

# Smiles for Life

*A national oral health curriculum*

## Module 5: Oral Health for Women: Pregnancy and Across the Life Span

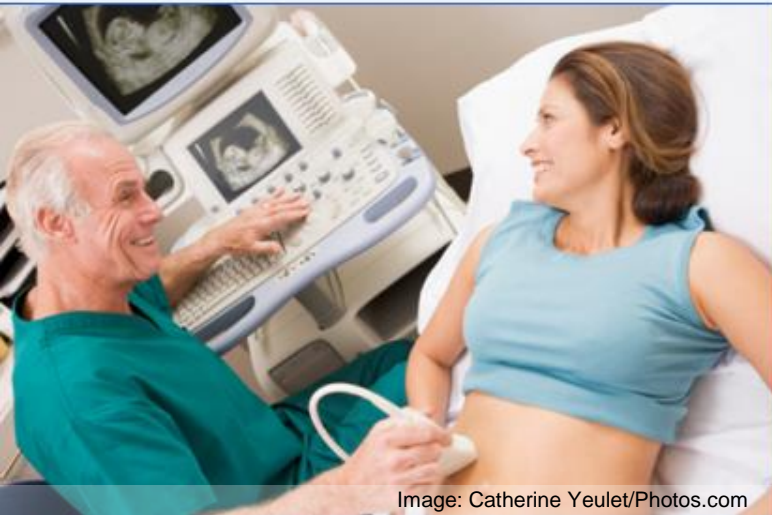


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# Educational Objectives

- Describe basic oral anatomy, terminology and oral screening
- Develop familiarity with causes and risk factors of periodontal disease and dental caries
- Understand the evidence for periodontitis affecting pregnancy outcomes
- Understand the evidence for caries risk transmission from mother to child
- Manage common oral conditions in pregnancy
- Understand the safety of common dental interventions in pregnancy
- Collaborate with members of interprofessional team to manage oral health in pregnancy
- Understand and promote oral health issues across the life span for women



# Oral Anatomy, Terminology and Examination

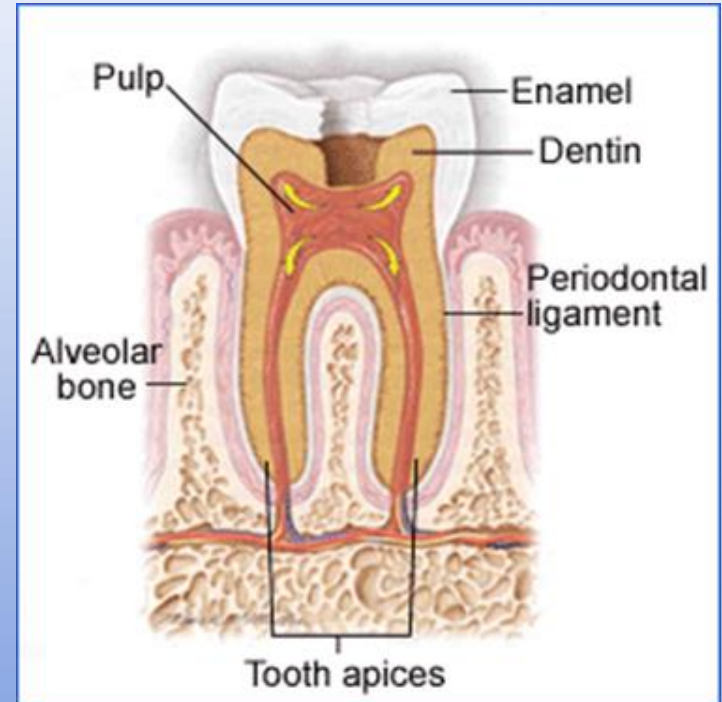
## Chapter Objectives

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# Tooth Anatomy

- Outer protective layer is enamel
- Middle layer is dentin
- Pulp is composed of nerves and blood vessels that exit the tooth via the apices
- Root connects to alveolar bone via the periodontal ligament



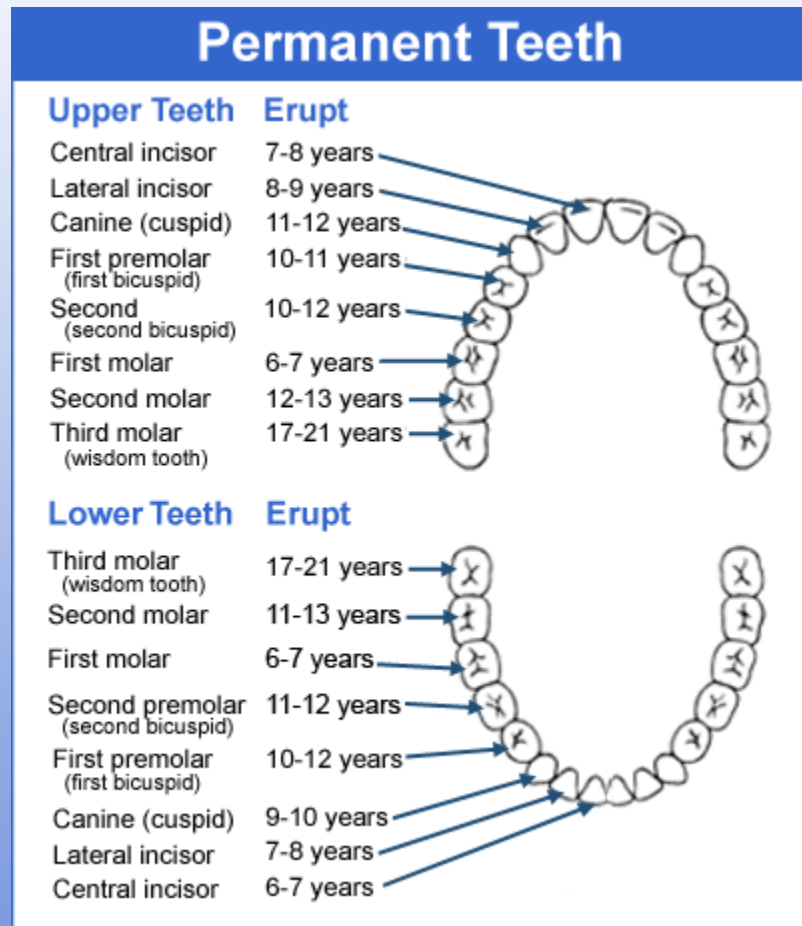
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# Adult Dentition

Permanent teeth begin to erupt around age 6 years and are all in by 21 years

Most Adults have 32 teeth, which include

- 8 incisors
- 4 canines
- 8 premolars
- 12 molars



# Gingivitis

## Symptoms

- 25-75% of pregnant women
- Mild gum swelling
- Tenderness and redness
- Bleeding gums
- Typically identified in second month and peaks in eighth month

## Causes

- Plaque buildup
- Changes in hormone levels

## Treatment

- Good oral hygiene
- Regular dental visits



Photo: Judith Skelton, MEd, PhD



Photo: John McDowell, DDS

## Symptoms

- 15% of pregnant women
- Few obvious symptoms early
- Patients with advanced disease will have loose teeth and eventual tooth loss

## Causes

- Chronic exposure of the periodontal tissues to bacterial plaque cause chronic inflammation and infection



Photo: Efthimia Ioannidou, DDS, MDS

## Treatment

- Good oral hygiene and regular dental visits
- Deep root scaling (cleaning below the gum surface) and antibiotics



# Caries: The Etiology (Causes) Triad

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## Symptoms

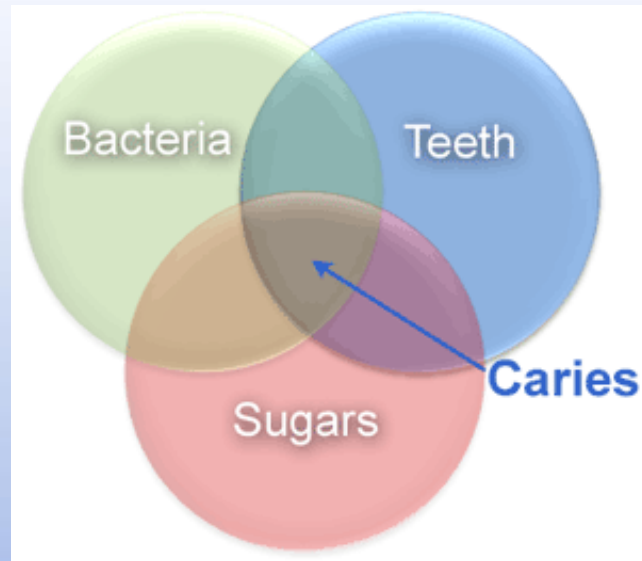
- Caries can be symptom free in early stages
- Changes to the tooth include white spots, brown spots and erosions
- Once a cavity forms, the root becomes exposed and pain occurs

## Causes

- Strep mutans and other bacteria metabolize carbohydrates to create acid that erodes the teeth

## Treatment

- Prevention is key – good oral hygiene, healthy diet, routine dental visits
- Once cavities occur, restorations (fillings), extractions, and/or root canal are needed



## Behavioral

- Poor oral hygiene habits
- Alcohol and tobacco use
- High sugar-containing diet
- Lack of routine dental visits

## Individual

- History of caries or periodontal disease
- Chronic disease such as diabetes
- Low socioeconomic status
- Medications that contain sugar or cause xerostomia
- Emotional or physical disabilities

## Environmental

- Non-fluoridated community water
- Poor access to dental and/or medical care



# Effects of Periodontal Disease on Pregnancy

## Chapter Objective

- Understand the evidence for periodontitis affecting pregnancy outcomes



Image: Ken Hurst/Photos.com

# Preterm Birth

- Preterm birth is a major public health problem
- Periodontal disease is associated with preterm birth and low birth weight
- Periodontal disease improves with treatment and women feel better
- Periodontal treatment is safe during pregnancy
- Periodontal treatment during pregnancy has not been shown to improve birth outcomes
- Need additional research to determine if pre-pregnancy treatment would lower risk





# Caries Risk Transmission from Mother to Child

## Chapter Objective

- Understand the evidence for caries risk transmission from mother to child



Image: Jupiterimages/Photos.com

# The Maternal-Child Linkage

## Caries is a transmissible disease!

- Mothers are the main source of passing the bacteria responsible for causing caries to their infants
- Transmission occurs via saliva contact such as tasting or pre-chewing food
- The higher mom's bacterial level, the more likely the child will acquire the bacteria
- If the child does not acquire caries-causing bacteria until after age two, then the child will have fewer caries
- Caregivers with caries also often pass on bad habits (high sugar intake, poor oral hygiene)
- Fathers can pass on the bacteria, but studies show this is less common

# What Are the Consequences?

## Untreated caries can lead to:

- Facial swelling
- Pain
- Nutritional and growth changes

## Caregivers can decrease their own caries levels by:

- Receiving regular comprehensive dental care, including during pregnancy
- Limiting the frequency of sugar in the diet
- Maintaining excellent oral hygiene
- Using preventive agents, such as prescribed mouthrinses and Xylitol-containing gums



Photo: ICOHP



# Other Oral Conditions in Pregnancy

## Chapter Objective

- Manage other common oral conditions in pregnancy



Image: Leah-Anne Thompson /Photos.com



# Pregnancy Granuloma (Skin growth)

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## Symptoms

- Occur in 5% of pregnant women
- Red, non-painful, smooth or lobulated mass
- Bleeds easily when touched
- Most frequently develops on the gums

## Causes

- Develops as a response to local irritation such as poor hygiene or trauma and hormonal changes

## Treatment

- Observe unless lesions are bleeding excessively, interfere with eating, or do not resolve spontaneously after delivery



Photo: Brad Neville, DDS

## Management of Dry Mouth (Xerostomia)

- Drink water often in small amounts
- Brush regularly
- Use fluoride rinse

## Management of Reflux and Hyperemesis Gravidarum

- Rinse with water or bicarbonate to reduce acid in mouth after vomiting
- Avoid brushing too firmly after emesis



# Dental Treatment in Pregnancy

## Chapter Objective

- Understand the safety of common dental interventions in pregnancy



Image: Vicki Reid/Photos.com

## **Women frequently do not see a dentist when pregnant**

- Only 26-34% of all pregnant women visit the dentist
- Percentage is even lower for Hispanic women, low SES, and those not aware of oral-systemic linkages
- Only 50% of pregnant woman with a dental problem visit a dentist
- Even among women with dental insurance, dental care declines during pregnancy



## Why don't pregnant woman obtain dental care?

- Obstetrical and primary care providers do not routinely refer patients for dental care
  - Uncertainty about safety of dental interventions
  - Lack of training
  - Competing health demands limits focus on this topic
- Dentists may be unsure of how to manage the pregnant patient
  - Lack of practical training
  - Dentists may fear malpractice repercussions

# Treatment Guidelines

- Discuss oral health with all pregnant and post-partum patients
- Advise patients to receive an oral health assessment during the first prenatal visit
- Reassure patients that oral care is safe during pregnancy and should not be delayed
- American Congress of Obstetricians and Gynecologists states “A dental checkup early in pregnancy will help ensure that your mouth stays healthy. Pregnant women are at an increased risk for cavities and gum disease”

## Fluoride

- Large studies demonstrate safe use in pregnancy
- Inhibits bacteria growth and strengthens enamel
- Used topically to prevent dental caries

## Xylitol Gum

- Decreases level of bacteria in saliva and plaque

## Chlorhexidine

- Used as mouthwash to decrease periodontal and cariogenic bacteria
- Reduces gingivitis and plaque deposition



# What CHWs Can Do

## Chapter Objective

- Promote oral health in pregnant women and newborn children
- Collaborate with members of an interprofessional team to manage common oral conditions in pregnancy



Image: Image Source/Punchstock



## **CHWs can encourage patients to:**

- Brush teeth with soft toothbrush twice daily with fluoridated toothpaste
- Floss daily
- Limit sugary snacks and drinks to meal times only
- Chew xylitol gum four to five times per day after eating
- Establish a dental home for the family
- Feel reassured about the safety of dental treatment during pregnancy

# Postpartum Interventions

- Promote breast feeding
  - Breast fed children are less likely to develop caries than bottle fed babies.
  - Substantial proven systemic health advantages associated with breastfeeding.
  - American Academy of Pediatrics recommends exclusive breastfeeding for the first 6 months of life and continuing until at least age 12 months or beyond, as desired by mother and child.
- Ensure children are not put to bed with a bottle
  - Teeth are at highest risk overnight when saliva levels are low
- American Academy of Pediatric Dentistry suggests that parents gently clean infants' gums and teeth after breastfeeding.
- Recommend children see a dentist at 12 months of age
- Promote xylitol gum or brief chlorhexidine rinse programs for mothers until child is 2
  - Xylitol can help decrease transmission of bacteria that cause caries from mother to child



# Oral Health Issues Across the Life Span for Women

## Chapter Objective

- Understand and promote oral health issues across the life span for women



Image: Image Source/Punchstock

# Hormonal Changes and the Mouth

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Onset of puberty, menses and use of oral contraceptives:

- All can lead to gingivitis, bleeding gums and discomfort
- Treatment: Proper hygiene and regular dental visits including cleanings



Image: Simone van den Berg/Photos.com

## Menopause

- Symptoms: Gums may waste away; increased dry mouth; altered taste sensation
- HRT (hormone replacement therapy) may improve these symptoms, but alone is not an indication for HRT use
- Treatment: Maintain oral hygiene, saliva substitutes as needed, periodic dental visits

# Mouth Pain

Oral pain can result from causes other than caries and periodontitis.

Other causes to consider:

- Burning Mouth Syndrome (more prevalent in women)
  - Causes include medications, yeast, B12 deficiencies, dry mouth
- Tooth erosion
  - May arise from GERD (gastroesophageal reflux disease)
  - Eating disorders may be a possible cause as well
- Oral Trauma
  - May consider providing resources for domestic violence if tooth/lip trauma



Image: Jaimie Duplass/Photos.com



- Briefly discuss oral health habits, proper diet, and referrals to dental providers as part of overall health promotion
- Provide appropriate oral health handouts
- Maintain a list of local dental providers that you trust, can communicate with, and are culturally sensitive
- Know which dental providers in your community accept Medicaid insurance



Image: Design Pics/Punchstock



# Take Home Messages

- Periodontal disease is associated with preterm birth and low birth weight
- Periodontal therapy has not yet been shown to improve pregnancy outcomes, but is safe in pregnancy
- Decreased maternal caries-causing bacteria levels is associated with improved child oral health
- Routine dental interventions are safe during pregnancy
- CHWs should promote oral health throughout the life cycle for all women as mouth health affects overall health



# Questions?



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