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**THE WOMEN'S REVOLUTION
AKA MENOPAUSE**

Menopause

- **Process of ovarian follicular depletion**
- **Transition from reproductive to the non-reproductive phase**
- **Natural cessation of menstruation**

Menopause

- **12 months of amenorrhea (no other pathological cause)**
- **FSH > 25 (x 2, > 4 weeks apart)**
- **NO independent biological marker for menopause**

Definitions

- **Premenopause**
 - **The entire reproductive period, up to final menses**
- **Perimenopause**
 - **period immediately before and up to 1 year after the final menstrual period**
 - **Average is 47yo**
 - **May last for 3-5 years**
 - **Erratic menses and onset of symptoms**
- **Postmenopause**
 - **1 year after final menstrual period**

Definitions

- **Delayed menopause**
 - **> 54yo**
- **Early menopause**
 - **Occurring between 40yo and typical age of menopause**
- **Induced menopause**
 - **Surgical menopause secondary to BSO**
 - **Iatrogenic ablation of ovarian function**
- **Primary Ovarian Insufficiency**
 - **“Premature menopause”**
 - **Loss of ovarian function <40yo**
 - **Hypergonadotropic hypogonadism**

Symptoms

- **Vasomotor Symptoms (VMS)**
- **Genitourinary Syndrome of Menopause (GSM)**
- **Somatic Symptoms**
- **Neuropsychiatric Symptoms**

Vasomotor Symptoms

- **80% of women**
- **Lasts 2-4 minutes**
- **Duration is variable**
- **Risk factors**
 - **obesity, smoking, sedentary lifestyle, genetics**
- **Thermoregulatory dysfunction induced by estrogen withdrawal**

Causes of flushing

- **Drugs**

- (alcohol, blood pressure meds, SSRI's, SNRI's, TCA's, SERMs, opioids, diltiazem, nitrates, niacin, levodopa)

- **Diseases**

- (carcinoid, systemic mastocytosis, leukemia, pheochromocytoma, thyroid disease, POTS, hypoglycemia)

Genitourinary Syndrome of Menopause (GSM)

- **Prevalence of 30%**
- **Vulvovaginal atrophy, vaginal atrophy, urogenital atrophy, atrophic vaginitis**
- **Dryness, burning, dyspareunia, increase urinary frequency, recurrent UTI's, postcoital bleeding**

Somatic Symptoms/Changes

- **Joint pain**
- **Loss of collagen**
- **Bone loss**
- **Impaired balance**
- **Increased CVD risk**
- **Increased risks of Metabolic Syndrome (insulin resistance)**
- **Body composition changes**
 - **increase in abdominal fat**
 - **Loss of muscle mass**

Neuropsychiatric Symptoms



- **Sexual dysfunction**
- **Cognitive decline**
- **Depression/anxiety**
- **Sleep disorder**

Clinical Evaluation of Menopause Transition

- **Detailed history, physical exam, recommended health screenings**
- **Document menopause-related symptoms**
- **Lab evaluation**
 - **General Health Panel**
 - **FSH, estradiol**
 - **Vitamin D (and others if indicated)**

Diagnosis

Stages of Reproductive Aging Workshop (STRAW) staging criteria

(Insert algorithm)

Insert UTD algorithm

Treatment Goals

- **Quality of Life (QOL)**
- **Health Related Quality of Life (HRQOL)**

Options

- **Behavioral/Diet Changes**
- **Menopausal Hormone Therapy (MHT)**
- **Non-hormonal options**

Behavioral/Diet Changes

- **ALL menopausal women**
- **Behavioral**
 - **Weight Bearing exercise**
 - **Sleep hygiene**
 - **Stress relief**
 - **Routine health screenings**
- **Diet**
 - **Cut alcohol intake**
 - **Increased protein, decreased processed foods/sugar**
 - **Adequate fiber (25g per day)**
 - **MVM, calcium, vit D, magnesium**

Menopausal Hormone Therapy (MHT)

- ▶ **Insert flashy controversial pic**

Women's Health Initiative (WHI)

- **NIH study (insert logo for WHI)**
- **Started 1991, initial data published in 2002**
- **randomized controlled trial with 3 arms (DM, E+P, E)**
- **Addressed cardiovascular disease, cancer, and osteoporosis**
- **160,000 women ages 50-79 (avg age of 63yo), 20% minorities**
- **Estrogen prescriptions dropped from 30% to 4%**

Summary of findings

- ▶ **Chart from UTD**

Symptom Relief (QOL)

- **VERY effective for:**
 - **Vasomotor symptoms, GSM, Sleep**
- **MODERATELY effective for**
 - **Mood, Libido, joint pain**
- **MINIMALLY effective for**
 - **cognitive changes, skin changes**
- **NO improvement**
 - **body composition**

Menopausal Hormone Therapy (Current Recommendations)

- **Benefits outweigh risks**
- **Lowest dose that relieves symptoms, < 5years**
- **Only FDA approved medications**
- **Estradiol (E2)- pill, patch, gels, creams, vaginal ring**
- **If uterus intact- add progesterone (prometrium, progestin IUD)**
 - **Progesterone is NOT absorbed well transdermally**

Contraindications

ABSOLUTE

- **Breast cancer**
- **Hx of stroke/blood clot**
- **Hematologic clotting disorder**
- **Unexplained vaginal bleeding**

RELATIVE

- **HTN**
- **Smoking**
- **High risk for breast cancer**
- **Migraines with aura**

Side Effects



- **Breast tenderness**
- **Abnormal uterine bleeding**
- **Headache**

Non-Hormonal Options

- **SSRI**
 - **Low dose paroxetine (paxil)**
 - **Venlafaxine (Effexor)**
- **Veyozah**
 - **Fezolinetant**
 - **Neurokinin 3 Receptor Antagonist**

Treatment of GSM

- **Systemic estradiol**
- **Topical vaginal estrogen**
 - **NOT contraindicated with hx of breast cancer**
 - **Estradiol (Estrace, Vagifem, ImVexxy), Premarin**
- **Prasterone (Intrarosa)- DHEA**
- **Hyaluronic Acid**
 - **Revaree**

ALL peri/postmenopausal women need oil-based lubricant for EVERY sexual encounter

Testosterone

- ▶ **Menopause is a state of relative ANDROGEN EXCESS**
- ▶ **Insert graph of testosterone over course of reproductive life**

Testosterone

- **NOT a part of standard recommended MHT**
- **Some data for use for Hypoactive sexual disorder**
- **No FDA approved testosterone for women currently available**
- **Associated with significant side effects that are IRREVERSIBLE**

Problems

- **Post menopausal bleeding (PMB)**
- **Fertility concerns**
- **Birth control**

Perimenopausal Bleeding

- **Needs full evaluation**
- **Can be treated with continuous hormonal contraceptives**
- **MHT with cyclic progestin or progestin IUD**
- **MUST address pregnancy risk**

Postmenopausal Bleeding

- **Needs full evaluation with Gyn**
- **Differential Dx:**
 - **polyp (38%)**
 - **atrophy (31%)**
 - **secretory endometrium (15%)**
 - **endometrial cancer/hyperplasia (10%)**
 - **fibroid (6%)**
- **Work up:**
 - **Ultrasound**
 - **Hysteroscopy/endometrial sampling**

Stopping MHT

- ▶ **Standard recommendation is 5 years, not beyond 60yo**
- ▶ **Individualized**
- ▶ **Tapering recommended**
- ▶ **Do NOT abruptly stop**
- ▶ **Start (or continue) Topical vaginal estrogen**
- ▶ **Consider starting SSRI**

What do I do?

- ▶ **Menstrual/symptom history**
- ▶ **Review medical history/medications**
- ▶ **Frank discussion of menopausal symptoms vs normal si/sx of aging and reasonable expectations for MHT**
- ▶ **Full lab eval for alternative causes of symptoms**
- ▶ **Recommendations for weight bearing exercise, MVM, vitD, magnesium qhs, collagen, intermittent fasting with high protein, increase fiber to 25g per day**
- ▶ **Estradiol transdermal (start 0.05mg twice weekly)**
- ▶ **Progestin IUD vs prometrium Qhs if needed**
- ▶ **Consider SSRI**
- ▶ **EVERYONE needs to address GSM**

References

1. ["How Human Society Was Built By Grandmas"](http://www.grandmagazine.com). *www.grandmagazine.com*. 20 October 2015. Retrieved 2018-02-03.
2. [^](#) ["The Evolutionary Importance of Grandmothers"](#). *The Atlantic*. 24 October 2012. Retrieved 2018-02-04
3. [**Clinical Practice Guidelines on Menopause: *An Executive Summary and Recommendations: Indian Menopause Society 2019-2020 - PMC**](#)