

EXCLUSIVE LIVE WEBINAR

Menopause Misinformation: Separating Health from Hype in the New Year

PRESENTED BY

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January 11, 2023
2-3:30pm ET

EARN
1.5 CEUs



Disclosures

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This webinar will also award credit for dietetics (CDR CPEU).



Objectives

1. Identify five areas of misunderstanding that contribute to the ambiguity surrounding the role of nutrition and lifestyle interventions during midlife and menopause.
2. Explain the impact weight bias has on clinicians' delivery of appropriate nutrition education and counseling to midlife women.
3. Implement an evidence-based, weight-neutral approach when helping clients manage menopause and the diseases of aging.
4. Strategize best practices that can be used by an interprofessional team of health care practitioners that result in excellent patient care for women in midlife and menopause.

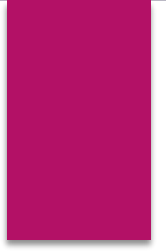
Poll #1

As it relates to caring for women with menopause concerns, are you more likely to consult with colleagues to develop a plan of care, or consult specialty physicians and other providers within the healthcare team to develop an interprofessional care plan?

1. Consult with colleagues
2. Consult specialty physicians and other providers within the healthcare team

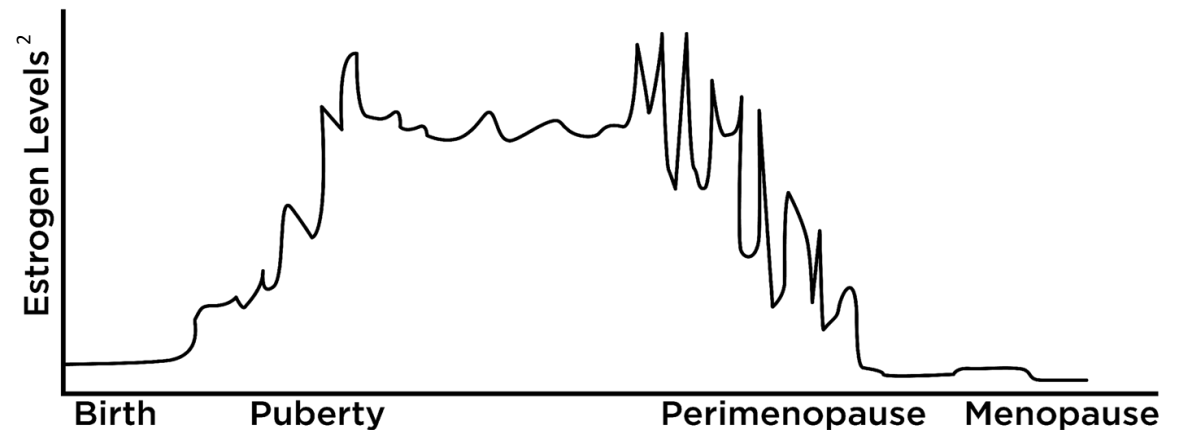


Introduction to Menopause



What is Menopause?

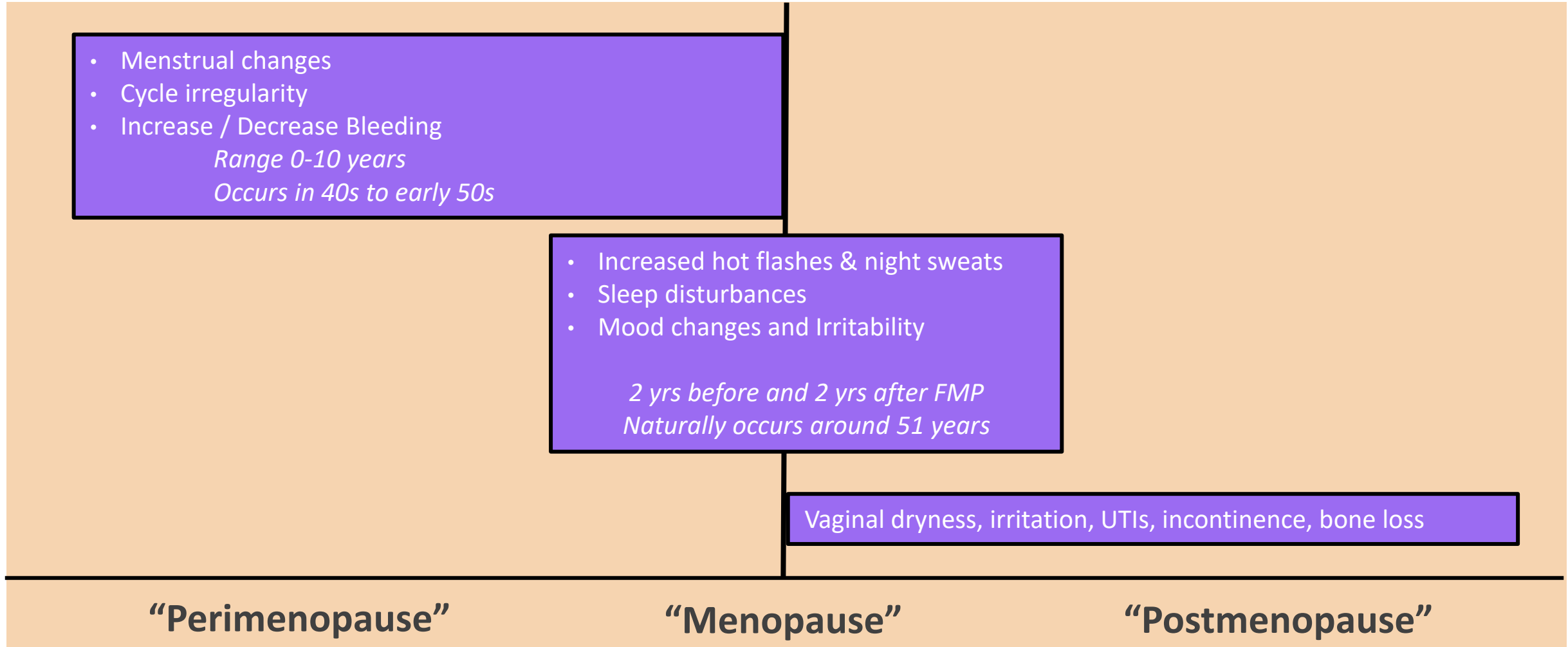
- A normal, natural event
- The end of a woman's reproductive years
- Confirmed after one year of no menstrual bleeding¹



¹The North American Menopause Society. *Menopause Practice: A Clinicians Guide*, 6th ed. Pepper Pike, Ohio: North American Menopause Society; 2019.

²Adapted from Hoyt, LT, Falconi AM. Puberty and perimenopause: reproductive transitions and their implications for women's health. *Soc Sci Med*. 2015;132:103-112.

Stages of “Natural” Menopause¹



¹The North American Menopause Society. *Menopause Practice: A Clinicians Guide*, 6th ed. 2019.

↑
Final Menstrual Period

Symptoms of Menopause³

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- Hair loss
- Hot flashes/night sweats
- Sleep disorders
- Irritability, mood swings, depression
- Cognitive (“brain fog”), memory lapses
- Headaches
- Weight gain/fat redistribution
- Fatigue
- Skin problems (hives, itchy skin)
- Loss of libido
- Vaginal dryness, UTIs
- Persistent urination and urinary pain
- Joint pain, frozen shoulder, decreased bone density
- Irregular heartbeat
- Digestive problems/IBS

Long-term concerns:

Osteoporosis

Heart disease

Diabetes

Cancer

Menopause Myths & Misinformation

1. Midlife weight gain is caused by depleted estrogen and unbalanced hormones.
2. Women can't be healthy if they gain weight or don't lose weight.
3. Women need to avoid carbohydrates because insulin resistance is inevitable during menopause.
4. Supplements and herbal remedies are natural and therefore safe.
5. Menopause is a disease that needs to be cured.

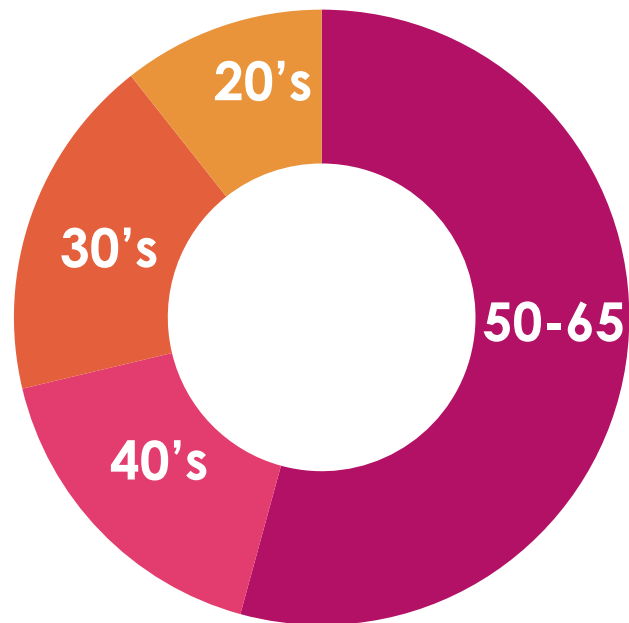
A Little History

In 1998, Women were “Happiest and Most Fulfilled” During Menopausal Years⁴

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Survey of 752 women about life changes since menopause

Age women report being
“Happiest and Most Fulfilled”



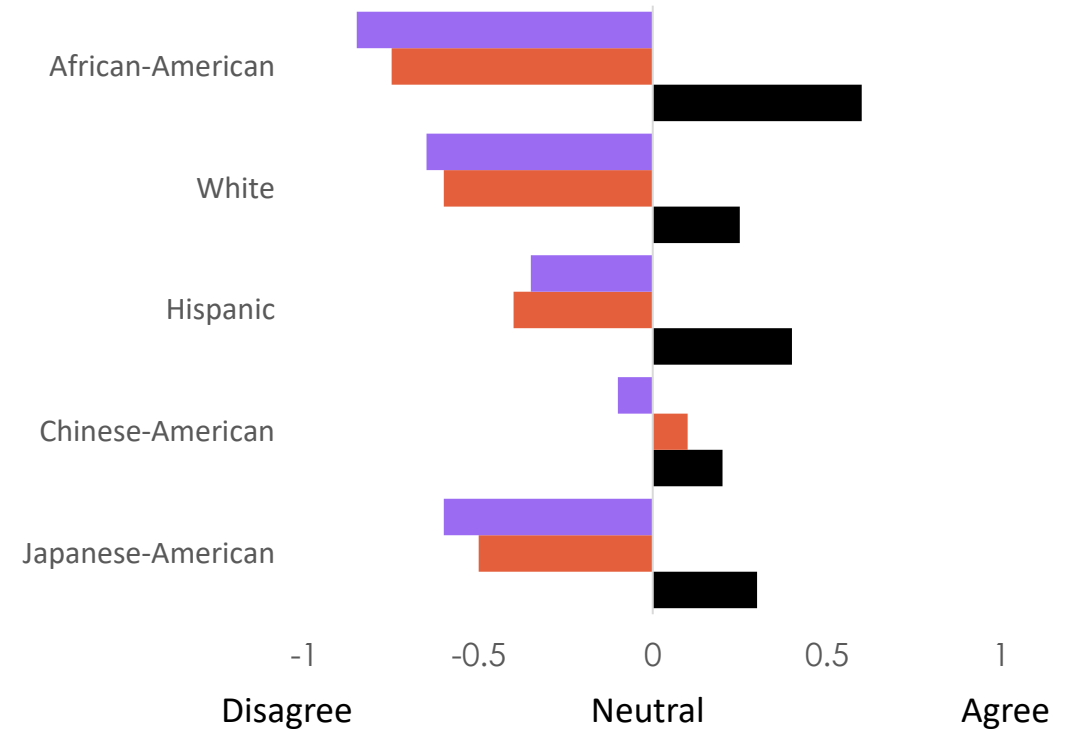
Strong majority thought the following were
unchanged or improved:

- ▶ Role at work
- ▶ Family life
- ▶ Partner/sexual relationship
- ▶ Friendships
- ▶ Self-fulfillment
- ▶ Physical health

Attitudes Toward Menopause and Aging Across Ethnic/Racial Groups

More than 16,000 women were interviewed (1995-96) as part of the Study of Women's Health Across the Nation⁵

- The older a woman is, the more valued she is.
- As I age, I feel worse about myself.
- A woman is less attractive after menopause.



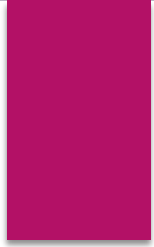
Degree of agreement and disagreement about aging by ethnic group

⁵Sommer B, Avis N, Meyer P, Ory M, Madden T, Kagawa-Singer M, Mouton C, Rasor NO, Adler S. Attitudes toward menopause and aging across ethnic/racial groups. *Psychosom. Med* 1999;61:868– 75.

Question:

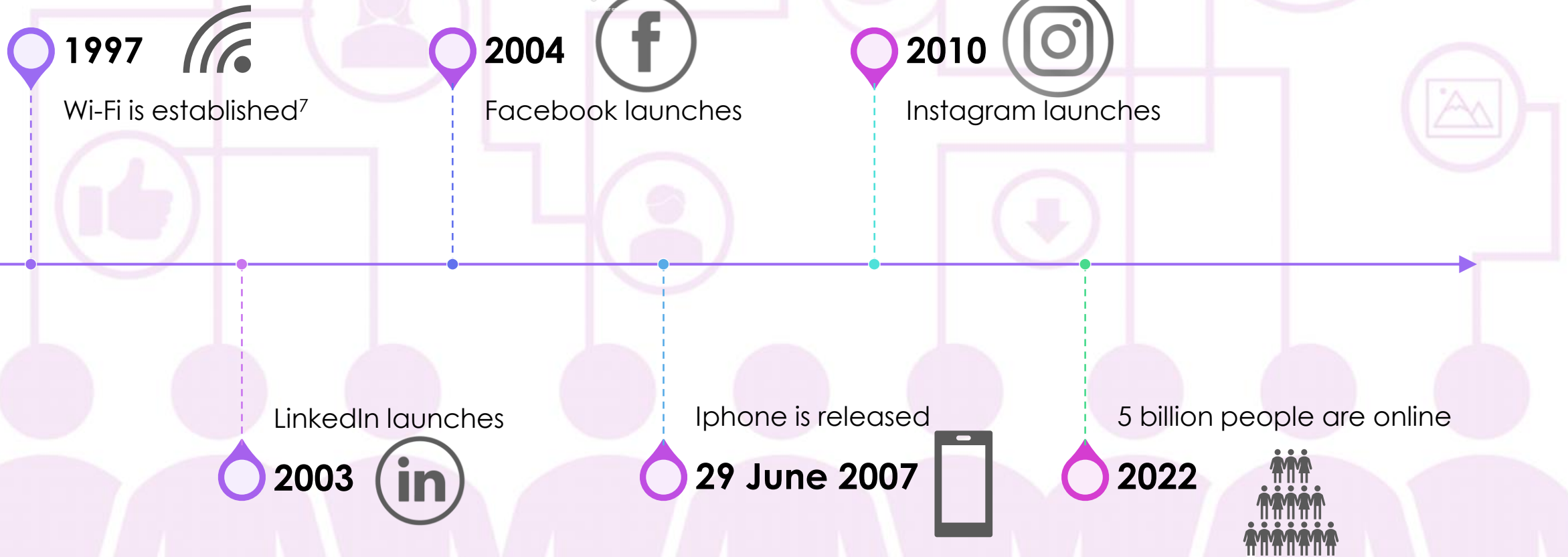
After learning about the positive attitude women had in the late 90s toward menopause and aging, what type of results do you think we would see from midlife women in today's culture?





What Has
Changed?

Growth of Social Media⁶



⁶Hines K. The history of Social Media. Search Engine Journal. <https://www.searchenginejournal.com/social-media-history/462643/>. Published November 8, 2022. Accessed November 9, 2022.

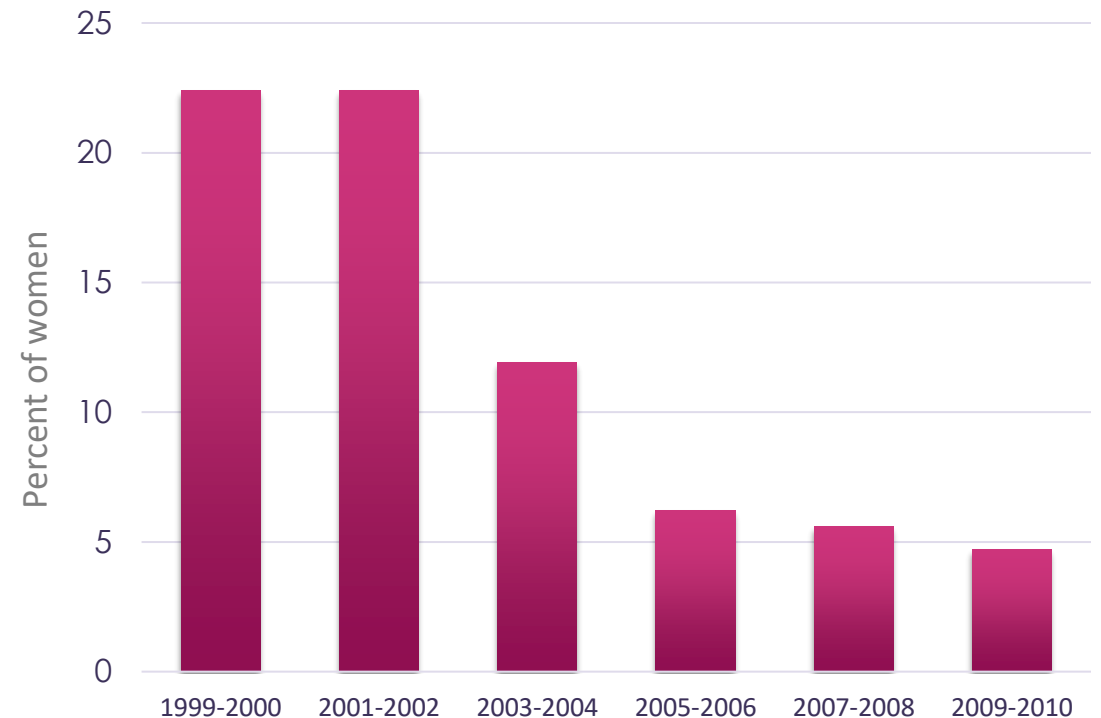
⁷Fi Alliance®, then and now. Wi. <https://www.wi-fi.org/beacon/jeff-abramowitz/wi-fi-alliance-then-and-now>. Accessed November 9, 2022.

Background image: Adapted from Creative Commons, <https://creativecommons.org/licenses/by/3.0/>

2002 Women's Health Initiative Study⁸

- ▶ Linked hormone replacement therapy (HRT) to a “slightly increased risk of stroke, heart disease and cancer”
 - Reassessment of clinical trials now show benefit and rare risks¹⁰
- ▶ Women desire “safer” alternative treatment options for menopausal symptoms

Prevalence in Menopause Hormone Therapy Use among women > 40 years of age⁹



⁸Writing Group for the Women's Health Initiative Investigators. Risks and Benefits of Estrogen Plus Progestin in Healthy Postmenopausal Women: Principal Results From the Women's Health Initiative Randomized Controlled Trial. *JAMA*. 2002;288(3):321–333

⁹Sprague BL, et al. A sustained decline in postmenopausal hormone use: results from the National Health and Nutrition Examination Survey, 1999–2010. *Obstet Gynecol*. 2012;120(3):595-603.

¹⁰Manson JE, et al. Menopausal Hormone Therapy and Health Outcomes During the Intervention and Extended Poststopping Phases of the Women's Health Initiative Randomized Trials. *JAMA*. 2013;310(13):1353–1368

BMI Classification Shifts

- ▶ In July 1998, the National Institute of Health changed the definition of what it means to be “overweight”¹¹
 - ▶ For women, the cutoff went from 27 to 25
 - ▶ The goal was to be in line with the 4 categories in the WHO guidelines
 - ▶ Suddenly millions of Americans went from being “normal weight” to being “overweight”
- ▶ The rates of perceived weight/height discrimination in medical care subsequently increased¹²

¹¹Nuttall FQ. Body Mass Index: Obesity, BMI, and Health: A Critical Review. *Nutr Today*. 2015;50(3):117-128.

¹²Andreyeva T, Puhl RM, Brownell KD. Changes in perceived weight discrimination among Americans, 1995-1996 through 2004-2006. *Obesity* (Silver Spring). 2008 May;16(5):1129-34.

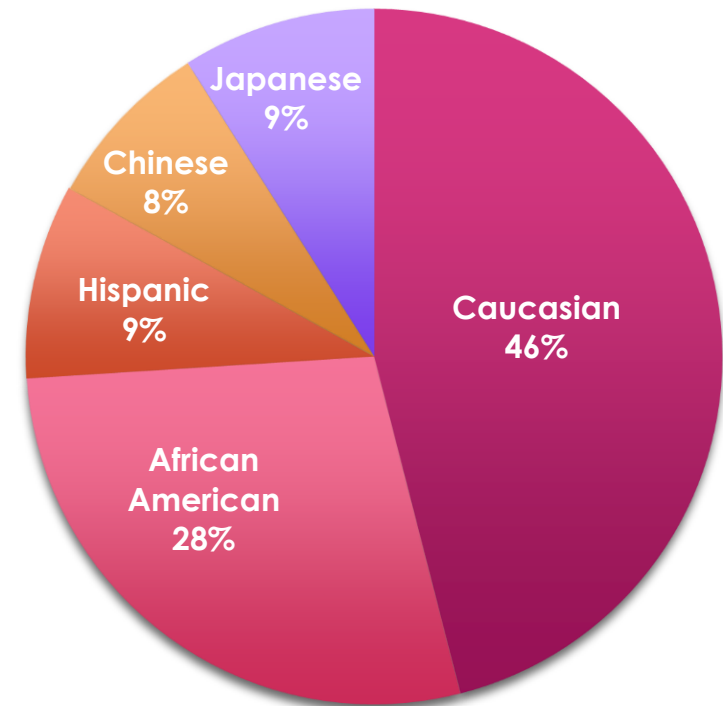
Myth #1

Midlife weight gain is caused by depleted estrogen and unbalanced hormones

What Body Weight Changes Occur?

- ▶ Weight gain is common during the transition to menopause
- ▶ Among women, aged 40–55 years, the average 3-year increase in body weight was 4.5 pounds¹³
- ▶ Unclear whether weight gain is due to aging or hormonal changes
- ▶ Hormone changes seem to cause a change in body fat distribution¹⁴

Proportion of SWAN participants in each ethnic group among seven sites in the US¹⁵*



*SWAN sites: MI, MA, IL, NJ, PA and 2 sites in CA

¹³Sternfeld B et al. Physical Activity and Changes in Weight and Waist Circumference in Midlife Women: Findings from the Study of Women's Health Across the Nation. *Am J Epidemiology*. 2004;160:912–922.

¹⁴Greendale GA et al. Changes in Regional Fat Distribution and Anthropometric Measures Across the Menopause Transition. *The Journal of Clinical Endocrinology & Metabolism*, 2021, Vol. 106, No. 9, 2520–2534.

¹⁵About swan - swan - Study of women's health across the nation. SWAN. <https://www.swanstudy.org/about/about-swan/>. Published December 15, 2021. Accessed November 8, 2022.

Functional Hypothalamic Amenorrhea¹⁶



Hypoestrogenic Condition

(weight is often suppressed)

Anorexia Nervosa

Female athlete triad & RED-S¹⁷

Over-exercise/over-training

Stress

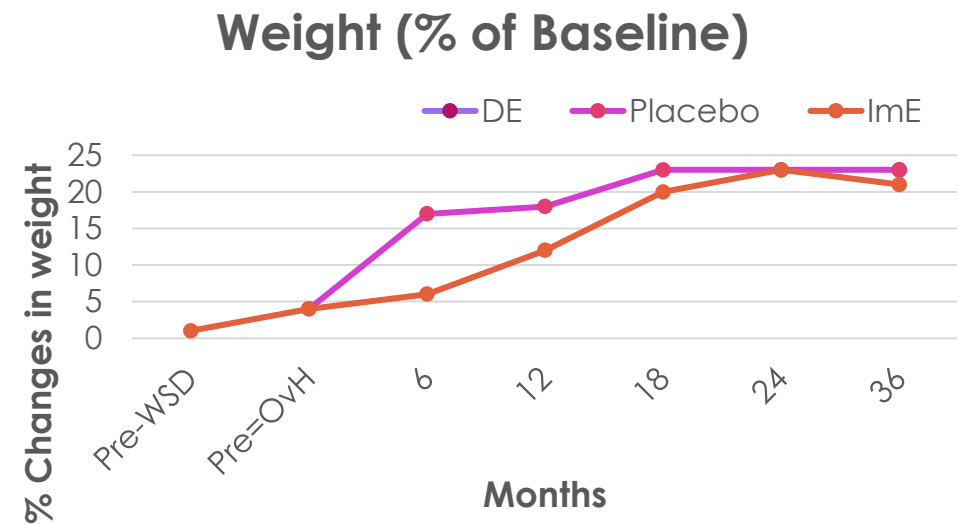
¹⁶Huhmann K. Menses Requires Energy: A Review of How Disordered Eating, Excessive Exercise, and High Stress Lead to Menstrual Irregularities. *Clinical Therapeutics*, 2020.

¹⁷M. J. De Souza¹- and R. J. Toombs. *Amenorrhea. A Case-Based, Clinical Guide*, Chapter 7. Amenorrhea Associated With the Female Athlete Triad: Etiology, Diagnosis, and Treatment

Estrogen-Based HT May Attenuate Weight Gain But Doesn't Prevent It¹⁸

Study: What are the effects of Estrogen-based hormone therapy on weight and metabolic parameters (*in old ovo-hysterectomized rhesus macaques*) consuming a western standardized diet over a 2 ½ year period?

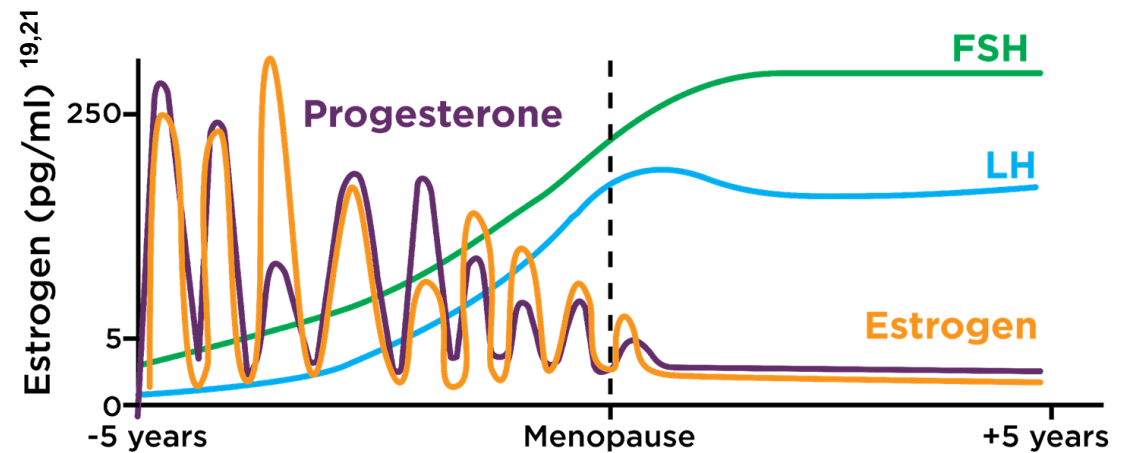
- ▶ Body weight and fat mass increased over time in both placebo and HT groups
- ▶ Intervention with estrogen delayed the rate of increase
- ▶ However, by 12 to 18 months, both groups exhibited similar weights



¹⁸Purnell JQ, Urbanski HF, Kievit P, Roberts CT, Bethea CL. Estradiol Replacement Timing and Obesogenic Diet Effects on Body Composition and Metabolism in Postmenopausal Macaques. *Endocrinology*. 2019 Apr 1;160(4):899-914.

Dynamic Fluctuations in Hormone Patterns

- ▶ Hyper-estrogenism can occur in perimenopause¹⁹
- ▶ FSH rises with menopause
- ▶ Blocking FSH induces thermogenic adipose tissue and reduces body fat²⁰



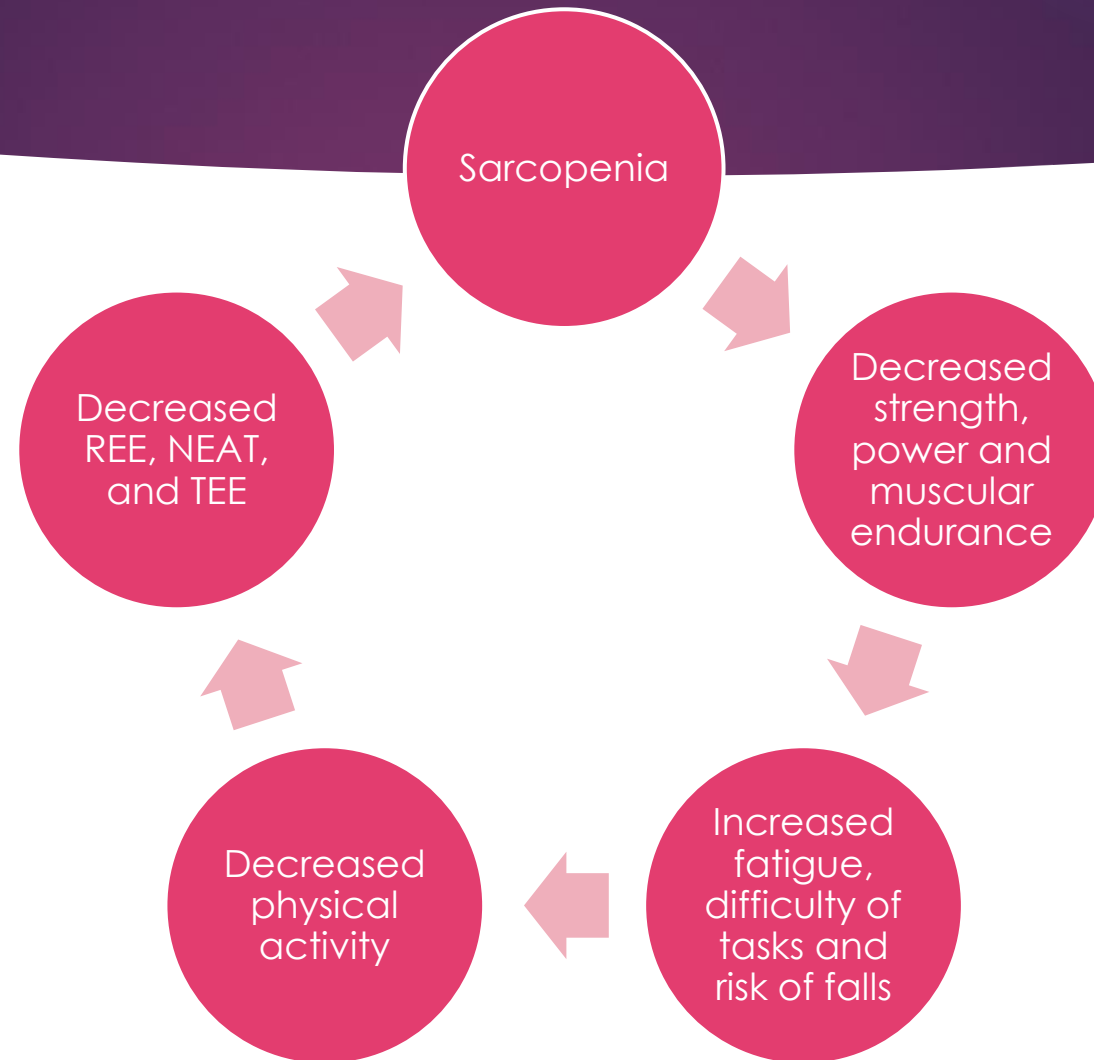
¹⁹Santoro N, Brown JR, Adel T, Skurnick JH. Characterization of reproductive hormonal dynamics in the perimenopause. *J Clin Endocrinol Metab.* 1996 Apr;81(4):1495-501.

²⁰Kohrt WM, Wierman ME. Preventing Fat Gain by Blocking Follicle-Stimulating Hormone. *N Engl J Med.* 2017

²¹Image adapted from Nckehinyere C-O, Baar K. Effect of Estrogen on Musculoskeletal Performance and Injury Risk. *Frontiers in Physiology*, 2019.

Role of Aging: Sarcopenia and Lifestyle²²

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²²Hunter GA, et al. Sarcopenia and Its Implications for Metabolic Health. *Journal of Obesity*, 2019;2019;1-10.

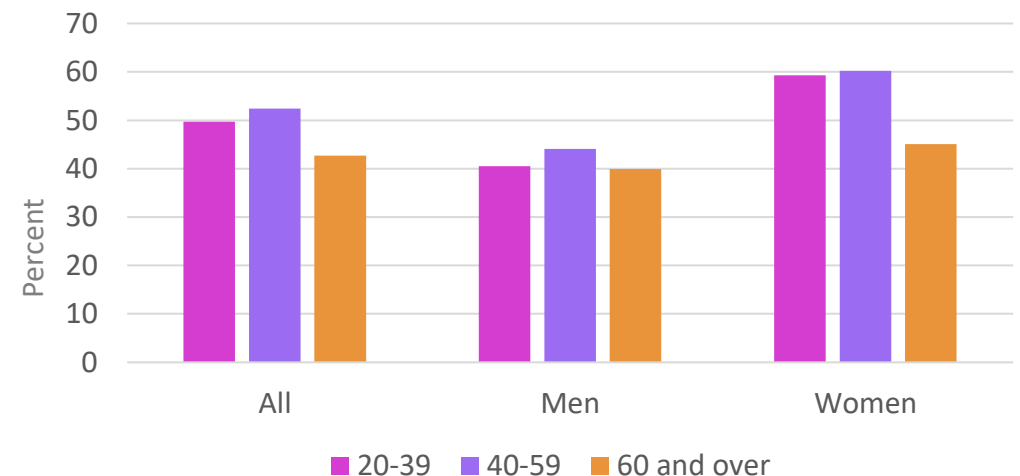
Impact of Dieting & Weight Cycling

- ▶ 60% of women >40 years of age in the US have tried to lose weight (2013-2016)²³
 - ▶ 35% of women >40 were trying to lose weight in 1989²⁴

*Weight Cycling:*²⁵

- Loss of lean tissue with weight loss and potential for “fat overshoot” with weight gain
- Older people have difficulties recovering fat-free mass
- Increased risk for disordered eating, intense cravings, and eating disorders, including binge eating disorder

Percentage of US adults who tried to lose weight, 2013-2016



²³Martin CB, Herrick KA, Sarafrazi N, Ogden CL. Attempts to lose weight among adults in the United States, 2013–2016. NCHS Data Brief, no 313. Hyattsville, MD: National Center for Health Statistics. 2018

²⁴M K Serdula, D F Williamson, R F Anda, A Levy, A Heaton, and T Byers, 1994: Weight control practices in adults: results of a multistate telephone survey. *American Journal of Public Health* 84, 1821_1824,

²⁵Montani JP, et al. Dieting and weight cycling as risk factors for cardiometabolic diseases: who is really at risk? *Obes Rev.* 2015 Feb;16 Suppl 1:7-18.

Myth #2

Women can't be healthy if they gain weight or don't lose weight

Midlife Health Concerns:

- Heart disease
- Cancer
- Diabetes
- Osteoporosis

Midlife Mental Health



Disease Risk is Complex²⁶

- ▶ Weight (and health) is the outcome of many biological dispositions and behaviors
- ▶ Correlation ≠ Causation
- ▶ Other factors that are correlated with body weight and disease risk
 - Genetics
 - Early life experience (including undernutrition)
 - Weight stigma
 - Unequal access to care
 - Limited social connection
 - Food insecurity
 - Psychological trauma

²⁶Holt-Lunstad. Advancing Social Connection as a Public Health Priority in the United States. *American Psychologist*. 2017, Vol. 72, No. 6, 517–530.



Cholesterol

- ▶ Bodies of all shapes and weights can have high cholesterol
- ▶ Decreased estrogen is correlated with increases in LDL cholesterol²⁷
- ▶ An increase in LDL cholesterol is seen in:
 - Menopause²⁷
 - Athletic Amenorrhea²⁸
 - Eating disorders²⁹
- ▶ Weight loss – and regain – is associated with increased cholesterol and cardiometabolic risk factors independent of menopause status³⁰
- ▶ Diets that are based on a high-fat, low-carbohydrate approach are associated with high cholesterol³¹

²⁷Morgan AE, et al. Investigating cholesterol metabolism and ageing using a systems biology approach. *Proceedings of the Nutrition Society*. 2017;76(3):378-391.

²⁸Rickenlund A et al. Amenorrhea in Female Athletes Is Associated with Endothelial Dysfunction and Unfavorable Lipid Profile. *The J of Clin Endo & Metabolism* 90(3):1354–1359.

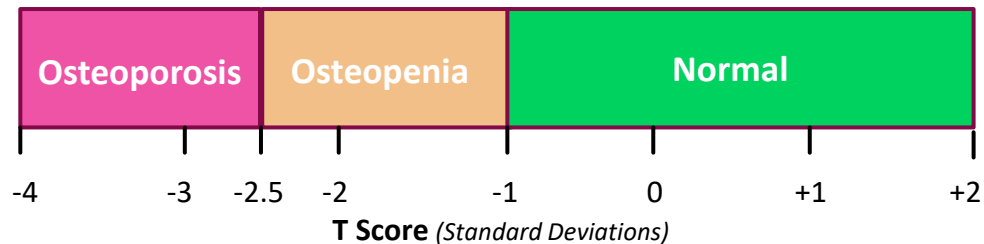
²⁹Hussain AA et al. Increased lipid and lipoprotein concentrations in anorexia nervosa: a systematic review and meta-analysis. *Int J Eat Disord*. 2019 June ; 52(6): 611–629.

³⁰Rhee E-J. Weight Cycling and Its Cardiometabolic Impact. *Journal of Obesity & Metabolic Syndrome* 2017;26:237-242.

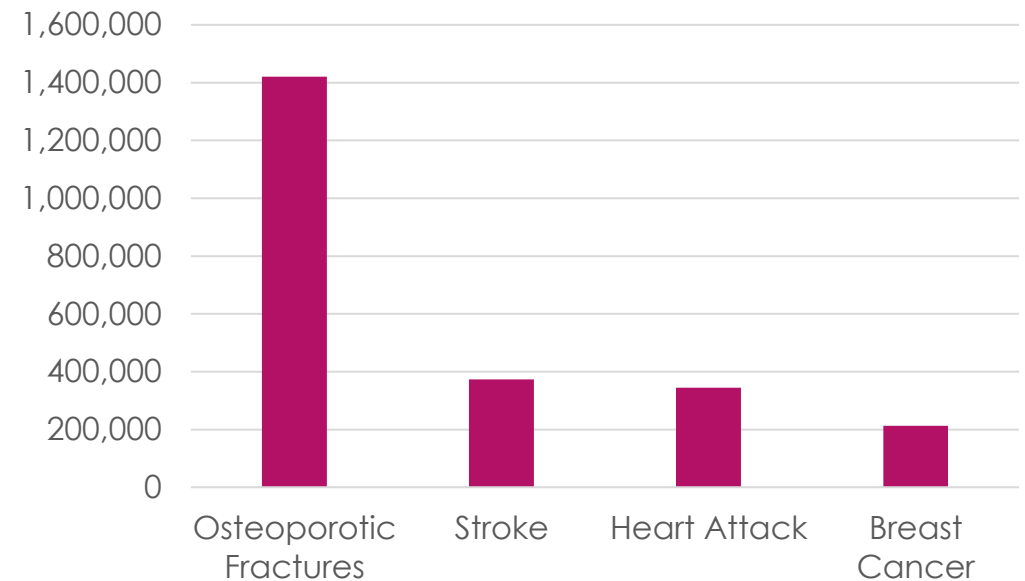
³¹Rosenbaum M. Glucose and Lipid Homeostasis and Inflammation in Humans Following an Isocaloric Ketogenic Diet. *Obesity* (2019) 0, 1-11.

Bone Health

- ▶ Bone Mineral Density is measured using dual-energy x-ray absorptiometry (DEXA)
- ▶ T-score ≤ 2.5 at spine or hip is defined as osteoporosis



- ▶ Fractures from osteoporosis are more prevalent than stroke, heart attack, and breast cancer combined³²



³²Sözen T, Özışık L, Başaran NÇ. An overview and management of osteoporosis. *Eur J Rheumatol.* 2017;4(1):46-56

Osteoporosis is Not Reversible³³

- ▶ Osteoporosis is a chronic and progressive disease that can be treated, but there is no “cure.”
- ▶ Modifiable Risk Factors Include:
 - Low Calcium, Vitamin D, protein, and total energy intake
 - Sedentary lifestyle
 - Low weight (BMI <21 kg/m²)
 - Major weight loss or weight cycling³⁴
 - Smoking, alcohol (>3/d)
 - Frequent falls

³³Management of osteoporosis in Postmenopausal Women: The 2021 position statement of the North American Menopause Society. *Menopause*. 2021;28(9):973-997.

³⁴Papageorgiou M, Kerschman-Schindl K, Sathyapalan T, Pietschmann P. Is weight loss harmful for skeletal health in obese older adults? *Gerontology*. 2019;66(1):2-14.

Cancer

*WCRF/AICR summary of recommended behaviors for reducing risk:*³⁵

- ▶ Be physically active
- ▶ Eat a diet rich in whole grains, vegetables, fruit and beans
- ▶ *Limit* consumption of “fast foods,” red and processed meat, sugar-sweetened drinks, alcohol
- ▶ Do not use supplements for cancer prevention
- ▶ After a cancer diagnosis, follow the recommendations

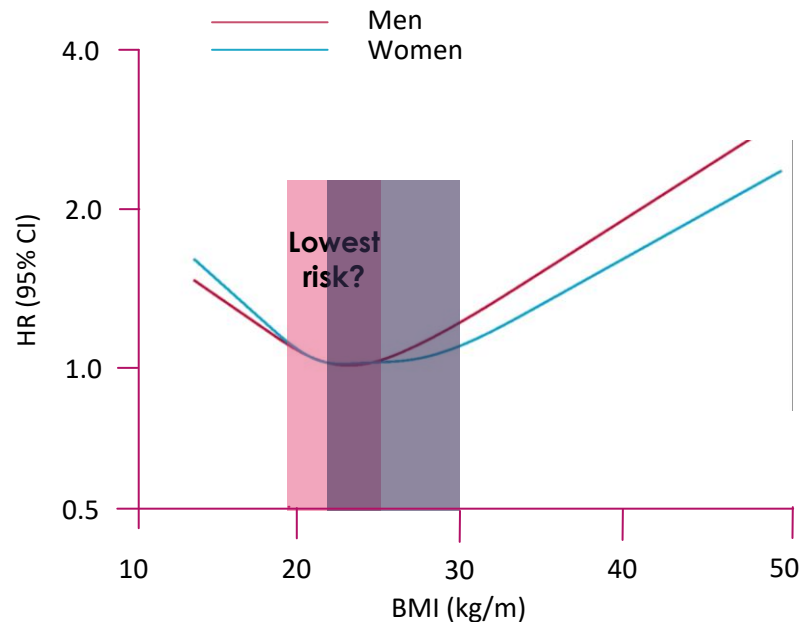
And...

- ▶ Be a healthy weight – avoid adult weight gain

³⁵World Cancer Research Fund/American Institute for Cancer Research. *Diet, Nutrition, Physical Activity and Cancer: A Global Perspective. Continuous Update Project. The Third Expert Report.* American Institute for Cancer Research; 2018.

What is a “Healthy” Weight for Women?

“A study of nearly 1.5 million (white) adults looking at deaths from any cause, found that a body mass index between 20.0 and 24.9 is associated with the lowest risk of death compared to other BMI levels” – NIH^{36,37}



3.6 million people (across 5 ethnic groups) from the UK were followed for 18 years³⁸

- The lowest all-cause mortality was at 25 kg/m²
- For women, the risk only begins to rise at 30 kg/m²
- Telling women with a BMI <21 kg/m² that they shouldn't gain weight is misleading
- The lowest mortality shifts toward higher BMIs with age³⁹

³⁶NIH study identifies Ideal Body Mass Index. National Institutes of Health. <https://www.nih.gov/news-events/news-releases/nih-study-identifies-ideal-body-mass-index>. Published October 6, 2015. Accessed November 10, 2022.

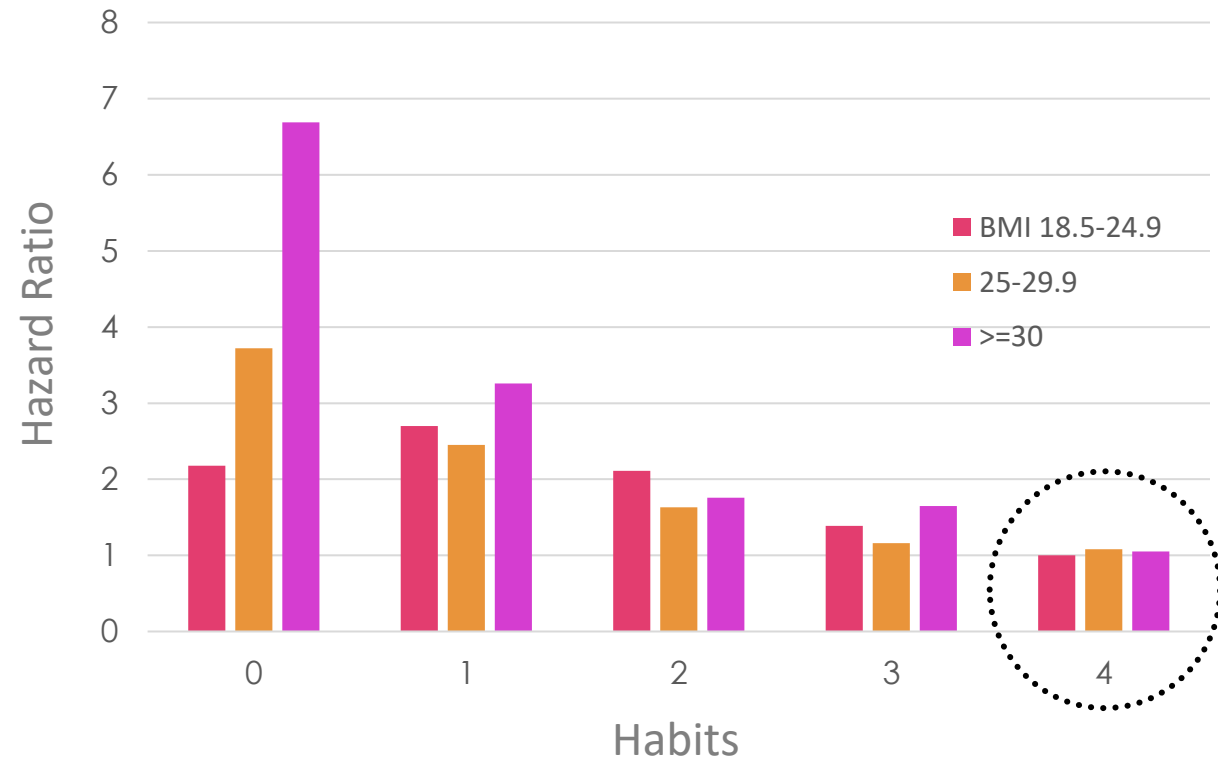
³⁷Berrington de Gonzalez B, et al. Body-Mass Index and Mortality — Prospective Analysis of 1.46 Million White Adults, *NEJM*, 2010. Vol. 362, No. 23.

³⁸Bhaskaran K et al. Association of BMI with overall and cause-specific mortality: a population-based cohort study of 3.6 million adults in the UK. *The Lancet Diabetes & Endocrinology*, 2018; 6944-953.

³⁹Hughes V. The Big Fat Truth. *Nature*, 2013; 497(7450):428-30.

Study: Healthy Lifestyle Habits are Associated with a Significant Decrease in Mortality Regardless of BMI⁴⁰

- 1) Eat 5 or more fruits and vegetables daily
- 2) Exercise regularly
- 3) Consume alcohol in moderation
- 4) Not smoking



⁴⁰Matheson et al. Healthy Lifestyle Habits and Mortality in Overweight and Obese Individuals *J Am Board Fam Med* 2012;25:9–15

Is Weight an Important Risk Factor for Mortality or Hot Flashes in Postmenopausal Women?

Study: Moderate weight gain of 22 lbs over a 17-year period had a three-fold decrease in mortality risk, largely due to a cardio-protective effect⁴¹

- ✓ Among “lean” postmenopausal women
- ✓ The protection could be due to increased estrogen, originating from the aromatization of precursors in adipose tissue after ovarian function ends

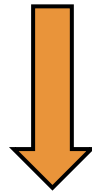
Study: Increased adiposity was associated with *fewer physiologically measured* hot flashes among older, postmenopausal women⁴²

⁴¹Singh PN, et al. The effect of menopause on the relation between weight gain and mortality among women. *Menopause*, 2001. Vol. 8, No. 5, pp. 314–320

⁴²Thurston RC, Santoro N, Matthews KA. Adiposity and hot flashes in midlife women: a modifying role of age. *J Clin Endocrinol Metab*. 2011;96(10):E1588-E1595.

Impact of Weight Bias on Midlife Women

- Belief that weight / weight loss = cure for menopause
- Weight loss is encouraged and praised vs questioned
- Lack of trauma-informed care



- Focus on weight/BMI contributes to shame and body-related guilt
- Women avoid well-visits and preventive health screenings⁴³



⁴³Mensinger JL et al. Mechanisms underlying weight status and healthcare avoidance in women: A study of weight stigma, body-related shame and guilt, and healthcare stress. *Body Image*. 2018;25:139-47

Myth #3

Women need to avoid carbohydrates because insulin resistance is inevitable during menopause

Menopause and Insulin Resistance

Claims:

“Midlife weight gain is caused by insulin resistance”

“Hormonal imbalance causes belly fat in females over 40”

“All women in menopause have insulin resistance”

“Unless hormones are balanced, you will never be able to lose weight or relieve other menopausal symptoms”



What You Need to Know

Facts:

- ▶ Estrogen has an important role in cell insulin sensitivity⁴⁴
- ▶ Changes in hormones during menopause are closely associated with central body fat accumulation which *may* increase a person's *risk* of IR⁴⁵
- ▶ Skeletal muscle accounts for 40–50% of lean body mass. Loss of muscle mass in aging has an impact on insulin-stimulated glucose disposal⁴⁶
- ▶ Weight cycling can lead to hyperinsulinemia and insulin resistance³⁰
- ▶ To date, studies focused on the relationship between insulin resistance and stage of menopause are limited

⁴⁴Mauvais-Jarvis, F. et al. The Role of Estrogens in Control of Energy Balance and Glucose Homeostasis. *Endocrine Reviews*. 2013;34(3):309-338

⁴⁵Yu W, Zhou G, Fan B, et al. Temporal sequence of blood lipids and insulin resistance in perimenopausal women: the study of women's health across the nation. *BMJ Open Diab Res Care*, 2022.

⁴⁶Cleasby ME. Insulin resistance and sarcopenia: mechanistic links between common co-morbidities. *Journal of Endocrinology*, 2016.

What Does PUBMED Say About the Prevalence of Menopause and Insulin Resistance?⁴⁷⁻⁵⁰

Study	Subjects	Findings
Lejskova M et al. Menopause: clustering of metabolic syndrome components and population changes in insulin resistance. Climacteric, 2011. ⁴⁷	909 women (ages 45-54) of reproductive age and naturally postmenopausal women were followed. Components of metabolic syndrome were compared with development of IR.	Only increases in waist circumference and TGs were observed. There was no increase in HOMA-IR.
Soriguer F et al. Type 2 diabetes mellitus and other cardiovascular risk factors are no more common during menopause: a longitudinal study. Menopause Journal, 2009. ⁴⁸	Cohort of 475 women from the Mediterranean population were categorized as premenopause or postmenopause and followed for 6 years (30% were postmenopausal at follow up).	The prevalence of impaired fasting glucose and TD2 along with the values of HOMA-IR were not affected by menopausal status or weight change.
Tuomikoski P, et al. Menopause hot flashes and insulin resistance. Menopause Journal, 2012. ⁴⁹	143 recently postmenopausal healthy and normal-weight women without previous hormone therapy use.	No differences in mean insulin resistance were detected between women without or with mild, moderate, or severe hot flashes.
Sites CK et al. Menopause-related differences in inflammation markers and their relationship to body fat distribution and insulin-stimulated glucose disposal. Fertility and Sterility, 2002. ⁵⁰	44 pre- and 45 post-menopausal women (were older, weighed more, and had greater total fat mass and intrabdominal fat).	There were no differences in insulin-stimulated glucose disposal based on menopausal status.

Take Aways:

- ▶ Menopause itself does not mean a woman has insulin resistance.
- ▶ Numerous factors may increase a woman's risk of developing insulin resistance.
- ▶ If there is a concern about insulin resistance, we ought to recommend testing fasting blood glucose, insulin, and monitoring A1C and blood lipids.

Carbohydrates are Vital for Healthy Aging

FOOD	Vitamin/Mineral It Provides			
Fruit	Vitamin C	Potassium	Folate	Vitamin A
Vegetables	Vitamin C	Potassium	Folate	Vitamin A
Dairy	Calcium	Vitamin D	Phosphorus	Vitamin B12
Whole Grains	B Vitamins	Iron	Magnesium	Phosphorus

Fiber: Important Role in the Gut Microbiome and Colon Health⁵¹



⁵¹Veronese N, Solmi M, et al. Dietary fiber and health outcomes: an umbrella review of systematic reviews and meta-analyses, *The American Journal of Clinical Nutrition*, 2018;107(3):436-444.

Myth #4

Supplements are Natural and Therefore Safe

Herbal Remedy	What the Science Says	Cautions and Side Effects
Black cohosh	Mixed data on providing relief for menopausal symptoms more than placebo	May be contraindicated for women with liver disease; Concern about possible interaction with statins; concerns about authenticity of plant source
Dong quai	Does not appear to be more effective than placebo	May increase risk of bleeding, and possible interaction with blood thinners
Chasteberry	Limited evidence for premenstrual syndrome or postmenstrual symptoms	May interact with hormonal therapy; not be for use in pregnancy
Kava	Used to relieve anxiety, but other studies show mixed results	May cause liver damage; avoid alcohol and other sedatives
Phytoestrogens (soy, red clover)	May help relieve hot flashes and night sweats	May interact with hormone therapy; avoid if you have hormone-sensitive conditions
Valerian	May help with sleep and anxiety	May cause drowsiness; avoid alcohol and other sedatives; do not use in the morning
Ashwagandha	Limited evidence for stress and anxiety	May cause drowsiness; may interact with thyroid medication; some evidence that it may cause miscarriages; not use with auto-immune diseases
Maca	Promoted to increase stamina, sexual function and improve mood but there are no large, well-controlled, long-term studies to support this use	Is generally considered safe, but reported side-effects include headache, stomach upset, sleep disruption, increased sweating and may affect liver function and blood pressure

Herbal Remedies: Overall Concerns⁵²

- Belief that they are natural and therefore safe
- Herbs and supplements can have beneficial effects - *as well as cause adverse events and interactions with other substances*
- Anecdotal evidence may support efficacy, but little clinical data to document safety or efficacy for most

⁵²The North American Menopause Society. Nonhormonal management of menopause-associated vasomotor symptoms: 2015 position statement of The North American Menopause Society, *Menopause*, 2015;22(11):1155-1174.

Source: National Institute of Health; Natural Medicines Database; ConsumerLab.com, Endocrine.org/menopausemap

Herbal Therapies: Quality Concerns⁵³

- ▶ The molecular composition of plants varies based on:
 - Climate, growing conditions, soil composition, the fertilizer used, and many more factors
 - Is the adaptogenic or therapeutic dose from last year's harvest the same as this year's?
- ▶ Concerns about quality – Is an herb listed on an ingredient label the identified herb? Does it contain adulterants?



Do they work? What is the evidence?

- ▶ There are limited, high-quality studies available
- ▶ Bias concerns: who is paying for the study?
- ▶ Length of study
- ▶ Number of participants
- ▶ Population studied – representative?
- ▶ Dosage amounts
- ▶ Animal studies vs rigorous clinical trials
- ▶ In SWAN participants, despite more frequent use of CAM, it was not associated with improvement in menopausal symptoms or quality of life⁵⁴



⁵⁴Christmas M et al. Menopause hormone therapy and complementary alternative medicine, quality of life, and racial/ethnic differences: the Study of Women's Health Across the Nation (SWAN). *Menopause*: October 18, 2022 - Volume - Issue - 10.

Food First – But Not Always Food Only

▶ Musculoskeletal health⁵⁵

- Protein – high-quality protein powder
- Vitamin D – 1000 to 2000 IU/d Vitamin D3
- Maybe calcium – doses ≤ 500 mg at a time up to 1200 mg/day

▶ Cardiovascular health

- Omega-3 fatty acids (EPA+DHA) – doses < 1 g/d
- In RCTs ω-3 supplementation >1g/d was associated with an increased risk of AF⁵⁶

▶ Menopause symptoms

- Cognitive Behavior Therapy for Insomnia and/or Hot flashes (Level 1 Evidence)⁵⁷
- Soy Foods/Isoflavones

Special Concerns	Key Nutrients
Bone Health	Calcium Vitamin D Phosphorus, Magnesium, Vit K
Muscle	Protein (leucine)
Heart Health Brain Health	Vits & Minerals (fruit/veg) Omega-3 Fatty Acids Carbohydrate
GI Health Energy Neurological Concerns	Fiber Iron (perimenopause) Vitamin B12

⁵⁵Azzolino D et al. Musculoskeletal Changes Across the Lifespan: Nutrition and the Life-Course Approach to Prevention. *Frontiers in Medicine*. 2021; 2021 Aug 31;8:697954.

⁵⁶Gencer B et al. Effect of Long-Term Marine ω-3 Fatty Acids Supplementation on the Risk of Atrial Fibrillation in Randomized Controlled Trials of Cardiovascular Outcomes: A Systematic Review and Meta-Analysis. *Circulation*. 2021;144:1981–1990.

⁵⁷Attarian H et al. Treatment of chronic insomnia disorder in menopause: evaluation of literature. *Menopause*, 2015. Vol. 22, No. 6, pp. 674/684.

Evaluating Herbal Remedies & Supplements

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- What is the symptom or health concern you are trying to resolve?
- What ingredient in the supplement or herbal remedy will solve that problem?
- What science is there for the efficacy *and safety* of the ingredient and/or product? What are the possible side effects?
 - Check a third party, i.e., Natural Medicine Database or ConsumerLab
- Are there any contraindications for the client? (medical history, medications they are taking, etc.)
- What other supplements are you taking? At some point, too much of a good thing is NOT a good thing

Myth #5

Menopause is a Disease that Needs to be Cured

Normalizing Menopause⁵⁸

- Menopause is a natural biological event for half the human population
- There is NO universal experience
 - It is experienced differently around the globe
 - Socioeconomic status, education level, and social and cultural attitudes about menopause, along with biological factors shape a person's experience
- Marketing menopause as a disease is a lucrative business that contributes to confusion, unregulated treatments, and more distress
- Negative attitudes and expectations before menopause predict the likelihood of distressing menopausal symptoms

The Grandmother Hypothesis⁵⁹

- ▶ Being able to assist in rearing grandchildren (after reproductive years) could have provided a means for the menopause phenotype to have evolved in humans
 - Over time women began living beyond their ovarian function
- ▶ Older women in hunter-gatherer societies are the most productive in foraging and sharing food
- ▶ Life expectancy of females (US data):
 - 2020: US: 81.7 (females) – 76.6 (males)⁶⁰

⁵⁹Takahashi M et al. A Theory for the Origin of Human Menopause. *Frontiers in Genetics*, 2017

⁶⁰United States demographics. Worldometer. <https://www.worldometers.info/demographics/us-demographics/#life-exp>. Accessed November 10, 2022.



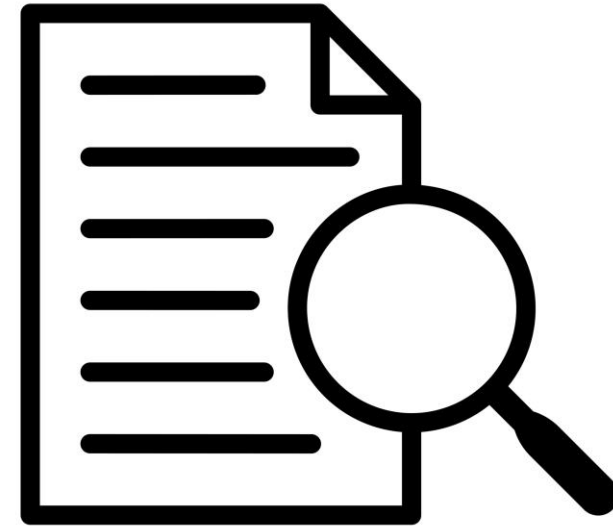
Menopause is a natural, biological event.



Identifying menopause as “a disease” that needs to be fixed or cured or a “risk factor” that causes disease is stigmatizing and potentially harmful to women’s health⁴⁸

⁴⁸Soriguer F et al. Type 2 diabetes mellitus and other cardiovascular risk factors are no more common during menopause: a longitudinal study. *Menopause*, 2009.

Case Study



Case Study: Mary

- ▶ 68-year-old cisgender, white, female referred by gynecologist for *patient's* weight concerns
 - Married, retired teacher, socially active
 - Final menstrual period: age 50
 - Current weight/height: 129 lbs, 5'1"
 - Previous "usual" weight: 119 lbs
 - PMH: Colon cancer (age 62) and HTN
- ▶ Medications/Supplements:
 - Lisinopril 10 mg qd, baby aspirin, Pepcid
 - Multiple supplements including Vit D2 (50,000 IU qw), Vit B12, Biotin, Iron w/vit C

Relevant Bloodwork	
Total cholesterol	221 mg/dL (ref range: <200)
HDL	79 mg/dL (ref range: >50)
LDL	128 mg/dL (ref range: <100)
Non-HDL	142 mg/dL (ref range: <130)
Triglycerides	58 (ref range: <150)
Hemoglobin A1C	4.9% (ref range: <5.7%)
Vitamin B12	1230 pg/mL (ref range: 200-1100)
25-OH Vitamin D	125 ng/mL (ref range: 30-100)

Assessment

- ▶ Nutrition and Diet History:
 - Unhappy with weight and distressed about 10 lb weight gain
 - Has tried diet programs with limited success
 - Follows a “Mediterranean Diet: high fish and vegetables”
 - Food rules and restrictions: no bread, limited starch, no sugar, no beef, limit snacks (has a box of “forbidden foods”)
- ▶ Current typical daily intake:
 - Breakfast: bowl of yogurt OR fruit with coffee
 - Lunch: slice of cauliflower pizza → “something fast, not a lot” (busy with hobbies, friends)
 - ~5 pm: wine, cucumbers, bell peppers, and hummus → “hungry”
 - Dinner: spiralized zucchini with pasta sauce OR grilled salmon and Brussels sprouts (+ ~ 2 glasses wine/night)
- ▶ Physical Activity: aims to walk 3 miles x 3 d/week
 - Some back/hip pain limits additional activity
 - With further questioning, learned that she has scoliosis

Interventions

▶ Initial Intervention:

- Self-monitoring (food intake, hunger/fullness, social eating situations)
- Emphasis on planning + education on the rationale for adequate meals/snacks
- Referred to orthopedic physician and physical therapist with scoliosis specialty
- Ordered DEXA (diagnosed with osteoporosis – T-Score = -3.0)

▶ Follow-ups:

- Ongoing meal planning with a focus on MNT for bone health
- Endocrinologist brought on the team to address osteoporosis
- Patient started physical therapy
- She was able to shift her mindset to a “health-focused” approach

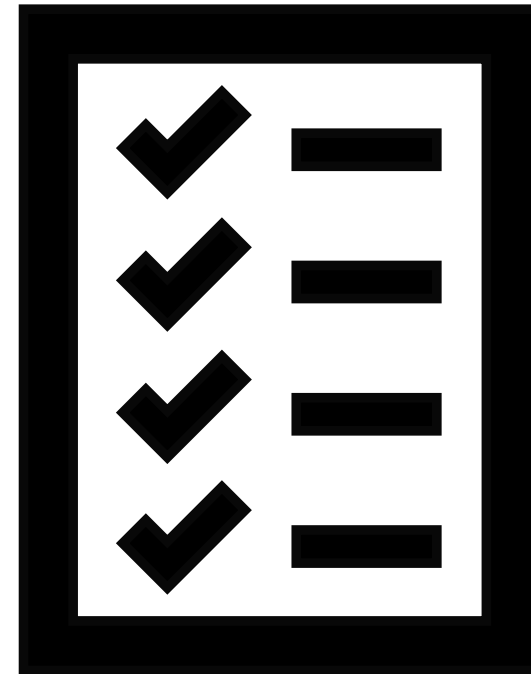


Group Discussion

What barriers or limitations come up for you in a case like this?



What Can We
Do?



#1: Use a Weight-Inclusive Approach

Motivational Interviewing:

- ▶ Collaborative and goal-oriented
- ▶ Assess ambivalence
- ▶ Explore reasons for change (and possible barriers) within an atmosphere of acceptance and compassion

Focus on Modifiable Behaviors:

- ▶ Dietary factors⁶¹⁻⁶³
 - Adequate energy intake
 - High-quality protein and nutrients for lean tissue and bone health
 - Diet rich in fruit and vegetables
 - Hydration
- ▶ Non-diet therapies: Intuitive eating | Mindful eating | Body image healing
- ▶ Physical activity: Strength | Cardiovascular activity | Flexibility and balance⁶⁴

⁶¹Aune D, et al. Fruit and vegetable intake and the risk of cardiovascular disease, total cancer and all cause mortality—a systematic review and dose-response meta-analysis of prospective studies. *International Journal of Epidemiology*, 2017, 1029–1056.

⁶²Sotos-Prieto M, et al. Association between the quality of plant-based diets and risk of frailty. *Journal of Cachexia, Sarcopenia and Muscle*, 2022.

⁶³Paddon-Jones D, et al. Protein and healthy aging. *Am J Clin Nutr*, 2015;101(Suppl):1339S–45S

⁶⁴Gaesser and Angadi, Obesity treatment: Weight loss versus increasing fitness and physical activity for reducing health risks, *iScience*, 2021;24(10):102995

#2: Collaborate with a Multi-disciplinary Team

Gynecologist/PCP

- Overall health, annual physical, vitals
- Preventative health checkups
- Treat menstrual irregularities
- Hormone-related health concerns and HT decision-making
- VMS and sleep

Endocrinologist

- Bone health
- Diabetes
- Thyroid
- Insulin/blood sugar management

Dietitian

- MNT
- Establish nutritional adequacy
- Support “normalized” eating
- Athletic fueling
- Body image



Mental Health Providers

- Address life changes, stressors, aging and identity concerns
- Mood dysregulation/depression
- Cognitive or memory concerns
- CBT for Insomnia/VMS

Others:

- Cardiology
- Oncology
- Gastroenterology

Orthopaedic/Physical Therapy

- Musculoskeletal issues
- Pelvic floor
- Bone disorders

#3: Recognize and Challenge Ageism and Weight Stigma

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- ▶ Be curious about your own views on aging and menopause
- ▶ Recognize medicalized views of menopause symptomology (including weight) that contribute to a narrative that it is a dreaded disease to fix or prevent
- ▶ Provide compassionate care for weight concerns:
 - Has someone told you that you need to lose weight?
 - What do you hope weight loss will change about your life?
 - What would you do if you weren't worried about your weight?
 - What are important things in your life?

"You can have terrible hot flashes and menopause not be a disease, just like you can have terrible labor pains and pregnancy not be a disease. Or like you can have terrible acne at age 14 and puberty not be a disease."

~ Dr. Jen Gunter⁶⁵

⁶⁵Gunter DJ. Menopause is having a moment. Menopause is Having a Moment - by Dr. Jen Gunter. <https://vajenda.substack.com/p/menopause-is-having-a-moment>. Published June 21, 2022. Accessed November 11, 2022.

#4: Normalize Menopause: It is a Health Milestone *NOT* Something to Fear

- Noteworthy signal of a new phase in a woman's life
- Opportunity to reassess
 - Values
 - Lifestyle
 - Health status and health goals
- Embrace a proactive and positive approach to one's future well-being

#5: Ask Questions and Get Educated

- ▶ Spot Misinformation:
 - Is the source qualified, trustworthy and unbiased?
 - Is there scientific consensus – or is this one study or opinion?
 - Are there gaps in the logic?
 - Go beyond the article! Ask “why?” and dig into the references cited
- ▶ Organizations:
 - The North American Menopause Society – Menopause.org
 - The International Menopause Society – imsociety.org
 - Hormone Health Network: Menopause Map – endocrine.org/menopausemap
 - The Academy of Eating Disorders – aedweb.org
 - The Female (and Male) Athlete Triad Coalition – femaleandmaleathlete.org





Thank you!

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