Pregnancy - Part 2: Optimizing appropriate and safe delivery of oral health care during pregnancy

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Executive summary

Clinical significance/ Importance:

- Pregnancy is a physiological state requiring adaptation of dental care, not avoidance of dental care.
- Despite substantial evidence supporting the safety of preventive, diagnostic and therapeutic dental treatment during pregnancy, pregnant patients may still be advised to postpone dental treatment because of concerns regarding radiographs, local anaesthetics, medications, infection or foetal harm. Such avoidance can allow preventable oral disease to progress and may ultimately increase maternal and foetal risk and treatment complexity.
- The key objective of appropriate and safe oral health care is: Healthy Mouth = Healthy Mother = Healthy Baby
- The purpose of this clinical review is to convert current evidence-base knowledge into a practical chairside decision tool for dental practitioners.

Key mesages

- Early pregnancy (first trimester) is the most crucial time for fetal growth.
- Mid-Pregnancy (second trimester) is the safest time to have surgery or dental work done.
- Pregnancy changes how care is delivered—not whether necessary care can be delivered.
- Oral health care, including X-rays, pain medication, and local anaesthesia , is safe throughout pregnancy.
- The potential harm of untreated odontogenic infection must be weighed against the risks of appropriately selected treatment.
- Radiographs should be justified by clinical need, with appropriate radiation protection.
- Use the fewest drugs necessary, at the lowest effective dose for the shortest appropriate duration, while considering gestational age.
- Hormonal shifts in pregnancy increase susceptibility to periodontal disease.
- Periodontal treatment should be undertaken to improve and maintain maternal oral health—not presented as a proven means of preventing preterm birth.

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Practice implications

- Pregnancy represents an important opportunity for preventive counselling, behaviour change and coordinated medical–dental care.
- The core principle is that pregnancy is not a contraindication to dental care – it is a reason for individualized risk assessment, treatment modification and appropriate interprofessional coordination.
- The pregnant patient should be educated on the importance of oral health care for herself and her child and on expert recommendations for bolstering home oral hygiene care during pregnancy.
- Where pregnancy is medically complicated, communication with the obstetric provider should be encouraged before undertaking complex or invasive care.

Background

Importance:

Pregnancy is a unique period during a women's life, characterized by complex physiological changes which may adversely affect oral health and delivery of care. At the same time, oral health during pregnancy is key to maternal and infant overall health and well-being[1,2], yet a frequently neglected, component of antenatal (prenatal) care.[3] Oral health care practitioners often do not provide oral health care to pregnant women. At the same time, pregnant women, including some with obvious signs of oral disease, often do not seek or receive care.[2] In many cases, neither pregnant women nor healthcare professionals perceive oral health care as an important component of a health during pregnancy.[2]

Furthermore, many mothers-to-be and their healthcare professionals, both prenatal and dental, are unsure as to the safety of providing dental care during pregnancy.4 Even though current standards confirm the safety of dental treatments across all trimesters of pregnancy, many prenatal care professionals are unclear about safety and are unwilling to treat pregnant women.[5] Safe delivery of oral health care, promptly, appropriately, and in an ethically responsible manner during pregnancy is therefore an essential component of prenatal wellness that protects both maternal and fetal health.[6,8]

Myths, Misconceptions and Barriers

In a recent systematic review it is reported that individual, cultural, and systemic barriers, such as misconceptions, safety concerns, dental treatment fear, high costs, lack of knowledge, and cultural taboos, may lead to lack of seeking care and the underutilization of dental services by pregnant women.[3] Common unfavourable beliefs, or misconceptions, held by expectant and new mothers, include the safety of dental treatments, the adverse impacts of pregnancy on oral health, and the necessity of oral hygiene during pregnancy.[6,7] Common popular beliefs and lack of clear information are major misconceptions leading to the avoidance of dental services, particularly the fear that dental procedures could harm the baby[5], and the myth that the foetus 'takes' calcium from the mother's teeth.[8]

Misconceptions regarding dental care safety, specifically the fear of potential harm to the foetus, is perceived as a major barrier contributing to the underutilization of dental services.[9] The latter systematic review also highlights challenges to accessing care by pregnant women, including cost, lack of oral health literacy, limited availability of clinics, long waiting times, and inadequate interdisciplinary collaboration between dentists and other healthcare professionals.[9]

Yet pregnancy remains associated with a persistent misconception that dental treatment should be avoided, particularly during the first trimester. Ultimately, this can result in delayed diagnosis, untreated caries, progressive periodontal disease, acute odontogenic infection and avoidable emergency treatment.[10]

Professional challenges

The reluctance by dental practitioners to treat pregnant women, mainly stem from a lack of information regarding what is safe, insufficient training, medicolegal risks, lack of interprofessional collaboration, and lack of institutional support.[3] The evidence-based position however is substantially different: pregnancy is not a contraindication to dental care. Preventive, diagnostic, restorative and emergency dental treatment can be safely provided throughout pregnancy when appropriately planned. The American College of Obstetricians and Gynaecologists and the American Dental Association (ADA) specifically support necessary dental treatment during pregnancy and emphasize that delaying treatment may result in more complex disease.[1] The practical challenge is therefore not simply to determine whether treatment is "safe", but to determine what treatment is necessary, when it should be undertaken, how it should be delivered and what risks can reasonably be minimized.

Pregnancy should consequently be approached through individualized risk assessment rather than a blanket "defer treatment" philosophy.

Purpose

Part 2 of this series examines the current evidence-based knowledge and provides a practical clinical decision-making tool together with clinical recommendations on how to optimize safe oral health care and appropriate scheduling trimester-by trimester, and considers timely preventive strategies during pregnancy. The purpose of this two part series is to support appropriate, safe and ethically responsible oral healthcare through individualized risk assessment, interprofessional collaboration, shared and informed clinical judgement, prudent pharmacotherapy and effective disease prevention.

Optimising preventive strategies and appropriate and safe oral/dental health care

Pregnancy represents an important preventive opportunity, rather than simply a period during which dental treatment must be modified. Preventive strategies are essential during pregnancy due to the heightened vulnerability to conditions like gingivitis and periodontitis, dental erosion, and dental caries.[11,12,13] Pregnant women deserve the same level of oral healthcare as any other dental patient, and clinicians now have an evidence base that shows appropriate dental care as being both necessary and safe during the prenatal period.[2,11,14] The particular trimester influences treatment planning and patient tolerance, but does not determine whether necessary dental care can be provided. (**Table 2**)

The core principle is that pregnancy is not a contraindication to dental care – it is a reason for individualized risk assessment, treatment modification and appropriate interprofessional collaboration. (**Figure 1**) The practical chairside decision tool framework presented below is designed to support dental health care practitioners in making more informed, transparent, and evidence-based decisions that balances maternal needs with fetal safety.

A Clinical Decision Pathway for Optimizing Oral Health Care during Pregnancy

1. ASSESS ORAL HEALTH & MEDICAL STATUS (RISK ASSESSMENT)

Recommendations:

- **Oral health history:** At the first antenatal visit, undertake a comprehensive oral health history[2,15] that include the following questions: How many weeks pregnant are you? Do you have swollen or bleeding gums, a toothache, problems with eating or chewing food? Since becoming pregnant, have you been vomiting? If so, how often?[2]
- *Medical and behavioural history:* Assess the patients' medical and dietary histories, including use of tobacco, alcohol, and recreational (lifestyle) medications.[2]
- **Comprehensive oral examination:** Visually inspect the oral cavity for evidence of dental caries, periodontal disease, mucosal lesions, oral hygiene status and practices, dysbiosis, and signs of infections.[2,15,16]
- **Periodontal screening:** It is suggested that incorporating periodontal screening into prenatal care may benefit maternal oral and metabolic health.[17,18]
- **Diagnostic radiographs:** Take radiographs to assess and definitively diagnose dental/oral diseases and conditions when absolutely necessary and clinically justified, using low doses and protective equipment.[2,10,19]
- **Advise/Inform**: Reassure women that oral health care, including use of radiographs, pain medication, and local anaesthesia is safe throughout pregnancy.[2]
- **Shared decision-making:** Pregnant patients should receive clear explanations rather than reassurance based simply on authority. A useful clinical message is: "Pregnancy changes how we provide care, but it does not mean that dental care is unsafe. We will treat what needs treatment, avoid unnecessary exposure and medications, and coordinate with your maternity-care team when appropriate." This approach respects patient autonomy while reducing both undertreatment and overtreatment.
- **Record:** Document findings on the patients' medical record.

Checkbox 1: Assess Oral Health and Medical Status (Risk assessment)

- ☐ Gestational age (Trimester)
- ☐ Perform comprehensive oral examination & Risk assessment
- ☐ Medical/Obstetric status
- ☐ Allergies
- ☐ Medication, Supplements, & Dietary history
- ☐ Oral hygiene status
- ☐ Oral health status
- ☐ Record name and contact information of the prenatal care health professional
- ☐ Use of tobacco, alcohol, and recreational medications.
- ☐ Advise patient on risks and benefits of oral health care
- ☐ Patient concerns
- ☐ Does patient understand the shared information
- ☐ Informed consent
- ☐ Provide culturally and linguistically appropriate care

2. TRIAGE CLINICAL NEED

Triage of dental clinical needs in a pregnant patient is the systematic evaluation, risk assessment and classification of a pregnant woman's oral health status to determine how urgently she requires dental treatment. Clinical needs can be classified in: (i) Emergency/Active infection/Pain; (ii) Active Disease; (iii) Elective/Non-essential care; and (iv) Preventive/Maintenance Care.

2.1 Emergency/active infection/pain → Treat promptly

Recommendations:

- First trimester: Early pregnancy is the most crucial time for foetal growth is during the first trimester. If acute dental pain occurs in pregnant patients, symptomatic emergency management can be performed, such as removing inflamed pulp or draining pus to alleviate pain.11
- Safe procedures: Specifies that preventive and restorative procedures, along with emergency treatment for acute pain or infections, are safe to perform throughout pregnancy.[10,20]
- Urgent treatment—including management of odontogenic infection, extraction, endodontic treatment, restoration of active caries and periodontal treatment—should not be unnecessarily delayed.[1]
- Acute care: Provide emergency or acute care at any time during the pregnancy as indicated by the oral condition. Consult with prenatal health care professional before use.[2]
- Late pregnancy: In case of dental pain during late pregnancy, emergency treatment can be performed; however, it is advised to postpone treatment if possible, until after delivery. The American Dental Association underscores the importance of timely dental care during pregnancy. Controlling and treating odontogenic infections is essential for a healthy pregnancy. It is crucial to note that infections pose risks to both the mother and the foetus.[11]

2.2 Active disease → Treat according to diagnosis

- Periodontal disease: Scaling and root planing is safe to perform during pregnancy.[1]
- Symptomatic conditions: Routine preventive, diagnostic, and restorative dental treatment dental restorations, root canal therapy), including periodontal therapy (guided biofilm therapy and scaling and root planing), is both safe and effective throughout all trimesters of pregnancy for treating symptomatic conditions, and does not increase adverse pregnancy outcomes.[10,20]
- Periodontal therapy: Prioritize periodontal therapy, especially mechanical debridement combined with patient education and non-invasive therapies, particularly in early pregnancy and for high-risk populations.[21,22]
- Treatment of non-dental biofilm-induced gingival diseases and conditions: (i.e., gingival hyperplasia, pyogenic granuloma) that occur as a result of reactive :processes (i.e., endocrine, nutritional, metabolic, pharmacological) must be managed by risk factor control, oral hygiene instructions, professional mechanical plaque removal, scaling and root planing, co-adjuvant antiseptics, targeted systemic therapy (antibiotics), surgical excision of certain lesions and periodontal plastic surgery. The management of non-dental biofilm-induced gingival diseases and conditions requires accurate diagnosis, integrated periodontal care, appropriate systemic therapy and regular follow-up for effective management and prevention of recurrence." [23]
- Tooth erosion can be effectively controlled with use of fluoridated toothpaste or mouthrinses containing sodium bicarbonate. That neutralises the acid and prevents demineralization.[16,24,25]

2.3 Elective/non-essential care → Individualize timing and patient tolerance

Recommendations:

- Elective/non-essential dental treatment: Deferred during the first trimester due to fetal vulnerability.[26]
- Routine preventive procedures: Routine preventive examinations and scaling are safe in the first trimester.
- Non-essential procedures (i.e., restorations, endodontic therapy, and elective extractions) should be postponed until the second trimester or post parturition.[26,27]
- Endodontic procedures: Use a rubber dam when performing restorative and endodontic procedures.[2]
- Safety: Reassure women that oral health care, including use of radiographs, pain medication, and local anaesthesia is safe throughout pregnancy
- Reassess: Follow-up to determine whether preventive and restorative treatment has been effective.

2.4 Preventive / maintenance care → Continue throughout pregnancy

Recommendations:

- Treatment objectives: Pregnancy care should focus on safe, non-invasive inflammation control and biofilm therapy.[22]
- Practice good oral hygiene: Reinforce twice-daily toothbrushing with fluoridated toothpaste and appropriate interdental cleaning, and use of saline/sodium bicarbonate mouthrinses should be encouraged.1[1,16,28]
- Indications: Routine and preventive dental procedures can be performed safely throughout pregnancy, with certain precautions, and emphasizes that dental treatment should not be withheld.[26]

Checkbox 2: Clinical Need Triage

- ☐ Emergency care / Active infection / Pain → Treat promptly
- ☐ Active disease → Treat according to diagnosis
- ☐ Elective Non-essential Care → Individualize timing and patient tolerance
- ☐ Preventive/Maintenance care → Continue throughout pregnancy

- Preventive interventions, such as antimicrobial mouth rinses and comprehensive oral hygiene regimens, show promise in mitigating periodontal disease and its systemic effects.[21]
- Erosion and enamel loss induced by nausea and vomiting can be effectively controlled by neutralising the acid and preventing demineralization with use of toothpaste or mouthrinses containing sodium bicarbonate.[16,24,25,29]
- Caries risk: Use fluoridated toothpaste and mouthrinses routinely and consider additional topical fluoride strategies (mouthrinses) according to individual caries risk.[26] to counteract the effect of demineralization due to vomiting. The role of topical applications is well accepted for the prevention of dental caries.
- Periodontal disease: Scaling, polishing, and root planning is recommended at any stage of pregnancy to preserve and promote oral health for pregnant patients.[26]

3. MODIFY DELIVERY — NOT NECESSARILY THE TREATMENT

Treatment modifications, starting from scheduling appointments, correct chair positions, to delivery of treatment, are necessary during pregnancy based on the specific changes occurring in each trimester.[27] It is suggested that dental treatment should adhere to recommended guidelines for the different stages of pregnancy, noting that the second trimester is the safest period for most procedures.[16]

Modifications to delivery of safe and appropriate management of oral/dental care trimester-by-trimester during pregnancy is summarized in **Table 2**. [15,26]

There is no evidence-based requirement to postpone necessary dental treatment until after delivery. Routine preventive care and clinically indicated treatment can be provided during all trimesters. The second trimester is often practically convenient for elective treatment because nausea may have improved and the physical burden of late pregnancy is less pronounced, but this should not be interpreted as a safety requirement.

Recommendations:

Time/Treatment scheduling

- Early pregnancy (first trimester) is the most crucial time for fetal growth. If acute dental pain occurs in pregnant patients, symptomatic emergency management can be performed, such as removing inflamed pulp or draining pus to alleviate pain.[11]
- Mid-Pregnancy (second trimester) is the safest time to have surgery or dental work done. Emotional stability, reduced stress, and lower anxiety levels make it an ideal time for selective and necessary dental treatments, including professional plaque removal, periodontal surgery, tooth extractions, and root canal therapy.[11] Routine restorations, endodontic therapy, and elective extractions should preferably be performed after fetal organogenesis, specifically during the second and third trimester, to ensure maternal and fetal safety.[26]
- Indications: Dental treatment, including radiographs with proper shielding and local anaesthetic, is safe in all trimesters, with optimal care provided in the second trimester.[15]

Appointment length:

- Short dental procedures should preferably be performed during the third trimester, noting that discomfort to the mother, rather than risk to the foetus, is the main concern, and can be mitigated by proper positioning.[26]
- Use short, preferably morning appointments when nausea and fatigue are manageable.

Positioning:

- To prevent supine hypotensive syndrome in the dental chair, position pregnant women appropriately during care in a semi-reclining position with her head at a higher level than her feet. Place a small pillow under the right hip, or have her turn or tilt slightly to the left as needed to relieve pressure on the inferior vena cava to avoid dizziness or nausea resulting from hypotension.[2] (**Table 2**) Allow frequent position changes.
- Other practical modifications that can substantially improve safety and comfort include:
- avoid prolonged supine positioning later in pregnancy;
- provide positional changes and appropriate support;
- monitor tolerance and symptoms;
- maintain effective aspiration and airway awareness;
- allow breaks during longer procedures;
- manage anxiety proactively; and
- coordinate complex treatment with the obstetric provider when indicated.

Table 2: Safe timing and appropriate management of oral/dental care during pregnancy

Trimester Timing	1st Trimester Conception-13 Weeks	2nd Trimester 14-27 weeks	3rd Trimester 28 weeks - delivery
Primary clinical focus	• **Assess & Stabilize:** • Organogenesis and fetal growth takes place during this period – prone to risk of teratogens • Oral health education • Oral hygiene instructions • Treatment limited to periodontal prophylaxis and emergency treatment • Avoid routine radiographs	• **Treat & Prevent:** • Organogenesis is complete • Maintenance of oral hygiene • Control of active oral disease • Safe to perform elective procedures i.e., restorations, root canal treatment, extractions	• **Maintain & Prepare:** • Oral hygiene maintenance and biofilm control. • Control of active oral disease. • Appropriate to perform short elective procedures to reduce risk of discomfort. • Minimize use of radiographs
Risk assessment	Confirm gestational age, pregnancy status, medical/obstetric risks, medication and allergies. Establish baseline oral health	Reassess periodontal, caries and erosion risks; identify unresolved disease.	Reassess disease activity, symptoms, treatment needs and ability to tolerate procedures.
Preventive care	Oral hygiene instruction, fluoridated toothpaste, diet counselling, caries/ periodontal risk control. Routine scaling polishing and root planing. Manage nausea/vomiting and erosion- Can be effectively controlled with use of toothpaste or mouthrinses containing sodium bicarbonate, that neutralises the acid and prevents demineralization.	Intensify individualized preventive and periodontal maintenance strategies. Scaling polishing and root planing	Continue prevention and maintenance; reinforce maternal and infant oral health education. Scaling polishing and root planing
Diagnostic care / Radiographs	Clinical examination. Clinically justified radiographs must be performed when required.	Clinical examination. Clinically justified radiographs must be performed when required.	Same principle; minimize unnecessary radiographic exposure while obtaining essential diagnostic information
Necessary treatment	Do not defer urgent symptomatic treatment because of pregnancy. Manage pain, infection and active disease.	Often a practical period for completing elective and necessary treatment.	Treat urgent disease promptly; elective /prolonged procedures may require greater modification because of maternal discomfort and positioning
Periodontal care (Scaling and root planing)	Control inflammation and infection according to periodontal diagnosis and risk. Remove local gingival irritants Scaling polishing and root planing.	Continue/complete indicated periodontal therapy and maintenance Scaling polishing and root planing	Continue periodontal maintenance and manage active disease; avoid unnecessary treatment delay. Scaling polishing and root planing
Anaesthesia/ medication	Use clinically appropriate local anaesthesia and the minimum effective dose. Check medication safety. Consult with Obstetrician when required.	Same principle. Avoid using NSAID's from week 20. Consult with Obstetrician when required.	Same principle; review all medications, particularly analgesics /NSAIDs. Consult with Obstetrician when required.
Positioning	Usually well tolerated; modify according to nausea and comfort.	Comfortable semi-reclined positioning as pregnancy progresses.	Avoid prolonged supine positioning; use semi-reclined position and/or left lateral tilt as required.

Table 2 contd: Safe timing and appropriate management of oral/dental care during pregnancy

Trimester Timing	1st Trimester Conception-13 Weeks	2nd Trimester 14-27 weeks	3rd Trimester 28 weeks - delivery
Appointment strategy	Short, low-stress appointments may improve tolerance, particularly with morning sickness.	Often the most comfortable period for longer planned care.	Shorter appointments, frequent breaks and comfortable positioning; consider proximity to delivery and obstetric status.
Obstetric coordination	Coordinate with obstetric provider when pregnancy is high-risk or significant medical;/obstetric concerns exist. Consult with obstetrician to control related	Coordinate when clinically indicated.	Main communication for high-risk pregnancy, significant systemic disease or complex treatment.
Preventive care	Oral hygiene instruction, fluoridated toothpaste, diet couns and root planing. Manage nausea/vomiting and erosion-Can be effectively controlled with use of toothpaste or mouthrinses containing sodium bicarbonate, that neutralises the acid and prevents demineralization.	Intensify individualized preventive and periodontal maintenance strategies. Scaling polishing and root planing	Continue prevention and maintenance; reinforce maternal and infant oral health education. Scaling polishing and root planing
Key patient message	**"We can safely assess and treat what needs attention."**	**"This is an opportunity to restore and strengthen oral health."**	**"Maintain oral health while preparing for delivery and the infant's oral-health needs."**

Justify radiographs:

- Contemporary dental radiography delivers very low fetal radiation exposure, and current evidence-based guidance considers dental radiographs safe during pregnancy when clinically indicated.[19]
- Radiographs should be prescribed according to clinical need, not pregnancy status alone. Clinically justified radiographs must be performed when required, using low doses and protective equipment.[10,19] (**Table 2**)
- Radiation protection should follow the ALARA principle: exposures should be justified and kept as low as reasonably achievable.[19]
- Special precautionary measures: Every protection should be taken to reduce radiation contact using shielding, thyroid collars and lead aprons wherever possible.[19]

Medication stewardship and Pharmacological guidance

- Medications considered safe and those that must be avoided are summarized in **Table 3**.
- Medications listed in **Table 3** should only be used for indicated health conditions and with appropriate supervision by a health professional.[2]
- Use of other medications calls for consultation with the patient's obstetrician to weigh risks and benefits.

Appropriate local anaesthesia:

- Local anaesthesia is considered safe during pregnancy when clinically indicated.
- Local anaesthetics with epinephrine (e.g., bupivacaine, lidocaine, mepivacaine) may be used during pregnancy.[2,30] (Table 3)
- Use the lowest effective dose, aspirate appropriately and avoid unnecessary systemic exposure.

Analgesics:

- For analgesia, acetaminophen/paracetamol is generally the preferred first-line option when clinically appropriate.
- NSAIDs require particular caution: FDA guidance recommends avoiding NSAID use from approximately 20 to 30 weeks of pregnancy, unless specifically advised by the treating healthcare professional, and avoiding them after 30 weeks because of fetal renal and ductal risks[31,32] and major birth defects.[33,34]
- Low-dose aspirin prescribed for specific obstetric indications is an important exception and should not be discontinued without medical advice.[35]

Antibiotics and antifungals:

- Antibacterial drugs can be prescribed during pregnancy in the case of ongoing infectious pathological

processes, choosing active ingredients with broad safety indices.[36] Betalactams such as ampicillin, amoxicillin (not in association with clavulanic acid) and some cephalosporins, and macrolides such as clarithromycin and erythromycin, are considered safe at therapeutic dosages.[2,36] (**Table 3**)

- Tetracyclines such as doxycycline and minocycline, which can cause liver damage to the pregnant woman and dyschromia of the dental enamel of the baby, as well as gentamicin, which causes foetal ototoxicity, should be avoided.[11]
- When antibiotics are clinically indicated, the choice should be based on infection characteristics, allergy status, pregnancy considerations and current prescribing guidance. Commonly used dental antibiotics such as penicillins, cephalosporins, clindamycin and metronidazole are listed by the ADA among options considered compatible with pregnancy.[30]
- Antifungals such as nystatin and clotrimazole are safe, while it is preferable to avoid fluconazole and ketoconazole which are toxic to the foetus.[11]

Antimicrobial mouth rinses:

- Chlorhexidine (in concentrations 0.05%–0.2%) and cetylpyridinium chloride mouth rinses are safe for use during pregnancy.[2] (**Table 3**)

Nitrous oxide sedation:

- Nitrous oxide requires particular caution due to risk of fetal harm if administered during pregnancy.[30,37] (**Table 3**)
- Where oral inhalation sedation is considered necessary, consultation with the patient's obstetric provider and appropriate anaesthetic expertise should be considered.

Sedation / Anesthesia:

- Consult with prenatal care health professional before using general anaesthesia, intravenous sedation, oral inhalation sedation, or enteral-inhalation sedation. Limit duration of exposure to less than 3 hours in pregnant women in the 3rd trimester.[2]

Table 3: Pharmacological considerations for pregnant women

Pharmacological agent	Indications, Contraindications, Special considerations
Analgesics	
Acetaminophen	Oral pain - may be used during pregnancy.
Acetaminophen with Codeine	If opioids are used, prescribe the lowest dose for the shortest duration (usually less than 3 days, and avoid repeat prescription to reduce risk of dependency)
Aspirin (low dose)	May be used after 12 weeks for women at high risk for preeclampsia. Consult with prenatal care health professional before use.
Aspirin	First trimester – avoid use • Second trimester 13-20 weeks : may be used for short duration (2-3 days); 3rd trimester: avoid use
Ibuprofen, Naproxen	First trimester: Avoid use; Second trimester: (13-20 wks.): may be used for short duration, (2-3 days); Second trimester (20 up to 27 weeks): Limit use; Third trimester: Avoid use
Antibiotics	
Amoxicillin, Cephalosporins, Metronidazole, Penicillin, Clindamycin	May be used during pregnancy
Ciprofloxacin, Clarithromycin, Levofloxacin, Moxifloxacin	Avoid during pregnancy
Tetracycline (Doxycycline)	Never use during pregnancy
Anaesthetics	
Local anaesthetics with epinephrine (e.g., Bupivacaine, Lidocaine, Mepivacaine, prilocaine)	May be used during pregnancy
Local anaesthetic: Articaine	Avoid during pregnancy; consult with prenatal care health professional
Nitrous oxide, enteral inhalation sedation	Consult with prenatal health care professional before use. Avoid during pregnancy.
Intravenous sedation, general anaesthesia	Consult with prenatal health care professional before use. Avoid during pregnancy
Antimicrobials	
Cetylpyridinium chloride mouth rinse, Chlorhexidine mouth rinse	May be used during pregnancy

Checkbox 3: Modify delivery – Not necessarily the treatment

- ☐ Timing/Treatment scheduling
- ☐ Appointment lengtht
- ☐ Positioning
- ☐ Justify radiographs
- ☐ Appropriate local anaesthesia
- ☐ Analgesics / Pain management
- ☐ Antibiotics
- ☐ Antimicrobial mouthrinses.
- ☐ Sedation / Anaesthesia

4. COLLABORATION WITH PRENATAL CARE HEALTH PROFESSIONALS

References

Recommendations:

- Interprofessional communication: Dentists, oral hygienists, obstetricians, midwives, family physicians and pharmacists should recognize oral health as part of comprehensive prenatal care.[25] Dental-medical teamwork and interprofessional communication is key to improve care and oral health in pregnant women.[22]
- Collaborate and coordinate treatment when indicated oral health care professionals and prenatal health care providers (i.e., GP, Obstetrician, Physician, Midwife), to optimize the quality of health care.[4,16,22]
- Consult with prenatal health care providers as necessary where pregnancy is medically complicated (i.e., co-morbid conditions, medications, risks, use of intravenous sedation or general anaesthesia, use of oral sedatives), before undertaking complex or invasive treatment.[2,14]
- Timely referral and share pertinent information with prenatal health care providers.[2]

Checkbox 4: Coordinate when indicated / Collaborate with prenatal care health professionals

- ☐ Medical complication, Risks, Medications, Anaesthesia
- ☐ Consult as necessary
- ☐ Timely referral
- ☐ Share pertinent information

5. PREVENT & EDUCATE

Recommendations:

Prevention

- Risk management: Prevention and early management, ideally before conception, is the most effective strategy for preserving maternal oral health and potentially reducing risks.[22]
- Selfcare: Consistent selfcare, practicing good oral hygiene, using a powered toothbrush is essential for maintaining oral health.[38]
- Erosion/ Enamel loss, induced by nausea and vomiting are very common in pregnant women during the first trimester can be effectively controlled with use of toothpaste or mouthrinses containing sodium bicarbonate to neutralises the acid and preventing demineralization.[29]
- Vomiting: Patients experiencing frequent vomiting should receive advice regarding acid neutralisation and erosion prevention.[16,24,25,26]
- Oral hygiene: Brush teeth twice daily preferably with a powered toothbrush and fluoride toothpaste and advise to spit and rinse excess paste[15]

Educate

- Maternal–infant oral-health education: Preconception oral care is critical for maternal and fetal health.[22] Education provides a unique opportunity to deliver oral health preventive information and services that benefit both the mother and her child.[14,21,39]
- Health promotion: Promoting oral health in women of reproductive age is essential to optimize both maternal well-being and pregnancy outcomes.[22]
- Oral health promotion: Encourage women to continue to seek oral health care, practice good oral hygiene, and eat healthy foods and attend prenatal classes during pregnancy.[2]
- Dental treatment: Inform women that dental treatment during pregnancy, including dental radiographs with proper shielding and local anaesthetic, is safe in all trimesters and optimal in the second trimester (AAPD).[15]
- Dietary counselling: Reduce (Limit) frequency of fermentable carbohydrate exposure and encourage nutrient-dense dietary choices. Advise about the hazards of consumption of high carbohydrate and acidic snacks and drinks taken between meals.[15]
- Regular checks: Advise women to have oral health checks and treatment, if required as good oral health is important for maternal and fetal health.[2]



Figure 2: Key clinical rules for optimizing safe and appropriate oral health care for pregnant patients

Checkbox 5: Prevent and Educate

- ☐ Encourage regular dental visits
- ☐ Practice good oral hygiene
- ☐ Erosion and demineralization
- ☐ Dietary counselling
- ☐ Tobacco cessation
- ☐ Maternal/ Infant oral health education
- ☐ Explain the important of optimal care during pregnancy

- Tobacco and substance counselling: Pregnancy provides an important opportunity for smoking cessation and avoidance of alcohol and other harmful substances.[2]
- Consistency: Behavioural and educational interventions are effective for improving periodontal health if carried out throughout the entire pregnancy period.[10,40]
- Health advocacy: Discuss oral health with all patients, including those who are pregnant or in the post-partum period.[2]

6. REVIEW → MAINTAIN →REASSESS

Recommendations:

- Review: Develop, discuss, and provide a comprehensive oral health care plan that includes prevention, treatment, maintenance, and follow-up throughout pregnancy.[2]
- Maintain: Maintaining good oral health during pregnancy for the overall health of both the pregnant woman and her infant, justifying the need for judicious oral health education by providers.[14,40]

Checkbox 6: Review – Maintain - Reassess

- ☐ Develop and discuss a comprehensive oral health care plan
- ☐ Preventive plan
- ☐ Treatment plan
- ☐ Maintenance plan
- ☐ Follow-up plan

- Reassess: Follow-up to determine whether preventive and restorative treatment has been effective.[2]
- Consistency: Advise the pregnant mother to continue regular follow-up and maintenance visits, practice good oral hygiene, eating healthy foods, and practicing healthy behaviours after delivery of the baby.

Key clinical rules for optimizing safe and appropriate oral health care

Appropriate and safe oral health care during pregnancy is fundamentally a matter of risk management rather than treatment avoidance. The key clinical rules for optimizing appropriate and safe oral health care is summarized in **Figure 2**. These rules complement individualized risk assessment, interprofessional collaboration, and shared decision-making. The key objective: Healthy Mouth = Healthy Mother = Healthy Baby.

Conclusions

Pregnancy alters the oral environment and the patient's physiological response to dental treatment, however it should not, in itself, constitute a contraindication to necessary dental examination, preventive interventions or indicated treatment. Appropriate and safe oral health care during pregnancy is fundamentally a matter of risk management rather than treatment avoidance.

Current evidence supports the safety of dental radiography when clinically justified, local anaesthesia, restorative treatment, endodontics, extractions and periodontal therapy during pregnancy. The major misconception that treatment should routinely be deferred until after delivery may itself create avoidable harm by allowing disease to progress. Conversely, clinicians should avoid overstating the evidence linking periodontal disease with adverse pregnancy outcomes. Although associations between periodontitis and

preterm birth have been reported, randomized evidence has not established that periodontal treatment during pregnancy prevents preterm birth or low birth weight.

Providing safe and appropriate oral healthcare during pregnancy requires an individualised, evidence-based approach that balances maternal needs with fetal wellbeing. Therefore, clinical decisions should consider gestational stage, the urgency of the oral condition, maternal medical history and current evidence regarding treatment and medication safety.

For dentists and oral hygienists, the practical principle is therefore: Assess risk → prevent disease → treat disease when indicated → minimize unnecessary exposure → coordinate care → educate and empower the patient. Pregnancy should be viewed not as a reason to suspend oral healthcare, but as a valuable opportunity to integrate oral health into maternal healthcare and establish healthier trajectories for both mother and child. Ultimately, pregnancy is not a contraindication to appropriate dental care. Evidence-based prevention, timely diagnosis, judicious pharmacotherapy and coordinated interprofessional care support maternal oral health while protecting fetal wellbeing.

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