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*Bisphosphonate Medication (Fosamax, Actonel, Boniva, Aredia, Bonefos, Didronel, Zometa) (Osteonecrosis of the Jaw)*

### **Overview**

If you use a bisphosphonate medication—to prevent or treat osteoporosis (a thinning of the bones) or as part of cancer treatment therapy—you should advise your dentist. In fact, any time your health history or medications change, you should make sure the dental office has the most recent information in your patient file. Here's why:

Some [bisphosphonate medications](#) (such as Fosamax, Actonel, Boniva) are taken orally (swallowed) to help prevent or treat osteoporosis and Paget's disease of the bone. Others, such as Aredia, Bonefos, Didronel or Zometa, are administered intravenously (injected into a vein) as part of cancer therapy to reduce bone pain and hypercalcemia of malignancy (abnormally high calcium levels in the blood), associated with metastatic breast cancer, prostate cancer and multiple myeloma.

In rare instances, some individuals receiving intravenous bisphosphonates for cancer treatment have developed osteonecrosis (pronounced OSS-tee-oh-ne-KRO-sis) of the jaw, a rare but serious condition that involves severe loss, or destruction, of the jawbone.

Symptoms include, but are not limited to:

- pain, swelling, or infection of the gums or jaw
- gums that are not healing
- loose teeth
- numbness or a feeling of heaviness in the jaw
- drainage
- exposed bone

If you receive intravenous bisphosphonates (or received them in the past year) and experience any of these or other dental symptoms, tell your oncologist and your dentist immediately.

More rarely, osteonecrosis of the jawbone has occurred in patients taking oral bisphosphonates.

Most cases of osteonecrosis of the jaw associated with bisphosphonates have been diagnosed after dental procedures such as tooth extraction; however the condition can also occur spontaneously. Also, invasive dental procedures, such as extractions or other surgery that affects the bone can worsen this condition. Patients currently receiving intravenous bisphosphonates should avoid invasive dental procedures if possible. The risk of osteonecrosis of the jaw in patients using oral bisphosphonates following dental surgery appears to be low.

### **Am I at Risk?**

Because osteonecrosis of the jaw is rare, researchers can not yet predict who, among users, will develop it. To diagnose osteonecrosis of the jaw, doctors may use x-rays or test for infection (taking microbial cultures). Treatments for osteonecrosis of the jaw may include antibiotics, oral rinses and removable mouth appliances. Minor dental work may be necessary to remove injured tissue and reduce sharp edges of damaged bone. Surgery is typically avoided because it may make the condition worse. The consensus is that good oral hygiene along with regular dental care is the best way to lower your risk of developing osteonecrosis.

### **What is Bruxism?**

"Keep a stiff upper lip" or "get a grip!" That's often the advice we get—and give—on how to cope with stress.

If you take it literally, the result could be grinding your teeth or clenching your jaws. It's called bruxism, and often it happens as we sleep, caused not just by stress and anxiety but by sleep disorders, an abnormal bite or teeth that are missing or crooked.

Symptoms include a dull headache or a sore jaw.

You could have teeth that are painful or loose from severe grinding. This can lead to fractures in your teeth.

Your dentist can fit you with a mouth guard to protect your teeth during sleep.

If stress is the cause you need to find a way to relax! Physical therapy, muscle relaxants, counseling and even exercise may help reduce tension.

Don't make your teeth the brunt of your stress.

## *Cancer Treatment and Oral Health*

An estimated 400,000 of the 1.2 million Americans diagnosed with cancer each year may develop painful and debilitating oral complications from their cancer treatment. Persons who undergo cancer treatment are sometimes unaware that a dental examination is a critical step in maintaining their overall health.

Someone who is receiving radiation therapy of the head and neck area, or has a history of such treatment, may develop certain complications including dry mouth, sensitive lesions in the oral cavity, hypersensitive teeth, rapid tooth decay and difficulty swallowing. Chemotherapy can also have significant effects on the oral cavity.

To help prevent, minimize and manage such problems, your dentist and oncologist can work together—before and during your cancer treatment.

During the treatment period for head and neck cancer, gently brush your teeth twice a day unless your dentist recommends otherwise. Your dentist may recommend a mouthrinse in addition to daily brushing. If you develop a condition called dry mouth, your dentist may recommend a saliva replacement, an artificial saliva that is available over-the-counter at pharmacies. Frequent fluoride applications may also be recommended.

Because any mouth infection may have serious implications, contact your dentist or physician immediately should any occur. Your dentist and physician both want your treatment to be as safe and effective as possible.

## *Canker Sores, Cold Sores & Common Mouth Sores*

They are annoying and painful and there are plenty of things that can cause them – infections from bacteria, viruses or fungus; a loose orthodontic wire; a denture that doesn't fit; or a sharp edge from a broken tooth or filling.

Mouth sores may be symptoms of a disease or disorder. A dentist should examine any mouth sore that lasts a week or longer. Among the most common mouth sores are:

**Canker sores.** Small ulcers with a white or gray base and a red border. Canker sores appear inside the mouth. They are not contagious. There may be only one canker sore or several and they can return frequently. Their exact cause is uncertain but some experts believe that immune system problems, bacteria or viruses may be involved.

Fatigue, stress or allergies can increase the likelihood of a canker sore. Some women may be more prone to them in their premenstrual cycle. A cut caused by biting the cheek or tongue, or reactions from hot foods or beverages may contribute to canker sore development. Intestinal problems, such as ulcerative colitis and Crohn's disease, also seem to make some people more susceptible.

**Treating Canker Sores:** They usually heal on their own after a week or two. Over-the-counter topical anesthetics and antimicrobial mouthrinses may provide temporary relief. Stay away from hot, spicy or acidic foods that can irritate the sore. See your dentist if the sores do not heal or are painful. Antibiotics from your dentist and some oral bandages can reduce secondary infection.

**Cold sores.** Annoying and painful, cold sores, also called fever blisters, are groups of fluid-filled blisters. They often erupt around the lips and sometimes under the nose or around the chin. Cold sores are caused by the herpes simplex virus type 1 and are very contagious. The initial infection (primary herpes), which often occurs before adulthood, may be confused with a cold or flu and can cause painful lesions to erupt throughout the mouth.

Once a person is infected with primary herpes, the virus stays in the body and causes occasional attacks. Recurring cold sores look like multiple tiny fluid-filled blisters that most commonly appear around the edge of the lips. For some people, the virus remains inactive or dormant. For others, cold sores can follow a fever, sunburn, stress, emotional upsets or a break in the skin.

**Treating cold sores:** Cold sore blisters usually heal in a week by themselves. Over-the-counter topical anesthetics can provide some relief. Your dentist may prescribe antiviral drugs to reduce these kinds of viral infections.

# *Diabetes*

## **Overview**

Diabetes affects about 23.6 million Americans. This is 7.8% of the population with 1.6 million new cases diagnosed each year for people over age 20 years. If you have been diagnosed with diabetes, you may know that the disease can cause problems with your eyes, nerves, kidneys, heart and other parts of your body. Diabetes can lower your resistance to infection and can slow the healing process.

### **What information do I need to give my dentist about my diabetes?**

It's important to keep your medical records up-to-date. Let your dentist know:

- if you have been diagnosed with diabetes;
- if the disease is under control;
- if there has been any other change in your medical history, and;
- the names of all prescription and over-the-counter drugs you are taking.

### **What oral health problems can be associated with diabetes?**

The most common oral health problems associated with diabetes are:

- tooth decay;
- periodontal (gum) disease;
- salivary gland dysfunction;
- fungal infections;
- lichen planus and lichenoid reactions (inflammatory skin disease);
- infection and delayed healing;
- taste impairment.

### **Is there a connection between diabetes and periodontal (gum) disease?**

Because diabetes reduces the body's resistance to infection, the gums are among the tissues likely to be affected. Periodontal diseases are infections of the gum and bone that hold your teeth in place.

Periodontal disease is often linked to the control of diabetes. For example, patients with inadequate blood sugar control appear to develop periodontal disease more often and more severely, and they lose more teeth than persons who have good control of their diabetes. It is possible to have periodontal disease and not have all of the warning signs. If you notice any of the warning signs of gum disease, see your dentist immediately.

Because of lowered resistance and a longer healing process, periodontal diseases often appear to be more frequent and more severe among persons with diabetes. That's why good maintenance of blood sugar levels, a well-balanced diet that meets your needs, good oral care at home, regular dental checkups and periodontal examinations are important.

### **What else can I do to help prevent oral health problems?**

Preventive oral health care, including professional cleanings at the dental office, is important if you are to control the progression of periodontal disease and other oral health problems. Regular dental checkups and periodontal screenings are important for evaluating overall dental health and for treating dental problems in their initial stages.

Your dentist may recommend more frequent evaluations and preventive procedures, such as teeth cleaning, to maintain good oral health.

### **What should I do if my mouth frequently feels dry?**

Saliva helps wash away food particles and keeps the mouth moist. Without adequate saliva, bacteria continue to colonize. Xerostomia, or dry mouth, is a common complaint among diabetic dental patients and patients undergoing radiation of the head and neck for cancer therapy. Constant dryness irritates the soft tissues in the mouth, often making them inflamed and painful. This condition greatly increases the risk of tooth decay and periodontal diseases.

Your dentist may recommend a saliva substitute that can be used for relief from dry mouth discomfort. Your dentist may also recommend rinsing with a fluoride mouthrinse or having a topical application of fluoride at home and in the dental office to help prevent rampant tooth decay. These products are sold over-the-counter at pharmacies.

Using sugarless gum, sugarless mints, taking frequent sips of water or using melting ice chips may help alleviate a dry mouth. Restricting intake of caffeine and alcohol also can help.

### **What are some other oral conditions that can be associated with diabetes?**

Oral candidiasis, a fungal infection in the mouth, appears to occur more frequently among persons with diabetes including those who wear dentures. Your dentist may prescribe antifungal medications to treat this condition. Good oral hygiene is critical.

Lichen planus is a skin disorder that produces lesions in the mouth. A more severe type of Lichen planus involves painful ulcers that erode surface tissue. Although there is no permanent cure, your dentist may prescribe a topical anesthetic or other medication to reduce and relieve the condition.

Some diabetics have reported that their taste for sweets is diminished, although the taste impairment is usually not severe. Altered taste sensations, barely perceptible to most diabetic patients, may influence their food choices in favor of sweet tasting foods with highly refined carbohydrate content. This may worsen the diabetic patient's dental health and overall health.

### **What if I need oral surgery?**

Infection is a risk for the diabetic patient and can make it more difficult to control blood glucose levels. If you are having extensive oral surgery, your dentist may prescribe antibiotics to minimize the risk of infection. To help the healing process, keep your blood glucose levels under control before, during and after surgery.

## ***Diet and Oral Health***

### **Overview**

Your body is like a complex machine. The foods you choose as fuel and how often you “fill up” affect your general health and that of your teeth and gums. Many dentists are concerned that their patients are consuming record numbers of sugar-filled sodas, sweetened fruit drinks, and non-nutritious snacks that affect their teeth. These items generally have little if any nutritional value and over time they can take a toll on teeth.

Eating patterns and food choices among children and teens are important factors that affect how quickly youngsters may develop tooth decay. When bacteria (plaque) come into contact with sugar in the mouth, acid is produced, which attacks the teeth for 20 minutes or more. This can eventually result in tooth decay.

Not sure you're getting the nutrients, vitamins and minerals needed by your body (and your teeth and gums)? Check out the [U.S. Department of Agriculture's Web site](#). The USDA oversees the nutritional health of the nation. The agency's dietary recommendations are designed to promote optimal health and to prevent obesity-related diseases including cardiovascular disease, Type 2 diabetes and cancers.

The government's recommendations recognize that people have different dietary needs at various stages of life. They offer guidance for children and adults based on their levels of physical activity. Your physician or a registered dietician can also provide suggestions for your daily food intake.

Foods that contain sugars of any kind can contribute to tooth decay. Almost all foods, including milk or vegetables, have some type of sugar. However, they shouldn't be removed from our diets because many of them contain important nutrients. And they add pleasure to eating. To help control the amount of sugar you consume, read food labels and choose foods and beverages that are low in added sugars. Added sugars often are present in soft drinks, candy, cookies and pastries.

If your diet lacks certain nutrients, it may be more difficult for tissues in your mouth to resist infection. This may contribute to periodontal (gum) disease, a major cause of tooth loss in adults. Although poor nutrition does not cause periodontal disease directly, many researchers believe that the disease progresses faster and could be more severe in people with nutrient-poor diets

## *Halitosis (Bad Breath)*

### **Overview**

Whether you call it bad breath or halitosis, it's an unpleasant condition that's cause for embarrassment. Some people with bad breath aren't even aware there's a problem. If you're concerned about bad breath, see your dentist. He or she can help identify the cause and, if it's due to an oral condition, develop a treatment plan to help eliminate it.

What you eat affects the air you exhale. Certain foods, such as garlic and onions, contribute to objectionable breath odor. Once the food is absorbed into the bloodstream, it is transferred to the lungs, where it is expelled. Brushing, flossing and mouthwash will only mask the odor temporarily. Odors continue until the body eliminates the food. Dieters may develop unpleasant breath from infrequent eating.

If you don't brush and floss daily, particles of food remain in the mouth, collecting bacteria, which can cause bad breath. Food that collects between the teeth, on the tongue and around the gums can rot, leaving an unpleasant odor.

Bad breath can also be caused by dry mouth (xerostomia), which occurs when the flow of saliva decreases. Saliva is necessary to cleanse the mouth and remove particles that may cause odor. Dry mouth may be caused by various medications, salivary gland problems or continuously breathing through the mouth. If you suffer from dry mouth, your dentist may prescribe anartificial saliva, or suggest using sugarless candy and increasing your fluid intake.

Tobacco products cause bad breath. If you use tobacco, ask your dentist for tips on kicking the habit.

Bad breath may be the sign of a medical disorder, such as a local infection in the respiratory tract, chronic sinusitis, postnasal drip, chronic bronchitis, diabetes, gastrointestinal disturbance, liver or kidney ailment. If your dentist determines that your mouth is healthy, you may be referred to your family doctor or a specialist to determine the cause of bad breath.

Maintaining good oral health is essential to reducing bad breath. Schedule regular dental visits for a professional cleaning and checkup. If you think you have constant bad breath, keep a log of the foods you eat and

make a list of medications you take. Some medications may play a role in creating mouth odors. Let your dentist know if you've had any surgery or illness since your last appointment.

Brush twice a day with fluoride toothpaste to remove food debris and plaque. Brush your tongue, too. Once a day, use floss or an interdental cleaner to clean between teeth.

Mouthwashes are generally cosmetic and do not have a long-lasting effect on bad breath. If you must constantly use a breath freshener to hide unpleasant mouth odor, see your dentist. If you need extra help in controlling plaque, your dentist may recommend using a special antimicrobial mouth rinse. A fluoride mouth rinse, used along with brushing and flossing, can help prevent tooth decay.

## *Oral Piercing*

### **Overview**

While many people think this trend looks cool, it has many possible and harmful side effects.

Common symptoms after oral piercing include pain, swelling, infection, an increased flow of saliva (“spit”) and injuries to the gums:

- Millions of bacteria (“germs”) live in your mouth, so oral piercings may become infected easily
- Swelling of the tongue is a common side effect but it is possible for the tongue to swell large enough to block your airway and prevent breathing.
- Piercing can cause uncontrollable bleeding and nerve damage. If a blood vessel was in the path of the needle during the piercing, severe and difficult-to-control bleeding can result.
- Blood clots or blood poisoning can occur

And the jewelry itself can be hazardous or cause other problems:

- You can choke on the studs, barbells or hoops that become loose in your mouth.
- Teeth can chip or crack from contact with the jewelry.
- Bacteria that breeds around the piercing can cause bad breath.
- The jewelry can prevent you from speaking clearly or cause problems with chewing and swallowing food.
- The metals may cause an allergic reaction.

Since oral health is important for overall health, the effects of an oral piercing may have a greater impact than one may think. Unfortunately, many people with oral piercings don't realize that these side effects could happen to them.

## *Pregnancy*

### **Overview**

Pregnancy is very special time. You'll want to think about taking good care of yourself and getting your baby's life off to a healthy start. Your oral health is an important part of your overall health, and good oral health habits not only help prevent oral problems during pregnancy, they also affect the health of your unborn child.

#### **Is there a connection between my diet pregnancy and my oral health?**

Eating a balanced diet is necessary to provide the correct amounts of nutrients to nourish both you and your child. What you eat during the nine months of pregnancy affects the development of your unborn child -- including teeth.

Your baby's teeth begin to develop between the third and sixth month of pregnancy, so it is important that you receive sufficient amounts of nutrients – especially calcium, protein, phosphorous, and vitamins A, C, and D.

### **Does a woman lose calcium from her teeth during pregnancy?**

It is a myth that calcium is lost from the mother's teeth during pregnancy. The calcium your baby needs is provided by your diet, not by your teeth. If dietary calcium is inadequate, however, your body will provide this mineral from stores in your bones. An adequate intake of dairy products – the primary source of calcium – or the supplements your obstetrician may recommend will help ensure that you get all the calcium you need during your pregnancy.

### **Does pregnancy affect my gums?**

During pregnancy, your body's hormone levels rise considerably. Gingivitis, especially common during the second to eighth months of pregnancy, may cause red, puffy or tender gums that tend to bleed when you brush. This sensitivity is an exaggerated response to plaque and is caused by an increased level of progesterone in your system. Your dentist may recommend more frequent cleanings during your second trimester or early third trimester to help you avoid problems.

### **What are “pregnancy tumors”?**

Occasionally overgrowths of gum tissue, called “pregnancy tumors,” appear on the gums during the second trimester. These localized growths or swellings are usually found between the teeth and are believed to be related to excess plaque. They bleed easily and are characterized by a red, raw-looking mulberry-like surface. They are often surgically removed after the baby is born. If you experience pregnancy tumors, see your dentist.

It's especially important, then, to maintain good oral health during pregnancy. Studies indicate that pregnant women who have severe periodontal (gum) disease may be at increased risk for pre-term delivery, which in turn increases the risk of having a low-birthweight baby. If you notice any changes in your mouth during pregnancy, see your dentist.

### **What can I do to keep my mouth healthy during pregnancy?**

To help prevent tooth decay and periodontal disease, brush your teeth thoroughly twice a day with a fluoride toothpaste to remove plaque. Be sure to clean between your teeth daily with floss or interdental cleaners. Ask your dentist or hygienist to show you how to brush and floss correctly. When choosing oral care products, look for those that display the American Dental Association's Seal of Acceptance, your assurance that they have met ADA standards of safety and effectiveness.

## *Oral Cancer*

### **The Importance of Early Detection**

Your dentist has recent good news about progress against cancer. It is now easier than ever to detect oral cancer early, when the opportunity for a cure is great. Only half of all patients diagnosed with oral cancer survive more than five years.

Your dentist has the skills and tools to ensure that early signs of cancer and pre-cancerous conditions are identified. You and your dentist can fight and win the battle against oral cancer. Know the early signs and see your dentist regularly.

You Should Know

- Oral Cancer often starts as a tiny, unnoticed white or red spot or sore anywhere in the mouth.
  - It can affect any area of the oral cavity including the lips, gum tissue, cheek lining, tongue and the hard or soft palate.
  - A change in the way the teeth fit together
  - Oral Cancer most often occurs in those who use tobacco in any form.
  - Other signs include:
    - A sore that bleeds easily or does not heal
    - A color change of the oral tissues
    - A lump, thickening, rough spot, crust or small eroded area
    - Pain, tenderness, or numbness anywhere in the mouth or on the lips
    - Difficulty chewing, swallowing, speaking or moving the jaw or tongue.
  - Alcohol use combined with smoking greatly increases risk.
  - Prolonged exposure to the sun increases the risk of lip cancer.
- Oral cancers can occur in people who do not smoke and have no other known risk factors.  
Oral Cancer is more likely to strike after age 40.  
Studies suggest that a diet high in fruits and vegetables may prevent the development of potentially cancerous lesions.

## Regular Dental Check-ups Important

Oral cancer screening is a routine part of a dental examination. Regular check-ups, including an examination of the entire mouth, are essential in the early detection of cancerous and pre-cancerous conditions. You may have a very small, but dangerous, oral spot or sore and not be aware of it.

Your dentist will carefully examine the inside of your mouth and tongue and in some patients may notice a flat, painless, white or red spot or a small sore. Although most of these are harmless, some are not. Harmful oral spots or sores often look identical to those that are harmless, but testing can tell them apart. If you have a sore with a likely cause, your dentist may treat it and ask you to return for re-examination.

Dentists often will notice a spot or sore that looks harmless and does not have a clear cause. To ensure that a spot or sore is not dangerous, your dentist may choose to perform a simple test, such as a brush test. A brush test collects cells from a suspicious lesion in the mouth. The cells are sent to a laboratory for analysis. If precancerous cells are found, the lesion can be surgically removed if necessary during a separate procedure. It's important to know that all atypical and positive results from a brush test must be confirmed by incisional biopsy and histology.

## Prevention and Detection

- The best way to prevent oral cancer is to avoid tobacco and alcohol use.
- Regular dental check-ups, including an examination of the entire mouth, are essential in the early detection of cancerous and pre-cancerous conditions.
- Many types of abnormal cells can develop in the oral cavity in the form of red or white spots. Some are harmless and benign, some are cancerous and others are pre-cancerous, meaning they can develop into cancer if not detected early and removed. (American Cancer Society)
- Finding and removing epithelial dysplasias before they become cancer can be one of the most effective methods for reducing the incidence of cancer.
- Knowing the risk factors and seeing your dentist for oral cancer screenings can help prevent this deadly disease. Routine use of the Pap smear since 1955, for example, dramatically reduced the incidence and mortality rates for cervical cancer in the United States.<sup>12</sup>
- Oral cancer is often preceded by the presence of clinically identifiable premalignant changes. These lesions may present as either white or red patches or spots. Identifying white and red spots that show dysplasia and removing them before they become cancer is an effective method for reducing the incidence and mortality of cancer.

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### **Cancer Treatment and Oral Health**

Dental care is an important element of overall cancer treatment. As soon as possible after cancer diagnosis, the patient's treatment team should involve the dentist. Individuals who will undergo cancer treatment should:

- Schedule a dental exam and cleaning before cancer treatment begins and periodically during the course of treatment.
- Tell the dentist that he or she will be treated for cancer.
- Discuss dental procedures, such as extractions or insertion of dental implants, with the oncologist before starting the cancer treatment.
- Have the dentist check and adjust removable dentures as needed.
- Tell the dentist and physician about any bleeding of the gums, or pain, or unusual feeling in the teeth or gums, or any dental infections.
- Update a medical history record with the dentist to include the cancer diagnosis and treatments.
- Provide the dentist and oncologist with each other's name and telephone number for consultation.
- Maintain excellent oral hygiene to reduce the risk of infection.

Reference: American Dental Association website [www.ada.org](http://www.ada.org)