

Dentalnotes

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Women's Oral Health

X-rays help predict permanent damage from bisphosphonates

Breast cancer patients, individuals at risk for osteoporosis and those undergoing certain types of bone cancer therapies often take drugs containing bisphosphonates. These drugs have been found to place people at risk for developing osteonecrosis of the jaws (a rotting of the jaw bones). Dentists, as well as oncologists, are now using X-rays to detect "ghost sockets" in patients that take these drugs and when these sockets are found, it signals that the jawbone is not healing the right way. Early detection of these ghost sockets can help the patient avoid permanent damage to their jawbone, according to a case report and literature review that appeared in the March/April 2009 issue of *General Dentistry*, the Academy of General Dentistry's (AGD) clinical, peer-reviewed journal.

A ghost socket occurs when the jawbone is not healing and repairing itself the right way. For example, if a tooth was removed, a divot forms in the jawbone instead of the bone growing to replace the spot where the tooth was removed. "The good news is that even though these ghost sockets may occur, by using radiographic techniques we can see that the soft tissue above these sockets can still heal," according to Kishore Shetty, DDS, MS, MRCS, lead author of the report. Dr. Shetty states these findings are important news to learn about because early prevention and detection can halt permanent damage



Tips to reduce the risk for osteonecrosis of the jaw and maintain a healthy mouth:

- Inform general dentist or specialist about bisphosphonates
- Check and adjust removable dentures
- Maintain regular dental cleanings
- Opt for root canal therapy over extractions when possible

from happening to a patient's jawbone.

In 2006, about 191 million prescriptions of oral bisphosphonates worldwide were written and today, associated with the increase in sales of this drug is a growing patient population in need of the drugs as baby boomers age and become more susceptible to osteoporosis. The National Osteoporosis Foundation estimates that nearly 44 million people in the United States are at risk for developing osteoporosis. Currently, approximately 10 million Americans suffer from the disease.

Bisphosphonates are a family of drugs used to prevent and treat osteoporosis, multiple myeloma, Paget's disease (bone cancers), and bone metastasis from other cancers. These drugs can bond to bone surfaces and prevent osteoclasts (cells that break down bone) from doing their job. Other cells are still working trying to form bone, but it may turn out to be less healthy bone leading to the ghost-like appearance on X-rays.

"Healthy bones can easily regenerate," says Dr. Shetty. "But, because jawbones have rapid cell turnover, they

can fail to heal properly in patients taking any of the bisphosphonate drugs. It's very important for patients to know about complications from dental surgery or extractions. Since these drugs linger in the bone indefinitely, they may upset the cell balance in how the jaws regenerate and remove unhealthy bone."

According to AGD spokesperson Carolyn Taggart-Burns, DDS, FAGD, patients who are taking bisphosphonates should inform their dentist to prevent complications from dental surgical procedures. "Widespread use of bisphosphonates to prevent or treat early osteoporosis in relatively young women and the likelihood of long-term use is a cause for concern," says Dr. Taggart-Burns.

Drs. Shetty and Taggart-Burns agree that, "how bisphosphonates interfere with healing after dental surgery is still unclear and further research will be needed. It is imperative that the public understands there is no present treatment or cure for this problem."

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Tooth Erosion

How acid reflux disease damages teeth

First reported more than 200 years ago, dental erosion still continues to be a major concern for dentists and consumers. Twenty decades ago, studies reported dental erosion occurred because of industrial hazards, specifically when workers were exposed to acidic aerosols. In recent years, everyday foods and drinks such as lemons, pickles, sodas and sugary, starchy goods have been associated with tooth erosion. People now also need to be aware of another danger that causes permanent and severe loss of tooth structure, acid reflux-induced erosion, a condition that occurs when stomach contents reflux into the mouth, according to a study that appeared in the March/April 2009 issue of *General Dentistry*, the Academy of General Dentistry's (AGD) clinical, peer-reviewed journal.

According to the U.S. Department of Health and Human Services, more than seven million people suffer from severe acid reflux. However, David Lazarchik, DMD, lead author of the study notes that, "patients often are not aware of the damage that reflux-induced erosion has caused to their teeth until it has reached an advanced stage of destruction."

The potential of hydrogen, or pH, is a standard way to measure the acidity of a substance. It is measured on a scale of 0 to 14. A lower pH means that a solution contains more acid. The higher the pH, the more alkaline (or non-acidic) the solution.

"Dental enamel begins to dissolve at a pH of 5.5," says Dr. Lazarchik. "Because stomach acid has an extremely low pH of

2.0, it has the potential to cause significant chemical erosion."

Certain foods, beverages and habits are known to cause acid reflux and as preventive measure, individuals should be aware of the products they consume. Spicy, fatty, fried foods, citric fruits and beverages and dairy products can lead to acid reflux.

In addition to taking the steps necessary to establish a healthier eating lifestyle, AGD Vice President, Fares Elias, DDS, FAGD, says, "When visiting a general dentist, it's important to make him or her aware of any medical conditions and medical history in general."

"In some cases, other medical conditions, not directly related to your oral health, may be the cause for problems associated in the mouth," says Dr. Elias, who has also experienced acid reflux. "Treating reflux-induced erosion without treating and preventing the medical condition that causes the erosion may only lead to more severe problems for your oral health in the future."

If acid reflux-induced erosion is diagnosed:

- Avoid eating acidic foods and foods that can cause acid reflux (tomatoes, citric fruits, spicy & fried foods, fatty meats, dairy, chocolate and caffeine are all culprits)
- Avoid brushing for 60 minutes after reflux episodes
- Rinse mouth with water after reflux episodes
- Take a sugar-free antacid and let it dissolve in the mouth
- Chew xylitol gum or other sugarless gums, lozenges or candies

Sensitive Teeth

Common condition creates diverse list of treatment options

Cracked teeth, lost teeth and decaying teeth are among the complaints a patient may present to his or her dentist for treatment. Each of those oral health troubles comes with a list of options the dentist may use to fix it; for example, implants, fillings or bonding. Although the most common patient complaint is sensitive teeth, no one desensitizing agent is ideal to manage this uncomfortable condition, according to an article in the March/April 2009 issue of *General Dentistry*, the Academy of General Dentistry's (AGD) clinical, peer-reviewed journal.

Dentin hypersensitivity is caused by both the loss down of tooth enamel covering the dentin and exposure of the root surface, which may expose the nerve endings inside the teeth or gum tissue. Common actions such as brushing too hard, using an abrasive toothpaste, drinking too many acidic drinks and grinding of the teeth all can contribute to a loss or flaking of enamel, which produces many uncomfortable effects on a person's oral health.

"Depending on its intensity, the increased sensitivity can affect eating,

drinking, and breathing," says Sergio Lima Santiago, DDS, MS, PhD, one of the study's lead authors. "It can also hinder one's ability to control dental plaque effectively, which causes an increase in the probability that the patient will develop cavities."

Thankfully, treatment for this dental condition begins with a simple conversation with a dentist. Dentists have a variety of regimens to manage tooth hypersensitivity, including both in-office treatments and patient-applied products for home use.

"A dentist may prescribe a fluoride gel or over-the-counter desensitizing toothpaste," says AGD spokesperson Dave Tecosky, DMD, MAGD. "Sealants, other protective coatings and even fillings may help, which block transmission of sensation from the outside of the tooth to the nerve," Dr. Tecosky adds. "However, all patients are different and what works for one may not work for another. Describing what a patient is feeling and when the sensitivity occurs is a great way to help the dentist decide on the right treatment plan."



How to treat sensitivity:

- Use desensitizing toothpaste
- Ask a dentist to apply sealants or other filling materials, such as fluoride
- Decrease intake of acid-containing food and drink
- Avoid using hard-bristled toothbrushes and brushing teeth too hard

Snoring and Sleep Apnea

A dentist's role in the disorder

A good night's sleep has the power to restore the body and enliven the mind. For the 18 million Americans who experience symptoms of sleep apnea, a good night's sleep also has the power to save their lives. Obstructive sleep apnea is a serious, life-threatening disorder that is characterized as a series of episodes in which a person stops breathing for 10 seconds or longer during sleep, according to an article in the March 2009 issue of *AGD Impact*, the Academy of General Dentistry's (AGD) monthly newsmagazine.

So, how would someone know if



he or she had sleep apnea? Snoring is a major indicator, but not all symptoms are so obvious—and audible. A dentist can detect the less evident symptoms of sleep apnea through a candid conversation with a patient, in conjunction with an exam, about the patient's recent

pains or discomforts. A dentist may suspect a patient suffers from sleep apnea if the patient complains about lethargy, morning headaches, or dry mouth (typically caused by open mouth breathing during sleep).

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Women's Oral Health

Important oral health considerations at all life stages

Women can attribute bloating, irritability, moodiness, and the occasional hot flash or emotional outburst to hormones. But, according to an article in the May 2009 issue of *AGD Impact*, the Academy of General Dentistry's (AGD) monthly newsmagazine, the state of one's oral health is hormone-dependant as well.

Hormonal changes occur throughout a woman's life, and related to these hormonal changes are changes in oral health. Puberty, menstruation, pregnancy, and menopause all can have an effect on a woman's oral health.

During puberty, fluctuations in hormones can make gums more susceptible

to gingivitis. As a result, the gums may appear red and swollen, and they can bleed. During menstruation, women who have a tendency to develop canker sores and cold sores may develop a pattern in which these sores recur during every menstrual cycle.

During pregnancy, gingivitis may develop. In fact, gingivitis is the most common oral condition associated with being pregnant. Also during pregnancy, the chemical composition of saliva changes, thus reducing saliva's antimicrobial capacity. Sometimes, however, women will avoid dental checkups for fear that treatment might harm the developing baby. In fact, untreated decayed

teeth can put a mother and her baby at risk for infection.

Some women also experience dry mouth while pregnant. "Since too little saliva can make you prone to cavity formation, it's important to alert your dentist to this symptom," says AGD spokesperson Gigi Meinecke, DDS, FAGD. "Frequent sips of water and using toothpaste which does not contain sodium laurel sulfate, a drying agent, can help. It's important to avoid mouth rinses containing alcohol as they can be very drying as well," she adds.

Menopause can be accompanied by a number of oral conditions. "Symptoms can include dry mouth, altered taste perception, pain, and burning sensations," says Dr. Meinecke. "Patients with these symptoms should see their dentist to rule out any other cause for their condition as well as receive recommendations for treatment," she adds.

Together, a patient and his or her dentist can create a treatment and prevention plan that specifically meets their needs. For more information about women's oral health, visit www.knowyourteeth.com.



Types of eating disorders

- Anorexia nervosa
- Bulimia nervosa
- binge eating disorder
- Food addiction
- Pica

SLEEP APNEA

(Continued from page 3.)

"Dentists are often the first professional to become aware of a potential problem since they are usually in contact with their patients more frequently than are physicians," says J. Michael Owen, DDS, FAGD, Academy of General Dentistry (AGD) spokesperson. Dentists will send patients with symptoms of sleep apnea to a sleep medicine specialist who will assess the patient's conditions. If a patient is diagnosed with the disorder, he or she may return to the dentist to receive treatment.

Treatment options for sleep apnea vary depending on the severity of the disorder. An individual with mild sleep apnea may need to make behavioral changes such as altering the sleeping position, losing weight, or quitting smoking, as well as wearing a dental appliance during sleep. A dental appliance for sleep apnea, which looks similar to an athletic mouthguard, repositions the jaw and tongue to improve airflow.

"Like any appliance they do require some adjustment and a commitment on the part of the patient, but they are typically as easy to wear as most retainers or other removable dental appliances," says Dr. Owen. Treatment for severe cases of sleep apnea requires more aggressive management, which may include the use of a continuous positive airway

What are the symptoms of sleep apnea?

- People with sleep apnea usually do not remember waking up during the night. Indications of the problem may include:
- Morning headaches
- Excessive daytime sleepiness
- Irritability and impaired mental or emotional functioning
- Excessive snoring, choking, or gasping during sleep
- Insomnia
- Awakening with a dry mouth or sore throat

pressure (CPAP) system—a device that delivers air through a small mask and applies constant pressure to keep the air way open—or surgery.

Most dentists have undergone special training for the treatment of sleep apnea and are very skilled in its management using behavioral modification and dental appliances, but a confirmed diagnosis from a sleep medicine specialist is required before any treatment can be administered. Because sleep apnea can be a silent condition, it can go undiagnosed for many years. It is important to keep an open and honest dialog with health care professionals to ensure that conditions such as sleep apnea can be identified and properly treated.

Q&A

Why Are My Teeth Sensitive?

Tooth sensitivity is caused by the movement of fluid within tiny tubes located in the dentin (the layer of tissue found beneath the hard enamel that contains the inner pulp), which results in nerve irritation. When the hard enamel is worn down or gums have receded, causing the tiny tube surfaces to be exposed, pain can be caused by eating or drinking food and hot or cold beverages; touching your teeth or exposing them to cold air.

Exposed areas of the tooth can cause pain and even affect or change your eating, drinking and breathing habits. Taking a spoonful of ice cream, for example, can be a painful experience for people with sensitive teeth. The excessive consumption of acid-containing foods and beverages such as citrus juices and fruits and soft drinks can also put you at risk for tooth sensitivity. Bulimia and acid reflux can also result in erosion of the hard enamel and sensitivity due to acid in the mouth.

How can I avoid sensitivity?

Some toothpastes contain abrasive ingredients that may be too harsh for people who have sensitive teeth. Ingredients found in some whitening toothpastes that lighten and/or remove certain stains from enamel, and sodium pyrophosphate, the key ingredient in tartar-control toothpastes, may increase tooth sensitivity.

What can I do about sensitive teeth?

Tooth sensitivity can be reduced by using a desensitizing toothpaste, applying sealants and other desensitizing and filling materials, including fluoride, by your dentist and decreasing the intake of acid-containing foods. Tartar-control toothpastes will sometimes cause teeth to be sensitive as well as drinking soft drinks throughout the day, so these habits should be avoided.

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