

# REVIEW ARTICLE ON ORAL HEALTH AND PREGNANCY

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## **ABSTRACT**

Between 2007-2009, 35% of American women said they hadn't been to the dentist in the previous year, and 56% said they hadn't gone while they were pregnant. The likelihood of receiving dental care is directly correlated with economic level, with the poorest women having the lowest likelihood of doing so. By sharing spoons, for example, good oral hygiene during pregnancy may reduce the quantity of caries-causing oral bacteria that is passed on to the child. Although some studies have suggested a link between periodontal disease and preterm birth, research has not demonstrated any better results following prenatal dental care. Despite this, these studies found no evidence to support any safety issues with dental care during pregnancy. Women should regularly get advice on maintaining good dental hygiene practices throughout their life as well as the security and significance of oral health care during pregnancy in order to enhance general health and wellbeing.

**Keywords:** oral health, medication, pregnancy, management

## **INTRODUCTION**

Oral health is a determining factor for quality of life, according to the World Health Organization Global Oral Health Programme, which highlights this connection. (1) A "hidden epidemic of oral disorders is impacting our most vulnerable individuals," including the poor and many members of racial and ethnic minority groups, according to the 2000 Surgeon General's report Oral Health in America. A "mirror for general health and well-being," oral health refers to the condition of the gums, teeth, and jawbone. The American dental Association advises regular brushing and flossing in addition to semi-annual dental examination and cleaning to avoid tooth decay, oral infections, and tooth loss. The American Dental Association also emphasises the significance of maintaining oral health when pregnant (2)

## **COMMON ORAL HEALTH CONDITIONS DURING PREGNANCY**

Pregnancy-related physiological changes may cause the mouth cavity to change (3)

During pregnancy, benign oral gingival lesions, tooth mobility, tooth erosion, dental caries, and periodontitis are some of these alterations (Table 1) . Pregnant women of these many changes to their gums and teeth is crucial, as is reinforcing excellent oral hygiene practices to maintain healthy gums and teeth.

Table 1. Common Oral Health Condition During Pregnancy (4)

Primary gingivitis	An increased inflammatory response to dental plaque during pregnancy causes gingiva to swell and bleed more easily in most women. Rinsing with saltwater may help with the irritation. Pregnancy gingivitis typically peaks during the 3 <sup>rd</sup> trimester. Women who have gingivitis before pregnancy are more prone to exacerbation during pregnancy.
Benign oral gingival lesion (known as Pyogenic granuloma, granuloma gravidarum or epulis of pregnancy)	In approximately 5% of pregnancies, a highly vascularized, hyperplastic and often pedunculated lesion upto 2 cms in diameter may appear, usually on anterior gingiva. These lesions may result from a heightened inflammatory response to oral pathogens and usually regresses after pregnancy. Excision is rarely necessary but may be needed if there is severe pain, bleeding or interference with mastication.
Tooth mobility	Ligaments and bone that support the teeth may temporarily loosen during pregnancy, which results in increased tooth mobility. There is normally not any tooth loss unless any other complications are present.
Tooth erosion	Erosion of tooth enamel may be more common because of increased exposure to gastric acid from vomiting secondary to morning sickness, hyperemesis or gastric reflux during late pregnancy. Rinsing with baking soda solution may help neutralize the associated acid.
Dental caries	Pregnancy may result in dental caries due to increased acidity in the mouth, greater intake of sugary snacks and drinks secondary to pregnancy cravings and decreased attention to prenatal oral health

	maintenance.
Periodontitis	Untreated gingivitis can progress to periodontitis, an inflammatory response in which a film of bacteria known as plaque adheres to teeth and releases bacterial toxins that create pockets of destructive infection in gums and bones. The teeth may loosen, bone may be lost, and bacteremia may result.

According to a study,

prevalence of periodontal disease among pregnant women is about 40% . The majority of pregnant women with periodontal disease are African American, smokers, and recipients of public assistance. Maternal periodontal disease and preterm birth have been linked, according to a 1996 study (5). Since then, more research have backed up this finding (6) (7). The placental tissues, as well as the uterus and cervix, may be exposed to blood-borne gram-negative anaerobic bacteria or inflammatory mediators like lipopolysaccharides and cytokines. Increased inflammatory modulators as a result, especially in African Americans, may trigger preterm labour (8). Recent meta-analyses and other significant studies, however, have not revealed any advantages of periodontal care during pregnancy for reducing preterm birth and low birth weight infants (9) (10) (11) (12) (13) (14)

Similar discoveries regarding the impact of periodontal disease on preeclampsia have produced mixed findings (15) (16) These areas require additional study. To determine whether pre-pregnancy treatment could lessen unfavourable pregnancy outcomes, randomised controlled studies of periodontal therapy during the preconception or interconception phases are recommended.

Treatment of maternal periodontal disease during pregnancy is not connected with any bad maternal or birth outcomes, despite the lack of evidence for a causal link between periodontal disease and unfavourable pregnancy outcomes. Additionally, prenatal periodontal therapy is connected to a better maternal oral health (11) (12) (13).

#### **DENTAL PHARMACOLOGICAL CONSIDERATIONS FOR PREGNANT WOMEN**

Because the serum concentration for drug binding is lower during pregnancy, medications are easily absorbed. A higher drug distribution volume, a lower maximum plasma concentration, a shorter plasma half-life, a higher level of lipid solubility, and a higher level of drug clearance are also present. All of these elements make it simple for an unbound medication to pass through the placenta, exposing the foetus to the medicines. There may also be negative effects from some medications. As a result, care should be used while prescribing medications to pregnant women. The majority of medications are excreted in breast milk, where they are then given to the infant. (17)

Care should be taken when prescribing any medication to the pregnant women. (Table 2)

Table 2. Dental Pharmacological Consideration For Pregnant Women (18)

<b>MAY BE USED</b>	<ul style="list-style-type: none"> <li>•Analgesic- Acetaminophen, Acetaminophen with Codeine, Hydrocodone or Oxycodone</li> <li>•Antibiotic- Amoxicillin, Cephalosporine, Clindamycin, Metronidazole, Penicillin</li> <li>•Anesthetic- Local Anaesthetic with Epinephrine (e.g. Lidocaine), Nitrous Oxide</li> <li>•Therapeutic Agents- Chlorhexidine mouth rinse, Professionally applied Topical Fluoride</li> </ul>
<b>MAY BE USED IN SHORT DURATION</b>	Aspirin, Ibuprofen
<b>AVOID</b>	Ciprofloxacin, Levofloxacin, Moxifloxacin
<b>NEVER USE</b>	Tetracycline

#### **ORAL AND DENTAL HEALTH MANAGEMENT DURING PREGNANCY**

Pregnant patient's oral health is managed as one of the most crucial aspects of their care. It is advised to first evaluate the patient's oral health, after which she should be informed about the changes that may be expected during pregnancy and the steps that can be taken to minimise discomfort (19)

In contrast to untreated tooth deterioration, which may later result in early childhood caries, the dental examination and treatment do not harm the foetus (during the second and third trimesters). Similar to this, it is advised to carry out other treatments including diagnosis, periodontal therapy, restorations, and extractions during the middle trimester as organogenesis is finished by then.

### **First trimester**

Procedures are not thought to be suitable during the first trimester of pregnancy. During this time, organogenesis occurs and is susceptible to teratogen danger. Additionally, the chance of spontaneous abortions rising. (20) (21)

During this time, you should abide by the following rules-

- >The person needs to be well-informed on the changes occurring in the mouth.
- >Instructions on how to keep your teeth clean.
- >Only periodontal prophylaxis and emergency care should be administered.
- >Avoid standard radiography.

### **Second trimester**

Emergent dento-alveolar surgery and other elective treatments are safe to undertake during this trimester because the organogenesis period is finished. (22)

During this time, recommendations include:

- >Oral hygiene upkeep and plaque control
- >If necessary, scaling, polishing, and curettage can be done safely
- >Active oral illnesses need to be managed
- >Elective operations including root canals, extractions, and restorations can be done safely

### **Third Trimester**

Radiographs can be taken selectively.

Due to the low risk to the foetus, it is acceptable to carry out quick dental treatments during the third trimester. However, there is a higher chance of pain for the mother, which can be more significantly decreased by appropriate placement. It is advised to have operations done in the middle of the third trimester.

During the third trimester, the following actions are advised:

- >Scaling, polishing, and curettage can be done without risk, if necessary
- >Elective procedures can be carried out safely
- >Radiograph usage to be kept to a minimum

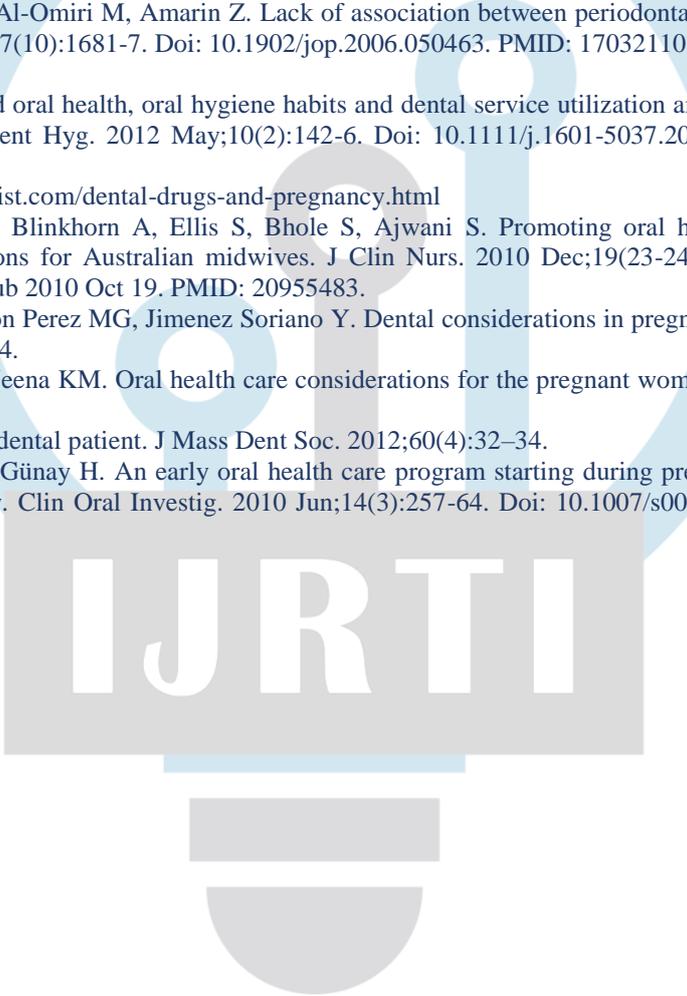
### **CONCLUSION**

Good oral and overall health depend heavily on regular dental treatment. Although there is little proof that prenatal dental care leads to better pregnancy outcomes, there is plenty of data that pregnancy dental care is safe and should be advised in order to enhance the mother's oral and overall health. The incidence of dental caries in children may be decreased by improved maternal oral health by reducing the transmission of potentially cariogenic germs to infants. Obstetrician-gynecologists are routinely accessed by many women, making them a unique chance to inform women about the value of dental care and excellent oral hygiene throughout their lives, especially during pregnancy. (23)

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