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“Women and Gum Disease”

Throughout a woman's life cycle, hormonal influences affect many of the tissues in her body, including her gums. Gums can become sensitive, and at times react strongly to the hormonal fluctuations. This may make her more susceptible to gum disease.

What is Periodontal Disease (Gum Disease)?

Gum disease, or periodontal disease, is caused by the bacteria and toxins in dental plaque, a sticky colourless film that constantly forms on the teeth. Gum disease affects the gums and supporting structures of the teeth.

Gingivitis Gingivitis is the mildest form of gum disease, and is characterised by swollen, red or tender gums. This may cause them to bleed easily during standard dental health care routines such as brushing and flossing.

Periodontitis If left untreated, gingivitis can progress to a more serious stage where the bone and tissue surrounding the teeth are damaged or destroyed. If still not treated, teeth eventually become loose and may be lost.

Signs and symptoms of gum disease/periodontal disease:

- Bleeding gums stimulated by brushing and/or flossing
- Swollen, red or tender gums
- Recession in gums
- Loose teeth/ Mobile teeth
- Gums that pull away from teeth
- Persistent bad breath
- Presence of pus between teeth/gums
- Change in jaw alignment and teeth

Without careful home oral care, including brushing and flossing and regular visits to the dentist, you put yourself at risk of gum disease. In addition, as mentioned before, hormonal changes at certain stages in life can be a contributing factor in her chances of getting some kinds of gum disease, or can make an existing gum problem worse.

Gum disease can strike any woman and at different ages and stages of life.

The following will give you an idea of oral health changes during puberty, menstruation, pregnancy and menopause.

Puberty

During puberty, an increased level of sex hormones, such as progesterone and estrogen, in a young woman's maturing system causes increased blood circulation to the gums. This, in turn, may cause an increase in the gums' sensitivity which leads to a greater susceptibility of periodontal diseases. This hormonal increase can exaggerate the way gum tissues react to any irritation, including food particles, plaque bacteria and calculus (or tartar).Pronounced inflammation, bluish red discoloration, edema and gingival enlargement result from local factors that would ordinarily elicit a comparatively mild gingival response. Gums may bleed easily while chewing or brushing.

There is also some evidence that the increased level of sex hormones increases the growth of some bacteria just beneath the gums around the teeth. The gums react to local irritants and become inflamed. Since the cause of the inflammation is due to local irritants, these must be removed by a dental professional. Afterwards, careful oral home care (including brushing and flossing) is necessary, or the inflammation will return. If not treated, the bone and tissues surrounding the teeth can be damaged.

As a young woman progresses through puberty, the tendency for her gums to swell so much in response to a small amount of irritants will lessen. However, it is important that she remembers to brush and floss daily and seek regular professional dental care.

Menstruation

As a general rule, the menstrual cycle is not accompanied by notable gingival changes, but occasional problems do occur. Gingival changes associated with menstruation have been attributed to hormonal imbalances and in some patients may be accompanied by a history of ovarian dysfunction.

Gingivitis can be much more prevalent during menstruation. Again, this is due to an increased amount of progesterone in her system before her period begins, accompanied by plaque accumulation. Occasionally, some women experience sore or bleeding gums, tense feeling in gums three or four days before their period begins. Another rare occurrence for some women is gingivitis during menstruation, which is marked by reappearing gingival bleeding, a bright red swelling of the gums between the teeth and sores on the tongue and inside of the cheek.

Menstruation gingivitis occurs right before a woman's period and clears up once her period has started. As always, good home oral hygiene, including brushing and flossing, is important to maintain oral health, especially during these hormonal fluctuations.

Pregnancy

There used to be an old wives tale that said 'A tooth lost for every child'. While it may be far-fetched, it actually was based loosely in fact. Woman's teeth and gums are affected by pregnancy, just as other tissues in her body. Most commonly, women experience increased gingivitis, beginning in the second or third month that increases in severity through the eighth month and begins to decrease in the ninth month. This condition is called as **pregnancy gingivitis**. Partial reduction in the severity of gingivitis occurs by 2 months postpartum, and after 1 year the condition of gingiva is comparable to that of patients who have not been pregnant. However gingiva does not return to normal as long as local factors are present. Tooth mobility, pocket depth and gingival fluid are also reduced after pregnancy.

Pregnancy Gingivitis: Pronounced ease of bleeding is the most striking feature. Gingiva is inflamed and varies in color from bright red to bluish red. Pregnancy gingivitis is marked by an increased amount of swelling, bleeding and redness in the gum tissue in response to a very small amount of plaque or calculus. This again is caused by an increased level of progesterone in the system.

Pregnancy affects the severity of previously inflamed areas, it does not alter the healthy gingiva. Impressions of increased incidence may be created by the aggravation of previously inflamed but unnoticed areas. Tooth mobility, pocket depth and gingival fluid are also increased in pregnancy. If your gums are in good health before you get pregnant, you are less likely to have any problems. Pregnancy gingivitis usually affects areas of previous inflammation, not healthy gum tissue.

Just like any other type of gingivitis, if left untreated, pregnancy gingivitis can have damaging effects on the gums and bone surrounding your teeth, resulting in tissue (bone and gum) loss. During Pregnancy, hormonal level rise dramatically. Progesterone reaches 10 times and estrogen reaches 30 times higher levels than during reproductive cycle. Because

her oral tissues are more sensitive due to increased progesterone, they will react strongly to any local irritant present.

In order to reduce the amount of gingival problems, it is important to seek professional cleaning to remove irritants and keep up a diligent daily home oral care routine, including brushing and flossing. Now more than ever, a regular examination by dentist is very important. If dental check-up is due, don't skip it. In fact, woman might benefit from more frequent professional cleaning during your second trimester or early third trimester.

Pregnancy Tumours: Occasionally, the inflamed gum tissue will form a discrete tumour like masses, referred to as **pregnancy tumours** (or **granuloma**), which usually appear in the second or third month of pregnancy, but may occur at any time during the course of pregnancy. A pregnancy tumour is a large swelling of gum tissue and is not malignant. They bleed easily and become hyperplastic and nodular. It is an extreme inflammatory response to any local irritant (including food particles, plaque or calculus) that may be present.

A **pregnancy tumour** usually looks like a large tumour like masses which may be sessile or pedunculated and ulcerated, ranging in color from purplish red to deep blue, depending on the vascularity of the lesion and degree of venous stasis. The lesion classically occurs in areas of gingivitis and associated with poor oral hygiene and calculus. The tumour is usually painless, however, it can become painful if it interferes with your bite or if debris collects beneath it. If a pregnancy tumour forms, it may be treated by professional removal of all local irritants and diligent home oral care. Any further treatment or removal would need to be discussed with your periodontist and gynaecologist.

Pregnancy gingivitis and **pregnancy tumours** usually diminish following pregnancy but they do not go away completely. If she experience any gum problems during her pregnancy, it is important on completion of her pregnancy to have her entire mouth examined and her periodontal health checked. Any treatment she might need can be determined at this time.

"More alarming is gum disease's apparent impact on pregnancy". A pregnant woman with gum disease is seven to eight times more likely to give birth prematurely to low birth-weight babies. Researchers believe that gum disease causes the body to release inflammatory chemical mediators which causes pre-term births.

Research suggests a link between pre-term delivery, low birth weight babies, and gingivitis. Excessive bacteria can enter the bloodstream through their gums; the bacteria can travel to the uterus, triggering the production of inflammatory chemical mediators like prostaglandins, which are suspected to induce premature labour.

Systemic inflammation and its chemical mediators play a major role in pathogenesis of preterm delivery , pre-eclampsia, intrauterine growth restriction. Chronic infections like intrauterine infection and chorioamnionitis are linked to both preterm birth and elevated CRP.

There are many different reasons why periodontal disease may affect the health of the mother and her unborn child:

Prostaglandin – Periodontal disease appears to elevate levels of prostaglandin in mothers who are suffering from the more advanced forms of the condition. Prostaglandin is a labour-inducing compound found in oral bacteria strains associated with periodontitis. Elevated levels of prostaglandin can cause the mother to give birth prematurely and deliver a baby with a low birth weight.

C - reactive protein (CRP) – This protein, which has been previously linked to heart disease, has now been associated with adverse pregnancy outcomes including preeclampsia and premature birth. Periodontal infections elevate C-reactive protein levels and amplify the body's natural inflammatory response. Periodontal bacteria may enter the bloodstream causing the liver to produce CRP which leads to inflamed arteries as well as possible blood clots. These inflammatory effects can then lead to blocked arteries causing strokes or heart attacks.

Bacteria spread – The bacteria which colonize in the gum pockets can readily travel through the bloodstream and affect other parts of the body. In pregnant women, research has found

that oral bacteria and associated pathogens have colonized in the internal mammary glands and coronary arteries.

Though many types of treatments are forbidden during pregnancy, dental care is not one of them. Most doctors encourage pregnant women with gum disease to seek treatment right away. Scaling and root planing, two common treatments of gum disease, are perfectly safe during pregnancy. Woman should, of course, always consult her gynaecologist before having any treatments and should make sure that dentist or periodontist is fully aware of her pregnant state. The second trimester and early part of third trimester is the safest period for providing routine dental care. The emphasis at this time is on controlling active disease and eliminating potential problems that could arise in late pregnancy.

Menopause

For the most part, any oral problem woman has while is in menopause probably is not directly related to the changes going on in your body. If she is taking estrogen supplement during this time, these should have little or no effect on her oral health. However, progesterone supplements may increase her gums response to local irritants, causing the gums to bleed, turn red and swell.

On rare occasions, a woman may experience a condition called menopausal gingivostomatitis. This condition is marked by gums which are red and shiny, bleed easily and that range in colour from the normally pale to deep red. Other symptoms include a dry, burning sensation in the mouth, abnormal taste sensations (especially salty, peppery or sour), extreme sensitivity to hot and cold foods or drinks, and finally, difficulty removing any partial dentures. If she is diagnosed with menopause gingivostomatitis, dentist or periodontist can help her to manage the condition with special medications.

Regular dentist appointments are essential for every woman. As her age, her body and oral health will change, and only a dentist or periodontist will be able to identify why her gums are bleeding and how to alleviate the problem. Common procedures to manage periodontal disease include scaling and root planing, often referred to as a deep cleaning, laser therapy or even gum surgery. The effects of gum disease on women's health are real and early detection is key.