Nourishing Resilience

FUELING STRENGTH & VITALITY IN THE MENOPAUSE JOURNEY

JENNA BRADDOCK
MSH, RDN, CSSD, LD/N, ACSM-CPT, CF-L1

Disclosure:

Jenna Braddock is an Independent Contractor for NOW Foods

Honorarium for this presentation provided by the Oklahoma Beef Council

OBJECTIVES

- Identify physical, cultural, and personal stressors that may cause negative symptoms during the menopause journey.
- Describe the science behind why mindset can play a powerful role in the aging process.
- Implement nutrition and lifestyle strategies that can help improve quality of life and empower women to thrive at each stage of menopause.

TESTIMONIAL

Women Want Good Advice

“What do you want to do?

That’s just what happens.

That’s not related to menopause.

Just lose weight.

Menopause

- Point in time when no menstrual cycle for 12 months
  - “Complete depletion of finite follicle supply”
- Average age range of occurrence
  - 40-58
  - 51 average age in higher income countries
  - 46-48 average age in middle and lower income countries
  - Earlier onset in Black, East Asian, Hispanic/Latina populations
- Surgical induced menopause
  - Removal of the ovaries

NORMALISING MENOPAUSE. BMJ 2022;377:E069369
HTTP://DX.DOI.ORG/10.1136/BMJ-2021-069369

Perimenopause

- Period of time leading up to menopause where cycles are irregular due to the decline in number of eggs in a women’s ovaries
- Characterized by erratic cycles & bothersome symptoms
  - Fluctuations in estrogen and progesterone
- Time Frame
  - 47.5 average age of symptom onset
  - Most common: 4-8 years
  - Rare cases: 10 years +

THE MENOPAUSE TRANSITION: SIGNS, SYMPTOMS, AND MANAGEMENT OPTIONS. THE JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM, 2021, VOL. 106, NO. 1

Menopause Transition

Why Such a Big Deal?

- No universal experience
- Nearly every cell is impacted
- Women/practitioners are unprepared
- Youth is prioritized for relevance
- Differences in ethnicities, social values, & cultural beliefs

HOGA L, ROHOLPHO J, GONCALVES B AND QUIRINO B (2015) WOMEN'S EXPERIENCES OF MENOPAUSE: A SYSTEMATIC REVIEW OF QUALITATIVE EVIDENCE. JBI DATABASE SYSTEM REV IMPLEMENT REP. 8:250-337. DOI: 10.11124/JBISRIR-2015-1948.

Hormone Crash Course

Estrogen

ESTRADIOL - E2

- Primary type in reproductive years
- Produced in ovaries
- Stimulates tissue growth, uterine contractions, fluid retention, inflammatory and immune activation
- Receptors everywhere - Muscle, brain, bone, cells/metabolism, CNS

ESTRIOL - E3

- Predominant type during pregnancy
- Weaker form of estrogen - 100-fold less potent than E2

ESTRONE - E1

- Predominant type during menopause
- Produced from adipose tissue
- 10 fold less potent than estrodiol/E2
- Does not drive action like estrodiol/E2
- Can be converted to estradiol to help with low levels in early post-menopausal years

CHIDI-OGBOLU N AND BAAR K (2019) EFFECT OF ESTROGEN ON MUSCULOSKELETAL PERFORMANCE AND INJURY RISK. FRONT. PHYSIOL. 9:1834. DOI: 10.3389/FPHYS.2018.01834

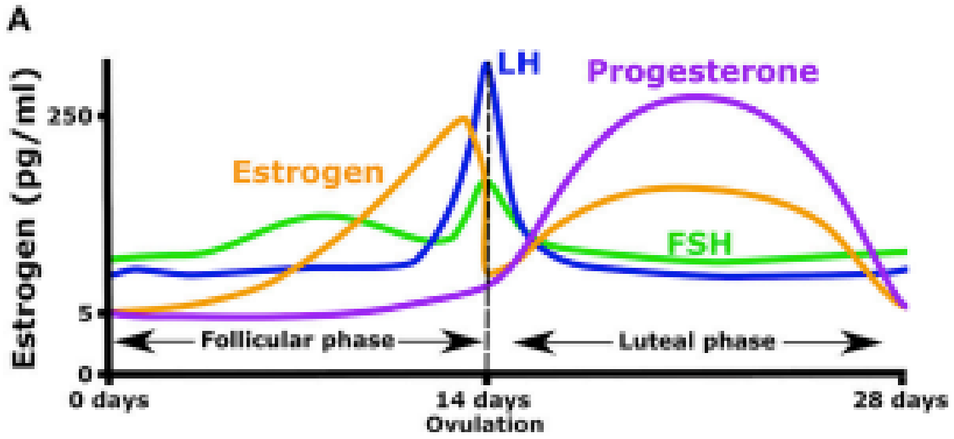
Progesterone

- Produced in ovaries
- Works as a counterbalance to estrogen. (Tones down the drama.)
- Promotes tissue catabolism, decreases uterine contractions, anti-inflammatory.
- Receptors - brain, uterus, pancreas, bone, lower urinary tract
- Neuroactive Steroid: Acts directly on nervous system tissues & strong connection with cognition
- Post Menopause: Levels reduce to <0.5 ng/mL (compared to 5-20 ng/mL during cycles)

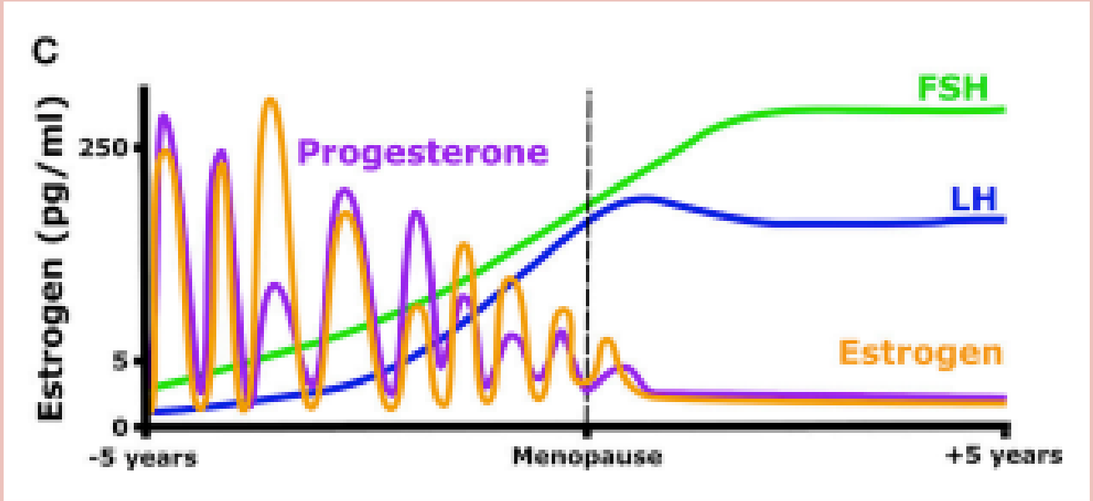
HENDERSON VW. PROGESTERONE AND HUMAN COGNITION. CLIMACTERIC. 2018 AUG;21(4):333-340. DOI: 10.1080/13697137.2018.1476484. EPUB 2018 JUN 1. PMID: 29852783; PMCID: PMC6309195.

SCARPIN KM, GRAHAM JD, MOTE PA, CLARKE CL. PROGESTERONE ACTION IN HUMAN TISSUES: REGULATION BY PROGESTERONE RECEPTOR (PR) ISOFORM EXPRESSION, NUCLEAR POSITIONING AND COREGULATOR EXPRESSION. NUCL RECEPT SIGNAL. 2009 DEC 31;7:E009. DOI: 10.1621/NRS.07009. PMID: 20087430; PMCID: PMC2807635.

Menstrual Cycle



Perimenopause - Post Menopause



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How The Menopause Journey Can Impact a Woman's Body

Vasomotor

- Temperature dysregulation
- Sleep disturbances
- Night Sweats
- Heart palpitations

Vaginal/Pelvic

- Vaginal atrophy
- Dryness/Pain
- Bladder control
- Increase in infections

Mental Health

- Mood & emotional regulation
- Depression/Anxiety
- Higher sympathetic drive
- Brain fog

Metabolism & Physiology

- Insulin sensitivity declines
- Body composition changes
- Accelerated rate of bone loss
- Increase in CAD risk biomarkers
- Joint pain, loss of function

THE MENOPAUSE TRANSITION: SIGNS, SYMPTOMS, AND MANAGEMENT OPTIONS. THE JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM, 2021, VOL. 106, NO. 1

MENOPAUSE SYMPTOMS AND ETHNICITY: THE STUDY OF THE WOMEN'S HEALTH ACROSS THE NATION. WOMENS HEALTH. 2009.

NICK PANAY, SENG BIN ANG, REBECCA CHESHIRE, STEVEN R. GOLDSTEIN, PAULINE MAKI, ROSSELLA E. NAPPI & ON BEHALF OF THE INTERNATIONAL MENOPAUSE SOCIETY BOARD (2024) MENOPAUSE AND MHT IN 2024: ADDRESSING THE KEY CONTROVERSIES – AN INTERNATIONAL MENOPAUSE SOCIETY WHITE PAPER, CLIMACTERIC, 27:5, 441-457,

Hormone Therapy

- WHI study results have been reevaluated.
- FDA approved for some symptoms.
- Not an anti-aging strategy.
- More recent studies suggest that the use of menopause hormone therapy early can benefit (and possibly help prevent disease) cardiovascular, metabolic, bone, and mental health.
- NA Menopause Society Position = favorable benefit-risk ratio

GLIEMANN, L. AND HELLSTEN, Y. (2019), THE EXERCISE TIMING HYPOTHESIS: CAN EXERCISE TRAINING COMPENSATE FOR THE REDUCTION IN BLOOD VESSEL FUNCTION AFTER MENOPAUSE IF TIMED RIGHT?. J PHYSIOL, 597: 4915-4925. HTTPS://DOI.ORG/10.1113/JP277056

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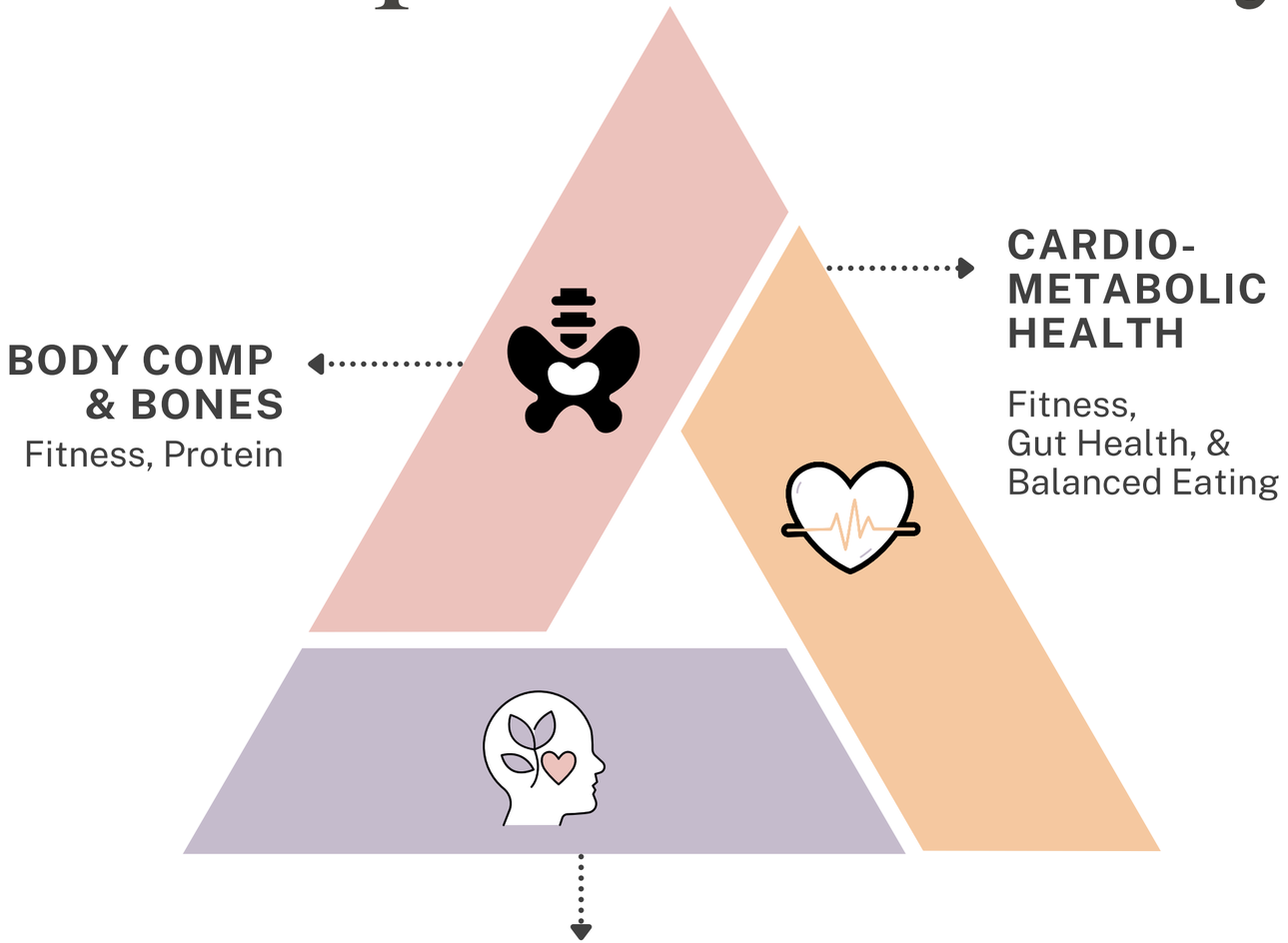
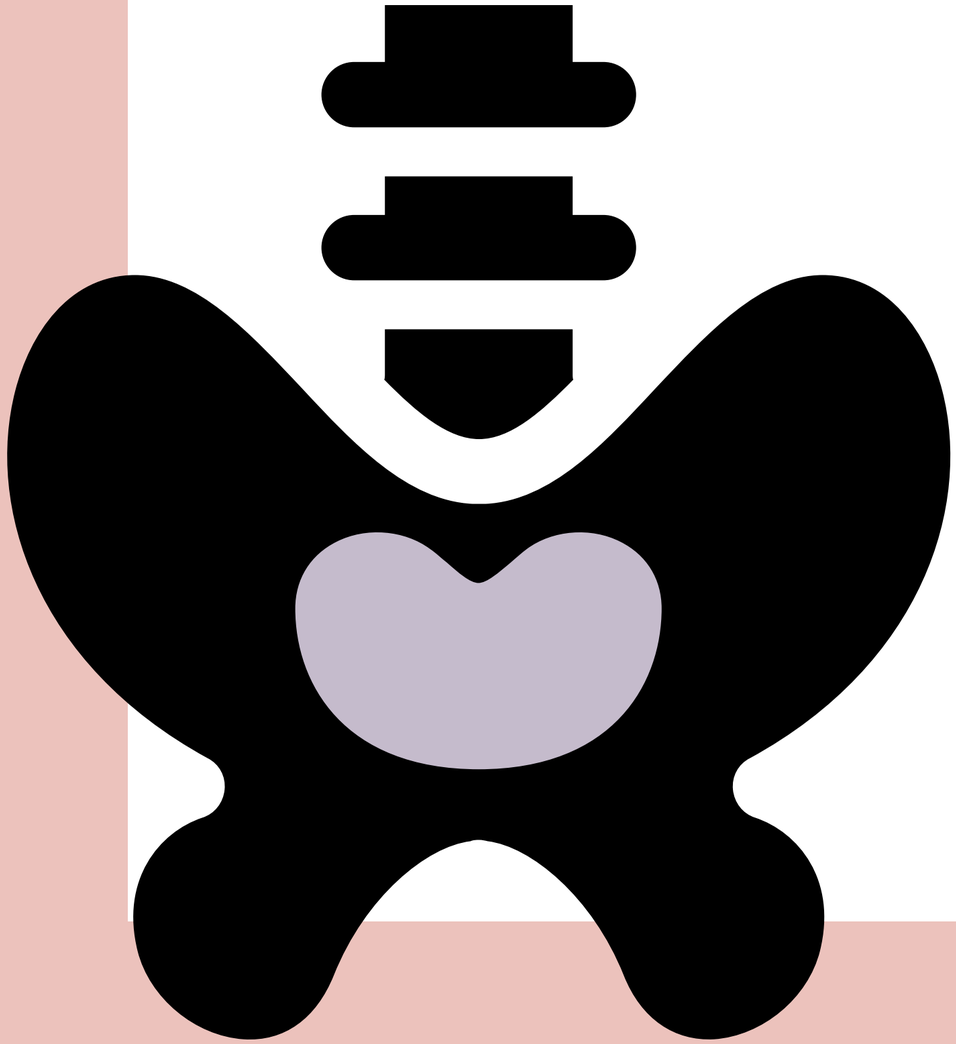
Building Resilience Through The Menopause Journey





01

Body Comp & Bones

FITNESS - PROTEIN

Body Composition & Bone Health

- Time to change the story about bodies --> What do you need or want your body to DO for you as you age?
- Body composition > body weight
- Key Message: Build as much muscle as you can!

ERDÉLYI, A.; PÁLFI, E.; T˝U˝U, L.; NAS, K.; SZ˝UCS, Z.; TÖRÖK, M.; JAKAB, A.; VÁRBÍRÓ, S. THE IMPORTANCE OF NUTRITION IN MENOPAUSE AND PERIMENOPAUSE—A REVIEW. NUTRIENTS 2024, 16, 27. HTTPS://DOI.ORG/ 10.3390/NU16010027

Physical Fitness

- Physically active women experience less severe menopausal symptoms at every stage - Start NOW
- Potential benefit to every area of health
- Certain exercise can mimic the effect of estrogen on muscle
- Moderate intensity, steady state exercise NOT as effective for fat loss or muscle gain in menopausal women

GLIEMANN, L. AND HELLSTEN, Y. (2019), THE EXERCISE TIMING HYPOTHESIS: CAN EXERCISE TRAINING COMPENSATE FOR THE REDUCTION IN BLOOD VESSEL FUNCTION AFTER MENOPAUSE IF TIMED RIGHT?. J PHYSIOL, 597: 4915-4925. HTTPS://DOI.ORG/10.1113/JP277056

BOUTCHER, YATI N.; BOUTCHER, STEPHEN H.; YOO, HYE Y.; MEERKIN, JARROD D.. THE EFFECT OF SPRINT INTERVAL TRAINING ON BODY COMPOSITION OF POSTMENOPAUSAL WOMEN. MEDICINE & SCIENCE IN SPORTS & EXERCISE 51(7):P 1413-1419, JULY 2019.

Fitness Priorities Through the Journey

SPRINT INTERVALS

- Short intense effort followed by less intense recovery (80-100% MHR)
- Benefits: effective for improving body comp, efficient, high compliance
- Lots of options - run, walk, cycle, row, swim, march
- 8 sec sprint: 12 sec recovery
- 2-3 times per week

WEIGHT TRAINING

- Lifting heavy weight for at least 2-3 sets of 5-12 reps (67-85% of 1RM)
- Benefits: stimulates muscle growth, improves body comp, improves bone density, improves blood pressure and glucose
- Muscle = strength = ability = freedom (connect to purpose)
- Train to train - start small

OTHER OPTIONS

- Jump/plyometric training
- Rucking
- Dancing

SHAW, B, GOUVEIA M, MCINTYRE S, SHAW I. ANTHROPOMETRIC AND CARDIOVASCULAR RESPONSES TO HYPERTROPHIC RESISTANCE TRAINING IN POSTMENOPAUSAL WOMEN. MENOPAUSE (2016) 23:1176-1181.

KEMMLER W, SHOJAA M, KOHL M, VON STENGEL S. EFFECTS OF DIFFERENT TYPES OF EXERCISE ON BONE MINERAL DENSITY IN POSTMENOPAUSAL WOMEN: A SYSTEMATIC REVIEW AND META-ANALYSIS. CALCIFIED TISSUE INTERNATIONAL (2020) 107:409–439

Quality Protein

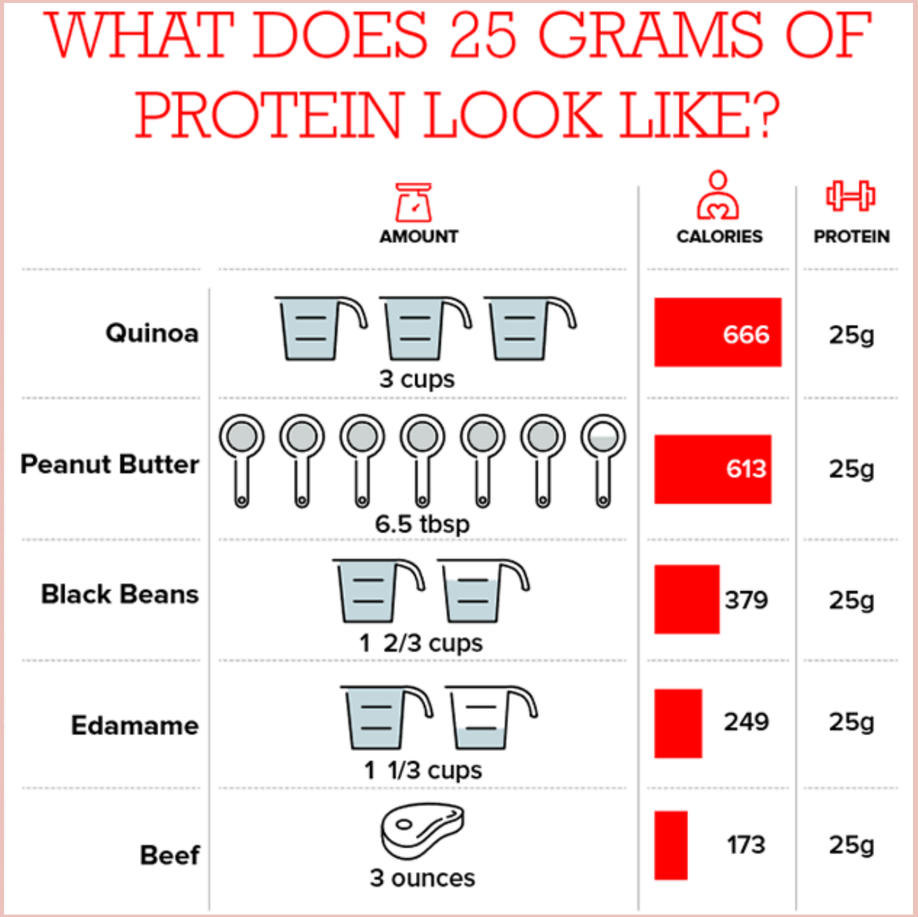
- Older women tendency to eat less overall quality energy & protein
- Quality protein intake helps preserve lean muscle mass (20+ grams)
- Increasing protein intake helpful for improving body comp when resistance training & reducing caloric intake (1.2+ g/kg vs. 0.8g/kg or less)
- Key Message: “Quality Protein “ is important, not just “High Protein”

BERNER L, BECKER G, WISE M, DOI J. CHARACTERIZATION OF DIETARY PROTEIN AMONG OLDER ADULTS IN THE UNITED STATES: AMOUNT, ANIMAL SOURCES AND MEAL PATTERNS. J ACAD NUTR DIET. 2013;113:809-815.

L GREGORIO, ET AL. ADEQUATE DIETARY PROTEIN IS ASSOCIATED WITH BETTER PHYSICAL PERFORMANCE AMONG POST-MENOPAUSAL WOMEN AGES 60-90. J NUTR HEALTH AGING. 2014; 18(2):155-160

Protein AND Plants

- Protein intake recommended as 50/50 split between animal and plant sources
- Animal sources of protein like lean beef provide high quality protein in a reasonable serving size and caloric allotment
- Animal source protein can elicit greater gains in whole body net protein balance



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Protein Stacking - Mix & Match

4 - 5 g	1 oz sunflower seeds 6 oz traditional yogurt
6 - 7 g	2 tbsp chia seeds 2 tbsp spirulina 1/2 cup black beans String cheese 1 egg
8 - 9 g	1/2 cup edamame 1/2 cup lentils 1 oz lean beef 3 oz extra firm tofu
10 - 11 g	2 tbsp hemp hearts 1 oz jerky 1/2 cup cottage cheese
12 - 15 g	1 scoop protein powder 1 oz dry roasted edamame
16 - 18 g	3 oz tempeh 3/4 cup plain Greek yogurt Tuna pouch 2 oz lean beef

02

Cardiometabolic Health

FITNESS - BALANCED EATING- GUT HEALTH

Cardiometabolic Health

- Incidence of metabolic syndrome 2-3 times higher in postmenopausal women
- “Exercise is the best way to activate positive benefits to vascular function and NO production post-menopause.”
- Weight loss still seems to be the “primary driver” in improving glucose control

CLINA JG, SAYER RD, PAN Z, ET AL. HIGH- AND NORMAL-PROTEIN DIETS IMPROVE BODY COMPOSITION AND GLUCOSE CONTROL IN ADULTS WITH TYPE 2 DIABETES: A RANDOMIZED TRIAL. OBESITY (SILVER SPRING). 2023; 31(8): 2021-2030. DOI:10.1002/OBY.23815

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Balanced Eating

- Blood sugar regulation becomes important
- Reducing added sugar & alcohol recommended
- Specific carbohydrate goals spread throughout the day may be needed/helpful

Specific Strategies

Balanced Meals = Meals anchored in protein (20+ grams), produce, & fiber rich foods

30 - 50 grams of fiber a day

B vitamin rich foods

ERDÉLYI, A.; PÁLFI, E.; T˝U˝U, L.; NAS, K.; SZ˝UCS, Z.; TÖRÖK, M.; JAKAB, A.; VÁRBÍRÓ, S. THE IMPORTANCE OF NUTRITION IN MENOPAUSE AND PERIMENOPAUSE—A REVIEW. NUTRIENTS 2024, 16, 27. HTTPS://DOI.ORG/10.3390/NU16010027

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Gut Health

"ESTROBOLOME"

- Estrogen-gut microbiome axis
- Intestinal flora play a role in estrogen metabolism
- Gut dysbiosis produces a cascade of negative effects

MECHANISM

- β-glucuronidase - enzyme secreted by gut microbiota that deconjugates estrogens into their active forms that can bind to receptors
- Gut dysbiosis reduces diversity & increase inflammation, reducing β-glucuronidase activity
- Less deconjugation of estrogen & phytoestrogens into their circulating & active forms

TOOLS

- Increase fiber 30 - 40 g/day
- Increase diversity of plants eaten
- Soy isoflavones benefit IR
- Identify dysbiosis with stool testing
- Calm the sympathetic nervous system - stress reduction

BAKER JM, AL-NAKKASH N, HERBST-KRALOVETZ M. ESTROGEN–GUT MICROBIOME AXIS: PHYSIOLOGICAL AND CLINICAL IMPLICATIONS. MATURITAS, VOLUME 103, P45-53, SEPTEMBER 01, 2017. HTTPS://WWW.MATURITAS.ORG/ARTICLE/S0378-5122(17)30650-3/FULLTEXT

03
Mindset

PURPOSE - STORYTELLING - CONNECTION

“The Change”

THE POWER OF PURPOSE

"Purpose in life predicts both health and longevity suggesting that the ability to find meaning from life's experiences, especially when confronting life's challenges, may be a mechanism underlying resilience. Having purpose in life may motivate reframing stressful situations to deal with them more productively, thereby facilitating recovery from stress and trauma. In turn, enhanced ability to recover from negative events may allow a person to achieve or maintain a feeling of greater purpose in life over time."

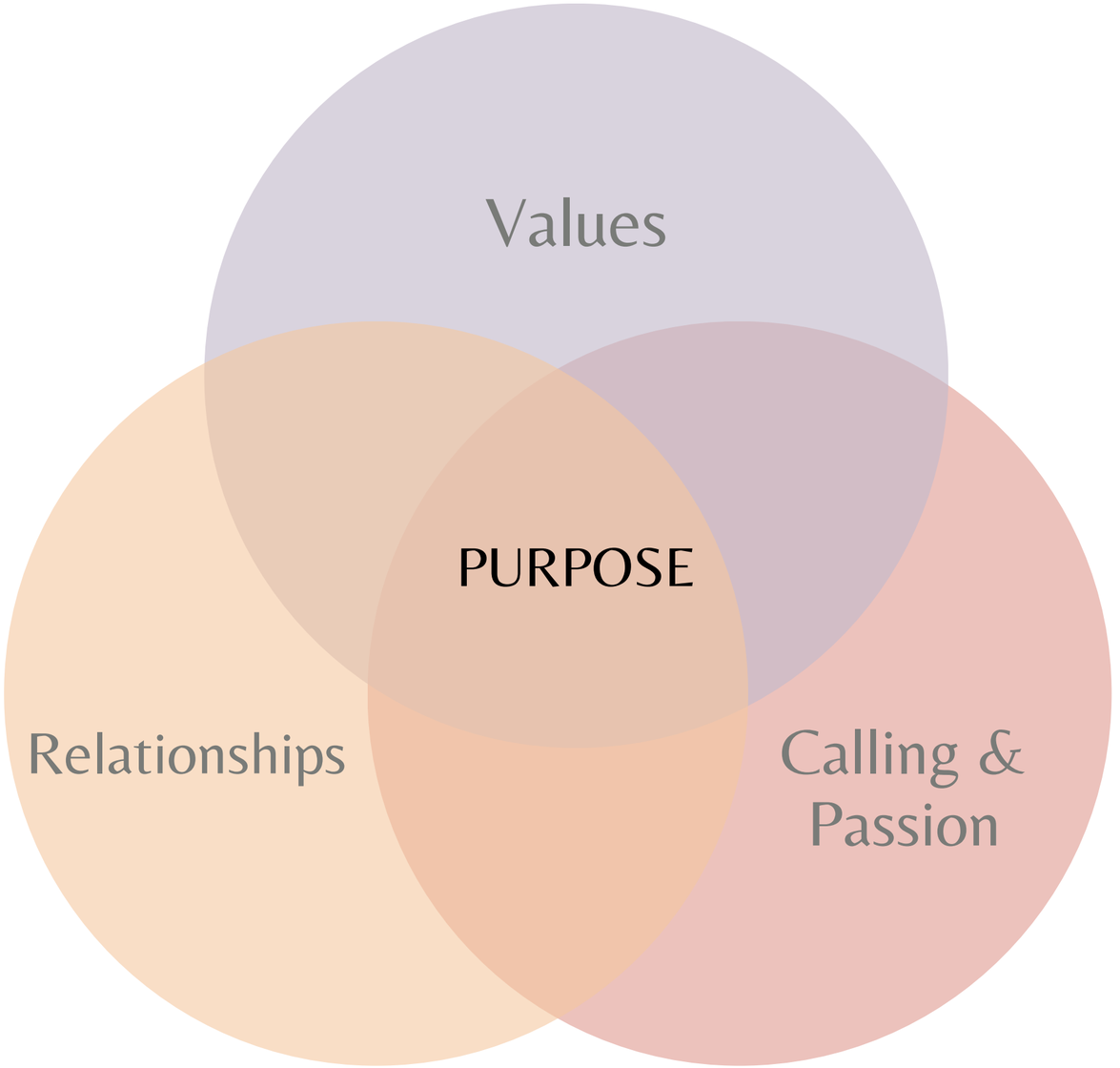
Stacey Schaefer
Researcher from University of Wisconsin - Madison

SCHAEFER SM, MOROZINK BOYLAN J, VAN REEKUM CM, LAPATE RC, NORRIS CJ, ET AL. (2013) PURPOSE IN LIFE PREDICTS BETTER EMOTIONAL RECOVERY FROM NEGATIVE STIMULI. PLOS ONE 8(11): E80329. DOI:10.1371/JOURNAL.PONE.0080329

KIM ET AL. SENSE OF PURPOSE IN LIFE AND SUBSEQUENT PHYSICAL, BEHAVIORAL, AND PSYCHOSOCIAL HEALTH: AN OUTCOME-WIDE APPROACH. AM J HEALTH PROM. 2022.

What is Purpose?

- “Ultimate Mission”
- Failure is not an option
- The force that pushes you to action
- Your legacy
- Rooted in core values



SEKO, K.; HIRANO, M. PREDICTORS AND IMPORTANCE OF SOCIAL ASPECTS IN IKIGAI AMONG OLDER WOMEN. INT. J. ENVIRON. RES. PUBLIC HEALTH 2021, 18, 8718. HTTPS:// DOI.ORG/10.3390/IJERPH18168718

PURPOSE FUELS GOOD STORYTELLING

"More important that what happens to you is the story you tell yourself about what happened."

Dr. Jim Loehr
The Power of Story

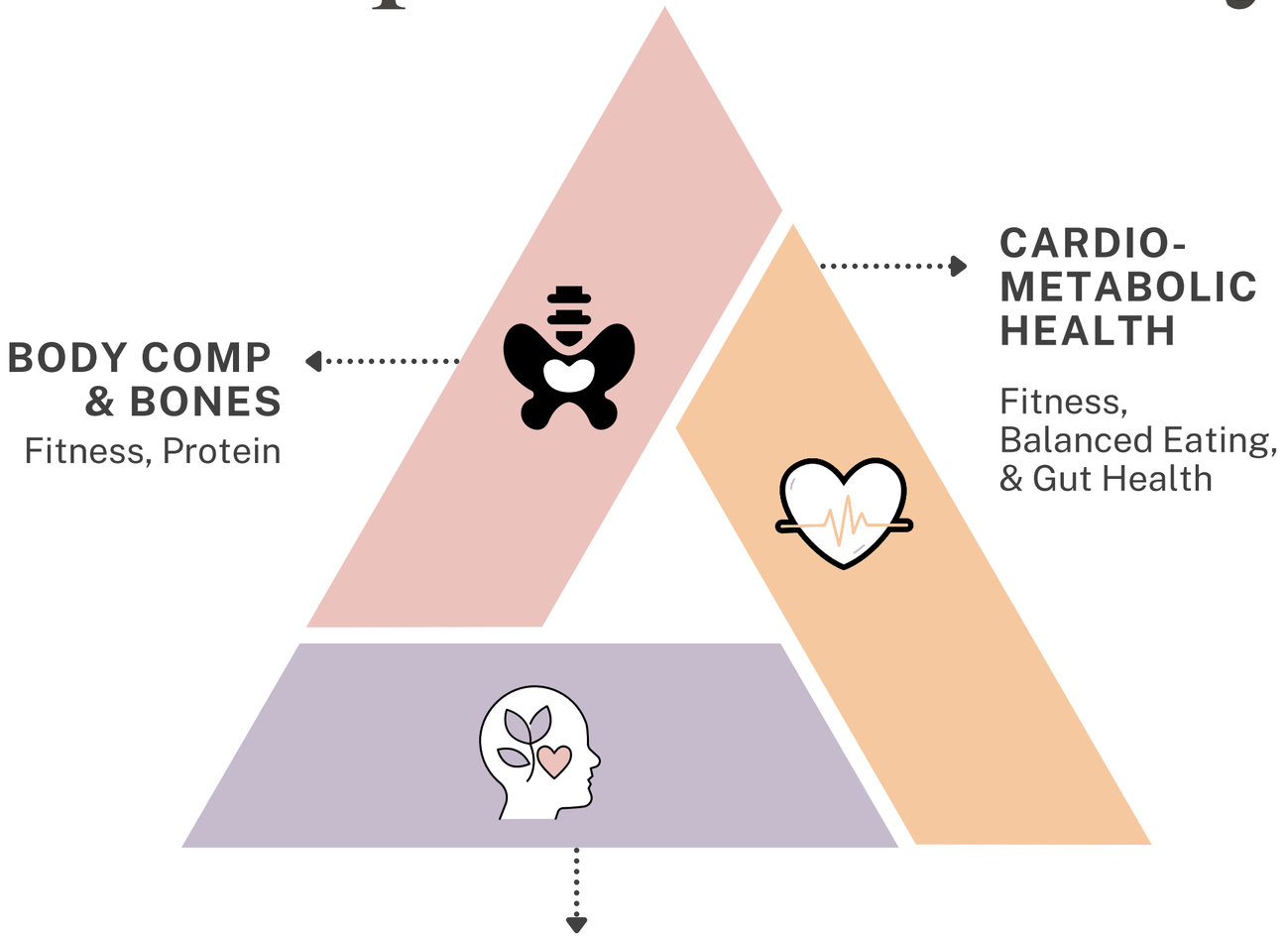
MALEKMIRZAEI, E., FARSHBAF-KHALILI, A. & PAKPOUR, V. THE SELF-CARE BEHAVIORS AND HEALTH LITERACY CAN PLAY IMPORTANT PREVENTIVE ROLES IN OLDER FEMALE OSTEOPOROSIS. BMC WOMEN'S HEALTH 23, 429 (2023). HTTPS://DOI.ORG/10.1186/S12905-023-02546-2

Discovering Purpose

- What are your core values? How have they changed in this time of your life? Is there a disconnect between your values & behaviors?
- What ignites your energy and passion at this time of your life? What impact do you want to have on others?
- Envision your 90th birthday - who is there and what do you want them to be saying about you?
- What kind of legacy do you want to be writing right now and eventually leave behind? How do you define a successful and meaningful life?

KIM ES, TKATCH R, MARTIN D, MACLEOD S, SANDY L, YEH C. RESILIENT AGING: PSYCHOLOGICAL WELL-BEING AND SOCIAL WELL-BEING AS TARGETS FOR THE PROMOTION OF HEALTHY AGING. GERONTOL GERIATR MED. 2021 MAR 23;7:23337214211002951. DOI: 10.1177/23337214211002951. PMID: 33816707; PMCID: PMC7995285.

Building Resilience Through The Menopause Journey



Resources

- Ikigai: The Japanese Secret to a Long and Happy Life by Hector Garcia and Francesc Miralles
- The Power of Story by Jim Loehr
- The Comfort Crisis by Michael Easter
- When the Game is Over It all Goes Back in the Box by John Ortberg
- Man's Search for Meaning by Viktor Frankl
- Next Level by Stacy Sims
- The New Menopause by Dr. Mary Claire Haver
- North American Menopause Society Position Papers

Scan to Provide Feedback

Let's Connect!

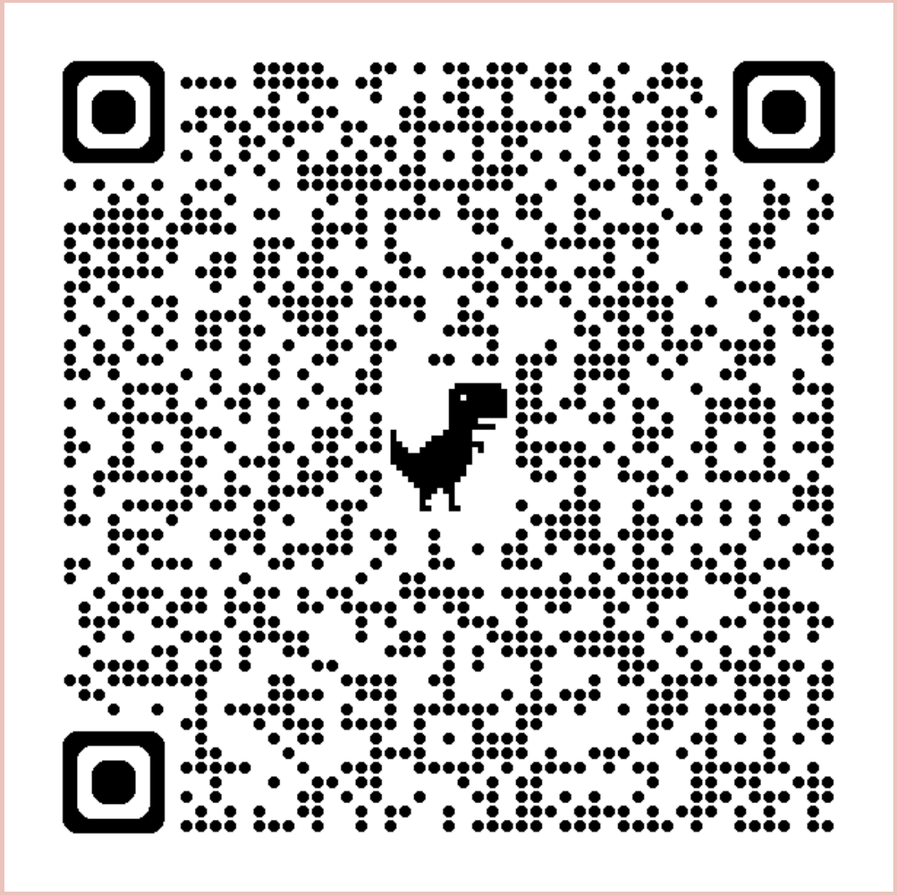
JennaBraddock.com

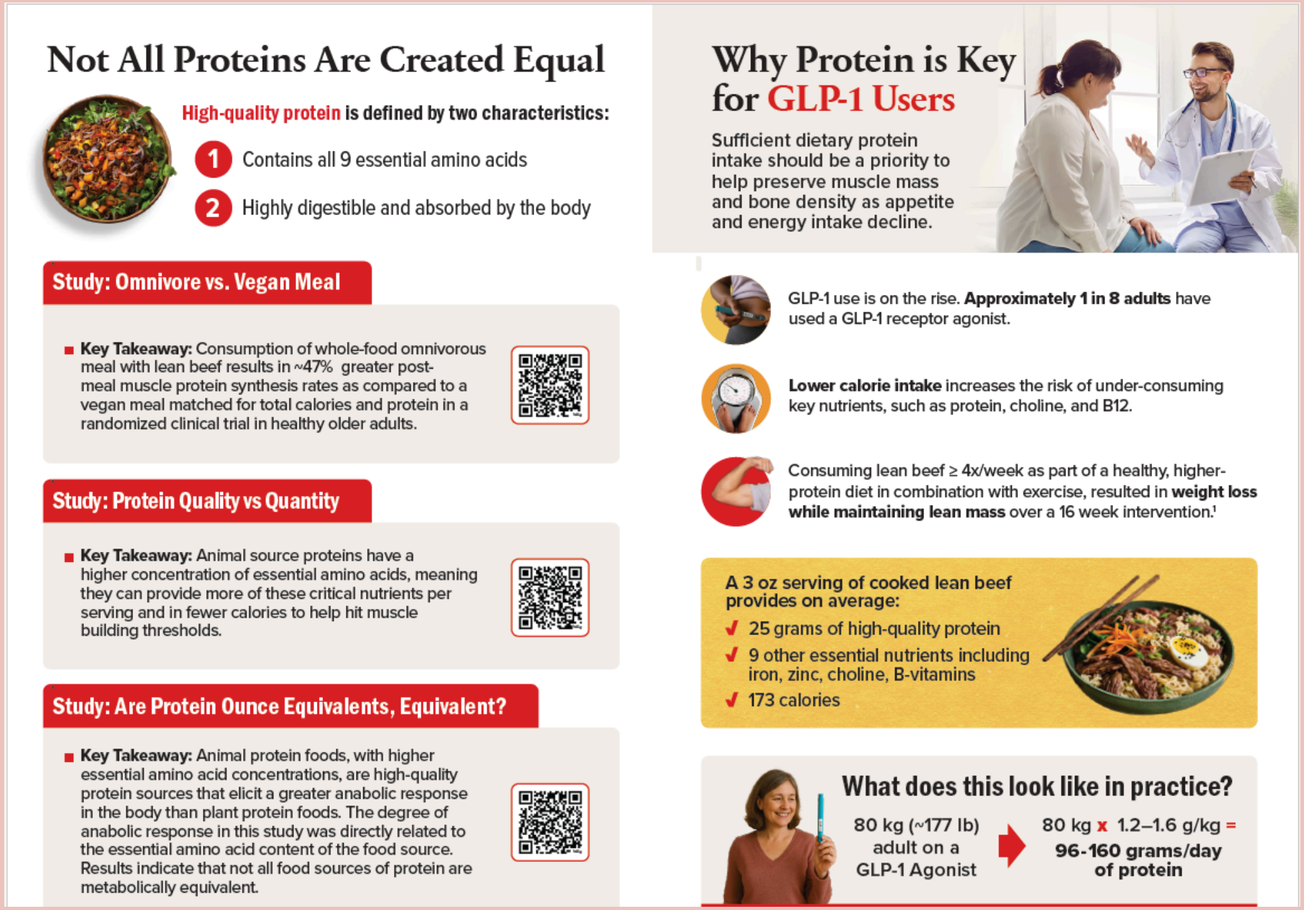
@JennaBraddockRDN

@JBraddockRD

jenna@jennabraddock.com

High Quality Protein Toolkit





Scan the QR Code and sign up to receive a complimentary High-Quality Protein Toolkit sponsored by the Oklahoma Beef Council.