nutrients.

Some vegetarians—especially vegans, who consume no animal or dairy products—are at risk for nutritional deficiency in calcium, vitamin D, vitamin  $B_2$ , vitamin  $B_{12}$ , or complete proteins, according to the Academy of General Dentistry (AGD). A lack of vitamin D can cause teeth to soften over time, which makes them more susceptible to tooth decay and periodontal disease. Vitamin D is produced naturally in the body with sun exposure, so the odds of deficiency are rare. But it can develop in those who do not consume milk or fish, says the AGD. Adding cod liver oil, nutritional yeast, or green leafy vegetables to their diet may lessen the risk. A daily multivitamin is also a good way to supplement a vegetarian diet.

Eating a balanced variety of fruits, vegetables, grains, and legumes will help vegetarians achieve a healthy, well-rounded diet . . . and a healthy smile, to boot.

# IS A LOW-CARB DIET TAKING YOUR FRESH BREATH AWAY?

he low-carb diet craze might be good for your waistline, but the same cannot be said about your breath, according to the Massachusetts Dental Society (MDS). Nearly 63 percent of low-carb dieters suffer from halitosis, or bad breath.

Why? In order to effectively burn fat, you must have a certain amount of carbohydrates in your diet. Because these types of diets, which include the Atkins Diet and South Beach Diet, are low in carbohydrates, the body has to modify the way it deals with fat by producing a chemical substance called ketones. Ketones are the chemicals that give your breath that different, and oftentimes bad, odor.

According to the Academy of General Dentistry (AGD), there are ways that low-carb dieters can fight bad breath. Drinking plenty of water to wash away germs in the mouth will help. It's also a good idea to keep a toothbrush and toothpaste handy for brushing after each meal. (Remember, the surface of the tongue is one of the major breeding grounds for bacteria that attack the teeth and gums, causing bad breath. Brushing your tongue daily will help fight mouth odor.) The AGD also recommends that low-carb dieters chew sugarless gum to stimulate saliva and fight mouth odor. But it's important to remember that persistent bad breath may be a sign of something more serious, such as periodontal or gum disease.

Whether the source of your mouth odor is related to a low-carb diet or something else, the MDS suggests that maintaining good oral health is necessary to avoid many dental problems, including bad breath, before they occur.

For more information on bad breath and its causes, contact the Massachusetts Dental Society at **(800) 342-8747** or visit *www.massdental.org*.

### Is Your Toothbrush Sick?

We're smack in the middle of cold and flu season, and sure, you're taking all the preventive measures to protect yourself from those dreaded viruses. But are you doing everything you can to keep your toothbrush healthy? You may not realize it, but unless properly cared for, your toothbrush can be a breeding ground for germs and bacteria.

During the process of removing plaque and particles from teeth, toothbrushes can become contaminated with bacteria, blood, saliva, oral debris, and toothpaste, and this contamination can be passed back to you. So here are some tips to help you make sure your toothbrush gets a clean bill of health:

• Rinse your toothbrush thoroughly with tap water after brushing to remove any residue and toothpaste.

• Air-dry your toothbrush thoroughly in an upright position.

• Don't let your toothbrush make contact with any other toothbrushes stored in the same holder—germs can be passed along that way. A good rule of thumb is to keep them at least an inch apart.

• Replace your toothbrush after you've had any illness, such as a cold or flu, as germs can remain on the toothbrush even after you've recovered. You should also replace it every three months, or if the bristles look worn and frayed. A good way to remember when to change your toothbrush is to start using a new one at the beginning of each new season.

• Don't share your toothbrush. If you have children, make sure that each child is using his or her designated toothbrush. An easy solution for this is to "color code" toothbrushes for each member of your household.

• If you use a disinfectant solution or mouthwash to rid your toothbrush of germs, be careful not to reuse the solution over a period of time or to disinfect multiple toothbrushes in the same solution.

• Don't routinely cover your toothbrush or store it in a closed container. The humid environment that closed storage breeds can lead to bacterial growth. If you do cover your toothbrush, be sure to clean the cover frequently.

• Keep your toothbrush away from contaminated areas, such as the toilet bowl. But if you do store your toothbrush in the bathroom, make sure to close the toilet seat cover before flushing to help prevent airborne bacteria from

dispersing. O

### Do Mouth Rinses Really Make a Splash?

A fter you've eaten a tuna fish sandwich or a few slices of pizza topped with onions, your first instinct may be to use a mouth rinse to freshen your breath. For most people, mouth rinses help to temporarily alleviate mouth odor. However, the Massachusetts Dental Society (MDS) believes that for people with chronic bad breath, using mouth rinses may be like pouring money down the drain.

Generally, oral rinses give the mouth a fresh, clean feeling, while also helping to remove debris and temporarily suppress bad breath. Yet in some cases, mouth rinses could be masking the symptoms of a potentially serious dental health problem. With conditions such as periodontal disease or chronic bad breath, a constant unpleasant taste in your mouth can be the first sign that something is wrong. And no amount of mouth rinsing can correct this.

So if you're regularly using a mouth rinse to conceal halitosis or bad breath problems, the MDS recommends contacting your dentist first. Because chronic mouth odor can be caused by a number of

factors, it's important that a

dentist diagnose the source of the problem first. He or she will then be able to recommend or prescribe specific products or medications that will have a lasting effect on bad breath, or determine if a periodontal screening is necessary.

While some study results indicate that the use of mouth rinses is as effective as flossing for reducing plaque, the American Dental Association (ADA) believes the best way to remove plaque is still by brushing and flossing daily.

Nevertheless, there are some definite benefits to using mouth rinses.

Mouth rinses are generally classified by the United States Food and Drug Administration as either cosmetic or therapeutic, or a combination of both. Cosmetic rinses are sold over the counter and help to remove debris before or after brushing, reduce bacteria, and temporarily suppress bad breath. Over-the-counter mouthwashes are fine for someone who wants to get rid of a temporary mouth odor.

Therapeutic rinses have the benefits of their cosmetic counterparts but contain an added ingredient that helps protect against certain oral diseases. There are some over-the-counter antiseptic mouth rinse products, approved by the ADA, that have been shown to reduce plaque and gingivitis while providing breathfreshening properties. Instead of just temporarily eliminating breath odor, these products actually kill the germs that cause mouth odor.

It's important to remember that some mouth rinses contain alcohol and may produce a burning sensation on the inner cheeks and gums. Rinses with more concentrated formulas can also lead to sensitivity, soreness, and changes in taste sensation.

So while there are dental health benefits to using mouth rinses, they should never be considered a substitute for regular dental checkups and proper home care.

For more information on your oral health, contact the Massachusetts Dental Society at (800) 342-8747 or visit *www.massdental.org.* 

word of mouth

Brushing Up on Kios Toothou f yu have yung children, you know how dificult it "a be to get them to do cetting them to pick "mer, or adhere struggle. And brushing their teeth is no exception. That's why teaching the importance of a twice per day (let alone the recommendation of three times per day!) brushing habit to an often independent-minded and sometimes squirming preschooler can be frustrating for many parents. Ideally, good brushing habits should begin at birth.

Parents can use a wet washcloth or gauze to wipe the baby's gums. When the primary, or baby, teeth come in at around six months to one year of age, parental control is in full swing, and a pattern of regular oral cleansing in the morning and before bedtime can—and should—be established. Like Pavlov's famous experiment, the child will come to expect his or her teeth to be brushed at these times.

However, the real-world scenario in today's busy households often presents limited time for thorough toothbrushing. The recommended goal of a two-minute brushing routine is rarely achieved, even with the innovation of timers on many electric brushes. But it's important to resist the temptation to rush while you brush. Parents of young children can set a good example. If children see Mom and Dad regularly brushing and flossing, they are more likely to emulate this behavior.

For the more reluctant preschooler, the "team" approach might be helpful. Using this method, the child brushes his/her own teeth first, followed by a parental once-over. This way, the child's need for independence can be acknowledged, but Mom or Dad can still be the "brushing boss."

Removing food particles from between the teeth is equally important for preventive oral care. Therefore, flossing should certainly be introduced to young children, but it should be performed by the parent, preferably after brushing. The parent can sit on a chair or the toilet seat and have the child face forward. This will allow for better control of the child's head and increased visibility. (For more on children and flossing, see "What's Your Flossophy?" on page 14.)

Just be sure to remember that when dealing with young children, it will take persistence and patience to help lay the foundation for a lifetime habit of regular oral care. For more information on children's oral healthcare, contact the Massachusetts Dental Society at (800) 342-8747 or visit *www.massdental.org.* •

### FULL DENTURE DISCLOSURE

ou're receiving a full set of dentures soon, and you have some questions. Will wearing dentures change your appearance? Will your face still look like your face? Will you talk differently?

Patients should understand that while it may be awkward at first, their appearance with new dentures should become more natural with time. Without support from a denture,

facial muscles sag and make a person look older. Initially, the dentures may feel strange and bulky in your mouth. They may also cause a feeling of fullness at the lips



and cheeks; these sensations improve as you become more accustomed to the dentures and more relaxed and confident while wearing them.

Within a few weeks of being fitted with full dentures, you'll master any speech difficulties you may be having. It's important to remember that speaking normally with new dentures requires some practice, so try not to get too frustrated in the beginning. Reading aloud and repeating phrases that are difficult to pronounce is recommended, as practice makes perfect.

Even with full dentures, you need to have regular dental checkups to ensure that the dentures continue to fit properly. Poorly fitting dentures can cause irritation and mouth sores. Never try to adjust dentures yourself because you may end up damaging them.

Wearing full dentures is certainly a big change, but once you've gotten used to them, you'll be smiling in no time.

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There's more to good oral health than just brushing and flossing—not that those aren't important. While it may be easier to sit back and let your dentist or dental hygienist do all the work at your semiannual checkup and cleaning, it's important that you, as the patient and the owner of your teeth, speak up and ask the right questions about how your oral health is both *affecting* and *affected by* your oral healthcare routine and other external factors.

You may not be aware that oral diseases can lead to other health issues, or that smoking can have an impact on your oral health. A routine dental exam is the perfect opportunity for you and your dental health professional to look at other factors—besides brushing and flossing—that could be affecting your dental health and, potentially, your overall health.

### How to Be a Smart Mouth

With this in mind, here are several questions, recommended by Oral-B, for you to ask your dental health professional at your next routine checkup:

□ What is the impact of smoking on my oral health?

What are the signs of oral cancer?
What is a "dental healthy" diet?
As a diabetic, do I need to follow a different oral care routine?
Does using birth control or being pregnant have any impact on my oral health?

□ How can I improve the appearance of my smile?

How do I minimize bad breath?
What should I do if I have a tooth knocked out?

□ Do adults need fluoride treatment?

Just remember: To keep your teeth and gums in the healthiest condition possible, you may just need to open your mouth. • **SSTIO** 





# Going for the **C**

So you need to have a crown and you're not sure what your choices are. Which is more durable a crown made of porcelain or one made of gold? Are there advantages to having one versus the other? Here's a quick crown primer:

There are three basic types of crowns: porcelain bonded to metal, gold, and all porcelain.

Crowns made of porcelain bonded to metal are the most popular choice. Not only are they strong, but with the newest technology, they wear almost like natural teeth. These crowns are durable and esthetically pleasing and can be utilized in almost all areas of the mouth, for both front and back teeth. Preparation of the tooth requires removing a medium amount of the tooth's structure to allow for placement of the crown.



Gold crowns are the strongest crowns. But with the exception of rapper Nelly and other hip-hop artists, most people generally don't want to show

off gold teeth when they smile. Therefore, gold crowns are not customarily used for front teeth. Thanks to gold's durability, however, these crowns wear like natural teeth and require removing the least amount of the tooth's structure for placement.

Lastly, crowns made entirely of porcelain are the most esthetically pleasing for use in replacing front teeth. They are not as strong as the other two types of crowns, but if esthetics are an issue for you, they may be the best option. However, since these are the weakest of the basic types of crowns, they require removing the greatest amount of the tooth's structure for placement.

Your dentist will discuss with you the best options to suit your needs, but knowing all the available choices helps to ensure a good result and a pleasant dental experience.

### What's Your Flossophy?

The Massachusetts Dental Society recently launched a new campaign and Web page aimed at teaching children the importance of flossing as part of a good oral healthcare regimen. The Dental *Floss*ophy offers information on why flossing is an important weapon against plaque, cavities, and tooth decay, as well as what age to begin flossing, how to floss, and the different types of floss available.

Why is flossing so important? Chalk it up to plaque. Certain types of bacteria, which can be found in some of the foods we eat, stick to the enamel covering your teeth. These bacteria can then grow into a white film, called plaque. Brushing your teeth at least twice a day helps get rid of most of this plaque from the top, sides, front, and back of your teeth. But there's one area where plaque can still thrive: between your teeth. That's where flossing comes in, because your toothbrush, as good as it is, just can't reach between your teeth.

Kids, if you're not sure how to start flossing, just visit the Dental *Floss*ophy Web page, where you'll find easy-to-follow instructions (with pictures!) and a fun quiz. The Dental *Floss*ophy Web page can be accessed by logging on to the Public section at **www.massdental.org** and clicking on "Just for Kids."

For more information on flossing and other oral healthcare questions, please contact the Massachusetts Dental Society at **(800)** 342-8747 or visit *www.massdental.org*.



Floss











### Award Corner

### Word of Mouth® Recognized Nationally

Word of Mouth was recently honored with two separate national awards.

The semiannual consumer publication from the Massachusetts Dental Society was recognized in the category of External Publications in the 21st Annual Healthcare Advertising Awards competition sponsored by *Healthcare Marketing Report*, a national publication.



Word of Mouth also received an award in the category of Patient Education Information in the 11th Annual National Health Information Awards program sponsored by the Health Information Resource Center, a national clearinghouse for consumer health information programs and materials, based in Illinois.

### **Grin and Wear It<sup>ss</sup> Mouthguard Program Wins Golden Apple**

*Grin and Wear It*, the mouthguard awareness program of the Massachusetts Dental Society (MDS), was recently awarded the American Dental Association's 2004 Golden Apple Award for Outstanding Achievement in the category of Excellence in Dental Health Promotion to the Public.

Approximately 15 million children participate in organized sports in the United States, and every year more than 5 million teeth are knocked out through sports injury, accident, or play. Mouthguard use prevents approximately 200,000 oral and facial injuries each year.

Launched by the MDS in 2002, *Grin and Wear It* is a statewide program that educates parents and children on the importance of wearing mouthguards while participating in contact sports.

Mouthguards, also known as mouth protectors, help prevent injury to the oral area, including teeth, lips, cheeks, and tongue. The device can also help protect against head and neck injuries by cushioning blows that could



otherwise cause concussions or jaw fractures.

As part of *Grin and Wear It*, approximately 150 MDS member dentists have volunteered to fit school-age children with custommade mouthguards at a discount or for a nominal fee. To find a list of dentists participating in the *Grin and Wear It* program, log on to the Public section of **www.massdental.org** or contact the Massachusetts Dental Society at **(800) 342-8747**.