

BRUSH BEFORE EACH MEAL??

Dear Dr. McCrummen, I understand that you recommend brushing before eating. That seems ridiculous, and I have always heard "brush after every meal". How long should I brush? When is the best time to floss? Is an electric toothbrush very good to use? Does gum really help stop cavities? Lots of questions, I know. J.M.

Do we wash our hands before we eat, or after? Usually both. Why? First to remove germs, and after to clean food off. We have heard "brush after every meal" for many years, but those words of wisdom were not based on scientific evidence. If that is what works best, and there is no decay problem, there may be no need to change. But, if there are problems with reoccurring decay it can help to know why brushing before eating may help. Brushing after meals is still very good to remove unsightly food from the teeth and freshen the breath.

Organisms form on the teeth overnight and flourish in the dryness caused by mouth breathing and dehydration. One can tell by "morning breath" that a lot of bad things have accumulated. We know that when sugars come in contact with some oral bacteria an acid is formed within fifteen minutes that can be as strong as the acid in your car battery. Having clean teeth before you eat reduces the populations of bacteria, which reduces the acids that lead to decay. Most people do not brush immediately after eating, and a lingering meal gives the bacteria time to do damage. Some enjoy coffee or tea with sugar, and a juice drink has citric acid. Do we brush right after a *Krispy Kreme*?

How long? Lightly brush all of the chewing surfaces, then thirty seconds on the tongue side, and thirty seconds on the cheek side, upper and lower, equals about two minutes. The average time spent is 33 seconds, total. *Do not scrub your teeth.* Rubbing a brush with sand on it back and forth on your leg for two minutes would make the skin raw. *Scrubbing* your teeth back and forth with silica (micro sand) in toothpaste is harmful as well. Brush *at least* twice a day; in the morning and before bedtime are two important times, but more often is better.

I highly recommend using an electric toothbrush. A circular spin brush tends to rub the gums and root surfaces repeatedly and does not go under the gumline well. At this time I recommend a sonic type toothbrush, with a light touch, focused at the gumline so the bristles go slightly under the gumline where your hygienist cleans. Sonicare Elite, and the WaterPik DT-400 are the types I see the best results with. Remember that what is removed from your teeth each day is soft. There is nothing to scrub, and you cannot remove tartar yourself. Only use soft bristles.

The best time to floss is when it is convenient for you. Ideally, once a day, but floss *before* a brushing so you can brush away what you have removed by flossing. If flossing is not done daily the bacteria that have accumulated between the teeth will form acids while eating. Decay between teeth is where most adults have problems. Brush your tongue to remove more microbes and improve breath.

I generally do not recommend gum, as it is unnatural to be chewing so much. It is hard on the jaw joint (the TMJ) and is bad for weak teeth. Sugarless gum is best, and one with Xylitol has been shown to help stop early decay. Sugarless gum with baking soda can be good for buffering acids and improving breath. I think the main mechanism of decay control with any sugarless gum is the increased saliva flow to buffer bacterial acids. I am not in favor of gum chewing unless there is a dry mouth problem.

Sources of sugar make a difference in acid attacks, also. Sodas often have over 10 teaspoons of sugar (1 tsp. equals 4 grams), and colas have additional phosphoric acid that attacks the teeth. Diet colas have even more phosphoric acid to enhance the flavor. Check the labels. Caramel, cakes, and cookies have sticky sugars, and like chewing gum with sugar, they lead to a lingering acid attack. Chocolate alone does not seem to do much damage; in fact there is something in it that seems to inhibit decay. Now that is good news!

