Martinis, Millennials, Motherhood & Menopause
Considerations in Women’s Health

OBJECTIVES
1. Discover how hormones impact multiple bodily systems, including oral health
2. Identify risk factors and prevention strategies for oral, heart, and bone health
3. Explore simple strategies in mental and physical wellness to beat the hormone groan at any age
4. Address the role of the dental professional in understanding, supporting, and educating patients

NOTES:

How many women in the world today?
Our Reproductive Cycle

DEFINITIONS
Stages of Woman’s Reproductive Cycle

- Reproductive
- Menopausal transition
- Post menopause
MENOPAUSE
Onset of menstruation

Pregnancy may happen

MENOPAUSE TRANSITION
The span of time when menstrual cycle and endocrine change occur post reproductive, through early and late perimenopause and just into post menopause

MENOPAUSE
12-months of no periods with no obvious pathologic cause. A point in time

PERIMENOPAUSE
Beginning in early transition and ending with the 12-month post-period mark
May last up to 10 years

Keeping track of your cycles, signs & symptoms
In 2003 research article in the JAMA, “It is determined that clinical diagnoses of perimenopause are done primarily through menstrual history and age. A woman’s self-assessment of her signs and symptoms add to the clarity of diagnoses and other lab tests are not necessary to determine if you are in perimenopause.”

POST MENOPAUSE
Any span of time after the day a woman reaches menopause, regardless of whether menopause was natural or induced.
**PMS: PRE-MENSTRUAL SYNDROME**

PMS symptoms are closely linked to changing levels of estrogen, serotonin, and progesterone.

Estrogen rises during the first half of the menstrual cycle and drops during the second half.

Progesterone drops with estrogen=PMS

**Symptoms of PMS**

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>MENTAL</th>
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<tbody>
<tr>
<td>Bloating (retaining water)</td>
<td>Mood swings</td>
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<tr>
<td>Breast soreness</td>
<td>Depression</td>
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<tr>
<td>Food cravings</td>
<td>Being grouchy</td>
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<tr>
<td>Muscle aches</td>
<td>Easily upset</td>
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<tr>
<td>Swollen hands and feet</td>
<td>Forgetting things</td>
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<tr>
<td>Feeling tired</td>
<td>Anxiety</td>
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<td>Belly (abdominal) pain</td>
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Strategies for Relieving Hormonal Symptoms

Stress Reduction

Staying hydrated

Eat Clean food. Balanced diet

Vitamins B6, D, Calcium, Magnesium, Folic acid (for reproductive zone)

Get plenty of sleep 7-9 hours nightly

EXERCISE

PREGNANCY
Hormones During Pregnancy

**HUMAN CHORIONIC GONADOTROPIN HORMONE (hCG).** - May cause nausea and vomiting

**HUMAN PLACENTAL LACTOGEN (hPL).** - Provides nutrition to the fetus

Stimulates milk glands in the breasts for breastfeeding.

**ESTROGEN.** - Maintains healthy pregnancy

**PROGESTERONE.** - Stimulates the thickening of the uterine lining for implantation of a fertilized egg.

Responsible for labor

Oral Health Recommendations During Pregnancy

**1st TRIMESTER**

Educate the patients about the maternal oral changes which occur during pregnancy

Emphasize strict oral hygiene instructions and thereby, plaque control.

Limit the dental treatment to a periodontal prophylaxis and emergency treatments only.

Avoid routine radiographs. They should be used selectively and only whenever they are needed.

**2ND TRIMESTER**

Scaling, polishing and curettage may be performed if they are necessary

Control of active oral diseases, if any

Elective dental care is safe

**3RD TRIMESTER**

Avoid an elective dental care during the 2nd half of the third trimester.
Post Partum is considered up to one year after birth.
**THE HORMONES**

**Androgen-DHEA – dehydroepiandrosterone sulfate**
- Derived from adrenal gland
- Precursor to other sex hormones
- Can be converted to estrogen in adipose tissue

**Testosterone**
- Derived from adrenal gland and ovaries
- May be converted to estradiol in adipose tissue
- Maintain libido and lean body mass

**Estrogen - Estradiol (Most Potent)**
- Power hormone for women
- Curves, softness, regulation of entire reproductive cycle
- Approx. 300 tissues in the body have estrogen receptors
- Secreted by ovaries
- Can be made from estrone and testosterone in adipose tissue
- Collagen production
- Inhibits bone resorption
- Breast cancer risk

**Estrogen - Estrone (2nd Most Potent)**
- Produced in adipose tissue
- Can convert back to estradiol

**Estrogen - Estriol (Least Potent)**
- Used to gauge viability of pregnancy
- “Protective” estrogen

**Progesterone**
- Produced in ovaries and adrenal glands
- Produced in the second half of the menstrual cycle
- Survival of the fetus
- Stimulates bone building cells
- Promotes energy production in the brain

**Estrogen Abundance**
- Fatigue
- Breast tenderness
- Fibrocystic breasts
- Premenstrual – like mood swings
- Loss of sex drive
- Heavy or irregular menses
- Craving for sweets
- Weight gain

**Estrogen Shortage**
- Hot flashes
- Night sweats
- Sleep disorders
- Dry skin
- Anxiety
- Mood swings
- Headache
- Vaginal shrinkage
- Painful intercourse
- Depression

**Progesterone Abundance**
- Somnolence
- Depression

**Progesterone Shortage**
- Inability to concentrate
- Fluctuations in body temperature
- Headache
- Low libido
- Fuzzy thinking
- Food cravings
- Insomnia
- Irritability
CHANGES IN THE BODY — VASOMOTOR (Hot Flashes, Night Sweats)

**Hotflash**: Recurrent, transient episodes of flushing and sensation of warmth to intense heat on upper body and face often followed by chills.

- Up to 75% of perimenopausal women in the US have hot flashes
- More body fat = more estrogen = more hot flashes
- Higher BMI 27 kg/m² predictor of hot flash frequency
- Heart rate speeds up 7-15 more bpm

**Science of Why**

- Hypothalamus = Thermostat
- Extremely sensitive to hormonal changes

**Strategies - Hot Flashes**

- Stop smoking
- Dress in layers — think absorbent, breathable
- Vigorous exercise — maintain a healthy body weight
- Bamboo
- Avoid personal triggers
- Avoid caffeine, spicy foods, alcohol, stress before bed
- Adopt relaxation techniques
- Take a deep breath — and RELAX!

- Soy foods, Red clover
- Black cohosh, vitamin E (mixed evidence)
- OTC or bioidentical progesterone
- Prescriptive HT
- Bioidentical estrogens, Phyto estrogens
CHANGES IN THE BODY – ORAL HEALTH

Science of Why
Hormone changes and the life cycle during:
• Adolescence
• Pregnancy
• Menses
• Menopause (JDH, ADA, NAMS)

Hormone changes can contribute to change in the oral mucosa.
• Altered taste perception
• Changes in gingival color and texture
• Hypersensitivity
• Enamel Erosion/Demineralization
• Xerostomia
• Perio and Caries Risk

Estrogen Affects Gingiva
• Cellular proliferation
• Differentiation
• Keratinization of gingival epithelium
• Hormone receptors embedded in basal layers of epithelium and connective tissue

Hormones Affect Periodontal Health

Effects of stress, cortisol and depression on periodontal disease:
• Positive correlation
• Increased levels of cortisol can lead to increased periodontal destruction of the gums and jawbone (JOP 2006, 2007, 2009)
• Increased cortisol levels are also found in women experiencing chronic stress
• Bone loss = tooth loss?
• Each 1% per year decrease in BMD – risk for tooth loss quadruples (NAMS)

REFERENCE ALERT: 2006 Oral Health Care Series – Women’s Oral Health Issues, the ADA ada.org/prof/resources/topics/healthcare.asp
Strategies – Oral Health

1. Clinical Considerations
Low to no SLS Products

Fl Varnish- Extended Flouride Release
- Decreases sensitivity
- Protects from caries risk

Prescription Strength Fl Toothpaste
- Low Abrasion
- Protects from Caries Risk
- Inhibits Demineralization and Enhances Remineralization

Oral Rinse
- Antimicrobial, Protects against Perio Disease
- Decreases Sensitivity
- Reduces Plaque build-up
- Helps with Xerostomia and Mal Odor

Xylitol Mints
- Stimulates Saliva Flow
- Prevents Caries
- No Sugars

2. Practitioner Considerations - Understanding is Key!
- Listening/Awareness
- Basic principles of oral hygiene
- Referral to medical specialist
- Addressing stress management techniques (JOP 2009)

CHANGES IN BODY – BONE HEALTH
Osteoporosis is defined by NIH 2000 as a “skeletal disorder characterized by compromised bone strength predisposing people to fracture”
- Decreased estrogen = increased bone resorption = decreased bone density
- Increased risk for tooth loss
- Check on dental x-rays
- NAMS reports the few years preceding and following menopause, BD loss can be seen at 2% annually; it then slows to 1-1.5% annually

Strategies
- Estrogen replacement
- Vitamin D- super bone power!
- Exercise and food choices
- Calcium

REFERENCE ALERT: North American Menopause Society (NAMS) menopause.org, obesityaction.org/educational-resources/resource-articles-2/obesity-related-diseases/what-your-weight-means-for-your-bones
Changes in the body—Heart Health

Heart disease is the #1 killer of women in the United States.

Science of Why? (Risk Factors)
- Aging
- Lifestyle choices - food, exercise
- Genetics - High blood pressure
- High LDL cholesterol
- Smoking
- Excessive alcohol use
- Perio disease

Symptoms for Women
- Angina (dull, heavy to sharp chest pain or discomfort)
- Pain in the neck/jaw/throat or pain in the upper abdomen or back
- No symptoms, silent

Perio and Heart Health—Inflammation and Perio Pathogens
- Those with periodontal disease have 30% higher risk of heart disease
- Periodontal Bacterial Pathogens (PBP) can invade coronary arteries, weakening walls & increasing thrombosis formation
- Elevated levels of LDL and fibrinogen are associated with 3 to 6-fold increased risk for heart disease and stroke.

Strategies
- Screening
- Healthy body weight
- Exercise
- Clean eating
- Lower Inflammatory burden on body
Prolonged Stress can lead to Hormonal Imbalance

Irregular menstrual cycle
Infertility
Decreased libido in both men and women
Stress also triggers mood swings and irritability

Stress Reduction

- Adopting a regular exercise routine
- Practicing daily meditation, mindfulness and/or deep breathing exercises
- Improving your sleep hygiene
- Minimizing your consumption of caffeine and alcohol
- Establishing and maintaining a healthy diet
- Evaluating and adjusting your work/home commitments
- Seeking out emotional support from family and friends

CREATE and MAINTAIN HEALTHY BOUNDARIES

How to?
Be direct: I need, I want, I feel, I will

Face the fear

Learn to say NO

Stand Firm

Start Small. Build on your Success

KelliJaecksCoaching.com/No
CHANGES IN THE BODY – SLEEP

Sleep Hygiene
Poor sleep is measured by: total amount, degree of waking during the night and how long it takes to get to sleep.

- Adults need 7-9 hours a night to recharge (www.sleepfoundation.org)
- Poor sleep may be more harmful to women than to men
  - Increased stress
  - Increased anger and depression
  - Increased levels of C-RP and IL-6 associated with heart disease and higher levels of insulin (Brain, Behavior and Immunity, 2009 Duke Researchers)
- Sleep plays a major role in the production of hormones – those that control mood and metabolism, organ functions and energy levels
- Lack of sleep is associated with increased heart disease, high blood pressure and obesity
- Getting enough sleep allows the mind and body to regulate, recharge, and re-think.

Strategies – Sleep
- Create proper sleep environment
- Bedroom is for sleep and sex
- Ritualize pre-sleep routine and stick to it
- Unplug ½ hour before bed
- Avoid emotional phone calls or discussions
- Avoid caffeine, alcohol and large meals before bed
- Alcohol produces rebound effect, disrupts the brain’s sleep mechanism and the body converts it to sugar = high blood sugar and insulin are sleep busters
- Have a snack with protein and complex carbs
- Get into comfortable clothes
- Hot bath or shower – raises body temp, relaxes
- Herbal relaxing teas: chamomile, lavender, lemon balm, etc.
- Melatonin
- Sleep regulating chemical – produced in the pineal gland in the brain
- Triggered by darkness and light (through the retina)
- Powerful antioxidant
- Turn off computer and TV - artificial light is seen as daylight so brain doesn’t release the melatonin
- Sleep in the dark

What is your sleep hygiene routine?
CHANGES IN THE BODY- BREAST HEALTH

Breast Cancer - 2nd most common cancer in American women.

- 89% found in women 50+ years of age
- 11% in women younger than 45 years of age.

Warning Signs

- New lump in the breast or underarm (armpit).
- Thickening or swelling of part of the breast.
- Irritation or dimpling of breast skin.
- Redness or flaky skin in the nipple area or the breast.
- Pulling in of the nipple or pain in the nipple area.
- Nipple discharge other than breast milk, including blood.
- Any change in the size or the shape of the breast.
- Pain in the breast.

Know YourBreasts

What are BRCA1 and BRCA2?

- Gene mutations
- In the U.S., between 1 in 400 and 1 in 800 people have a BRCA1/2 mutation
- BRCA1/2 mutations can be passed to you from either parent and can affect the risk of cancers in both women and men.

Risk Factors

- Having first menstrual period before age 12
- Never giving birth, or being older when your first child is born
- Starting menopause after age 55
- Taking hormones to replace missing estrogen and progesterone in menopause for more than five years
- A personal history of breast cancer, dense breasts, or some other breast problems
- A family history of breast cancer (parent, sibling, or child)
- Getting radiation therapy to the breast or chest
- Being overweight, especially after menopause

Strategies-Prevention

- Mammograms = X-rays
- Ultrasound
- Self-examination
- Mammography- Breast Cancer Screening

Recommendations - The US Preventive Services Task Force (USPSTF)

- 40 years – talk to physician, when to start and how often
- 50-74 years – at average risk for breast cancer should get a mammogram every two years
A COMPLETE LIST OF RESOURCES AVAILABLE UPON REQUEST.
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