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Tooth Plaque

Every time you go to the dentist to have your teeth cleaned it is likely that a hygienist will gently remind you (and for some of you she must downright nag you) to brush your teeth twice daily and floss at least once a day. What's the big deal about plaque? What is it anyway?

Plaque is a mostly colorless biofilm that builds up on the teeth. If it is not removed regularly, plaque can lead to dental cavities or periodontal (gum) problems. The microorganisms that form the biofilm are almost entirely bacteria. It has been estimated that as many as **400** distinct bacterial species may be found in plaque. The microorganisms present in dental plaque are all naturally present in the oral cavity and are normally harmless. However, failure to remove plaque by regular toothbrushing and flossing means that the microorganisms are allowed to build up in a thick layer. Those microorganisms nearest the tooth surface convert to anaerobic respiration, and in this state, they start to produce acids. Acids released from dental plaque lead to demineralization of the adjacent tooth surface, and consequently to dental cavities. Saliva, useful in neutralizing acids, is unable to penetrate thick plaque build-up and thus cannot neutralize the acid produced by the bacteria.

The bacteria in plaque also cause irritation of the gums around the teeth which can lead to gingivitis (red, swollen gums), periodontal disease or even tooth loss. The build up of plaque can become mineralized and form calculus, or tartar. The consequences of calculus formation are that the deposit is significantly more difficult to remove once calcified, and it leaves a rough surface on the root to which plaque can better adhere. Plaque can also collect stain from certain foods and make the teeth appear yellowish. By-products of the bacteria in the plaque can cause stinky breath. Who wants to kiss someone with a mouthful of stinky bacteria??!! And did you know that oral bacteria and microorganisms can be transferred from one person to another by a kiss? Saliva exchange is, in fact, one way that babies get certain types of oral bacteria – from being covered with kisses from their loving mommies, daddies, and relatives.

Frequency of brushing and flossing with good technique is important, because the composition of the microorganisms change as the plaque ages. Therefore, plaque which is 12 hours old, for example, is much less damaging than plaque which has not been removed in days. So the next time you are in a rush or just too tired to pick up that floss and toothbrush, just picture all the creepy, crawlies in your mouth that want to destroy your smile...and thank your hygienist for all her caring encouragement!

Smile Specialists!