



*What is*

# Pancreatic Cancer?

Pancreatic cancer occurs when there is out-of-control cell growth in the pancreas. The cells continue dividing and form lumps called tumors, which interfere with the normal functioning of the pancreas.

- > 30,000 people are diagnosed with pancreatic cancer in the US every year.
- > The 5-year survival rate is less than 5%.
- > Pancreatic cancer is the fourth leading cause of cancer-related death in the US.
- > The average life expectancy after diagnosis is just three to six months.
- > 94% of pancreatic cancer patients will die within 5 years of diagnosis.
- > 74% of pancreatic cancer patients die after the first year.
- > Unfortunately, treatment options are limited.

## **What is the link between pancreatic cancer and gum disease?**

Studies have found positive associations between gum and bone disease and pancreatic cancer. In one study, men with a history of gum disease had a 63% higher risk of developing pancreatic cancer than those with no history of gum disease. People with chronic inflammation caused by gum disease harbor higher levels of harmful bacteria in the mouth and gut. Over many years, this can lead to higher amounts of cancer-causing nitrosamines.

## **Resources**

[www.pancreatic.org](http://www.pancreatic.org)

[www.medicalnewstoday.com](http://www.medicalnewstoday.com)

[www.msnbc.msn.com](http://www.msnbc.msn.com)



# *What is* Sleep Apnea?

**Apnea is a sleep disorder characterized by abnormal pauses in breathing—or instances of abnormally low breathing—during sleep. Each pause in breathing can last from a few seconds up to whole minutes, and may occur 5 to 30 times (or more) in an hour.**

- > There are three types of sleep apnea: central sleep apnea (CSA), obstructive sleep apnea (OSA), and complex or mixed sleep apnea (a combination of CSA and OSA).
- > CSA is breathing interrupted by a lack of respiratory effort.
- > OSA is breathing interrupted by a physical block to airflow despite respiratory effort.
- > 84% of sleep apnea is OSA, making it the most common.
- > People who suffer from sleep apnea are rarely aware of having difficulty breathing, even upon waking. It is usually only recognized by a partner or friend who has witnessed an episode.
- > People with low muscle tone and soft tissue around the airway because of obesity are at a heightened risk for OSA.
- > Researchers revealed that people with OSA show tissue loss in brain regions that help store memory, linking OSA with memory loss.

## Symptoms of sleep apnea:

- > Daytime sleepiness/fatigue
- > Snoring
- > Restless sleep
- > Awakening with dry mouth or sore throat
- > 1 in 4 patients with OSA suffers from nighttime teeth grinding

## How do you know if you have sleep apnea?

- > Common indicators of sleep apnea include: obesity BMI greater than 30, large neck (16 inches for women, 17 inches for men), enlarged tonsils, large tongue, morning headaches, irritability/mood swings/depressions, learning and or memory difficulties, and sexual dysfunction.
- > The ending of an apneic event may be accompanied by a number of mouth phenomena, such as snoring, gasps, mumbles, and teeth grinding.
- > Men are more likely to suffer from sleep apnea than women, at a 3-to-1 ratio.
- > Risk of OSA rises with increase in body weight, active smoking, and age.
- > Diabetics or borderline diabetics are up to 3 times more likely to have OSA.

## Treatment Options

- > Lifestyle change, avoiding alcohol or muscle relaxants, losing weight, and quitting smoking
- > Various kinds of oral appliances to keep the airway open during sleep
- > Continuous positive airway pressure (CPAP)
- > Surgical procedures to remove and tighten tissue and widen the airway

## How is sleep apnea related to your mouth?

Patients with mild to moderate sleep apnea who use oral appliances at night have shown a significant reduction in symptoms, particularly if they sleep on their backs or stomachs. These patients sleep better and snore less. Oral appliances may also improve airflow for some patients with severe apnea, and they have a higher compliance rate than the CPAP.

## Resources

<http://www.sleepfoundation.org>

<http://www.mayoclinic.com>

<http://www.chestnet.org>



*What is*  
**Erectile  
Dysfunction?**

Erectile dysfunction (ED) is the regular or repeated inability to obtain or maintain an erection.

- > The National Institutes of Health states that up to 30 million men are affected by ED.
- > 1 in 10 men in the world are thought to suffer from ED.
- > If a man smokes more than 1 pack of cigarettes a day, he has a 50% higher chance of erectile problems than a non-smoker.
- > Men over the age of 75 have a 77.5% chance of suffering from erectile problems.
- > Underlying health issues such as diabetes or heart disease account for 70% of all erectile dysfunction cases.
- > Psychological causes such as stress and anxiety are estimated to cause around 10% to 20% of all erectile dysfunction cases.

## **Symptoms of erectile dysfunction:**

- > Trouble getting an erection
- > Trouble keeping an erection
- > Reduced sexual desire

## **Treatment Options**

- > There are three types of oral medications that have been proven successful: Viagra, Cialis, and Levitra.
- > These drugs enhance the effects of nitric oxide, a natural chemical your body produces that relaxes muscles in the penis, thus increasing the blood flow to achieve an erection.

## **How is erectile dysfunction related to your mouth?**

Researchers in Luzhou performed a groundbreaking study that showed laboratory rats with periodontitis had unusually low levels of an enzyme called eNOS. The eNOS enzyme produces nitric oxide, which in turn is used to relax the smooth muscles of the penis, allowing blood flow into the erectile tissue. This could explain why 15.8% of men with periodontitis have erectile dysfunction: the chronic inflammation associated with periodontitis leads to impotence.

## **Resources**

<http://www.hopkinsmedicine.org>

<http://www.mayoclinic.com>

<http://www.edguider.com>



# *What is* Pregnancy?

Pregnancy is the period from conception—when a woman's egg is fertilized—to birth. After the egg is fertilized by a sperm and then implanted in the lining of the uterus, it develops into the placenta and embryo, and later into a fetus. Pregnancy usually last 40 weeks, beginning from the first day of the woman's last menstrual period. It is divided into three trimesters, each lasting three months.

- > There are approximately 6 million pregnancies every year in the United States.
- > Every year there are approximately 2 million women in the US who experience pregnancy loss.
- > 600,000 women experience pregnancy loss through miscarriage.
- > 467,201 babies are born prematurely.
- > 307,030 babies are born with Low Birth Weight.
- > 820,000 women smoke cigarettes while pregnant.
- > 757,000 women drink alcohol while pregnant.
- > Nausea is one of the most universal pregnancy symptoms, affecting up to 85% of pregnant women.
- > 80% of pregnant women have acid reflux symptoms and the symptoms vary from mild to very severe.
- > Morning sickness is common during the first trimester.
- > Intense cravings for sweets are common during pregnancy.

## **How is pregnancy related to your mouth?**

There is a link between uncontrolled periodontal disease and pregnancy complications such as premature labor and preeclampsia (rise in blood pressure). A study exploring the possible link between periodontal disease and preeclampsia found that 50% of the placentas from women with preeclampsia were positive for one or more periodontal pathogens. Another study examined the amniotic fluid of a test group of pregnant women, identifying bacteria commonly found in the mouth and associated with periodontal disease.

Pregnancy causes hormonal changes that increase the risk of developing gum disease, which can affect the health of developing babies. Studies have shown that bacteria responsible for tooth decay are passed from the mother to the child in utero. The more frequently you give into the craving for sugary snacks, the greater the chance of developing tooth decay. Pregnant women with acid reflux are also at a greater risk of tooth erosion and periodontal problems, as the acid begins to thin and wear away the protective coating of teeth (enamel), leaving them weakened.

## **Resources**

<http://medical-dictionary.thefreedictionary.com>

<http://www.americanpregnancy.org>

<http://www.webmd.com/oral-health/dental-care-pregnancy>

<http://www.disabled-world.com>

<http://www.whattoexpect.com>

<http://dentalhealthandwellnessboston.com>

<http://www.perio.org/consumer>

<http://www.perio.org/consumer>





# *What is* Cardiovascular Disease?

Cardiovascular disease, also called heart disease, includes numerous problems, many of which are related to a process called atherosclerosis. Atherosclerosis is a condition that develops when a substance called plaque builds up in the walls of the arteries. This buildup narrows the arteries, making it harder for blood to flow through. If a blood clot forms, it can stop the blood flow, and this can cause a heart attack or stroke.

A heart attack occurs when the blood flow to a part of the heart is blocked by a blood clot. If this clot cuts off the blood flow completely, the part of the heart muscle supplied by that artery begins to die.

- > Each year, heart disease kills more Americans than cancer.
- > Cardiovascular disease is the number one cause of death and disability in the United States and most European countries.

## **How is heart disease related to your mouth?**

Several theories exist to explain the link between periodontal disease and heart disease. Oral bacteria can affect the heart when it enters the blood stream, attaching to fatty plaques in the coronary arteries (heart blood vessels) and contributing to clot formation. Coronary artery disease is characterized by a thickening of the walls of the coronary arteries due to the buildup of fatty proteins. Blood clots can obstruct normal blood flow, restricting the amount of nutrients and oxygen required for the heart to function properly. This may lead to heart attacks.

Another possibility is that the inflammation caused by periodontal disease increases plaque buildup, which may contribute to swelling of the arteries. Researchers have found that people with periodontal disease are almost twice as likely to suffer from coronary artery disease.

## **Cardiovascular diseases include the following:**

- > Aneurysm
- > Angina
- > Atherosclerosis
- > Cerebrovascular accident (stroke)
- > Cerebrovascular disease
- > Congestive heart failure
- > Coronary artery disease
- > Myocardial infarction (heart attack)
- > Peripheral vascular disease

## **Treatment Options**

Unlike many other chronic medical conditions, cardiovascular disease is treatable and reversible, even after a long history of disease.

Because periodontal disease can exacerbate existing heart conditions, patients at risk for infective endocarditis— inflammation of the inner lining of the heart—may require antibiotics prior to dental procedures. Your dentist and cardiologist will be able to determine if your heart condition requires use of antibiotics prior to dental procedures.



# *What is a* **Stroke?**

An ischemic stroke (the most common type) happens when a blood vessel that feeds the brain gets blocked, usually from a blood clot. When the blood supply to a part of the brain is shut off, brain cells will die. The result is the inability to carry out normal brain functions such as walking or talking.

> About 85 percent of strokes are ischemic strokes.

## **How is a stroke related to your mouth?**

Studies have pointed to a relationship between periodontal disease and stroke. In one study that looked at the causal relationship of oral infection as a risk factor for stroke, people diagnosed with acute cerebrovascular ischemia were found more likely to have an oral infection when compared to those in the control group.

## **How can you minimize your risk of having a stroke?**

- > Control high blood pressure (hypertension).
- > Lower the amount of cholesterol and saturated fat in your diet.
- > Quit tobacco use.
- > Control diabetes.
- > Maintain a healthy weight.
- > Eat a diet rich in fruit and vegetables.
- > Exercise regularly.
- > Drink alcohol in moderation, if at all.
- > Treat obstructive sleep apnea, if present.
- > Avoid illicit drugs.

## **Resources**

<http://www.heart.org/HEARTORG/Caregiver>

<http://www.news-medical.net>

<http://www.perio.org/consumer/mbc.heart>

<http://www.mayoclinic.com/health/stroke>



# *What is* Alzheimer's Disease?

Alzheimer's is a progressive neurological disease of the brain leading to the irreversible loss of neurons and the loss of intellectual abilities, including memory and reasoning. As the disease progresses, it can become severe enough to impede social or occupational functioning. Alzheimer's disease is also known as simply Alzheimer's or Senile Dementia of the Alzheimer Type (SDAT).

- > Scientists believe that, for most people, Alzheimer's disease results from a combination of genetic, lifestyle, and environmental factors that affect the brain over time.
- > As more and more brain cells die, Alzheimer's leads to significant brain shrinkage.

## **Common symptoms of Alzheimer's disease:**

- > Confusion
- > Disturbances in short-term memory
- > Problems with attention and spatial orientation
- > Changes in personality
- > Language difficulties and unexplained mood swings

Although these symptoms will likely overlap and fluctuate, varying in severity and chronology, the overall progress of the disease is fairly predictable. On average, people live for 8 to 10 years after diagnosis, though this terminal disease can last up to 20 years.

## **How is Alzheimer's related to your mouth?**

Studies have yet to yield conclusive results, but research suggest that exposure to inflammation early in life quadruples one's risk of developing Alzheimer's disease. An inflammatory burden early in life, as represented by chronic periodontal disease, might have severe consequences later on as a contributing factor to Alzheimer's. If the link between inflammation and periodontal disease is confirmed, researchers said it would add inflammatory burden to the short list of preventable risk factors for Alzheimer's disease.

## **Resources**

*<http://www.medicalnewstoday.com>*

*<http://www.mayoclinic.com/health/alzheimers-disease>*

*<http://www.ahaf.org/alzheimers/about/symptomsandstages>*

*<http://jada.ada.org/content>*

# *What is* **Rheumatoid Arthritis?**

**Rheumatoid arthritis (RA) is a form of inflammatory arthritis and an autoimmune disease. For reasons no one fully understands, in rheumatoid arthritis, the immune system—which is designed to protect our health by attacking foreign cells such as viruses and bacteria—instead attacks the body’s own tissues, specifically the synovium, a thin membrane that lines the joints. As a result of the attack, fluid builds up in the joints, causing pain in the joints and inflammation that’s systemic—meaning it can occur throughout the body.**

- > People with RA are 8 times more likely to develop gum disease than people without RA.
- > In patients suffering from both RA and gum disease, 18 percent had severe periodontal disease, and 32 percent had moderate periodontal disease.
- > By comparison, about 10 to 15 percent of adults without RA have moderate to severe periodontal disease.

## **What is the link between gum disease and rheumatoid arthritis?**

Rheumatoid arthritis is due to an overactive immune system. Both diseases have inflammation in common, which may explain the connection. Inflammation is a protective immune system response to substances like viruses and bacteria. In autoimmune diseases like rheumatoid arthritis, the immune system mistakenly triggers inflammation, although there are no viruses or bacteria to fight off. The inflammation causes joints to become swollen, painful, and stiff.

## **Treatment Options**

- > Controlling the inflammation through better dental care could play a role in reducing the incidence and severity of RA.

- > Studies have shown that when people with a severe form of rheumatoid arthritis cleared up their gum disease, their pain and other arthritic symptoms got better.
- > Gum disease ranges from gingivitis, a mild form that causes swollen, tender gums, to more serious forms like periodontitis, in which inflammation affects the tissue and bone supporting the teeth. Some people with RA also develop Sjogren's syndrome, an autoimmune disease of the glands, which causes dry mouth and increased tooth decay.
- > If you have gingivitis, it can be reversed with twice-yearly dental cleanings and good at-home care. People with more severe gum disease will need more extensive treatment from a dental professional to control the disease.
- > People with RA sometimes have a hard time maintaining good oral hygiene because the disease can affect the joints in their hands, making brushing and flossing difficult. Electric toothbrushes can be a great help to patients who have trouble brushing.
- > Gum disease has been linked to other conditions like heart disease, stroke, and diabetes, as well as RA. Taking care of your mouth may very well improve your overall health.

## **Tips from the American Dental Association to make dental care easier to manage:**

- > Reinvent your toothbrush. To better grip your brush, add a tennis ball or bicycle handle to the end.
- > Experiment with new types of floss. Try floss holders, floss picks, or threaders.
- > "Pump up" your paste. Toothpaste in a pump might be easier for you to use than a tube you have to squeeze.
- > Make the most of mouthwash. Buy one with fluoride to protect your teeth from cavities.
- > Don't light up. Smoking is a big risk factor in developing gum disease, and it can interfere with the success of some treatments.
- > Speak to your dentist. Tell your dentist about your rheumatoid arthritis.
- > Sometimes shorter appointments scheduled later in the day when joints are less stiff can make you more comfortable.
- > Ask for a neck or leg pillow for better support in the dentist's chair.

## **Resources**

<http://www.arthritis.org>

<http://www.everydayhealth.com>





# *What is* **Obesity?**

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to increased health problems and reduced life expectancy.

- > More than one-third of US adults (35.7%) are obese.
- > Obesity increases the likelihood of various diseases, particularly heart disease, Type 2 diabetes, obstructive sleep apnea, certain types of cancer, and osteoarthritis.
- > The most common cause of obesity is excessive food energy intake (sugars and carbohydrates), lack of physical activity, and genetic susceptibility (though few cases are caused primarily by genes).
- > Obesity is increasing in adults and children, and authorities view it as one of the most serious public health problems of the 21st century.
- > Medical costs associated with obesity were estimated at \$147 billion last year.
- > Obesity is a leading preventable cause of death worldwide.

## **How is obesity related to your mouth?**

Various studies have shown that individuals affected by obesity have more oral health problems than other individuals in general. Published findings indicate that these special-needs patients have higher tooth decay levels, more missing teeth, and fewer essential dental fillings. Obese individuals between the ages of 18 and 34 were found to have a rate of periodontal disease 76 percent higher than individuals within a normal weight range.

While the connection between obesity and dental health is complex, part of the reason may be diet. The combination of bacteria and food causes tooth decay. Plaque, a clear sticky substance that contains bacteria, forms on your teeth and gums, and as the bacteria feed on the sugars in the food you eat, they make acids. The acids attack the teeth for 20 minutes or more after eating. Over a period of time, these acids destroy tooth enamel, resulting in tooth decay.

## **How is obesity related to your mouth?**

- > Eat a well-balanced diet
- > Drink plenty of water
- > Limit snacking
- > Avoid sugary drinks

## **Resources**

<http://www.webmd.com/oral-health>

<http://www.wikipedia.org/>

<http://www.obesityaction.org>

<http://www.cdc.gov/obesity/data/adult.html>

<http://www.goodhealthstartshere.org>



*What is a*

# migraine headache?

Migraine is a chronic disorder characterized by recurrent moderate to severe headaches, usually affecting one side of the head, and accompanied by nausea, vomiting, sensitivity to light, sensitivity to sound, and aggravated by physical activity.

- > One third of sufferers see an aura before the pain starts.
- > 10% of the world population is affected by migraines at some point in life.
- > Migraines can be triggered by stress, hunger, or fatigue.
- > Medications are only considered successful if they reduce the frequency or severity by 50%.
- > Migraines with auras double the risk of ischemic strokes.
- > Most migraines commonly start between ages 15 and 24, and are most frequent between ages 35 to 45.
- > Migraines are responsible for 1% of total US medical disability.
- > 25% of American families include at least one member who suffers from migraines.
- > Suicide attempts are 3 times more likely among people who suffer from migraines with auras, regardless of past history of depression.

## **Link between migraines and TMD (Temporomandibular Joint Disease)?**

The temporomandibular joint (TMJ) is where your lower jaw connects to the skull. Each of us have two TMJs. But if the joint is out of alignment, it causes the muscles to strain in the face, head, and neck, even while at rest. It also causes increased blood flow, which increases blood pressure. All of these symptoms can cause TMJ headaches and migraines.

### **Symptoms of TMD:**

- > Sensitive/sore teeth
- > Sore jaw muscles
- > Pain in the head, neck, and shoulders
- > Facial pain
- > Headaches/migraines
- > Ringing in the ears
- > Locking of jaw
- > Clicking/popping of jaw
- > Limited jaw movement
- > Worn/chipped teeth

## **Resources**

[www.ezinearticles.com](http://www.ezinearticles.com)

[www.wikipedia.org](http://www.wikipedia.org)



*What is*

# diabetes?

Diabetes is a metabolic disorder in which the person has high blood glucose (blood sugar), either because insulin production is inadequate, or because the body's cells do not respond properly to insulin, or both. There is more than one type of diabetes.

- > Approximately 10% of all diabetes cases is Type I and usually develops before a person is 40 years old
- > Type II accounts for 90% of all cases
- > Obesity, especially those with belly fat, are at a higher risk for Type II diabetes

## **How diabetes is related to the mouth?**

- > Gum disease is considered the 6th complication of diabetes
- > Uncontrolled Type II diabetes are at higher risk for gum disease
- > Severe periodontal disease can increase blood sugar
- > Diabetics have a decrease ability to fight bacteria that invade the gums
- > Diabetics are at an increased risk to thrush (fungal infection in the mouth)
- > Medications can cause dry mouth (less saliva to wash away germs and acids germs create), which can cause soreness, ulcers, infections, and cavities
- > Poorly controlled diabetes will cause slow healing and increase your risk to infection after dental surgery

## **Family History Link**

You inherit a predisposition to diabetes then something in the environment triggers it. In most Type I cases, people need to inherit risk factors from both parents. The family history has a stronger link in Type II cases, but obesity also runs in families so it's hard to determine if Type II diabetes is caused from the genetic link or lifestyle factors.

## **Resources**

[www.medicalnewstoday.com/info/diabetes](http://www.medicalnewstoday.com/info/diabetes)  
[www.perio.org/consumer/mbc.diabetes.htm](http://www.perio.org/consumer/mbc.diabetes.htm)  
[www.diabetes.org](http://www.diabetes.org)