

Bioidentical Hormone Replacement Therapy (BHRT) for management of Menopause

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Objectives

Menopause

- Phases & Symptoms
- Diagnosing & Treating

Bioidentical Hormone Replacement Therapy (BHRT)

- Estradiol, Testosterone, and Progesterone
- Delivery Method
- Risks & Consideration
- Follow-up and Monitoring



What is Menopause?

- The natural cessation of menstrual cycles for 12 consecutive months due to the loss of ovarian follicular activity (menstrual cycle, vaginal bleeding, and/or spotting)
- Age range of 40s – 50s, with average US age of 51
- Encompasses a women's transitional journey from reproductive years, both physically, emotionally, and spiritually

(Mayo Clinic., 2024)
(ACOG., 2024)



Phases of Menopause

- **Perimenopause:** begins when first signs of menopause begin and last until 1 year after final menstrual period (FMP)
 - Cycles typically get shorter during early perimenopause (more frequent cycles)
 - Cycles typically become farther apart when the body is approaching menopause
- **Menopause:** The natural cessation of menstrual cycles for 12 consecutive months
- **Postmenopause:** Absence of menstrual cycle for greater than 12 months with no ovulatory activity and marked decline or absence of sex hormones (estrogen and progesterone)

Common Symptoms of Menopause

- **Cardinal Symptom** = Hot Flashes & Night Sweats (Vasomotor)
- **Cardinal Symptom** = Vaginal dryness, atrophy, dyspareunia
- Mood changes = irritability, depression, anxiety, poor tolerance to average daily stressors
- Sleep disturbances = difficult falling/staying asleep, waking frequently, nocturia
- Decline in motivation, desire in life, libido, and energy
- Worsening or new onset joint pain and generalized body aches
- New onset weight gain and/or inability to lose weight despite dietary and lifestyle adjustments

Causes of Menopause

- Natural Biological Process due to ovarian aging and decreased hormone production (estrogen and progesterone)
- Surgically induced (i.e., Hysterectomy)
- Medical treatments
 - Chemotherapy
 - SERMs (Tamoxifen)
- Endocrine disrupting agents
 - Herbicides, pesticides, heavy metals, radiation, pathogens, parasites, etc.

(ACOG., 2024)
(Biote., 2022)
(HHS., 2024)

Long-term Health Considerations

- Osteoporosis-related fractures
- Cardiovascular Disease
- Diabetes Mellitus
- Cognitive Impairment
- Cancer

Diagnosing Menopause

- Clinical Evaluation:
 - Collection of Medical History
 - Cycle throughout all stages of life, including LMP
 - History of endometriosis, fibroids, cancer, etc.
 - Identify any triggers
 - Discuss past/current treatment modalities
 - Birth control history
 - Pregnancy and birth history
 - Current Diet, Exercise, and Sleep patterns

Diagnosing Menopause Cont'd

- Clinical Evaluation:
 - Symptom Assessment with completion of health assessment questionnaire
 - Determine symptom onset (weeks, months, years?)

SYMPTOMS	NONE	MILD	MODERATE	SEVERE	VERY SEVERE
Physical Exhaustion (fatigue, lack of energy, stamina or motivation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sleep Problems (difficulty falling asleep or sleeping through the night)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Irritability (mood swings, feeling aggressive, angers easily)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anxiety (feeling overwhelmed, feeling panicky, or feeling nervous)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decline in drive or interest (loss of "zest for life," feeling down or sad)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Biote., 2022)

Diagnosing Menopause Cont'd

- Laboratory Testing
 - Estradiol (E2) = low or absent
 - Progesterone = low or absent
 - FSH = greater than 23
- Lab testing is NOT confirmatory, must consider the WHOLE clinical picture

Treatment Options

- Hormone Replacement Therapy
 - **Bioidentical**
 - Synthetic
- Non-Hormonal Options
 - Lifestyle changes
 - Herbal Supplements
- Medications
 - Symptom management (i.e., sleep aids, antidepressants, etc.)

Treatment Options Cont'd

- Diet & Nutrition
 - MORE whole foods, LESS processed foods
 - Think high protein, moderate fat, and minimal carbohydrates
- Exercise
 - Regular physical activity as tolerated to support mood and energy level
 - Optimal goal of 8K-10K steps per day
- Stress Reduction Techniques
 - Prayer
 - Yoga
 - Meditation
 - Breathing exercises

Bioidentical Hormone Replacement Therapy (BHRT)

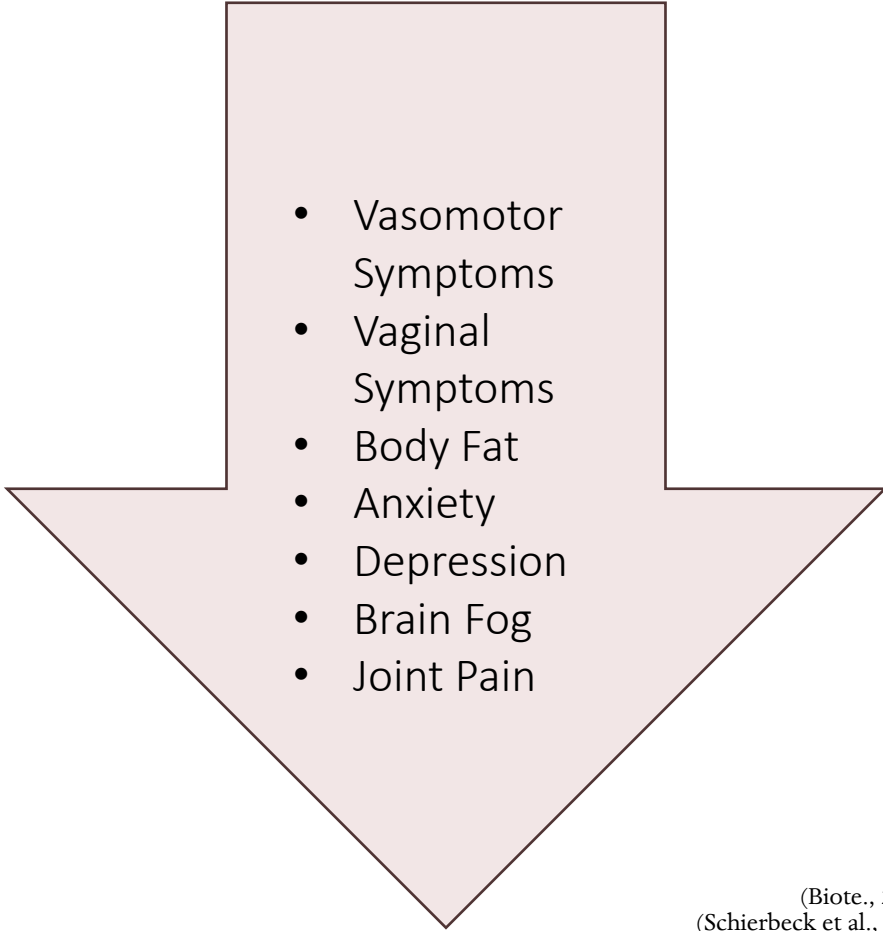
- Utilizes hormones that are structurally identical to those naturally produced by the human body
- Aims to reduce and/or resolve symptoms associated with hormonal imbalances in both females and males
- Hormones often used are estradiol, progesterone, and testosterone
- Allows for an individualized treatment plan

(Biote., 2022)



Positive Effects of Bioidentical Estradiol in Females

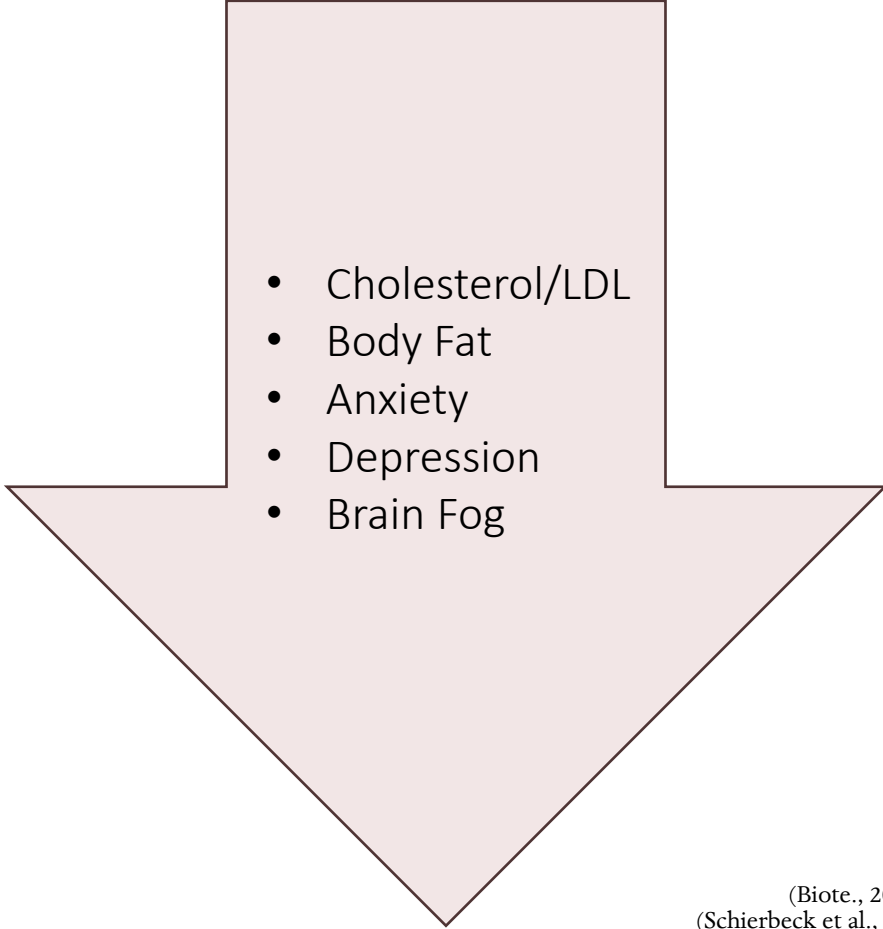
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- Energy
 - Sleep Patterns
 - Libido
 - Cardiac Protective
 - Breast Protective
 - Serotonin
 - Dopamine

- 
- Vasomotor Symptoms
 - Vaginal Symptoms
 - Body Fat
 - Anxiety
 - Depression
 - Brain Fog
 - Joint Pain

(Biote., 2022)
(Schierbeck et al., 2012)

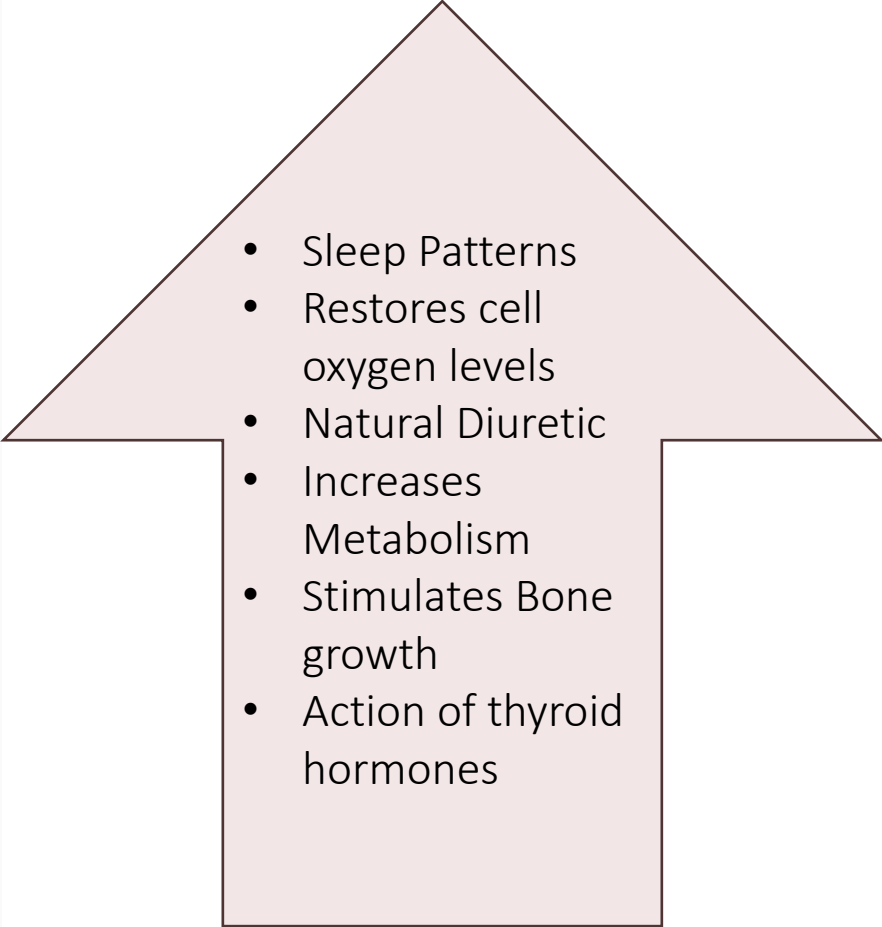
Positive Effects of Bioidentical Testosterone in Females

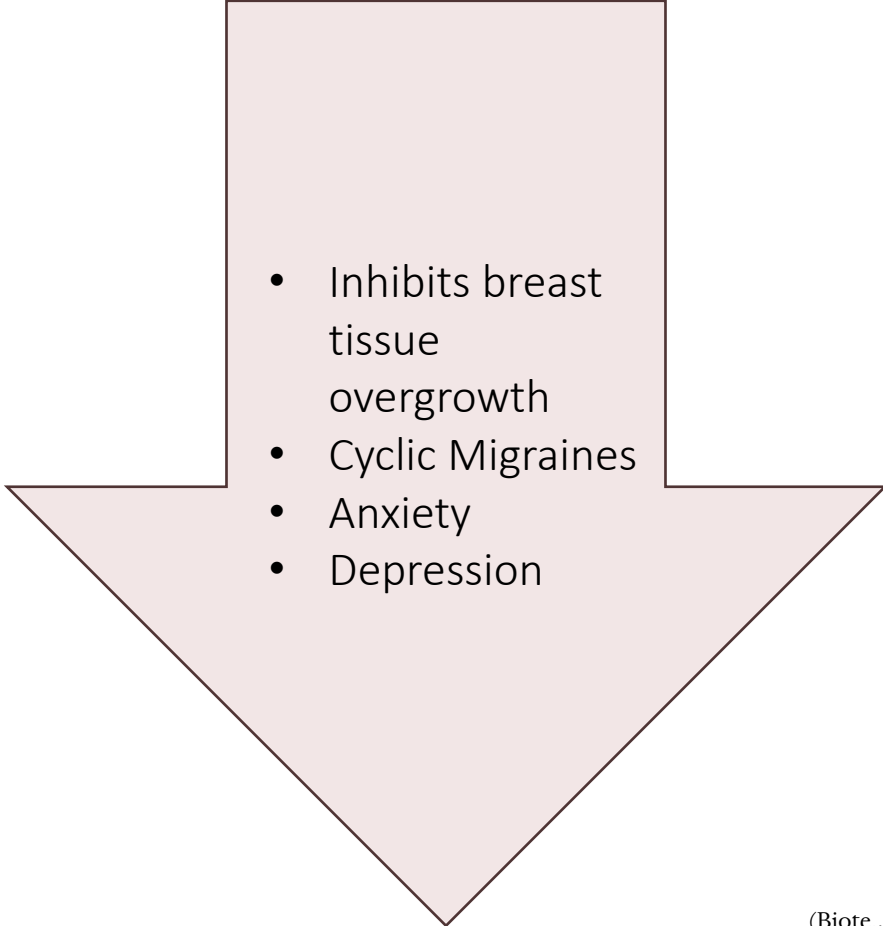
- 
- A large, light brown arrow pointing upwards, containing a list of positive effects of bioidentical testosterone in females.
- Energy
 - Sleep Patterns
 - Libido
 - Cardiac Protective
 - Well-being
 - Bones
 - Muscle

- 
- A large, light brown arrow pointing downwards, containing a list of negative effects of bioidentical testosterone in females.
- Cholesterol/LDL
 - Body Fat
 - Anxiety
 - Depression
 - Brain Fog

(Biote., 2022)
(Schierbeck et al., 2012)

Positive Effects of Bioidentical Progesterone in Females

- 
- A large, light pink arrow pointing upwards, containing a list of positive effects of bioidentical progesterone.
- Sleep Patterns
 - Restores cell oxygen levels
 - Natural Diuretic
 - Increases Metabolism
 - Stimulates Bone growth
 - Action of thyroid hormones

- 
- A large, light pink arrow pointing downwards, containing a list of negative effects of bioidentical progesterone.
- Inhibits breast tissue overgrowth
 - Cyclic Migraines
 - Anxiety
 - Depression

(Biote., 2022)

Potential Side Effects of Bioidentical Estradiol and Testosterone

- Postmenopausal bleeding
- Functional erythropoiesis
- Androgenic effects
- Weight Gain/Water Retention
- Breast tenderness/Swelling
- Mood changes
- Hair Loss/Growth
- Acne

Oral

- First-pass effect can lead to gastrointestinal discomfort, nausea, and liver toxicity
- Poor Absorption → Poor Efficacy
- Requires daily dosing for optimal results
- Buccal or sublingual formulations necessitate three times daily administration due to their short half-life

✦ Transdermal ✦

- Administered to delicate skin regions, including vaginal and scrotal areas
- Multiple factors affect absorption rate
- Can be applied daily or twice daily
- Blood concentration levels may fluctuate
- Risk of transmission to others; *exercise caution around young children*

DELIVERY MATTERS

Injection

- Administration on a weekly or biweekly basis
- Fluctuating response “roller coaster”
- Discomfort at the injection site
- Sensitivity/Intolerance to oil-based suspension
- Elevated risk of erythrocytosis and aromatization
- Potentially increase in platelet aggregation

✦ Pellet ✦

- Enhanced stability of blood levels over time
- Improved patient adherence
- Discomfort at the insertion site
- Risk of pellet extrusion
- Limitations on activities post-procedure

Risks & Considerations

- ♦ Age
- ♦ Breast Cancer History
- ♦ Seizure History
- ♦ Clotting Disorder
- ♦ Postmenopausal Breakthrough Bleeding
- ♦ Pellet Insertion Procedure
- ♦ Cost (No insurance coverage)

Continuous Follow-up & Monitoring

- ♦ Pellet Delivery Method (E and T only)
 - ♦ Initial Labs
 - ♦ 8 weeks post-initial pellet insertion, every 3-6 months thereafter
 - ♦ Implantation frequency 12-16 weeks, patient dependent
 - ♦ Oral progesterone therapy indicated when uterus is intact
 - ♦ Diindolymethane (DIM) Supplementation
- ♦ Topical Compounded Cream (E, T, and P)
 - ♦ Initial Labs
 - ♦ 10 weeks post-initiation of therapy, every 3-6 months thereafter
 - ♦ Routine follow-up as indicated

Thank You

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