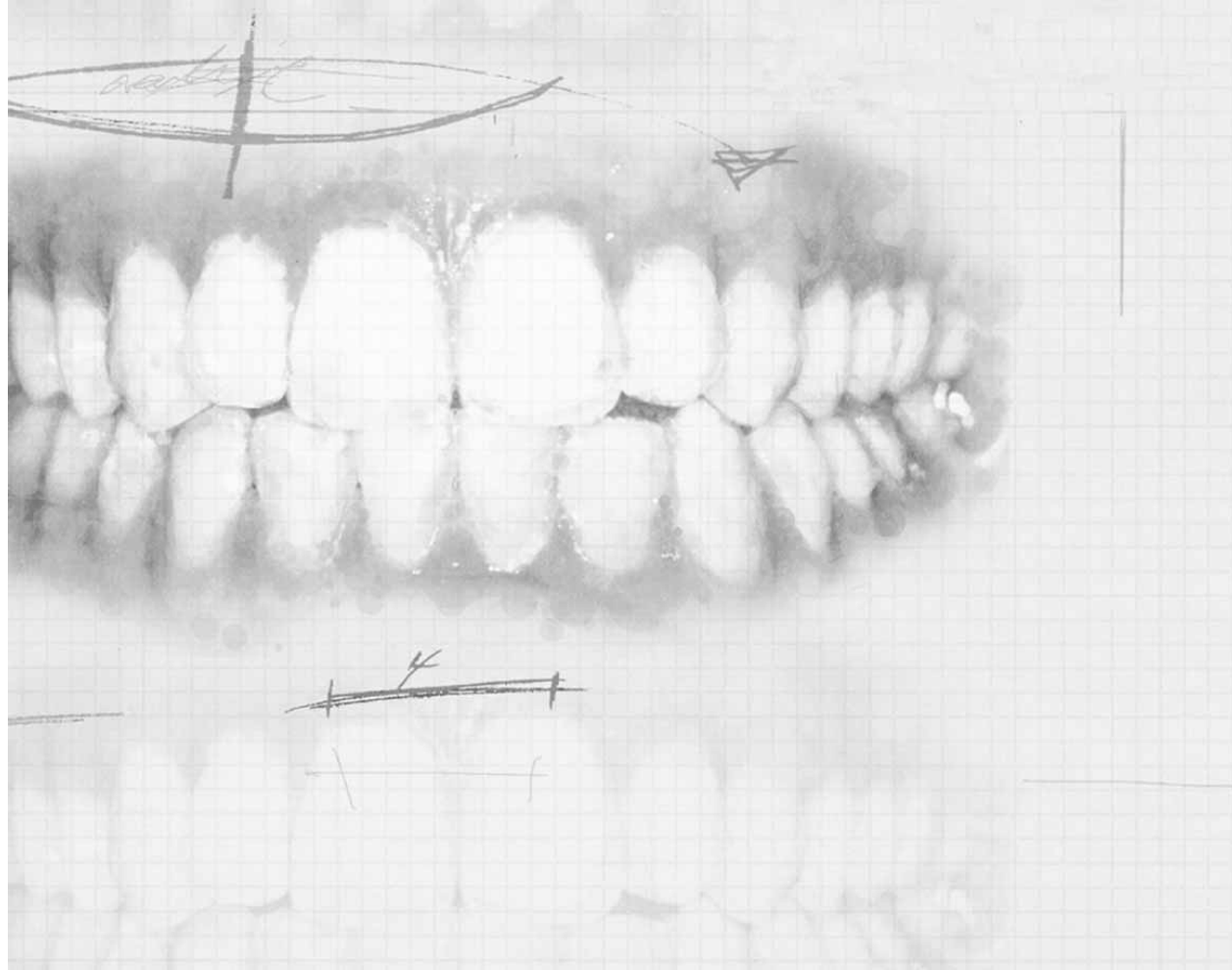


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Diagnosis and Treatment of Moderate to Advanced Gum Disease Patient Education Packet



Before Treatment Begins

As you consider having extensive dental treatment, it may be beneficial for you to review the following points:

- *Time Commitment.* Because of the nature of dental appointments, it may be necessary for you to take some time off work. A few longer appointments are generally more efficient and less inconvenient than many short appointments. This will minimize your time in the office. Usually, the best time to have a long appointment is in the morning. Once the treatment has begun, it needs to be completed in a timely fashion. If treatment is delayed or missed, it could change the proposed treatment plan. This could adversely affect the total cost to you.
- *Dentistry is both an art and a science.* In complicated and technically difficult cases it is sometimes necessary due our high standards to retake impressions, remake crowns, or modify a component, etc.
- *Make certain you are aware of what treatment is required and the goals of treatment.* If you do not understand why we have made a particular recommendation or treatment sequence, or the length of treatment required, please ask us for clarification before treatment begins. It is possible that previously undetected dental problems will be discovered once tooth preparation has begun. When this occurs after the treatment plan has been developed, you will be immediately informed.
- *You should be comfortable with all financial arrangements before any treatment is begun.* Pre-estimates sent to insurance carriers can help approximate your out-of-pocket costs. Establish your dental budget. This will determine how much and how quickly treatment can proceed. Understand that you, and not your insurance carrier, are ultimately responsible for the total cost of treatment. If you would like to have more treatment than you can easily afford at one time, it maybe possible to have the dental procedures done in phases over months or years. This will also allow you to use your insurance benefits to the maximum permitted. Payment is expected as work is completed.
- *Thorough oral self-care is very important, both at the beginning of treatment and afterward.* The better your oral health is, the easier the restoration process will be. You may be asked to use an antimicrobial prescription mouthrinse from 2 weeks before we begin treatment until after all restorative treatment is completed. Please follow these instructions.
- *While dental restorations function well for years of service, nothing lasts forever.* Not us, not dental restorations. We use the best available dental materials and techniques, but the reality is that some restorations simply last longer than others. With today's longer life span, the restoration might even wear out! The better you maintain your dental restorations, the longer they will last. Just as with anything else, proper maintenance is required.
- *Before beginning treatment, understand clearly what will be required of you for daily oral self-care, your periodic professional dental hygiene recare appointments, and the limitations of the restorations and dental prostheses you will receive.* This means that you must brush and floss your teeth as instructed every day. When extensive dentistry is completed, a 3- to 4-month interval for periodic dental hygiene recare appointments is strongly advised.

Dental restorations are subject to the same physical abuse as natural teeth. Whatever oral habits will break a natural, undrilled, undamaged tooth—such as chewing ice, biting fingernails, hard objects etc.—will probably be able to break a restoration as well. Expansion and contraction for hot liquids and cold foods can cause damage, as can the wet, dark, bacteria-filled oral environment of the oval cavity. *If you have ever considered whitening your teeth, the time to do it is before dental restorations are placed in teeth that are visible when you talk or smile.* If you are interested in tooth whitening, ask us now!

ORAL BACTERIA

Bacteria are the culprit in periodontal disease

Imagine you're in a jungle. It's warm and moist and there is plenty to feed on. It is also crawling with hundreds of diverse species of living beings. Many are harmless and some are even beneficial to the environment. However, one group can be described as predators, attacking their immediate environment and wreaking havoc far and wide. To stop the wild beasts, you need weapons. What should you grab? A toothbrush and floss. Okay, we're not talking about the Amazon Rain Forest, we're talking about your mouth, but it really is a jungle in there.

More than 500 species of microorganisms have been identified in the mouth. Approximately 15 of these bacterial species have been implicated for playing a role in periodontal disease. Whether or not you get periodontal disease depends on a complex interplay between these bacteria, your response mechanism and environmental factors, such as smoking. Your saliva includes proteins and antifungal agents, which help get rid of oral bacteria.

The bacteria in plaque cause the gums to become red and swollen and to bleed easily. Eventually, gums separate from the teeth forming pockets. The pockets fill with even more plaque and infection and eventually deepen. Over time, tissue and bone are destroyed and the teeth loosen.

To stop this process, it is necessary to eliminate the infection-causing bacteria that accumulate below the gumline; dental professionals often use simple procedures such as scaling and root planing. These are nonsurgical procedures to remove plaque and tartar from below the gum line. Tooth root surfaces are cleaned and smoothed as the rough surfaces of tartar make it easier for bacteria to get a foothold.

In addition, your dentist may recommend antibiotic treatments to enhance traditional therapies. These are designed to kill a wide variety of oral bacteria.

Someday, researchers may discover a vaccine to eliminate harmful bacteria from the mouth. Until then, arm yourself with a toothbrush, floss and regular dental visits. □

Since doctors believe many health complications can be prevented with good diabetic control, it's important to pay attention to what your oral health is telling you. Signs and symptoms related to oral health may provide clues about the presence of diabetes or uncontrolled diabetes. Investigate your mouth and take note of some of the following clues:

- Bleeding gums when you brush or floss
- Red, swollen or tender gums
- Gums that have pulled away from your teeth
- Dry mouth

If you notice any of the clues listed above, you will want to contact your dentist, and inform them of your symptoms. You can have periodontal diseases without any symptoms, so a periodontal evaluation is the best way to know if you have any periodontal diseases.

Proper oral hygiene is the best method to prevent periodontal diseases. Prevention includes daily flossing to break up the bacterial colonies between the teeth, proper daily brushing to prevent plaque buildup and professional cleanings at least twice a year to remove calculus from places the toothbrush and floss may have missed. ☺

Gingivitis

Almost everyone knows what a cavity is, but by 2004 thanks to the far-reaching benefits of advertising by toothpaste and oral rinse manufacturers almost everyone had heard of **gingivitis**. What may not be quite clear to you, however, is exactly what gingivitis is. You may recognize it as a problem but not know why and how serious it might be. You may even know that it is a type of gum (periodontal) disease. You may also know that it is somehow related to plaque and tartar (calculus) on teeth. But why should you be concerned about having it?

Gingivitis is an infection of the gum tissues surrounding the teeth. It is a very common infection and affects almost 95% of the world's population. This infection can be characterized by redness, swelling, and bleeding of the gums around the teeth. This gum infection absolutely needs to be treated as soon as possible. Gum infections are almost always preventable with sound daily oral self-care.

Gingivitis is the mildest form of periodontal disease and is reversible. By definition, there is no loss of bone that supports the tooth. If treated early, gingivitis can be eliminated. If left untreated, it can progress into the more serious form of periodontal disease called *periodontitis*. In its more serious form, the bone and gum tissues can be permanently affected. Bleeding gums, one of the signs of gingivitis, are a sign of infection in the mouth. Your gum tissues should never bleed. It is not normal for blood to appear on your toothbrush when you have finished brushing. Gingivitis does not generally hurt, so you may not even know that you have it. It can be localized (around a few teeth) or generalized (around most or all of the teeth). Gingivitis is seen most often in patients who do not brush and floss well daily, but it can also be related to medication. Bad breath can be another sign of gingivitis. If you are using a mouthwash to get rid of bad breath, you may need dental attention. While bad breath can be related to some medical problems, most often it is just debris that is not cleaned properly from your teeth, gums, and tongue that is decomposing in the dark, warm, and moist environment of your mouth—a perfect place to breed germs.

If you have bleeding gums, you should be concerned. Healthy tissue anywhere in our bodies does not bleed. So what can you do to stop the bleeding?

We can help you eliminate the gingivitis. It involves a good professional cleaning and good oral self-care habits. Plaque (soft debris made up of bacteria) and tartar (calculus or hardened debris) must be removed before the gum tissues can heal and the infection can be eliminated. If it has been some time since you had your teeth cleaned properly, it may take more than one appointment to get you back into shape.

Early Signs of Periodontal Disease

Get your teeth and gums cleaned on a regular basis. Keep them clean with daily brushing and flossing. The infection you have will be eliminated. If you keep your teeth and gums clean, they can be healthy and trouble-free for your whole life.

The early warning signs of every disease occur at a microscopic level. The early warning signs cannot be seen, felt, touched, diagnosed, or discovered. They cannot be noted by their symptoms. The early changes might be able to be detected by sophisticated chemical or biologic analysis, but not by normal diagnostic measures.

By the time you notice that your gums are bleeding (gingivitis), the disease has already been present for some time and it is not in its earliest stage. It is not unusual to hear, "My gums have always bled like this," but treatment is not sought. Yet if our eyes started to bleed when we washed our faces, we would generally rush to seek medical treatment! Bleeding gums are not normal and healthy. Luckily, at this stage the periodontal disease is fairly easy to treat and is reversible. When the disease has progressed past the bleeding gum stage, you may notice some pain, gum recession, loosening of teeth, and bad breath. If you have ignored your bleeding gums (possibly the earliest sign of gum disease) because you think it is normal to have a little "pink" on your toothbrush, you will likely have additional symptoms and conditions associated with disease progression. At this point the bone and gum support for the teeth may be permanently altered and diminished.

It is recommended that you adhere to the suggested time intervals for your dental cleaning appointments. We will examine your gums during your periodic dental cleaning appointments for early signs of periodontal disease. While we clean your teeth, we will note areas where it is difficult for you to remove plaque or where calculus forms and areas of gum tissue inflammation and will record probing depths, which will measure your gum tissue for signs of periodontal disease. We can then demonstrate effective oral self-care to prevent these areas from progressing into periodontal disease.

We want to stress prevention. Don't wait for the warning signs of gum disease to occur before you schedule your dental hygiene appointment. If you have very few fillings, have not lost any permanent teeth (other than wisdom teeth), and have very thorough oral self-care daily, a yearly cleaning and exam by the dental hygienist and dentist may be adequate. If you have had a great deal of dental work performed (bridges, crowns, fillings) or if you have missing teeth that have not been replaced and you don't spend time with adequate oral self-care, visiting the dental office three or four times a year might be necessary. We will let you know what is appropriate for your individual oral condition

Pocket Depth Measurement

When a dentist or physician is preparing a treatment agenda to heal a disease, test results are analyzed. Treatment decisions regarding a potential cure depend on information gathered. The more accurate the diagnostic information, the better the diagnosis and treatment. In the realm of periodontal disease, diagnosis is based in part on the collection and analysis of many numbers, specifically, measurements of the depth of the sulcus (crevice) of gum tissue that surrounds each tooth.

A periodontal charting generally consists of taking at least six measurements around every tooth. Areas of bleeding are also recorded. The evidence of bleeding is significant. Healthy gum tissue does not bleed when gently probed. There are certain factors, such as found in smokers that restrict bleeding, so lack of bleeding alone does not signify a healthy site.

These measurements (in millimeters) are one of the diagnostic tools (along with tissue color, position, and shape) a dentist and dental hygienist use to determine the severity of periodontal (gum) disease. Measurements generally range from 0 to 12 mm. Probing of the sulcus around the tooth often shows normal depths of 1 to 2 mm with greater depths in between the teeth where they touch as opposed to the direct cheek side or tongue side. The numbers will vary from position to position and tooth to tooth. They are rarely uniform throughout the entire mouth. The higher numbers indicate more severe soft and hard tissue involvement, and the greater the number of higher readings, the more likely surgical intervention is needed.

0 to 3 mm with **no bleeding**: Great numbers. No periodontal disease present.

1 to 3 mm **with bleeding**: Gingivitis (the mildest form of gum disease) present. Probably no bone loss. Usually treated with a good professional prophylaxis (cleaning) and improved oral self-care.

3 to 5 mm with **no bleeding**: May or may not have gum disease present. Smoking may be a factor in lack of bleeding. Since a patient cannot reliably clean deeper than 3 mm on a routine basis, there is high potential for gum disease to begin. Recommend professional recare visits 3 to 4 times a year.

3 to 5 mm **with bleeding**: Early to moderately advanced periodontal disease. Treatment is professional prophylaxis consisting of scaling and root planing and possibly systemic and/or site-specific antibiotics and other medications. Supporting bone may be involved. More frequent and extensive recare appointments are required. Some surgical intervention is possible.

5 to 7 mm **with bleeding**: Soft and hard tissue damage. Bone loss likely. Treatment will involve a more aggressive prophylaxis—scaling and root planing. Multiple appointments will be needed. Localized surgical intervention probable. Systemic and site-specific medications commonly used. Teeth may have started to become loose.

7 mm and above **with bleeding**: Advanced periodontal disease. Aggressive treatment required if teeth are to be saved. Surgery almost always required. Referral to periodontist is common. Systemic and site-specific medications commonly used.

In short, low numbers are good and high numbers are bad. The presence of deep periodontal pockets corresponds to more extensive gum disease and the need for more periodontal treatment.

Periodontal Disease

Periodontal disease is an infectious process classified according to how much damage has been done to the structures surrounding the teeth, namely the gingiva (gums) and bone. **It is an infection in your mouth.** It can happen anytime, around any teeth, affecting some or many of your teeth to varying degrees. There are genetic predisposing factors to periodontal disease, and our immune systems play a role in gum health, but it is usually related to how well you are able to keep your teeth clean through proper oral self-care. The better you clean your teeth to remove all the plaque bacteria, the less likely you will be to develop periodontal disease.

Progress of the Disease

The bacteria that cause this disease first cause the gum tissue to become inflamed and pull away from the teeth. As the problem becomes more serious, the bone that supports the teeth also becomes infected and begins to break down and dissolve. The teeth then become loose. Once the bone disappears, it is extremely hard, if not impossible, for new bone to be rebuilt. The damage is permanent and your teeth, the surrounding bone, and your general health will be compromised.

Periodontal disease is classified into several types. You will be given a separate handout with the appropriate description of the severity of your infection.

The mildest form of this infection will show up in red and swollen gum tissue that bleeds easily. There is seldom any pain involved at this stage. You may notice also that your breath becomes offensive and you feel the need to use mouthwash. Our sense of smell does become immune to the same odors, so we can lose our ability to detect our own offensive, diseased breath. As the disease progresses, the gum tissue becomes more red and swollen, more bleeding can be seen, and the teeth begin to become loose. This tooth mobility is a sign that there is a severe problem. There may still be no pain at this advanced stage. As more and more bone is lost and more teeth become involved in the infection, it becomes harder to treat. At this point, many times, the management of your problem will involve periodontal surgical procedures. If this is the case, you may be referred to a periodontist (gum specialist) for further treatment. Most of the time, periodontal disease starts and continues because of neglect. Brushing and flossing of teeth are not being done effectively on a daily basis. You may have been neglectful in getting your teeth checked and cleaned within the time frame intervals you need. Once we have diagnosed this disease, we will inform you of the problem and suggest treatment. If treatment is not completed, however, the disease will continue to progress. Unfortunately, the disease is quite invisible to most people until severe and possibly irreversible damage has occurred.

Soft Tissue Management

You have been diagnosed as having periodontal disease. Your specific periodontal problems may be slight and localized, slight and generalized, moderate, or severe. You may be a new patient or a patient who has been receiving treatment by us for some time. Treatment may be simple or quite complex and arduous. If you have been receiving continuous, regular hygiene care by us, there may have been a change (for the worse) in the condition of your periodontium (gums and supporting bone structure) or you may have had existing pockets that have not responded to conventional treatment. If you are a new patient, we are starting necessary treatment. Periodontal infection is site-specific and episodic: it can happen around teeth at any time.

Initial periodontal therapy, also known as *soft tissue management*, is an aggressive yet the most conservative method of treating periodontal (gum) disease. It is not periodontal surgery. It is done to attempt to minimize or eliminate the need for

periodontal surgery. Initial periodontal therapy involves a thorough root planing of all infected areas. The root planing is designed to remove the toxins produced by the bacteria in plaque.

When initial periodontal therapy is coupled with an oral self-care regimen of brushing, flossing, and use of periodontal cleaning aids as instructed, the results can be dramatic! You have a great deal of the responsibility and can affect the outcome of treatment. Oral self-care instructions will need to be followed carefully; otherwise, what we do for you at our office can all too easily be undone at home.

You have been given other written information about procedures that will be performed, such as subgingival irrigation. Other procedures may be required, but we will discuss these with you before we do them.

What dentistry believes is true about periodontal disease this year is very different from what it considered fact several years ago. We now know that periodontal disease is not caused by one organism. It is caused by many different organisms that can be active and inactive during different periods of the disease process. We know you will not experience symptoms until bone destruction is advanced. This disease does not hurt until advanced stages. As research continues and dentistry learns new facts about the beginning and progression of periodontal disease, the treatment recommended and provided by the dentist and/or periodontist will change. You will particularly notice this if you have been treated for this disease in the past, either here or elsewhere. New discoveries, new treatments, and new medications will continue to change the way we treat this disease process. Some people may still think that correct procedure to maintain periodontal health is to get your teeth cleaned only twice a year. That hasn't been the case for 20 years. We now know that periodontal disease is an infection that affects about 95 of 100 adults. It can occur in bursts of activity and can cause profound bone loss.

We promote oral health for all of our patients. However, every patient is different. The treatment you need will differ from that of another. The fact is that our goal for you is to **prevent** both tooth decay and periodontal disease.

Scaling and Root Planing

Has your dentist recommended scaling and root planing to you? If so, do you wonder exactly what this procedure will accomplish? **Scaling and root planing is a method of treating periodontal disease when pockets are greater than 3mm.**



Subgingival scaling. Cleaning the tooth below the gum.

Root planing. Smoothing the tooth root.

Scale and root planing is a non-surgical treatment usually recommended to most periodontal patients as the first mode of treatment. It is a careful cleaning of the root surfaces below the gum line to remove plaque, toxins and tartar from the root surfaces of the teeth with special instruments, ultrasonic scalers and some times even employees the use of lasers. This procedure is more intensive than a routine general dental prophylaxis or cleaning, which traditionally occurs every six months. For your comfort, the area may be numbed prior to treatment.

In some cases, systemic antibiotics (antibiotics taken orally), locally administered antibiotics (antibiotics placed into periodontal pockets), and or antibacterial mouth wash are prescribed at the time of the SRP procedure.

Antibiotics will help fight infections caused by the bacteria. Each time you take a systemic antibiotic, you increase your chance of developing drug resistant bacteria. That said, it is important to take antibiotics only as prescribed when necessary.

Research has consistently demonstrated that SRP reduces gingival inflammation and probing depths, and shifts the bacterial composition living in these pockets from one that is associated with disease toward one associated with health.

It is important to remember that some patients may not respond optimally to SRP with or without the antibiotics. These patients often respond favorably to advanced periodontal procedures that may include measures aimed at regenerating the natural anatomy that was lost to disease.

Periodontal diseases (also known as gum diseases) are infections of the gum and bone that hold teeth in place. If periodontal problems are not treated, they can become severe and may eventually lead to tooth loss. Periodontal diseases are often painless and you may not be aware that you have a problem until your gums and

the supporting bone are seriously damaged. The good news is that periodontal diseases often can be treated in the early stages with a treatment to clean your teeth called scaling and root planing. Treatment has a huge benefit. You'll increase the chances of keeping your natural teeth.

Plaque includes a film of bacteria that attaches to teeth and gums. The bacteria in plaque cause irritation of the tissues that support your teeth. This irritation can lead to chronic inflammation, bleeding, and infection that can destroy your gum and bone tissue.

Plaque that is not completely removed may harden (calcify) into a rough, porous deposit called tartar, or calculus. Tartar by itself does not cause disease, but it typically allows more plaque to form and makes it more difficult to remove plaque that can thrive on, in or near the tartar. The only way to remove tartar is to have your teeth cleaned at the dental office. Importantly, plaque is always forming even as you sleep. Thus, regular visits to the dentist are necessary to remove plaque and calculus in hard to remove places.

Preventing Recurrence

Once scaling and root planing has been completed, it is most important for you to practice the brushing and flossing techniques in which you will be instructed. Prevention is your first line of defense. This includes a good daily oral hygiene routine at home. Brushing twice a day with fluoride toothpaste and cleaning between teeth once a day with floss or another interdental cleaner help prevent tartar from forming. The dental office staff may provide instructions on additional cleaning methods or may recommend oral hygiene products to use at home. Look for products that display the American Dental Association's (ADA) Seal of Acceptance, a sign that a product has met the ADA's criteria for safety and use a balanced diet for good general health and limit snacks.

Regular dental checkups and cleanings are important in preventing periodontal diseases. If these measures are not taken, the likelihood of disease increases. In some cases, even with these measures, a certain percentage of patients experience some form of periodontal disease that must be treated. Systemic diseases, such as diabetes, blood cell disorders, HIV infections, and AIDS can lower the body's resistance to infection, placing an individual at greater risk for more severe forms of periodontal diseases. Tobacco use can also affect the health of your gums. Talk to your dentist about how to quit

Scaling and Root Planing: Reevaluation

The goal of scaling and root planing is to remove all plaque, toxins, and calculus both above and below the gumline. After healing has occurred, the tissues will shrink, and a reevaluation of the condition of the gum and supporting structures will reveal any areas that may need re-treatment. Your oral self-care habits will be reevaluated at the same time and any revisions to our recommendations will be made. We will be polishing your teeth at this appointment. As you will recall, we did not polish your teeth during the root planing and scaling appointments. Although the polishing can, in theory, be done then, we believe that allowing tissues proper time to heal will allow us to make the best reevaluation of our treatment and oral self-care recommendations. That is why there is a time period of several weeks between the root planing and scaling appointment and this prophylaxis and evaluation. Once all tissues have responded and the goals of scaling and root planing are met, a recare interval will be established for you.

At the recare appointment, we will once again be evaluating your oral self-care to determine whether we need to recommend different procedures to keep your oral health at its best. We will reexamine your periodontal tissues for evidence of healing by remeasuring the probing depths around each tooth. Any areas of bleeding will be noted and treated; your teeth will then be polished and a topical fluoride treatment will be applied.

Topical fluoride provides a bacteriostatic action to the oral bacteria during treatment and for several hours afterward. It appears to be harder for the bacteria that cause gum disease to multiply and cause problems when topical fluoride is used.

If the goals of scaling and root planing have not been met, we will either re-treat those areas that have reinfected or refer you to a periodontist for specific periodontal surgery. The periodontal surgery will correct some of the hard (bone) and soft tissue defects that were caused by the periodontal infection.

At this time we may also consider using one or more of the newer nonsurgical therapies available for localized sites that have not healed as much as we would like. The site-specific therapy may be recommended for the first time or as a re-treatment. We will then monitor the results to determine whether a referral to a periodontist is appropriate.

A final word about how often you should have your teeth cleaned: modern dentistry considers a patient who has had gum disease to be always recovering, never completely "cured." If you do not take care of your teeth and gums, the problem can come back again. It is in the best interest of your oral health to have your teeth examined and cleaned at an interval of 3 to 4 months in most cases, not every 6 months as you have heard for years.

Chlorhexidine Gluconate Oral Rinse 0.12%

Chlorhexidine gluconate oral rinse 0.12% provides long-term antimicrobial benefits. It is effective in reducing the redness, swelling, and bleeding of gum tissue that are present in gingivitis and periodontitis. This is not a cure for periodontal disease and should not be considered as a major treatment for this type of infection. Use of this rinse for up to 6 months does not appear to cause any significant changes in bacterial resistance or overgrowth of opportunistic bacteria or other organisms. It does not appear to cause any adverse changes in the normal microbial system that exists in the mouth.

The normal dosage is ½ fluid oz per use. (Use measuring cup provided or see markings inside cap.)

Precautions

Use of this rinse can cause staining of the teeth, tongue, and some types of restorations. The stain can be easily removed by a professional cleaning. If you brush and floss your teeth thoroughly, this will be much less of a problem. Some patients may notice a slight change in taste sensations while using the rinse. This taste alteration will return to normal after the rinse is discontinued.

Periodontal Surgery

Periodontal surgery is required for a variety of reasons. Any surgery would be initiated only after all signs of infection have been eliminated and you are involved in high-quality oral self-care. Periodontal surgery involves the contouring of the soft (gum) and hard (bone) tissues. The simplest type of periodontal surgery involves the reshaping and/or repositioning of the soft tissues only. The surgery may be required in order to eliminate or reduce problem pocket depths around one, several, or all teeth. The problem areas are usually places where you are having some difficulty keeping the area free of infection, plaque, and calculus.

It may also be necessary to reshape soft tissues to improve your appearance (cosmetic periodontal surgery) or to gain access for proper preparation and placement of any type of restorations. Different periodontal surgical procedures that do not involve the underlying bone can include correcting a frenum (muscle attachment) that is poorly positioned and grafting tissue to a new area where there is a deficient amount of periodontal tissue. These procedures may require some suturing of the gum tissue.

If you have experienced a more severe periodontal breakdown, your bone may have been affected by periodontal disease and may also require reshaping. This surgery is more extensive than soft tissue surgery. If your whole mouth has been affected, the surgery may be done in sections in separate appointments. Sutures and a periodontal dressing (intraoral bandage) are placed while healing occurs. A local anesthetic is used for these procedures. Postoperative discomfort will be alleviated with a prescription or over-the-counter medication.

Results

Once the healing has been completed, you will notice several things. Unless there was a graft placed or a frenum (muscle) cut, there will be soft tissue removed from around the teeth. This usually means that the teeth will look longer—because more of the teeth will be exposed. From an appearance standpoint, this is not usually welcomed, but it may be unavoidable. If you have experienced bone loss, the tissue may have to be repositioned in order to have the correct distance between the bone and gum. The soft tissue change may be slight or significant. Before the periodontal procedure, we will discuss with you the expected appearance of the teeth after surgery. We will also discuss with you whether there are other methods that can be used to improve the appearance of your teeth after the tissues have healed. If you are being referred to a periodontal specialist for these procedures, the expected results will be explained to you there as well. After surgery, you may experience increased sensitivity to hot and cold stimulation—ice cream and cold or hot drinks, for example. The sensitivity may be slight or severe; it may be short-lived or last for months. There is no way to predict how you will respond. If the sensitivity is severe and lingering, there are several procedures that can be done to reduce or eliminate the problem.

Gingivoplasty Procedures

There are gingivoplasty procedures to be performed. One is to correct a periodontal pathology or abnormality and the other is to reshape the gum tissue around a tooth or teeth so that a restoration, usually a crown, can be made.

Gingivoplasty is a recontouring and reshaping of the soft tissue. In both cases, there is no alteration of the underlying bone support for the teeth. This procedure might be considered the simplest form of periodontal surgery.

The most frequent reason for a gingivoplasty is that bleeding gum tissues still persist even after the teeth have been

thoroughly cleaned and polished and oral self-care is excellent. There may be areas where it is impossible for the patient to clean effectively due to different situations. Therefore, the tissue never has a chance to heal and inflammation and infection remain. Removal of some soft tissue helps reposition the gums so the area can be properly cleaned on a regular basis. If the pocket is too deep, unwanted bacteria will colonize the area and cause periodontal infection to persist. Removing the extra soft tissue allows the patient better access for proper oral self-care at that location.

The tissue rarely grows back, unless other medical factors are present or oral self-care is neglected. These procedures can be done with either a laser or scalpel, depending on the extent of the therapy.

While time-consuming to perform, both of these procedures are technically simple to complete. Visibility and access to the surgical sites are usually very good, and results can be predicted with great reliability.

In brief, a local anesthetic is given, the specific soft tissue is removed, sutures (stitches) are placed, and a periodontal surgical dressing or medicated oral bandage may be used to cover the treated area. The dressing will be removed about 7 days later. Sometimes the dressing may be reapplied for another week. This depends on your healing progress. While the dressing is in place, it is helpful to rinse with an antibacterial mouthrinse and not eat on the side that is being treated. Hard, crunchy foods or chewing gum can displace the periodontal dressing, so beware.

If you are having this procedure done in order to make enough tooth structure available for a crown, final impression for the crown will be delayed for this 4- to 8-week healing period.

Postoperatively, there may be some discomfort. Anti-inflammatory or pain relief medication may be prescribed for you.

Periodontal tissue is really thin, pink skin. New periodontal tissue will mature and will become stronger and will reach its final healed position around the tooth during the next 4 to 8 weeks.

Periodontal Osseous Surgery

Indications

When periodontal (gum) disease progresses to a more advanced stage, it is common for the underlying supporting bone to become involved. First, the soft, periodontal tissue becomes infected and inflamed. When the inflammation increases, the bone reacts to the infection. Bone is destroyed, and it does not return. You will generally not feel the gums becoming infected or the bone disappearing. Unfortunately, it is painless. Generally, by the time pain is involved, the condition is quite serious.

Since periodontal disease is site-specific, the bone loss will not be uniform. Some teeth will show slight bone loss, some teeth will show more serious loss, and some teeth will exhibit no bone loss at all. The bone loss around a specific tooth or teeth may be regular or irregular in form. The bone loss may be vertical, horizontal, or both. If irregular, surgery to correct the bone loss will be needed. It is not possible at this time to reliably regenerate all lost bone. Once it is gone, it is gone. Research involving the possibility of periodontal bone regeneration has been underway for some time. But at this time, there are few ways to regrow periodontal supporting bone after it has dissolved from periodontal disease.

Treatment

Until fairly recently, the only method of correcting the irregular bone was to smooth off the high spots. The new bone height between teeth would be even at the level of the most severe bone loss. Although the problem was now corrected, other teeth might lose healthy bone in the leveling process. This could and would make those teeth less stable, an unavoidable and undesirable consequence. In some cases, the nature of the bone defect still dictates that this procedure be done.

A better approach is to augment or build up the irregular bone in locations where it has been lost. This is accomplished with the placement of natural or synthetic bone in a procedure known as *grafting*. Natural bone has been used for over 3 decades and there have been no reported immune system problems. There are also autografts that use your own bone. Allografts are synthetic or freeze-dried natural bone.

Preoperative radiographs, clinical examinations, and periodontal charting will give us an understanding of the type of osseous surgery that is necessary. However, the full extent of the problem may not be fully discovered until the area is exposed during surgery. Radiographs are a two-dimensional, black-and-white representation of a three-dimensional, full-color area. For this reason, treatment goals will remain the same, but the surgery method may be modified. Prognosis of the teeth needing surgery, options, and a best guess for treatment progress will be discussed prior to treatment.

To perform periodontal osseous surgery, a flap must be raised. (Please refer to the **Periodontal Flap Procedures** page.) A local anesthetic is used and postoperative discomfort is handled with medication. After this surgical procedure, sutures

and a periodontal dressing are placed.

Osseous surgery may be the only treatment that will successfully help to retain your teeth after severe periodontal disease has been present for some time. Keeping your own natural teeth is generally better than having dentures.

Furcation Involvement

The roots of the teeth are covered and surrounded by bone and gum tissues when they are in their normal state and have been disease-free. Only the crown portion is visible. Some teeth toward the back portion of your mouth have two or three roots extending into the jaw bone from the crowns of the tooth. This “V-shaped” area where the tooth branches or forks into two or three roots is called the *furcation* or *furca*. The furca is also covered with bone and is attached to the tooth by periodontal ligament fibers.

As long as the furcation of a multirooted tooth is covered with the normal amount of bone and gum, everything is fine and the furca holds no exceptional interest for the dentist or dental hygienist. When there is an alteration in the density of the furca bone, or it actually starts to resorb (disappear due to some type of dental pathology), the furca area becomes important and interesting. Continued loss of bone would lead to loss of the tooth.

The loss of the bone in the furca area could be related to periodontal disease (gum disease). The periodontal pathology in the furca could be part of a localized problem—only present at that one site—or a sign that there is a more widespread problem that needs attention. The breakdown of bone in the furcation could also indicate that the nerve inside the tooth is dying, and the tooth will need a root canal (endodontic treatment).

If the breakdown is specific to the site on that one tooth, treatment would be localized. The type of therapy recommended would depend on the severity of the breakdown. Minimal disease might be treated by a dental prophylaxis (cleaning) and reinforcement of personal oral self-care. Treatment of a more extensive breakdown could involve aggressive periodontal procedures including but not limited to periodontal surgery and bone augmentation. You may be referred to a periodontist for these procedures.

If the furca breakdown is a sign of more widespread periodontal disease, the whole mouth will be evaluated and specific treatment recommendations will be made.

There are many very small nerves that exit through various portions of the tooth, and a localized furcation problem could indicate that the nerve in a tooth is dead or dying and the tooth may require a root canal.

You may think that teeth are difficult to floss and brush when tooth alignment and gum position are ideal. When there is bone loss in a furca, daily oral self-care becomes more complicated. A furca is a difficult area to clean—the more bone loss, the more difficult. In extreme cases, there is no bone or gum left in the furca, and a patient could actually place an interdental cleaning aid completely between the roots of a two-rooted tooth. For a three-rooted tooth with a furcation involvement, the cleaning process is even more of a problem.

You have been diagnosed with a furcation involvement problem. After careful examination, a treatment recommendation will be made. Our recommendation will be based on not only treating your furcation problem but also preventing further exposure of the furcation area.

Prophylaxis

There is nothing more important to your dental health than maintaining a clean mouth. Prevention or absence of infection optimizes our general health. A clean mouth will be disease-, infection-, and trouble-free. A clean mouth will not be predisposed to developing either decay or periodontal (gum) disease. One of our very important functions in dentistry is to teach you how to properly maintain your teeth and gums, and to regularly remove anything that you are unable to remove yourself.

The theory and practice of preventive dentistry have undergone revolutionary changes in recent years. We now know that the preventive needs of every individual differ. The adage of “see your dentist regularly; get your teeth cleaned twice a year” has changed too.

Your Personal Plan

The recare and examination interval that we have recommended for you is designed for your unique situation. And it, too, can change. The interval between regular prophylaxis (cleaning) appointments that is established for you is a function of many things.

These include:

- general health
- dexterity and hand/eye coordination
- age
- diet
- stress levels
- oral habits
- position and alignment of the teeth
- number, type, size, and location of restorations
- restorative materials used
- periodontal history
- location of bone and periodontal tissues

Simply stated, the more complex your dental situation and the more your tooth position and alignment deviate from the normal, the harder you will find it to keep your teeth clean and your gums healthy.

Recent studies have identified many of the microorganisms that cause gum disease and decay. They can be controlled with your help and with ours. These studies also show that a “cleaning” every 6 months may not be adequate for some patients. In order to prevent destructive oral disease, prophylaxis appointments in intervals of anywhere from 2 months to a year may be recommended. Periodontal (gum) disease can happen anywhere in your mouth at any time.

You don't have to let it happen to you! We are here to be your guide to good health.

How to Brush! How to Floss!

An old humorous expression says, “You don't have to brush all your teeth every day. Only the ones you want to keep!” And while we laugh at these words, the message could not be more correct. To maintain good oral health, teeth must be thoroughly cleaned each and every day. One good method of brushing is called the *modified Bass technique*. It is easy and quite effective. We can instruct you on how to brush properly. It is certainly easier to see it done than to read and imagine. But this will help you get started.

Use a multitufted, soft, nylon-bristled toothbrush. Hard-bristled toothbrushes can easily damage your teeth and gums. Soft-bristled toothbrushes last about 3 months before they need to be replaced. Don't keep a toothbrush for an extended period of time. When the toothbrush bristles become worn, they will not give you the best possible performance. Medium and hard brushes will last longer, but almost everyone brushes too hard to use these brushes. If you use medium and hard brushes or brush improperly with any toothbrush, you can cause permanent damage to your gum tissue, causing it to wear away. This can also wear notches into the tooth itself, exposing the dentin. In both cases, severe tooth sensitivity could develop.

The Bass Method

- The bristles of the brush should be angled toward the area where the tooth meets the gum, approximately a 45-degree angle.
- The bristles of the brush should be able to gently slide under the gum tissue. Gently move the brush back and forth so that there is a vibrating motion, **not a scrubbing motion**. The brush head should be able to cover and clean about two teeth at a time.
- Brush each area for about 10 seconds, and then roll the bristles to the biting surface. Move the brush head so that it overlaps a small portion of the tooth just brushed and the next teeth. Repeat until all teeth are brushed.

Brush all teeth. Start on the cheek side of the back teeth, at one corner of your mouth, brushing as you move across to the opposite corner. Then switch to the inside (tongue or palate side) and again brush from one corner to the other. Brush both upper and lower teeth using the vibrating back-and-forth motion.

Some areas will require you to switch the brush to a different angle such as the inside (tongue and palate side) of the top and bottom front teeth. Using the tip or small end of the brush will help brush around this curved area. Use the same type of vibrating motion with the brush, moving up and down against the tooth.

Brushing the biting surfaces of the teeth is easy. Place the bristles on the biting surface of the teeth into the grooves and brush back and forth. Be sure to brush the biting surfaces of left side and right side, upper and lower teeth.

Use of Dental Floss

Start with a 14- to 16-inch piece of floss. Any type of floss is okay to use. Nonshredding is easiest to use. It's thinner and most people find it easier to use. Lightly wrap the floss around the forefingers of each hand until there is a length of about 1 to 1.5 inches available between the fingers. Don't wrap it so tightly that you cut off circulation and your fingers turn blue! Using your thumbs and forefingers, position the floss over the spot where two teeth meet. With a **gentle** buffing motion, back and forth, move the floss between the teeth and slide it first under the gum around one of the teeth in a U shape. Move the floss up and down a few times, then reverse the U and floss the other tooth. The floss needs to get under the gum. Then remove the floss and place it between the next two teeth. Holding the floss taut between your fingers will give you more control, and flossing will be easier.

When you are able to perform these daily procedures effectively, you will significantly reduce your risk of gum disease and decay, and the associated expenses of treatment. There are other flossing aids available if you have problems using your hands. Let us know about these problems. Electric or mechanical toothbrushes can also be used. Again, talk to us about these devices. Keeping your teeth healthy for the rest of your life can be accomplished—one day at a time.

For a Lifetime of Great Oral Health

Prevention is the key to great oral health. Better diet, medical care, and other factors are allowing us to live longer lives. Unfortunately, our teeth have not adapted to our longer life span and need help to last as long as we do. If you want to have your teeth for your whole life, here is what to do:

- Brush, floss, and use recommended dental aids correctly, at least once a day. Use a fluoride-containing mouthrinse daily.
- Come to the office for the recare hygiene appointments at the intervals we recommend. Let us provide a prescription-strength topical fluoride treatment at **every** recare appointment.
- Let us take radiographs when we believe they are necessary.
- Teeth age and wear, just like the rest of your body. The outer covering of hard enamel can get thin, break off, or wear through and expose the softer dentin. Dentin erodes very quickly. When we see exposed dentin, let us get it covered and protected.
- Have sealants placed on all teeth that can benefit from them.
- Don't ask us to "patch" anything. Patchwork dentistry is contrary to the concept of keeping your teeth trouble-free for a lifetime. If small repairs are possible and appropriate, we will tell you.
- Choose the procedure or restorative material that will last you the longest. All dental materials have a life expectancy, after which time they fail and must be replaced. Each time a tooth is redrilled, it gets weaker.
- Bonded restorations (current state-of-the-art) require less drilling than silver fillings. Less drilling is good. The tooth retains more strength and the restoration lasts longer. Let us use the good stuff.
- Gum disease can start at any time. Genetics, diet, oral self-care, medications, and general health can all have an influence. Gum disease is both site-specific (most often starts in a localized area) and episodic (can begin at any time). It is also painless in its early stages. We will tell you as soon as we spot gum disease. It will need to be treated properly and immediately.
- Our treatment recommendations are always based on your needs, not on what your insurance company wants or its bottom line. There are dozens of common dental procedures that are not part of benefit packages. Dental insurance carriers are in business to make money. They want to pay out as little as possible as late as possible. An attitude of "If my insurance company doesn't pay for it, I don't want it," only hurts you and YOUR oral health.
- We have listened to what you want, examined your mouth, and know your dental needs. Most patients can have all the best dentistry they want and deserve. It just takes a little planning. We can help with that, too. If you want all of your teeth, all of your life, follow the above recommendations and do it right the first time.

For more information visit www.aldrichdental.com
<http://www.perio.org>



