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Senior Health and Wellness Newsletter

Kentucky Department for Aging and Independent Living

Toothbrushing: Good for Your Health

Brushing your teeth at least two times a day (morning and night) is a cornerstone of good oral healthcare. Along with flossing at least once a day to clean between the teeth, toothbrushing is a key in the prevention of periodontal (gum) disease.

Periodontal disease is very common in adults. According to the Centers for Disease Control (CDC), roughly 50% of American adults over 30 have periodontal disease. That figure goes up to 70% for adults over 65, according to a recent study in the *Journal of Dental Research* by P.I. Eke and others. Also, periodontal disease is a contributing factor leading to an increased risk and development of poor diabetes control, aspiration pneumonia, stroke and other conditions.

This article will review what you can do to develop an effective toothbrushing technique for good oral hygiene and to help prevent periodontal disease. It is part of a series on Preventive Oral Health.

Periodontal Disease (Gum Disease)

Periodontal disease may be classified as either Gingivitis or Periodontitis. Gingivitis may be thought of as the mildest form of periodontal disease. At this stage, the gums (gingiva) are often characterized by a red appearance and swelling. They often bleed easily on brushing, flossing or probing by a dental hygienist or dentist. The good news is that, at this point in the periodontal disease process, the condition is reversible.

The advanced form of gum disease, Periodontitis, is characterized by a loss of bony support around the teeth. This situation is similar to what happens when the foundation of a house gets washed away during a flood. The bony and tissue support surrounding the teeth is lost due to the inflammation/infection process. Periodontal pockets may develop which are difficult to keep clean. Periodontal Sur-



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gery and/or non-surgical treatments may then be required for the patient's gums to be returned to a state where they may be taken care of through normal brushing and flossing.

Toothbrush Bristle Texture

A key to developing good tooth brushing habits is to have the right type of toothbrush. A good toothbrush has bristles that are polished and made of nylon or a nylon blend. People should only use soft or extra soft toothbrushes. Using medium and hard toothbrushes can cause the position of the gums around the teeth to recede creating a condition known as gingival recession. Gingival recession can lead to more serious periodontal (gum) problems. In addition, hard and medium toothbrushes may cause excessive wearing away of the tooth itself.

Toothbrush Size and Angle

People often think that a large size toothbrush head is the best for cleaning but this may not be the case, especially for children, adolescents, and people with small mouths. In these situations, a toothbrush with a smaller head size may be more efficient to use.

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The angle of the toothbrush head is another factor to consider when selecting a toothbrush. Many people find the use of a toothbrush with a head angled like the head of a dental instrument allows for easier positioning and use in difficult to reach areas of the mouth. Toothbrush heads are also available in a variety of shapes and bristle patterns which may conform better to tooth surfaces.

Toothbrush Type and Replacement

Toothbrushes have been introduced recently which indicate, through a color change, when it is time to change the toothbrush. This feature, while not necessary, may prove convenient and helpful for some people. Toothbrushes should be replaced when the bristles of the toothbrush become flared, frayed or bent. This frequently happens in 3-4 months or less.

Should you use a Manual or Mechanical type of toothbrush? A person can do a good job brushing their teeth with either type of toothbrush. However, a mechanical brush may prove easier and more efficient to use for some people. This would include people such as those with limited hand use or agility due to a history of strokes or other conditions.

Toothbrushing Technique

A person should take at least one minute (preferably 2 minutes) to brush all teeth in the mouth. For efficiency, a routine should be developed so that a person adequately brushes all of his or her teeth efficiently during a brushing session. One way to help accomplish this is to divide the teeth of the mouth into four equal parts. This will create a right and left side to the upper arch of teeth and a right and left side to the lower arch.

Starting with the right side of the upper arch, spend at least 15 seconds (30 seconds for each side of the arch is better) brushing the outer, inner and top (biting) surfaces of the teeth, stopping on a tooth close to the middle of the upper lip. Next, brush the remaining 1/2 of the teeth in the upper arch (left side) for 15 seconds. The next step is to brush the teeth in the left half of the lower arch for 15 seconds followed by the teeth of the right half of the lower arch for 15 seconds.

It is important to develop a good brushing technique which is easily repeatable. People should visit a Dentist regularly for an oral examination (check-up) and cleaning. Every six months is a common schedule however, depending on a persons particular oral health status and needs, it may be more or less than every six months. The check-up is an excellent time to review brushing technique with your Dentist or Dental Hygienist.

Remember: If a good toothbrushing technique is used with the wrong type of toothbrush, the teeth and gums can still be harmed. Good technique and using the correct type of toothbrush are two keys to good oral care.

For more information on tooth brushing and other oral health topics visit:

- American Dental Association website: www.ada.org or www.mouthhealthy.org
- American Academy of Periodontology website: www.perio.org
- Manual versus powered toothbrushing for oral health (Review) The Cochrane Library 2009, Issue I <http://www.thecochranelibrary.com>

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Preventive Oral Health Series: Part II : Choosing the Right Toothpaste

In the first article of our Series on Preventive Oral Health, we reviewed how to brush your teeth most effectively and how to select the correct type of toothbrush as two keys to good oral care. This article will review what you can do to effectively choose the right toothpaste for good oral hygiene and to help prevent periodontal (gum) disease.

Brushing your teeth at least two times a day (morning and night) along with flossing at least once a day to clean between the teeth, are cornerstones of good oral healthcare and keys in the prevention of periodontal disease. Periodontal disease is very common in adults and is a contributing factor leading to an increased risk and development of poor diabetes control, aspiration pneumonia, stroke and other conditions.

Toothpaste Definition and Ingredients

Although the components of a particular toothpaste may vary, there are ingredients which are found in most toothpastes. Some of those common ingredients are: abrasive agents, water, binders-thickeners, moisturizers, detergents, flavoring & sweetening agents, and preservatives. In addition there may be various therapeutic agents like Fluoride.

Toothpaste Regulation

The United States Food and Drug Administration (FDA) approves all toothpastes which have Fluoride and requires that the manufacturer meet certain standards or requirements for the product's active ingredients, indications for use, and claims. However, the FDA does not test toothpastes to insure or verify the product is in compliance.

According to The American Dental Association (ADA), the "ADA Seal of Acceptance" is designed to help consumers make informed decisions about safe and effective consumer products (e.g.s toothpaste). The ADA Seal Program is voluntary for



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manufacturers. To qualify for the Seal, a company must meet a number of requirements to prove ingredients and manufacturing processes are safe and effective.

Toothpaste Selection

Selecting the proper toothpaste to meet your needs is very important. This is not a one size fits all situation, as there are many types of toothpastes on the market today.

The first step in selecting a toothpaste is to select one that contains Fluoride. Fluoride works primarily and most effectively to inhibit tooth demineralization, enhance tooth remineralization and inhibit plaque bacteria. All toothpastes which have earned the ADA Seal of Acceptance contain Fluoride. Research suggests brushing with a fluoridated toothpaste results in a significant (21%-45%) reduction in cavities depending on brushing frequency (1-3 times per day). This reduction in cavities is in addition to the reduction already achieved by drinking fluoridated water (approximately 50%). Therefore, using a Fluoridated Toothpaste and drinking fluoridated water are both important in achieving good cavity reduction results.

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Types of Toothpaste

Toothpastes for Sensitive Teeth (Hypersensitivity):

These toothpastes have special ingredients such as potassium nitrate, strontium chloride or high levels of stannous fluoride to decrease tooth sensitivity. These toothpastes can be particularly helpful for people with exposed root surfaces. It may take several days or weeks to notice a change in tooth sensitivity after starting to use a toothpaste formulated for hypersensitivity.

Gingivitis or Plaque Control Toothpastes:

Plaque is bacteria that adheres to tooth surfaces. These toothpastes have additives which typically inhibit bacteria responsible for the progression of gingivitis and plaque formation.

Calculus or Tartar Control Toothpastes:

Calculus or tartar is mineralized plaque which hardens and becomes difficult to remove. These toothpastes have additives which help prevent the formation and build-up of calculus or tartar.

Whitening Toothpaste:

It should be understood that Whitening Toothpaste is not a substitute for in-office or take-home whitening treatments or products. Although some of these products may contain peroxide which is found in some whitening agents, the mechanism of action for these toothpastes is through additives which help in the efficient removal of extrinsic (not in the tooth structure) stains.

High Fluoride Toothpaste:

Most over-the-counter (OTC) toothpastes contain similar concentrations of Fluoride that prove beneficial for most people when used in conjunction with good oral hygiene, regular cleaning and check-ups by a Dentist and Dental Hygienist. However, for people with conditions such as exposed root surfaces and a high susceptibility to cavities, toothpastes are available by prescription from a Dentist which contain a higher level of Fluoride than OTC brands.

People should visit a Dentist regularly for an oral examination (check-up) and cleaning. Every six months is a common schedule; however, depending on a person's particular oral health status and needs, it may be more or less than every six months. The check-up is an excellent time to review brushing technique with your Dentist or Dental Hygienist and to discuss what type of toothpaste is best suited to meet your oral health needs. **Note: It is very important to use a toothpaste that is not too abrasive as it can cause damage to teeth and gums.**

Remember: Selecting the right toothpaste and using a good toothbrushing technique with the correct type of toothbrush are essential parts of good oral care.

For more information on tooth brushing and other oral health topics visit:

- American Dental Association website: www.ada.org or www.mouthhealthy.org
- American Academy of Periodontology website: www.perio.org
- Manual versus powered toothbrushing for oral health (Review) The Cochrane Library 2009, Issue 1 <http://www.thecochranelibrary.com>

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Preventive Oral Health Series: Part III: Fluorides and Mouth Rinses

This is the third of our three-part Series on Preventive Oral Health. The first article of our Series (June 2013) reviewed how to brush your teeth effectively and select the correct type of toothbrush as two keys to good oral care. In the second article (July 2013), we examined the types of toothpastes available on the market and how to effectively choose the right toothpaste as a part of a good oral hygiene program.

Brushing your teeth at least two times a day (morning and night) along with flossing at least once a day to clean between the teeth, are cornerstones of good oral healthcare and keys in the prevention of periodontal (gum) disease and tooth decay. Periodontal disease is very common in adults and is a contributing factor leading to an increased risk and development of poor diabetes control, aspiration pneumonia, stroke and other conditions.

In this article, we will discuss the use of fluorides, mouth rinses, and various other preventive dental products as part of an effective preventive oral health program. Fluoride works by mechanisms which affect tooth surfaces and plaque. It works primarily and most effectively to inhibit tooth demineralization, enhance tooth remineralization and inhibit plaque bacteria. The Fluoride can be delivered by drinking water, food, beverages or dental products such as fluoride rinses, gels, varnish and toothpaste.

Community Fluoridated Water (CFW)

CFW has been in use for 68 years and has been shown to reduce tooth decay by approximately 50%. The Centers for Disease Control and Prevention has mentioned community water fluoridation as one of 10 Great Public Health Achievements of the 20th century. It is important to remember that switching to non-fluoridated bottled water instead of drinking fluoridated drinking water may result in an increased risk of getting tooth decay (cavities), if the fluoride is not supplemented in other ways.

Topical Fluorides

There are several products which can effectively deliver fluoride topically (to tooth surfaces and plaque).

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Fluoride Containing Toothpastes

As we stated in the July Newsletter, all toothpastes which have earned the ADA Seal of Acceptance contain fluoride. Research suggests brushing with a fluoridated toothpaste results in a significant (21%-45%) reduction in cavities depending on brushing frequency (1-3 times per day). This reduction in cavities is in addition to the reduction already achieved by drinking fluoridated water. Over-the-counter (OTC) toothpastes typically have a lower fluoride concentration than toothpastes which are available from a dentist by prescription. These prescription toothpastes, which contain a higher concentration of fluoride, are especially beneficial for people with conditions such as exposed root surfaces and a high susceptibility to cavities.

Low Fluoride Concentration Rinses and Gels

These products may be applied at home by the individual and may be used in addition to OTC fluoride toothpastes. Those products such as gels which do not have their own applicator system, are usually applied via toothbrush. OTC fluoride rinses are not recommended for children under the age of 6 or people who may have difficulty not swallowing the product. Manufacturer's or dentist's recommendations should be followed when using these products which typically call for use once daily and after brushing. These products are particularly helpful for patients with an increased susceptibility to cavities, exposed root surfaces or hypersensitivity.

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High Fluoride Concentration Gels, Rinses, Foams and Varnish

These products are typically applied by a dental professional after a dental cleaning and contain a higher concentration of fluoride. Gels and foams typically involve the use of a tray or carrier system and are held in the mouth for several minutes under the supervision of a dental professional. Fluoride varnish is a concentrated version of topical fluoride that is painted on teeth to give a long Fluoride exposure. Fluoride varnish typically takes less time to apply and creates less patient discomfort than comparable high fluoride gels. These products may be particularly beneficial for people with moderate to extreme risk of getting cavities, exposed root surfaces or root caries and/or tooth sensitivity. The frequency of application depends on a person's individual oral health risk factors and status.

Mouth Rinse Overview

A variety of mouth rinses are available on the market today and are used for a variety of reasons such as to:

- freshen breath;
- prevent or control cavities (tooth decay);
- decrease plaque formation;
- prevent or reduce gingivitis (a reversible and early form of gum disease);
- decrease the speed that tartar or calculus (mineralized or hardened plaque) forms on teeth; or
- produce a combination of the effects mentioned above.

Mouth rinses may be categorized as either Cosmetic or Therapeutic. According to the ADA, cosmetic mouth rinses act temporarily to control or reduce bad breath and leave the mouth with a pleasant taste. They don't kill the bacteria that cause bad breath or chemically inactivate odor causing compounds. Also, none of the cosmetic mouth rinses helps reduce plaque, gingivitis, or cavities. Therapeutic mouth rinses, on the other hand, can help reduce plaque, gingivitis, cavities and bad breath. Some therapeutic mouth rinses contain agents that either fight bad breath bacteria or that chemically inactivate odor causing compounds. Therapeutic mouth rinses that contain fluoride also help reduce or prevent tooth decay.

Chlorhexadine Gluconate is an antibacterial rinse that is only available by prescription. It has been used for the management of cavities and periodontal disease because it is effective against bacteria associated with both conditions. This product is particularly effective for people with a high to extreme risk of getting tooth decay.

Xylitol is a sweetener which inhibits some bacteria associated with tooth decay. It also reduces plaque formation and stimulates saliva flow. Xylitol can be found in specially-formulated products such as some gum, mints, sprays, and toothpaste. People generally like the taste of Xylitol containing products. It is especially beneficial for people with a moderate to extreme risk of getting cavities and to treat some causes of dry mouth.

To summarize, a variety of mouth rinses, fluorides and other preventive dental products are available which have the potential to be beneficial . People should visit a Dentist regularly for an oral examination (check-up) and cleaning. Every six months is a common schedule; however, depending on a person's particular oral health status and needs, it may be more or less than every six months. The check-up is an excellent time to review your preventive oral health program with your Dentist or Dental Hygienist and determine which fluorides, mouth rinses and/or other preventive dental products may benefit you.

For more information on fluorides, mouth rinses and other oral health topics visit:

- American Dental Association website: www.ada.org or www.mouthhealthy.org
- American Academy of Periodontology website: www.perio.org

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