

## REVIEW IN CAUSES AND TREATMENT OF DISEASES AND BLEEDING OF GUMS

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### ABSTRACT

In this review article, explanation about causes and treatment of diseases and bleeding of gums, sensitive gums for children, pregnancy, after hot or cold foods or drinks, after tooth whiten in

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g, after oral surgery, and some of causes from over-brushing with a hard brush.

### INTRODUCTION

Tooth sensitivity is caused primarily by the nerves on the roots of teeth being exposed. Normally, the roots of our teeth are covered by gum tissue. As gum disease progresses unchecked, the gum tissue recedes and causes the roots of our teeth to become exposed and unprotected.

Due to the pain associated with tooth sensitivity, sufferers commonly stop brushing the exposed roots. And with good reason! Brushing the roots also stimulates the nerves in the tooth roots and causes pain! Unfortunately, not applying gentle cleaning to the root surface allows the disease causing bacteria along and under the gum line to continue their destructive ways.

One of the reasons gums recede is due to poor brushing technique. Over the years of poor brushing technique, the gum tissue becomes so irritated that it recedes to the damage.

The combination of gentle brushing with a solution that reduces nerve sensitivity is one effective answer to stop the pain associated with sensitive teeth.

### Tooth Sensitivity

Tooth sensitivity is a common complaint, especially in the winter. Sometimes this is a relatively easy problem to solve. Studies show that one in four people suffer from sensitive teeth, however, this is greater in the 25-45 age groups and in women. People most likely to suffer from this marginal tooth sensitivity are those who over-enthusiastically brush their teeth, consume more than usual amounts of wine or citrus drinks, have had treatment for gum disease or who have special medical problems - like bulimia.

People whose teeth are sensitive feel pain when they eat or drink things which are very cold (most usually), hot or sweet and when brushing. The classic example is eating ice cream, but simply being out in the cold weather breathing on a frosty morning can be enough to set off the problem. Typically pain from sensitivity is sudden, sharp, and stabbing but subsides very quickly. If left untreated, the pain of sensitivity can lead to poor oral hygiene - it can become quite painful for the sufferer to brush their teeth so they stop doing a thorough job, which only makes the sensitivity problem worse. The problem area is usually near the gum margin where the tooth dentine or "nerve" may be exposed because of a receding

gum line. Their problem usually is the tooth margin - just below the enamel and where the 'nerve' is most exposed. Normally it is covered up. Dentists can recommend desensitising toothpastes as a good way to deal with the problem. Dentists also advise people to use the right type of toothbrush, especially as a lot of tooth sensitivity comes from over-brushing with a hard brush.

The loss of gum tissues leads to exposure of teeth roots that are referred as gingival recession or receding gums. It can be considered as the first sign for gum disease. Gum recession creates a gap between gum line and teeth. As a result, disease causing bacteria will severely damage the tissues.

Genes, periodontal disease, aggressive tooth brushing, hormonal changes, and insufficient dental care can be prime reasons for receding gums. Sensitivity of teeth, cavities, exposed roots, swollen gums, gum bleeding and bad breath are general symptoms for receding gums. If receding gums are left untreated, it can even damage bone structure and supporting tissues, which results in tooth loss

### **Tooth Structure**

The part of the tooth that is usually visible over the gum is called the crown and the part that is attached to the gum is called the root. Enamel is the outer calcified tissue layer covering the crown of the tooth. It is one of the hardest substances in the body.

### **Gum Changes in Pregnancy**

During pregnancy you can expect your mouth and gums to undergo multiple changes. Many women experience bleeding gums during pregnancy. Also, you may notice that your gums and teeth are more sensitive than before. That's because your mouth is not immune to the havoc that your pregnancy hormones can create. The shift in your hormones increases the blood flow to your gums, and it can cause them to become more sensitive and irritated. As a result, your gums may swell or bleed after you brush your teeth.

The increased level of pregnancy hormones in your body can also change how your body responds to bacteria. This can make it easier for plaque to build up in your mouth, leading to cavities and other dental problems. You also become more susceptible to gingivitis during pregnancy. If you have pre-existing gingivitis, it can worsen when you are pregnant. Pregnancy gingivitis is something you'll want to try to prevent, if possible. Gum changes can start to appear around the end of your first trimester, or after the second month of pregnancy. Fortunately, your gums will go back to normal after you deliver your baby. To prevent gingivitis and gum disease during pregnancy, it is very important that you continue to practice good oral health, including brushing and flossing your teeth on a regular basis.

Sensitive teeth or not – brushing and flossing at least twice a day is recommended to reduce pregnancy gingivitis. Fortunately, once you deliver your baby, your gums will go back to normal and you are not at higher risk for dental disease.

### **Causes of Bleeding Gums During Pregnancy**

Pregnancy hormones affect your gums in the same way they affect the other tissues of your body. It may cause tender, swollen gums or tumor in your mouth

- An increased level of progesterone causes gum disease.
- Consumption of sugary foods and calcium deficiency are also the reasons causing your gums become tender.

- Deficiency of calcium in your diet weakens your teeth and causes toothache. As your baby uses calcium, this may lead you to be deficient.
- There are chances that one may also suffer due to cavity or hole in a mouth or blocked sinuses.



Figure 1

### Treating Gum Disease During Pregnancy

Fortunately you can keep your teeth and gums very healthy throughout your pregnancy. You should plan on visiting your dentist at least once during your pregnancy. If your dentist finds gingivitis, undoubtedly he or she will recommend an appropriate treatment program to help prevent periodontal disease from developing. Here are some simple strategies you can adopt at home to help promote healthy teeth and gums during your pregnancy

- Brush your teeth and gums routinely. For most people that means brushing at the minimum after each meal. When you do brush you should make a point to do so for at least five minutes.
- Floss routinely. Flossing is important for preventing gingivitis and periodontal disease. Try a thin floss or waxed floss if you find your gums are sensitive during pregnancy.
- Invest in a soft toothbrush. Your gums and teeth are much more sensitive during pregnancy. You should also take care to brush gently when pregnant. Applying ice to your gums may help alleviate soreness or swelling you experience during pregnancy.
- Avoid sugary foods. These will only contribute to gingivitis and decay.

### Causes of Gums Disease

- **Smoking:** is one of the most significant risk factors associated with the development of gum disease. Additionally, smoking can lower the chances for successful treatment.
- **Hormonal Changes in Girls -Women:** these changes can make gums more sensitive and make it easier for gingivitis to develop.
- **Diabetes:** people with diabetes are at higher risk for developing infections, including gum disease.
- **Other Illnesses and their Treatments:** diseases such as AIDS and its treatments can also negatively affect the health of gums, as can treatments for cancer.
- **Medications:** there are hundreds of prescription and over the counter medications that can reduce the flow of saliva, which has a protective effect on the mouth. Without enough saliva, the mouth is vulnerable to infections such as gum disease. And some medicines can cause abnormal overgrowth of the gum tissue; this can make it

difficult to keep teeth and gums clean.

- **Genetic Susceptibility:** some people are more prone to severe gum disease than others.



**Figure 2**

### Diagnosis of Gum Disease

We can diagnosis via:

- Bad breath.
- Red or swollen gums.
- Tender or bleeding gums.
- Painful chewing.
- Loose teeth.
- Sensitive teeth.
- Receding gums or longer appearing teeth.
- Take an x-ray to see whether there is any bone loss.



**Figure 3**



**Figure 4**

### Treatment of Gum Disease

- **Deep Cleaning (Scaling and Root Planing)**

It helps remove bacteria that contribute to the disease. In some cases a laser may be used to remove plaque and

tartar. This procedure can result in less bleeding.

- **Surgical Treatments**

- **Flap Surgery**

Surgery might be necessary if inflammation and deep pockets remain following treatment with deep cleaning and medications. A dentist or periodontist may perform flap surgery to remove tartar deposits in deep pockets or to reduce the periodontal pocket and make it easier for the patient, dentist, and hygienist to keep the area clean. This common surgery involves lifting back the gums and removing the tartar.

- **Bone and Tissue Grafts**

In this procedure, a small piece of mesh-like material is inserted between the bone and gum tissue. This keeps the gum tissue from growing into the area where the bone should be, allowing the bone and connective tissue to regrow. Growth factors – proteins that can help your body naturally regrow bone – may also be used.

### **Causes Tooth Sensitivity after Whitening**

- **Bleaching Molecules Penetrate into your Teeth Increasing Blood Flow and Pressure in the Tooth Pulp Causing Mild Pulpitis**

Although diffusion into your teeth helps amplify whitening effects since chromophore molecules in your tooth dentin can be broken up by hydrogen peroxide, the increased pressure irritates the tooth nerve slightly and makes your teeth more sensitive to stimuli in general. Everyone responds differently and this mild pulpitis can last for about 2 weeks after whitening.

- **Increased Tooth Porosity and Removal of the Protective Protein Layer on the Surface of your Teeth**

We talked about how maintaining the protein pellicle is important in keeping the pores in exposed dentin closed off from the oral environment. For better or worse, all whitening products must strip off this protein layer in order to dissolve surface stains. This will open up pores in exposed dentin and cause sensitivity.

### **To Decrease Sensitive Teeth after Whitening**

- **Brush your Teeth before Whitening not after Whitening**

Brushing right after whitening will further open pores on exposed dentin and create sensitivity. It can also damage your enamel since some bleaching agents are slightly acidic. Let your teeth recover afterwards.(Optional)

- **Use a Desensitizing Gel to Calm your the Nerves in your Teeth Prior to Whitening**

For the most relief, you should apply the gel to your teeth for 10 to 30 minutes before bleaching using the same bleaching trays you got from your dentist and rinse afterwards. Ideally, the gel should contain both 5% potassium nitrate and fluoride. Your dentist is able to prescribe specifically designed desensitizing gels like UltraEZ™, Desensitize!, and Relief™, but in a pinch you can also try using in the trays a desensitizing toothpaste that contains 5% potassium nitrate. Using toothpaste instead of the commercial gels may also be a more cost-friendly method. Some ingredients in the toothpaste though might irritate your gums a bit, and if that starts to happen stop and let your dentist know.

- **Whiten as Directed.**
- **Rinse out your Mouth Thoroughly after Bleaching with Water, or Better Still a Ph Re-Balancing Mouth Rinse**

Although bleaching companies try to make products that are pH balanced, many end up being slightly acidic. Getting your oral pH back to normal lets your teeth begin to recover.

- **Use your finger (or q-tip) to gently apply to your teeth one of the Calcium-Based Desensitizing Pastes**

We discussed last week. Let the paste set for a few minutes and then spit thoroughly; do not rinse for at least 30 minutes following application. By gently coating your teeth with a product like MI Paste or Colgate's Pro-Argin Toothpaste, you will plug up open pores on your teeth and reduce sensitivity. Additionally, the remineralizing effects of these pastes help to improve whitening.



**Figure 5**

### **Teeth Whitening Without the Sensitivity Worries**

If you want whiter teeth but are afraid of the pain from sensitivity then you need to learn about new ways that you can whiten your teeth and not suffer from the sensitivity. There is a way to strengthen your teeth and worry less about feeling pain. For anyone who has experienced sensitivity, you know just how painful it can be when you feel that jolt of pain travel down into your tooth. It usually occurs right after you drink something that is either hot or cold. You can't allow the pain and sensitivity to stop you from whitening your teeth. You can whiten your teeth without the sensitivity by following these tips

Before you whiten your teeth, you want to make sure that you have enough calcium, vitamin D, and magnesium in your body. These three are responsible for healthy teeth. When you don't have enough Vitamin A the enamel on the outside of the tooth is jeopardized. Vitamin C is responsible for keeping your gums healthy. It's important to make sure that you start taking a vitamin about one month before you decide to whiten your teeth. Brushing your teeth is very important. Make sure that you are brushing your teeth at least twice a day. If you are not in a habit of brushing your teeth on a regular basis then you will want to start this a few weeks before you want to whiten your teeth. Be sure you brush your teeth using a soft toothbrush. This will help save the gums as well. The gums are sensitive and they will start to bleed if they become too sensitive.

Don't drink acidic beverages. Avoid soda, juice, wine, citrus fruits, and energy boosting drinks. If you drink any of these make sure that you rinse your mouth to remove the acidic agents out of your mouth. Cut out all the sugary foods

and beverages at least two weeks before you want to whiten your teeth. This helps you to prepare your teeth for the whitening procedure and gives you a chance to strengthen them. Do not use any mouthwash that contains alcohol.

The alcohol can damage the teeth and this can lead to severe sensitivity. Look for toothpaste that is made for sensitive teeth. You can find these in almost any store. They help replace the enamel that has grown porous over the years. Try to improve your sensitivity before you begin whitening your teeth. This can't be accomplished in a couple of weeks but it can help you to gain control over the sensitivity. When you whiten your teeth, don't whiten it again for a few months. Whitening your teeth too often may make it hard for the enamel to stay healthy. Don't whiten your teeth too long at one time. Most do-it-yourself whitening kits will give you a set amount of time to leave the whitening agent on. Not following directions can cause more damage to the enamel on your teeth.

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