THE WEBINAR BEGINS AT 19.30 GMT

Perimenopause and menopause transition:
optimising hormones for long-term health

Dr. Begoña Ruiz Núñez

PhD in Medical Sciences (University of Groningen)

MSc in clinical PNI and Evolutionary Medicine

Degree in Physiotherapy and Osteopathy

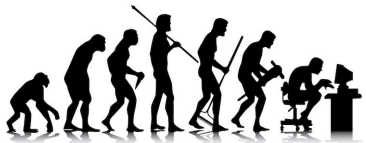
Health Coach and Therapist according to cPNI

President of the AEPNIc

Co-CEO of Healthy Institute

Scientific advisor

@drbegoruiznunez
@healthyinstitute



AEPNIc
Asociación Española de Psico-Neuro-Inmunología Clínica

Healthy Institute

www.healthyinstitute.es

New Roots HERBAL

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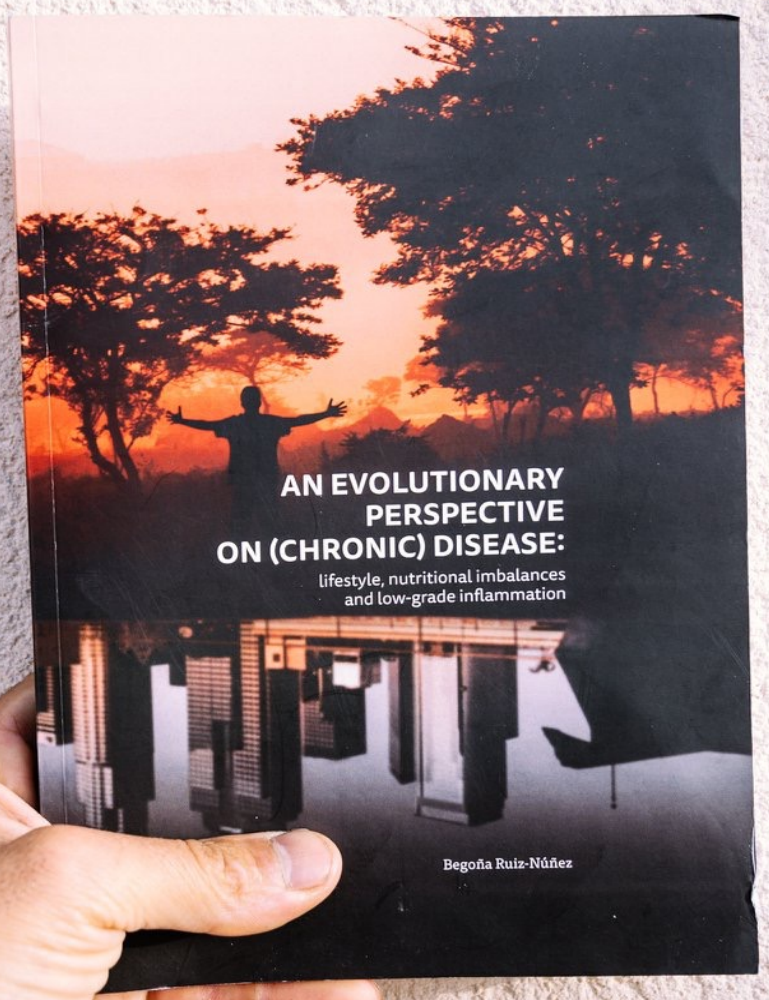
New Roots HERBAL


AN EVOLUTIONARY
PERSPECTIVE
ON (CHRONIC) DISEASE:
lifestyle, nutritional imbalances
and low-grade inflammation
Begoña Ruiz-Núñez

And... here we are!

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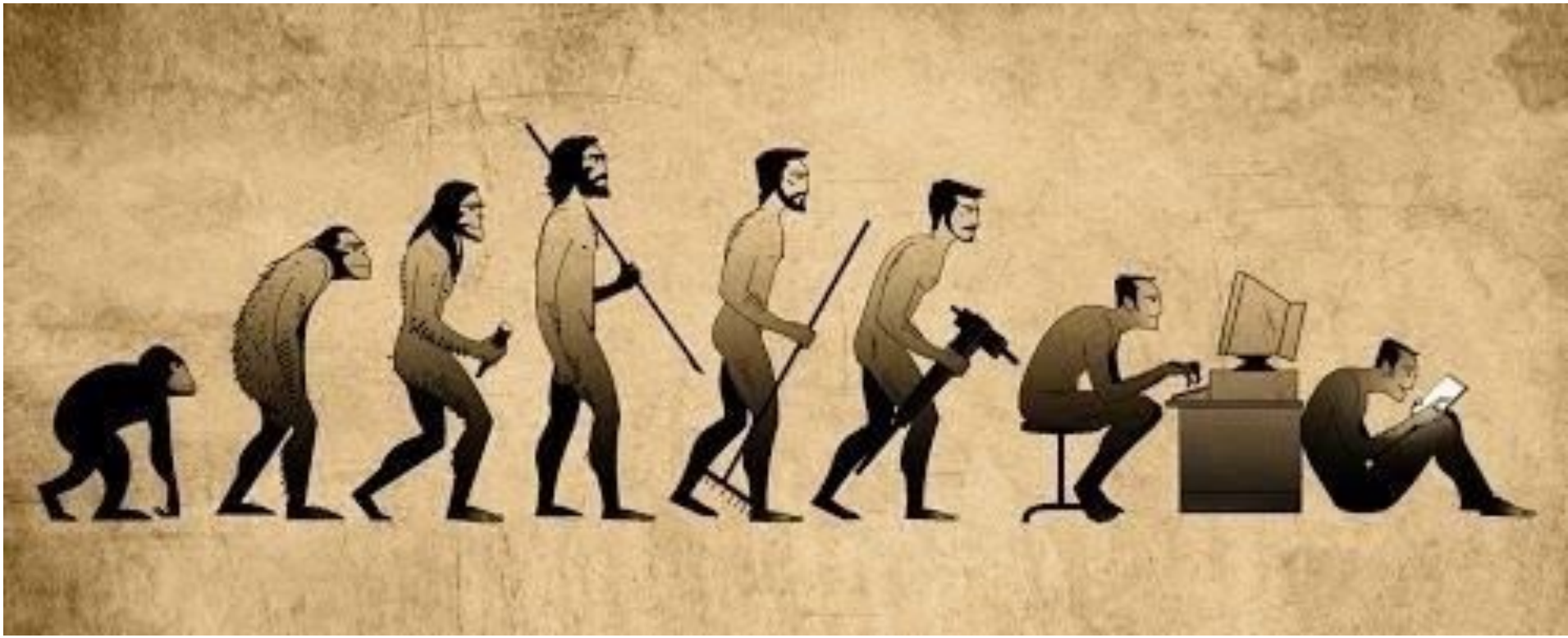
Evolution?



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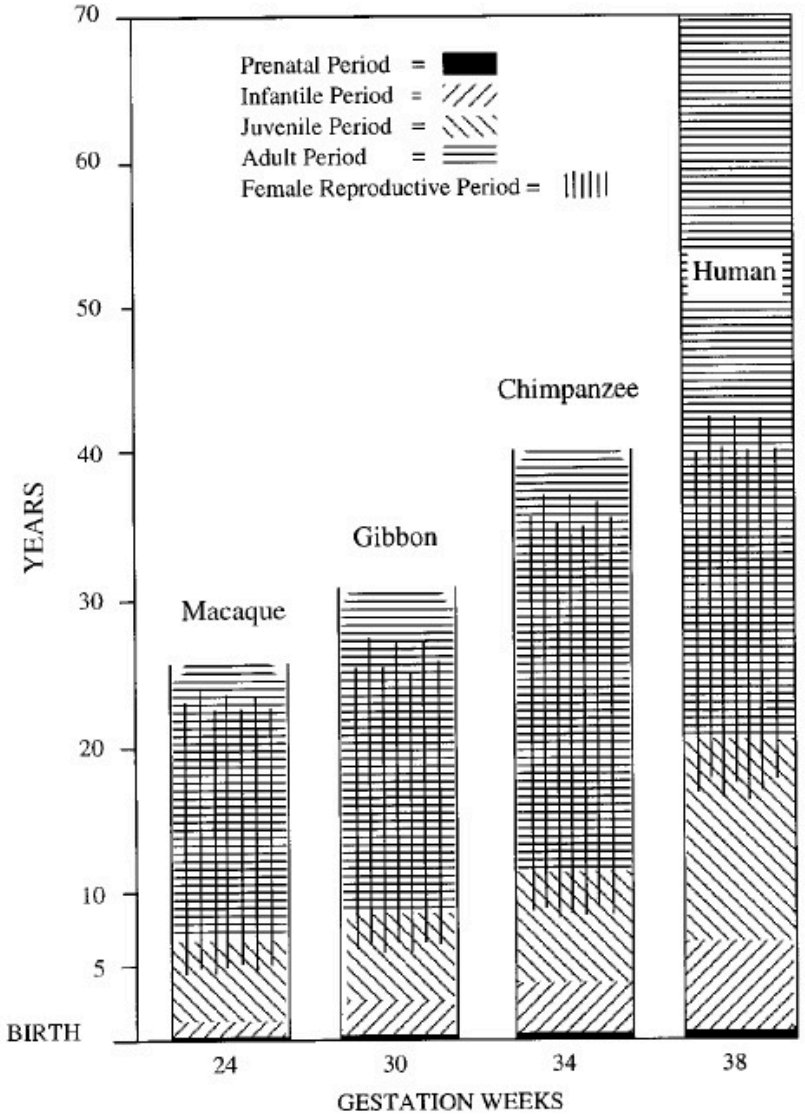
Menopause and evolution



Compared to other primates:

- ✓ Longer gestational period
- ✓ Longer prenatal, infantile and juvenile periods
- ✓ Much longer adult period
- ✓ Shorter female reproductive period
- ✓ Longer post-menopausal lifespan

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Hawkes, K., O'Connell, J. F., Jones, N. B., Alvarez, H., & Charnov, E. L. (1998). Grandmothering, menopause, and the evolution of human life histories. Proceedings of the National Academy of Sciences, 95(3), 1336-1339.

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Menopause and evolution

- ✓ Avoids mutations
- ✓ Healthier offspring
- ✓ Normal coresidence between older mothers and fertile daughters (not sons)
- ✓ Help daughter(s) with food supply and production
- ✓ Extended childhood learning

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Hawkes, K., O'Connell, J. F., Jones, N. B., Alvarez, H., & Charnov, E. L. (1998). Grandmothering, menopause, and the evolution of human life histories. Proceedings of the National Academy of Sciences, 95(3), 1336-1339.

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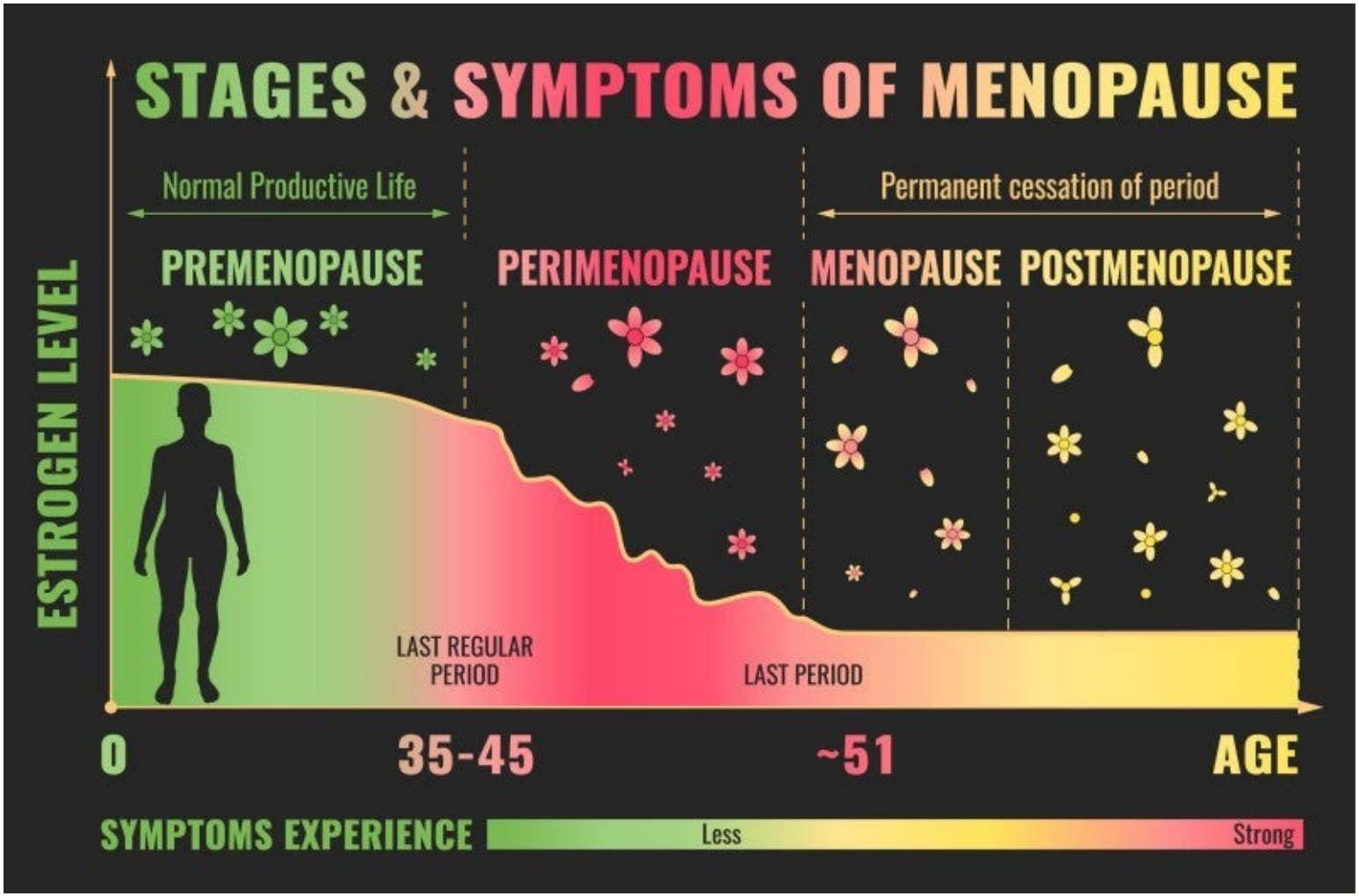
Menopause



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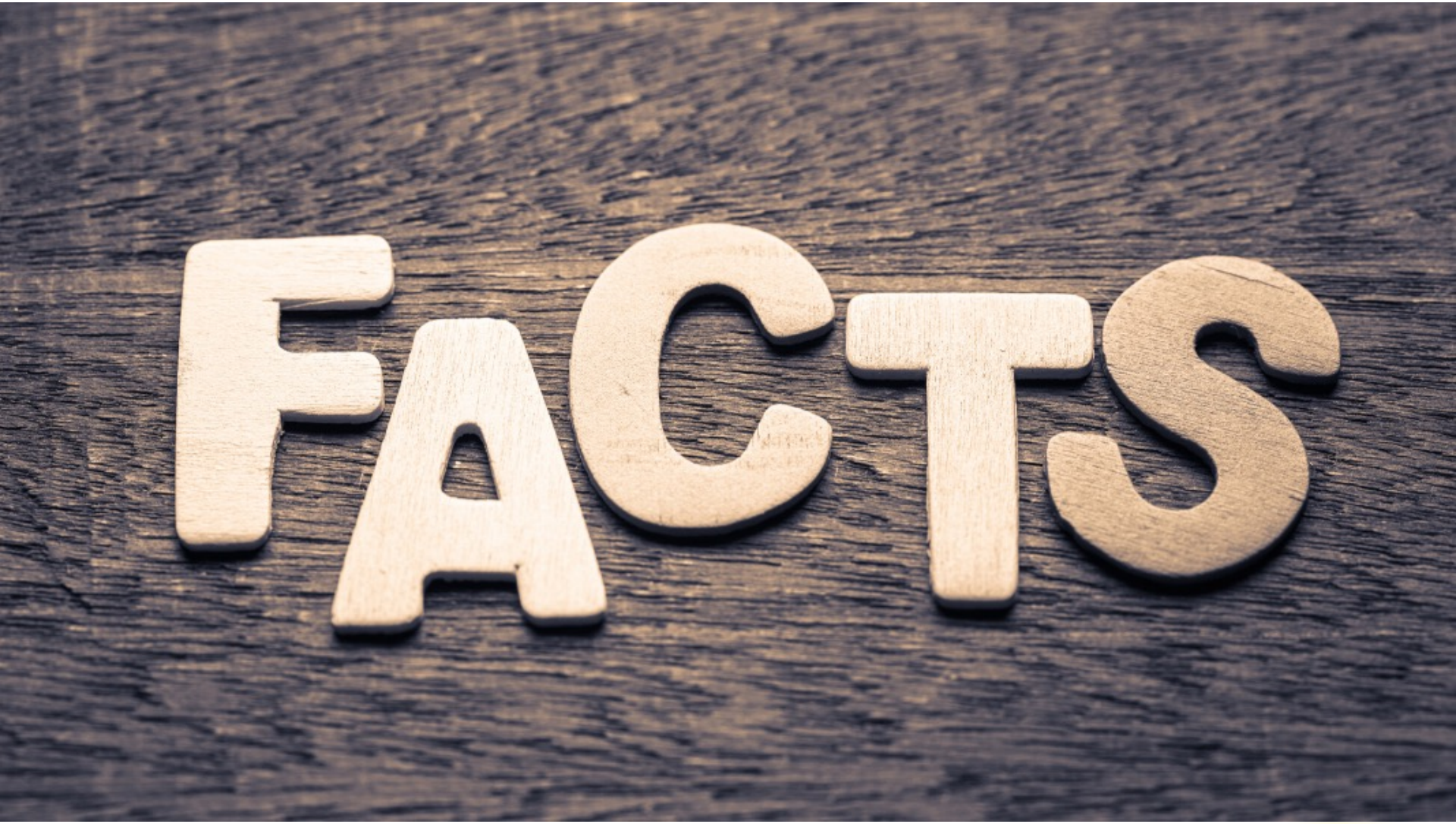

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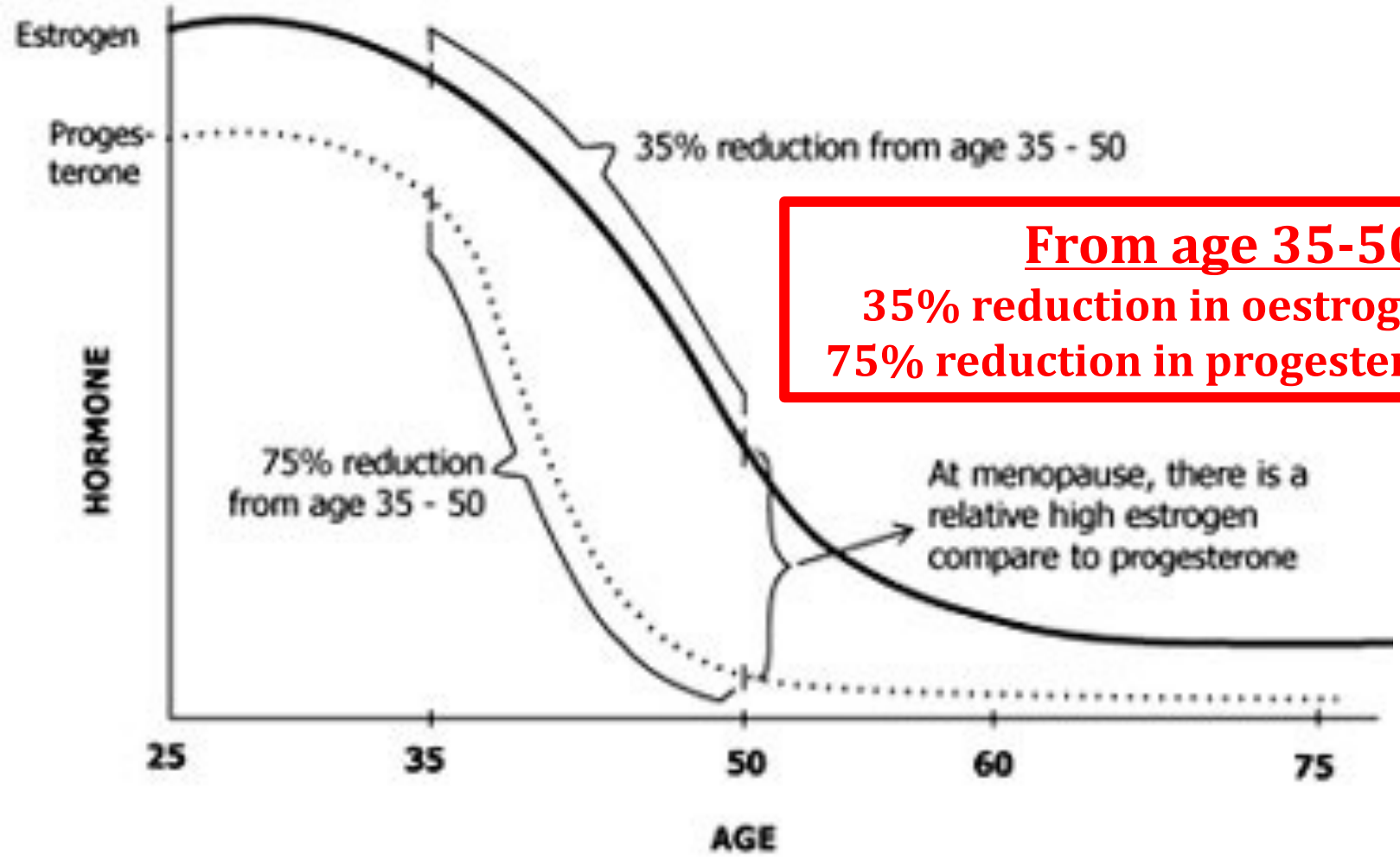
Perimenopause
Ovarian hormones



From age 35-50

35% reduction in oestrogen levels

75% reduction in progesterone levels

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http://www.womenfitness.net/menopause_weightgain.htm

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Menopause

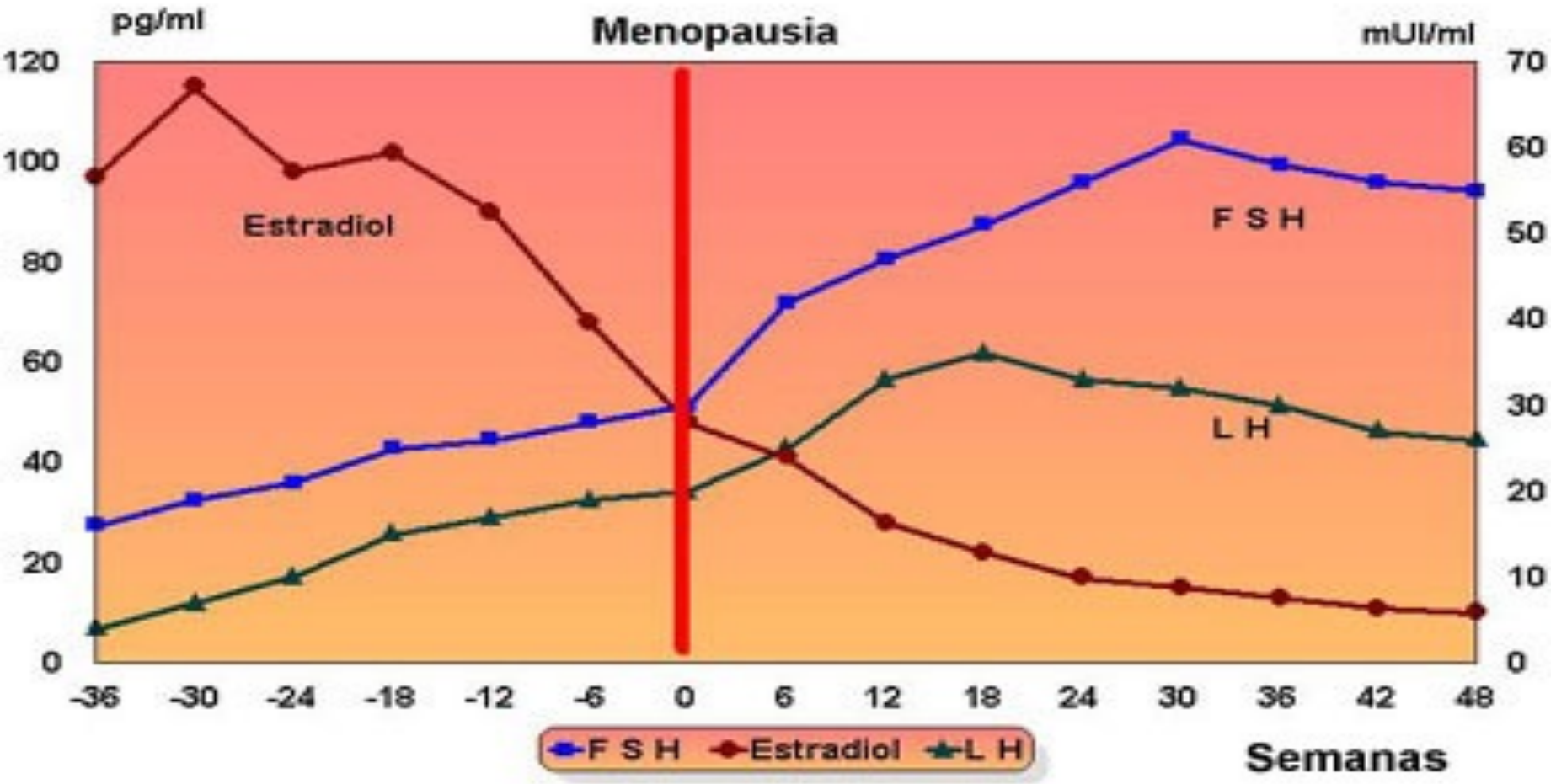

Figura 3. Cambios en los niveles de FSH, Estradiol y LH durante el climaterio

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https://belleza.iorigen.com/afronta-los-cambios-hormonales/

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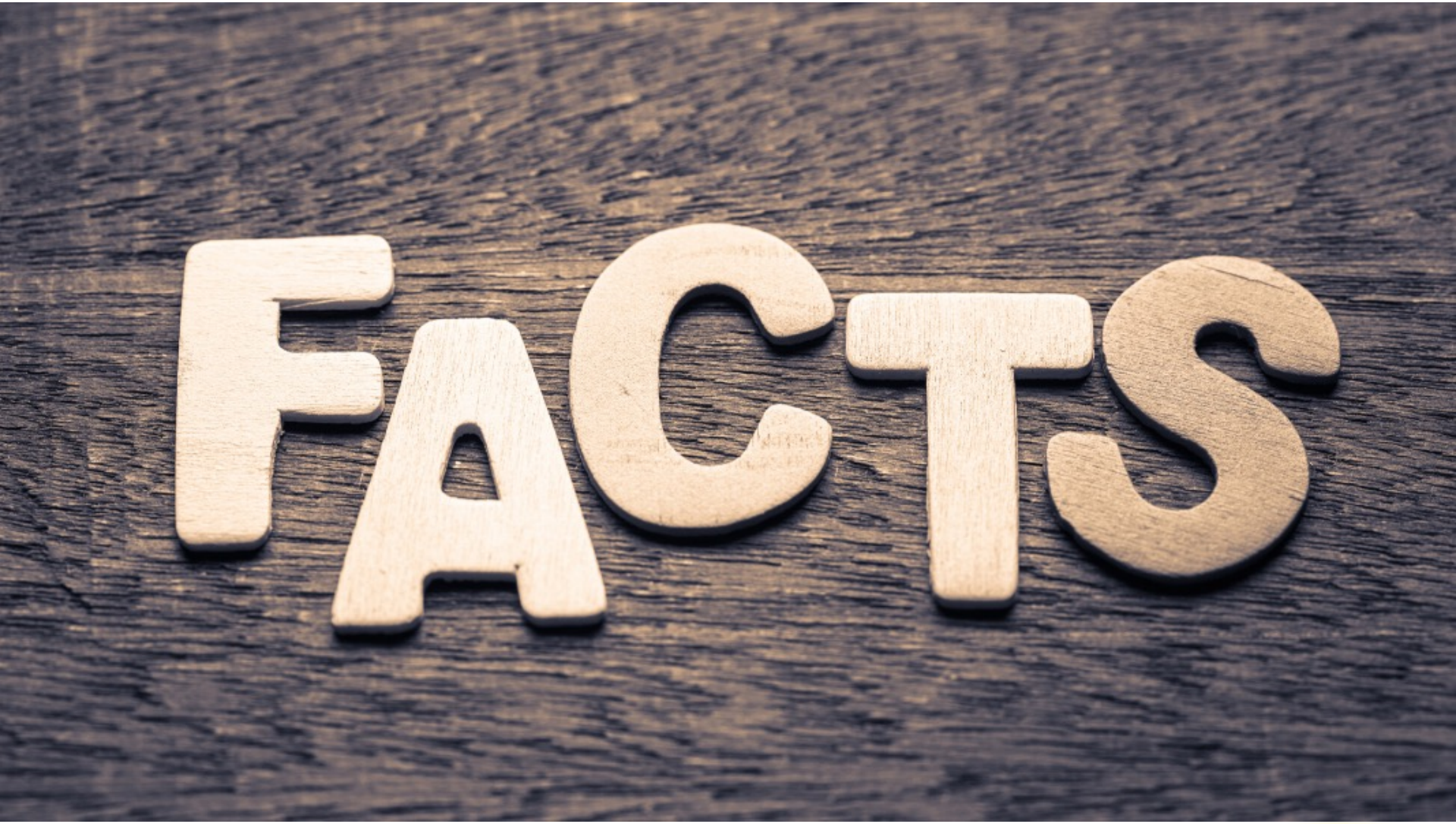

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Perimenopause--->heading menopause

- ✓ Lower oestrogen levels
- ✓ Much lower progesterone levels
- ✓ Higher levels of pituitary hormones (LH & FSH)

Davis, S. R., Castelo-Branco, C., Chedraui, P., Lumsden, M. A., Nappi, R. E., Shah, D., ... & Writing Group of the International Menopause Society for World Menopause Day 2012. (2012). Understanding weight gain at menopause. Climacteric, 15(5), 419-429.

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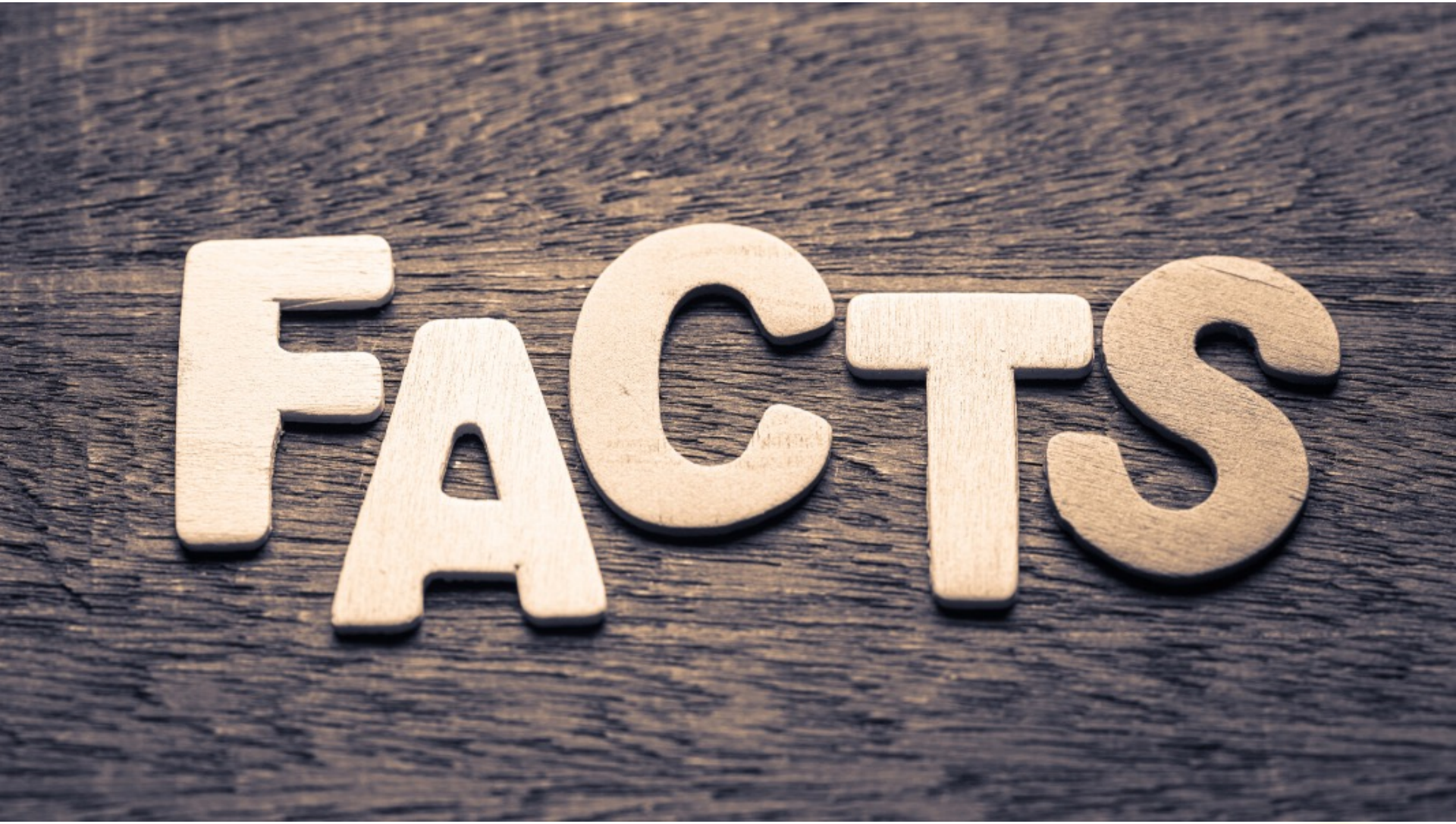

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Perimenopause Weight gain

CLIMACTERIC 2012;15:419–429

Understanding weight gain at menopause

S. R. Davis, C. Castelo-Branco, P. Chedraui†, M. A. Lumsden‡, R. E. Nappi**, D. Shah†† and P. Villaseca‡‡ as the Writing Group of the International Menopause Society for World Menopause Day 2012*

Study of Women ' s Health Across the Nation (SWAN)

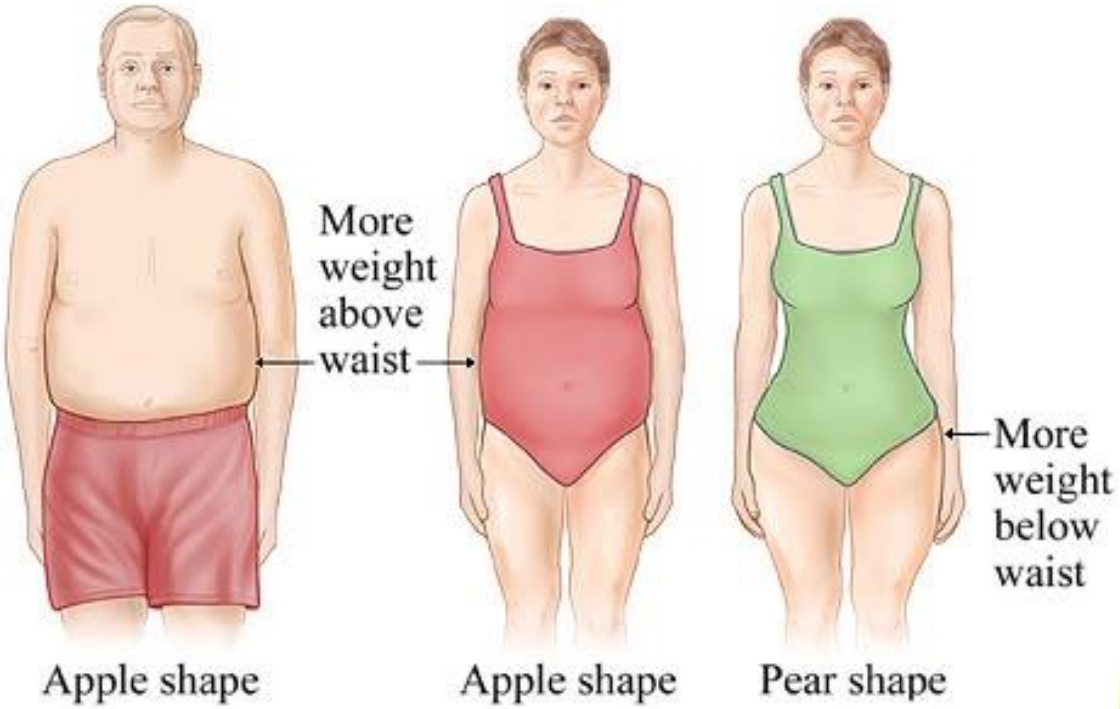
- ✓ 5 ethnic groups in the US: Caucasi
  Hispanic, Chines
- ✓ 16
- ✓ ed BMI was found between
  pausal and postmenopausal women, adjusting for age and other covariants
- ✓ Mean weight of Caucasian women was higher than that of the Chinese

Weight gain does not appear to be affected by the hormonal changes of the menopause

Davis, S. R., Castelo-Branco, C., Chedraui, P., Lumsden, M. A., Nappi, R. E., Shah, D., ... & Writing Group of the International Menopause Society for World Menopause Day 2012. (2012). Understanding weight gain at menopause. Climacteric, 15(5), 419-429.

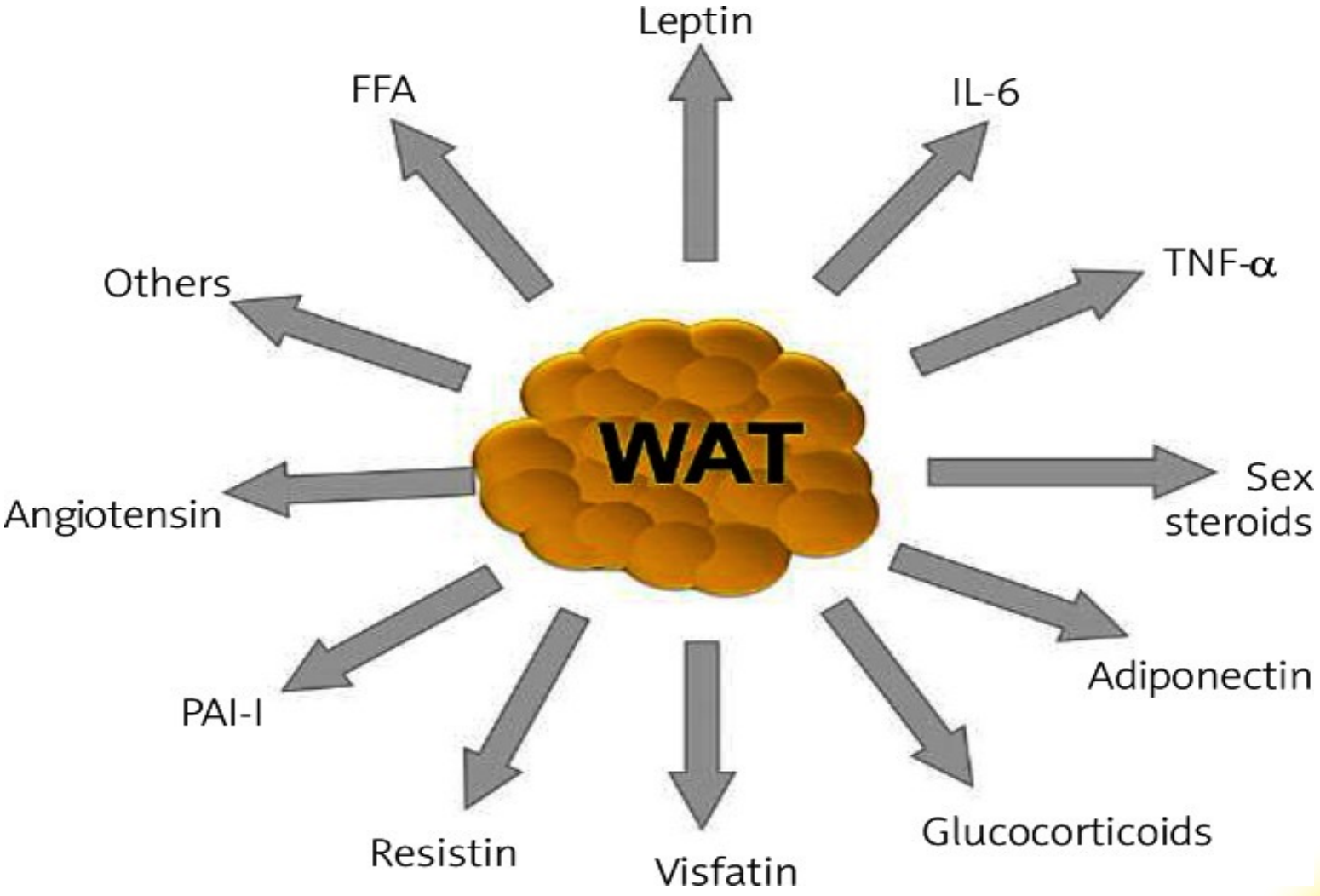
However...

The perimenopause is associated with a more rapid increase in fat mass and redistribution of fat to the ABDOMEN, resulting in a transition from a gynoid to an ANDROID pattern of fat distribution and an INCREASE IN TOTAL BODY FAT



Davis, S. R., Castelo-Branco, C., Chedraui, P., Lumsden, M. A., Nappi, R. E., Shah, D., ... & Writing Group of the International Menopause Society for World Menopause Day 2012. (2012). Understanding weight gain at menopause. Climacteric, 15(5), 419-429.

Abdominal fat as an endocrine organ



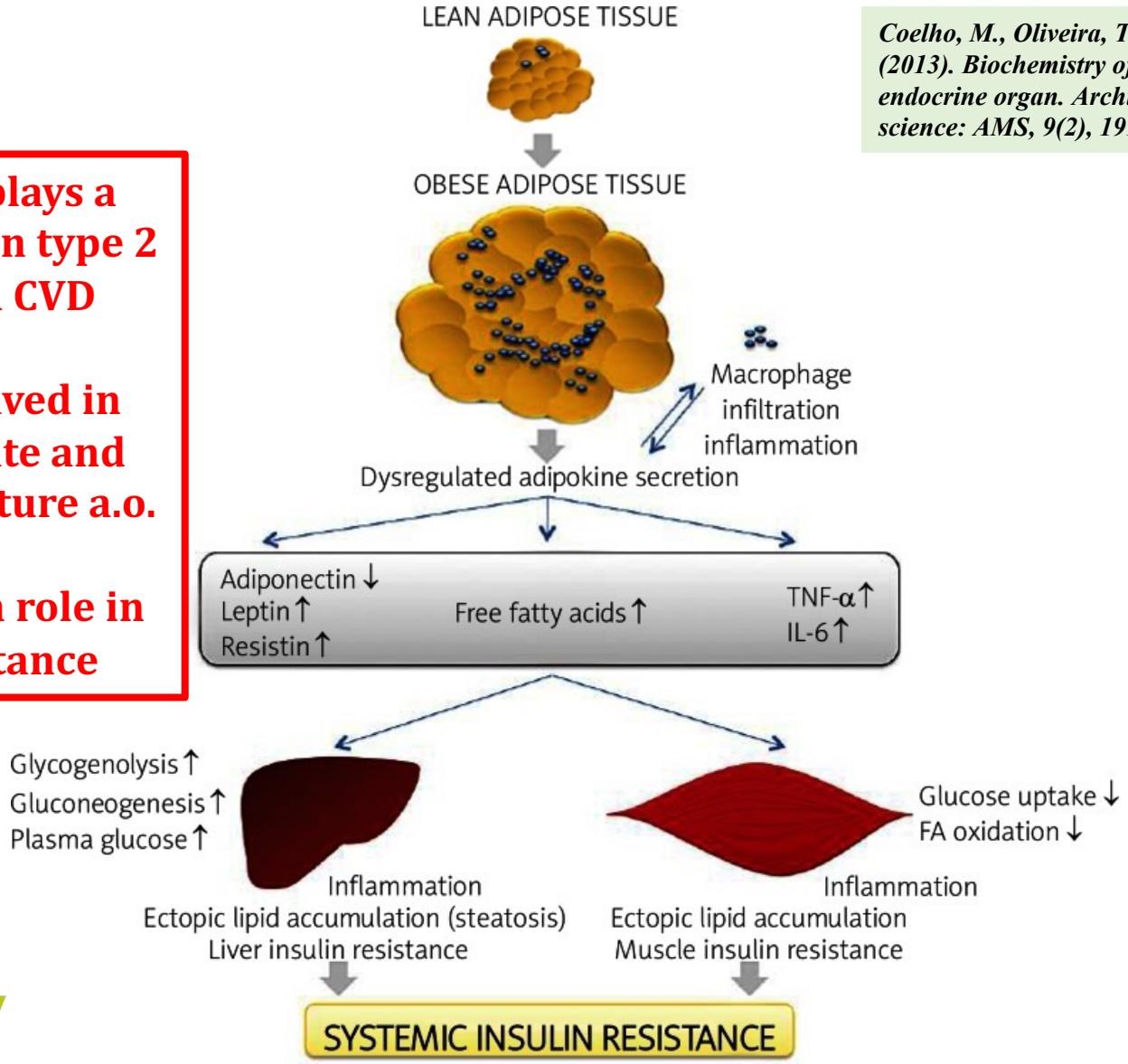
Coelho, M., Oliveira, T., & Fernandes, R. (2013). Biochemistry of adipose tissue: an endocrine organ. Archives of medical science: AMS, 9(2), 191.

Abdominal fat as an endocrine organ

Adiponectin plays a protective role in type 2 diabetes and CVD

Leptin is involved in satiety/appetite and energy expenditure a.o.

Resistin plays a role in insulin resistance



Coelho, M., Oliveira, T., & Fernandes, R. (2013). Biochemistry of adipose tissue: an endocrine organ. Archives of medical science: AMS, 9(2), 191.

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Abdominal fat as an endocrine organ

www.nature.com/scientificreports

scientific reports

Check for updates

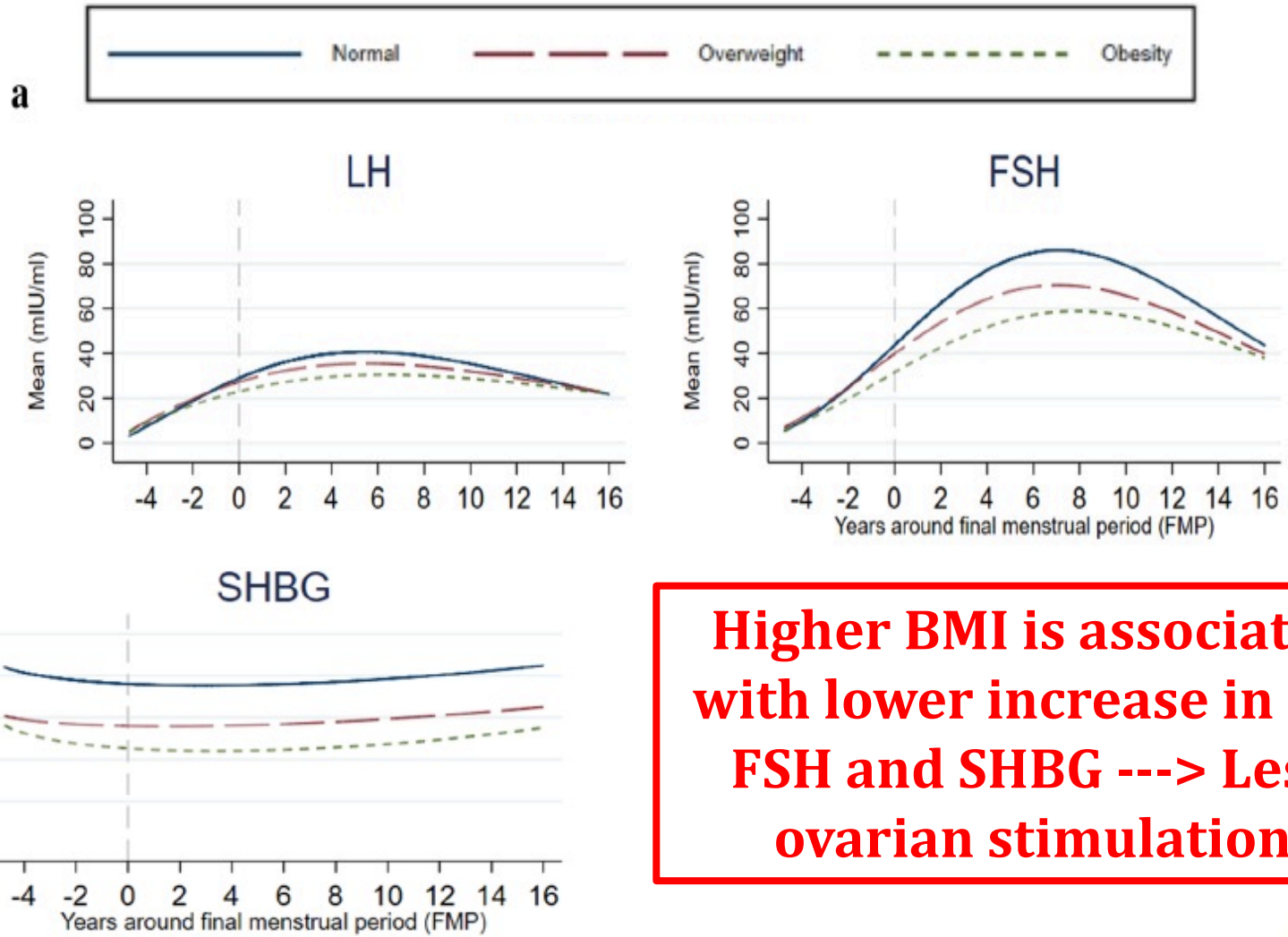
OPEN

Longitudinal changes in reproductive hormones through the menopause transition in the Avon Longitudinal Study of Parents and Children (ALSPAC)

Ana Goncalves Soares[1,2✉], Fanny Kilpi[1,2], Abigail Fraser[1,2,3], Scott M. Nelson[3,4], Naveed Sattar[5], Paul I. Welsh[5], Kate Tilling[1,2,3,6] & Deborah A. Lawlor[1,2,3,6]

SOARES, Ana Goncalves, et al. Longitudinal changes in reproductive hormones through the menopause transition in the Avon Longitudinal Study of Parents and Children (ALSPAC). Scientific reports, 2020, vol. 10, no 1, p. 1-13.

Abdominal fat as an endocrine organ



Higher BMI is associated with lower increase in LH, FSH and SHBG ---> Less ovarian stimulation

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SOARES, Ana Goncalves, et al. Longitudinal changes in reproductive hormones through the menopause transition in the Avon Longitudinal Study of Parents and Children (ALSPAC). Scientific reports, 2020, vol. 10, no 1, p. 1-13.

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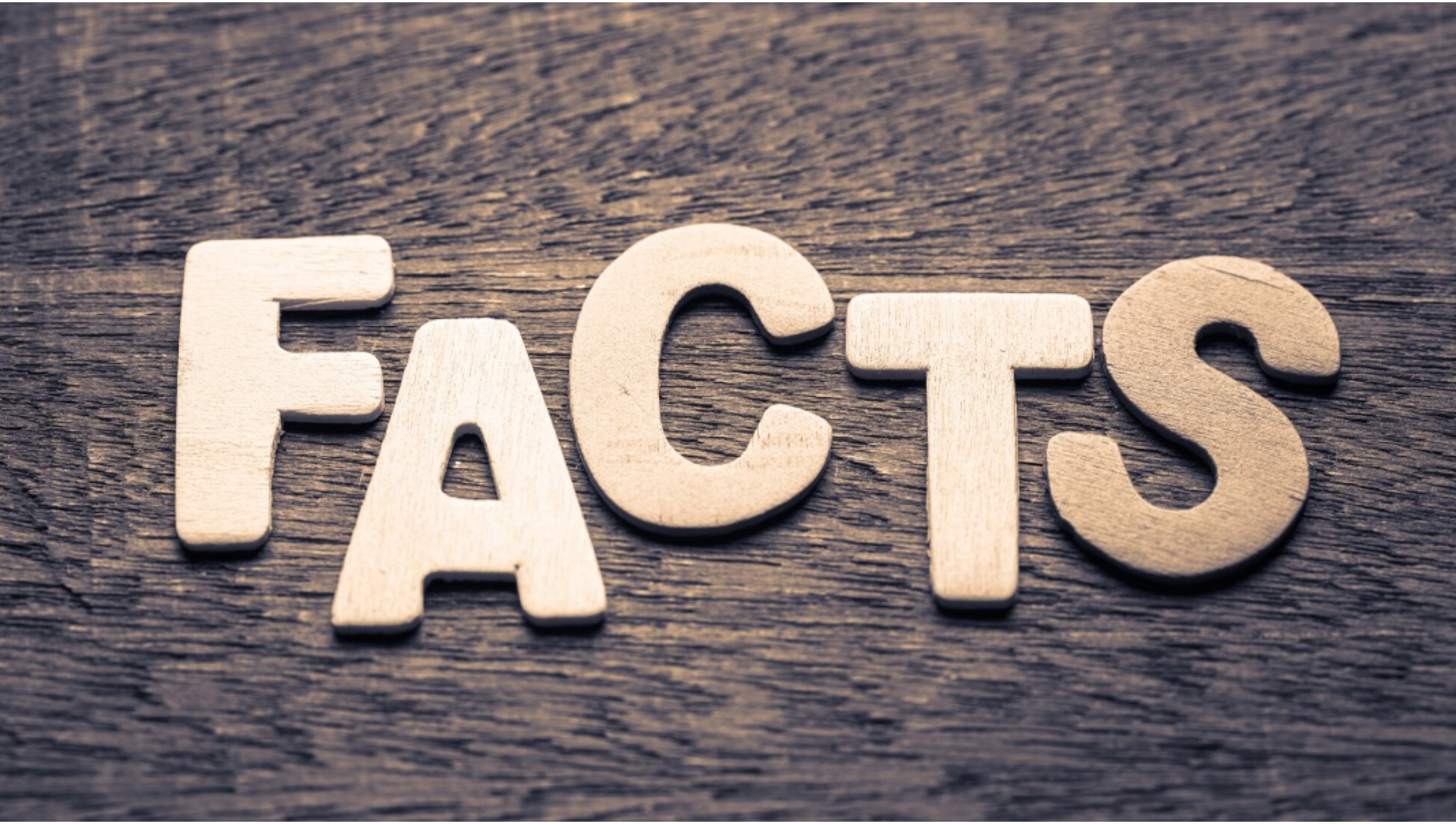

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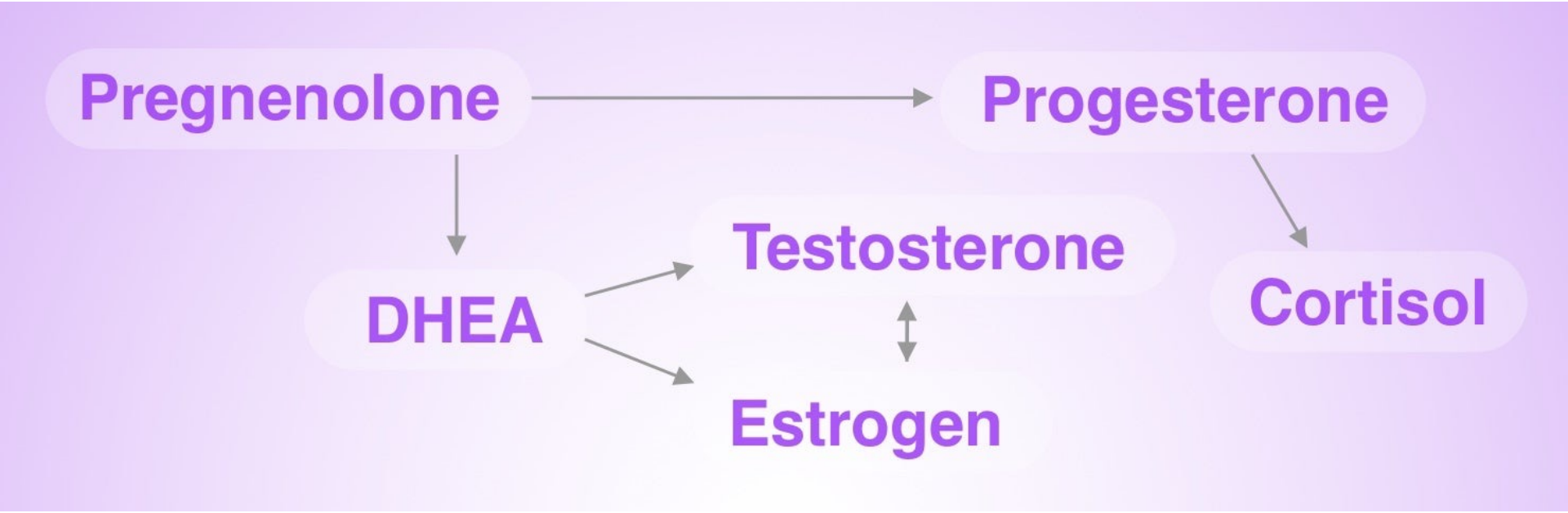
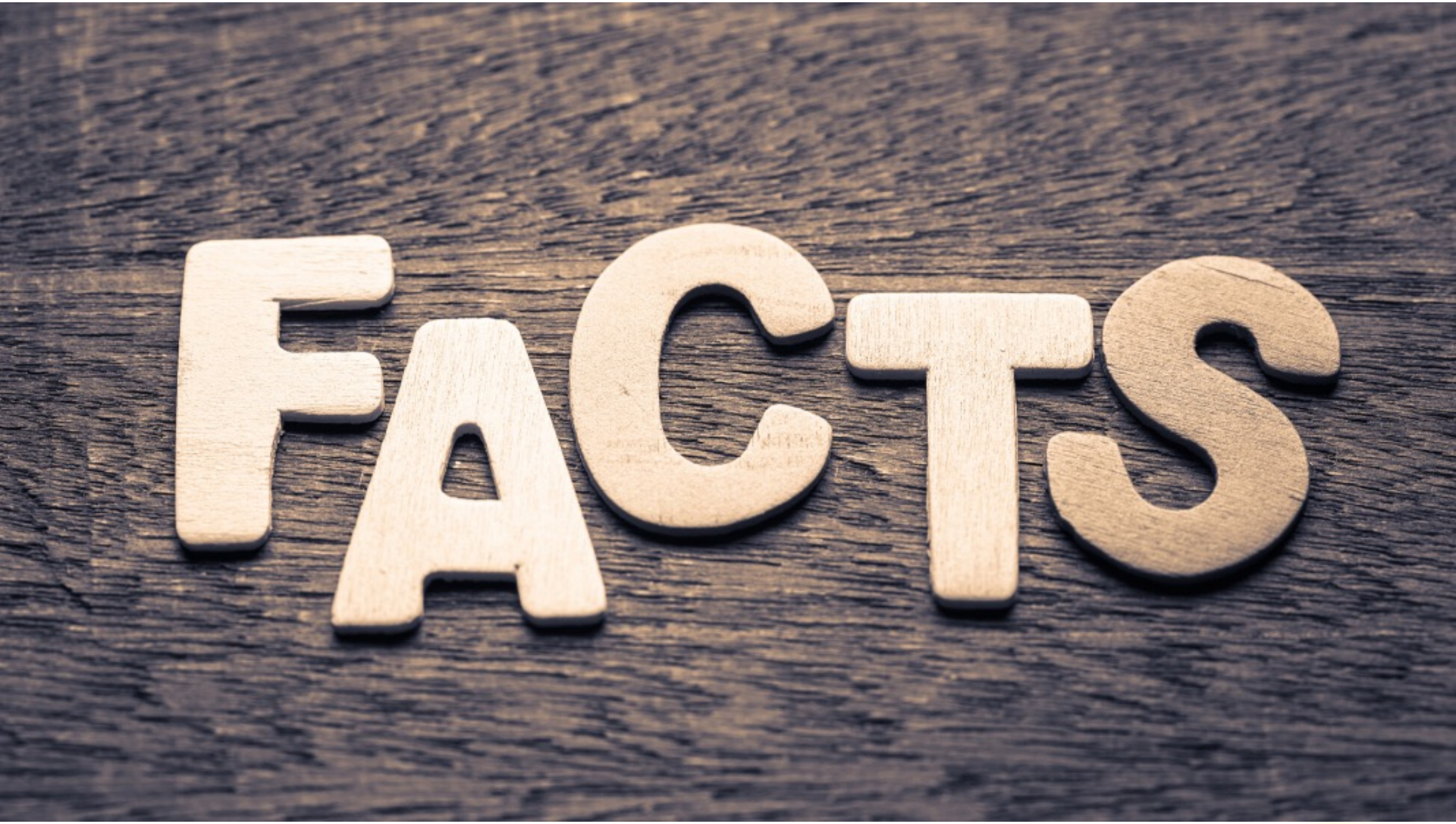
Stress, glucose & sex steroids



High cortisol/ACTH (stress) decreases DHEA levels
High glucose levels decrease DHEA levels
High stress levels may decrease progesterone, testosterone and oestrogen

Ueshiba H, Shimizu Y, Hiroi N et al. Decreased steroidogenic enzyme 17,20-lyase and increased 17-hydroxylase activities in type 2 diabetes mellitus. Eur J Endocrinol. 2002 Mar;146(3):375-80.



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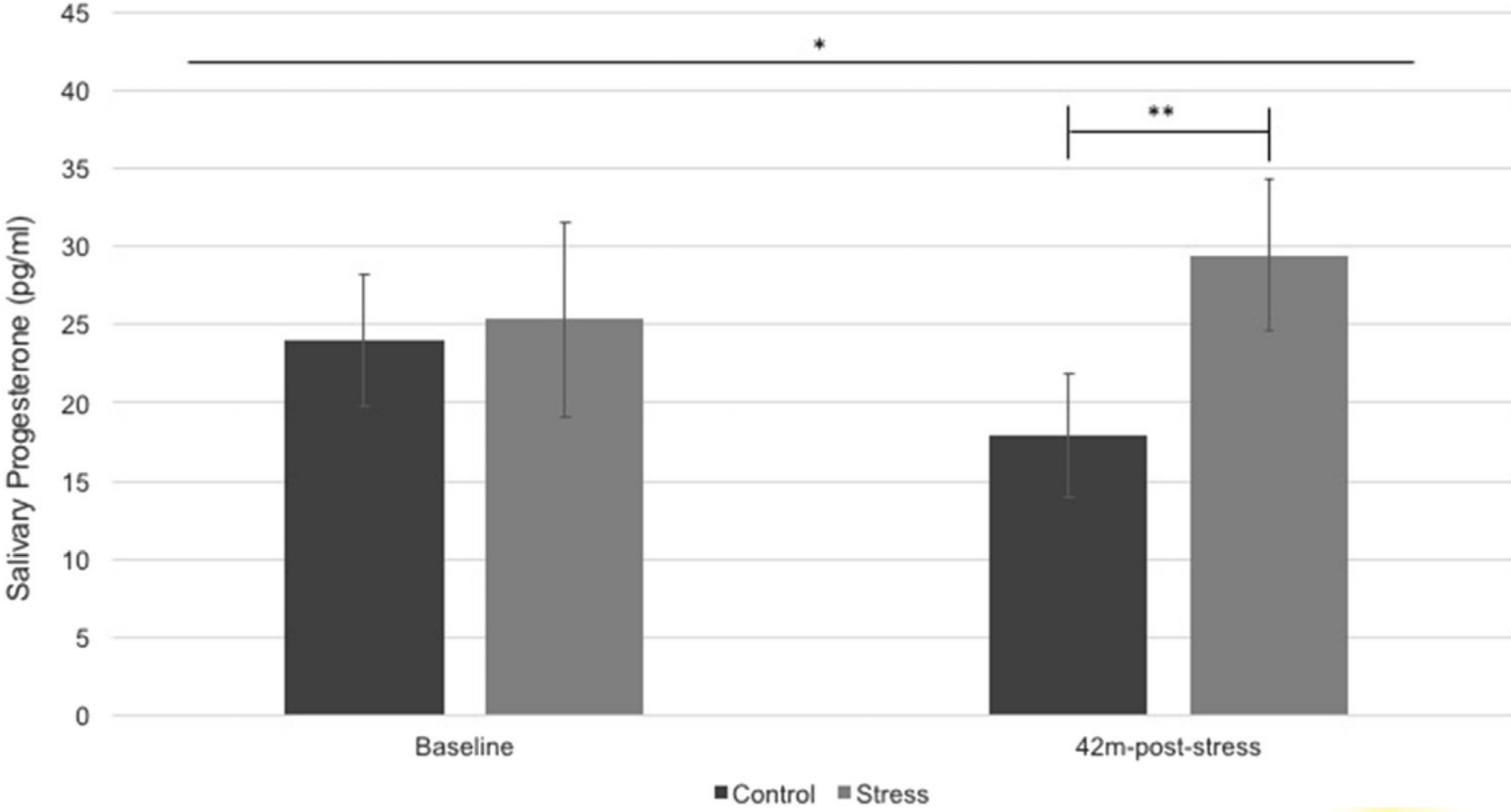
Progesterone is a "stress-buffering hormone"



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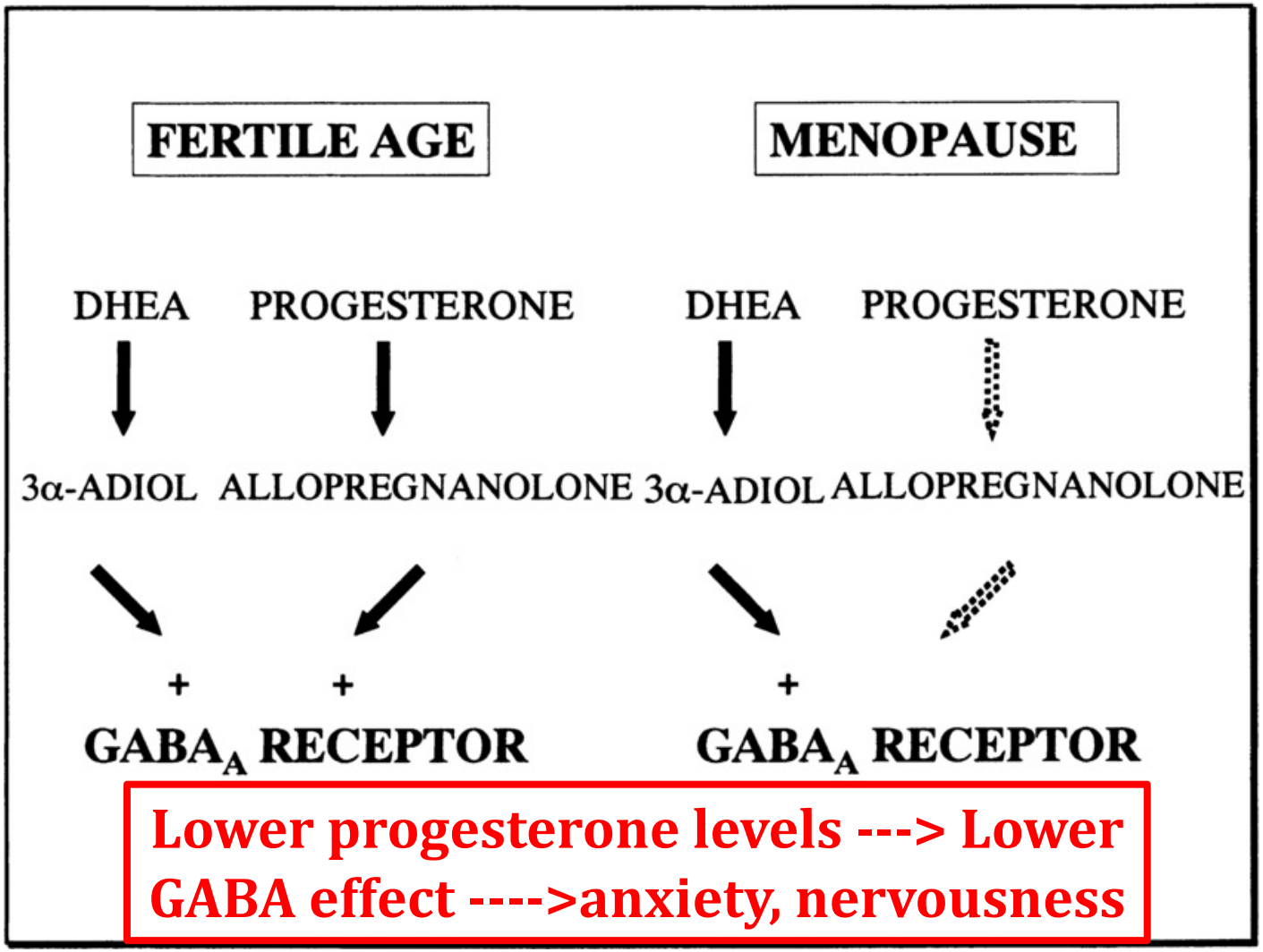
BARBACCIA, M. L., et al. Plasma 5α–androstane–3α, 17βdiol, an endogenous steroid that positively modulates GABAA receptor function, and anxiety: a study in menopausal women. Psychoneuroendocrinology, 2000, vol. 25, no 7, p. 659-675.

New Roots HERBAL

Menopause
Progesterone & GABA



BARBACCIA, M. L., et al. Plasma 5α–androstane–3α, 17βdiol, an endogenous steroid that positively modulates GABAA receptor function, and anxiety: a study in menopausal women. Psychoneuroendocrinology, 2000, vol. 25, no 7, p. 659-675.

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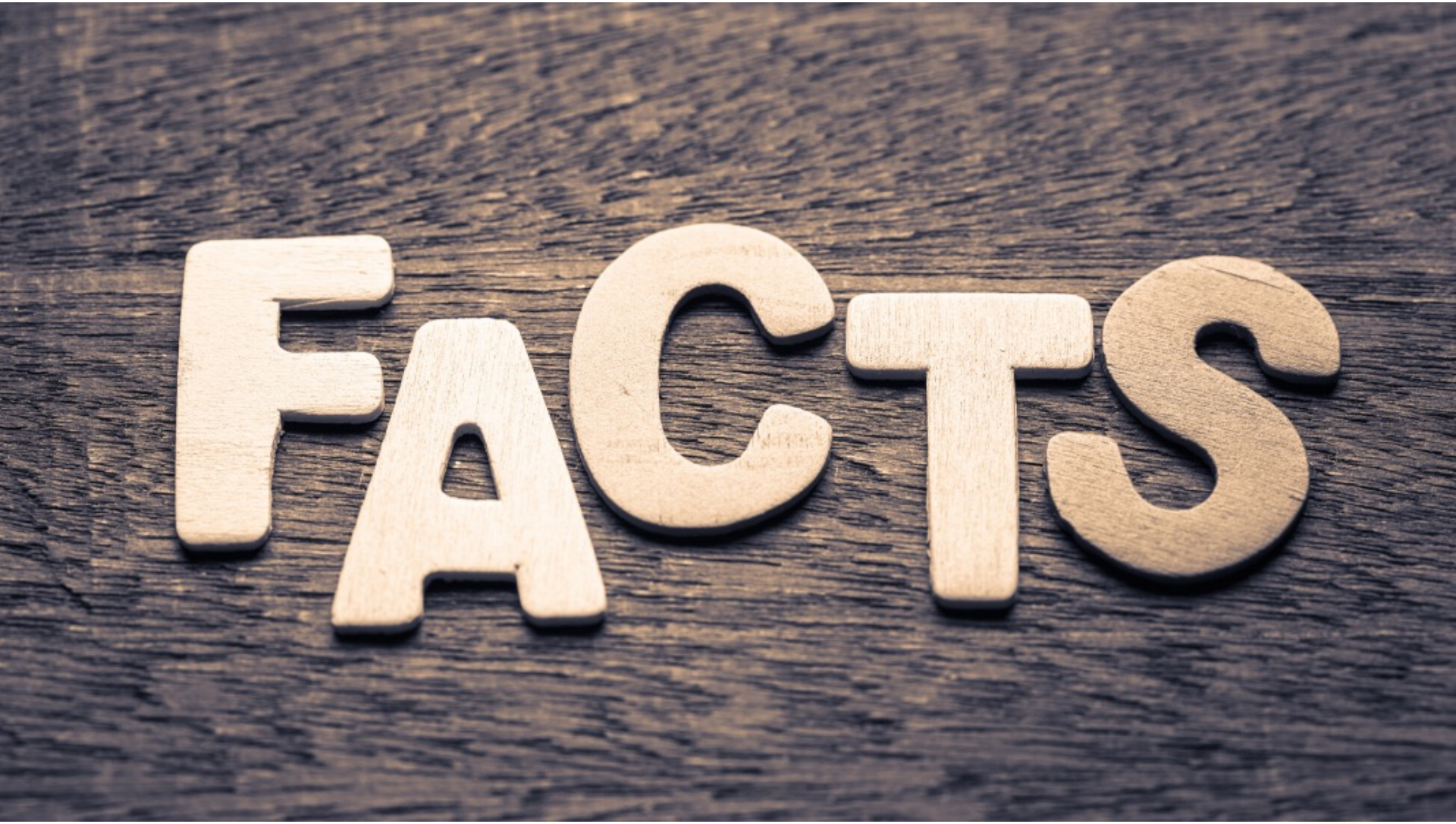

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New Roots HERBAL

Menopause Sleep

Menopause: The Journal of The North American Menopause Society
Vol. 27, No. 3, pp. 000-000
DOI: 10.1097/GME.0000000000001462

Effects of menopause on sleep quality and sleep disorders: Canadian Longitudinal Study on Aging

Sheida Zolfaghari, MD,[1,2] Chun Yao, MSc,[1,2] Cynthia Thompson, PhD,[3] Nadia Gosselin, PhD,[3,4,8] Alex Desautels, MD, PhD,[3,5,8] Thien Thanh Dang-Vu, MD, PhD,[6,7,8] Ronald B. Postuma, MD, MSc,[2,3,8] and Julie Carrier, PhD[3,4,7,8]

Conclusions: Menopause is associated with increased sleep-onset insomnia. Postmenopausal women also are more likely to screen positive for OSA. However, menopausal status is not associated with sleep maintenance, somnolence, or RLS, and RBD.

Menopausal women require >30 extra minutes to fall sleep and are more likely to suffer from obstructive sleep apnea

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ZOLFAGHARI, Sheida, et al. Effects of menopause on sleep quality and sleep disorders: Canadian Longitudinal Study on Aging. Menopause, 2020, vol. 27, no 3, p. 295-304.

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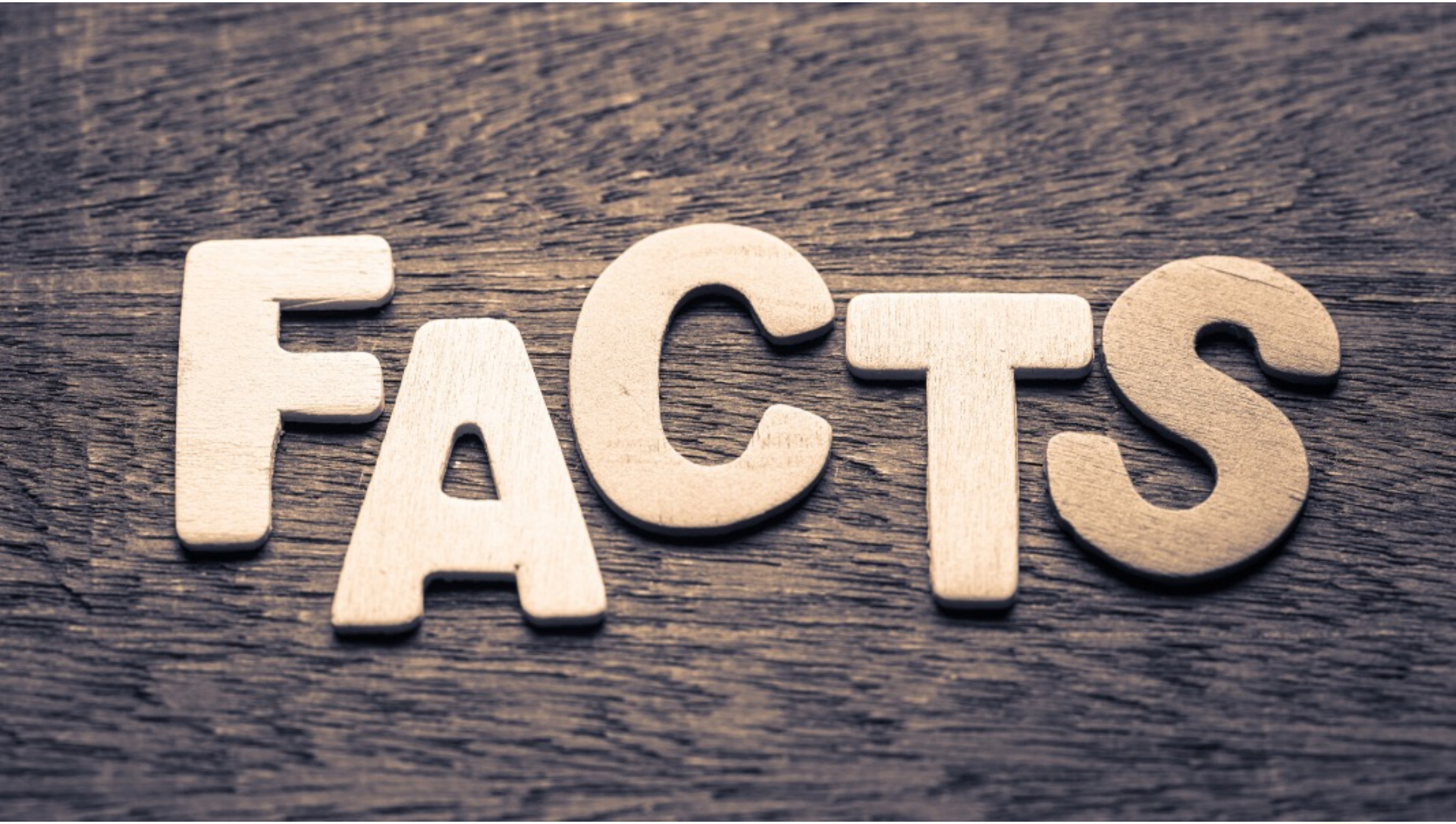

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New Roots HERBAL

Menopause
The role of magnesium

Decreased levels of oestrogen are associated to decreased levels of magnesium

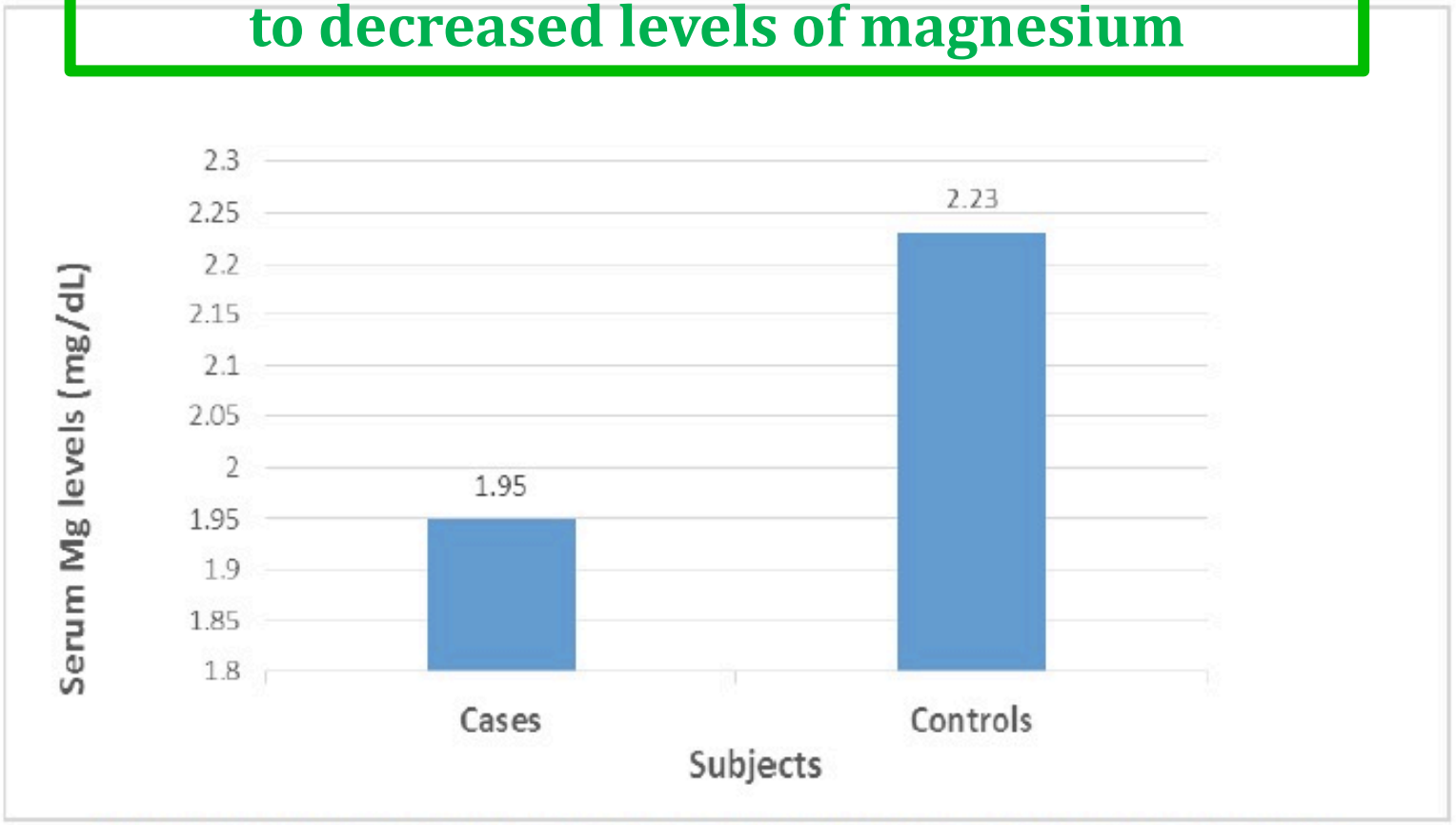

Figure 1: Serum magnesium levels in the Case and Control groups.

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MARIA, C., et al. MAGNESIUM–A FORGOTTEN CATION IN WOMEN. European Journal of Biomedical, 2018, vol. 5, no 3, p. 538-541.

New Roots HERBAL

Anxiety & depression
The role of magnesium

Association between magnesium intake and depression and anxiety in community-dwelling adults: the Hordaland Health Study

Felice N. Jacka, Simon Overland, Robert Stewart, Grethe S. Tell, Ingvar Bjelland, Arnstein Mykletun

To our knowledge this study is the first to test the hypothesis that magnesium intake is related to anxiety and depression in an epidemiological setting. While being cognisant of the limitations of the study, the present findings of an inverse association between magnesium intake and depression may have both public health and treatment implications. In primary

Jacka, F. N., Overland, S., Stewart, R., Tell, G. S., Bjelland, I., & Mykletun, A. (2009). Association between magnesium intake and depression and anxiety in community-dwelling adults: the Hordaland Health Study. Australian & New Zealand Journal of Psychiatry, 43(1), 45-52.

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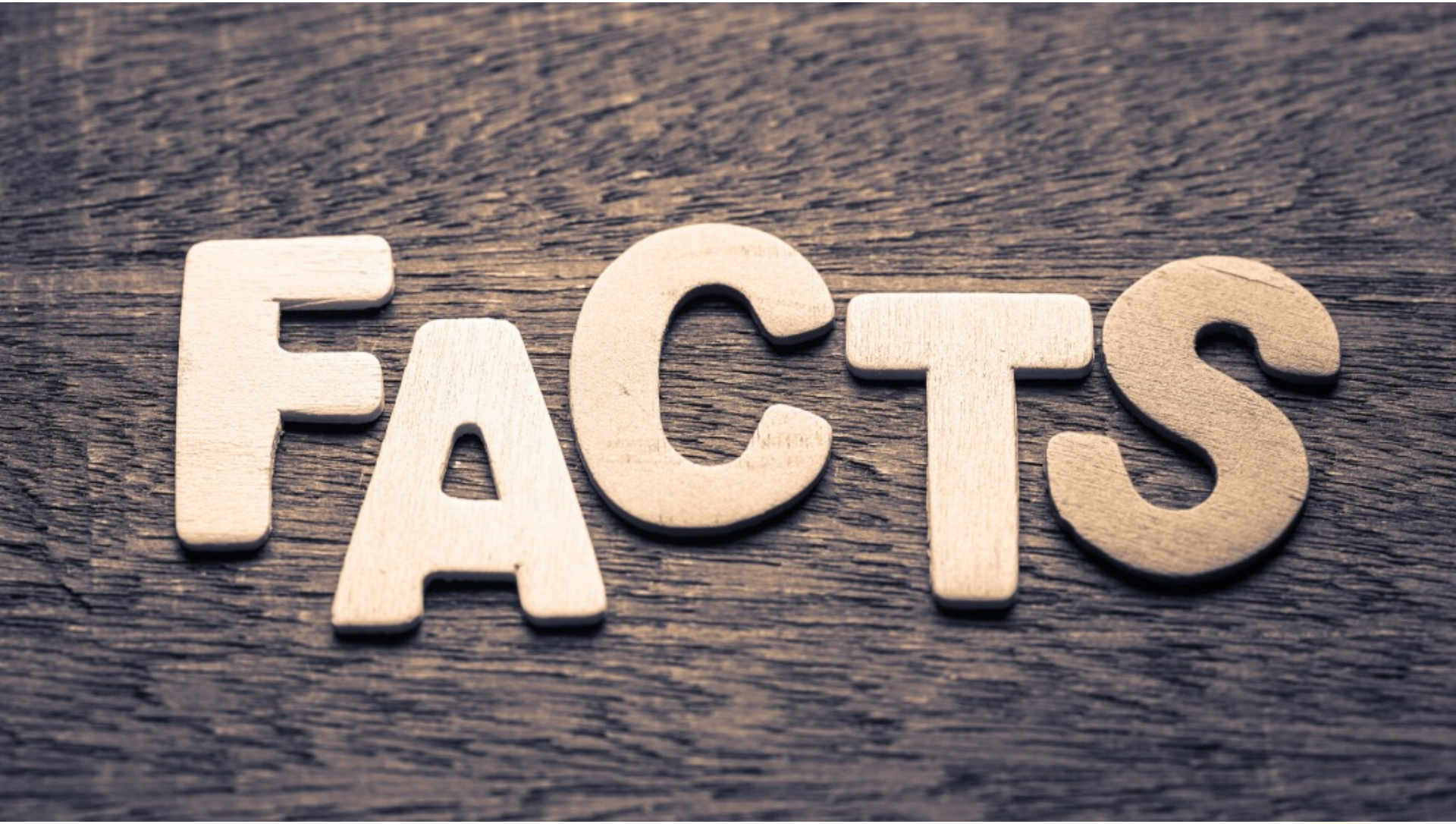

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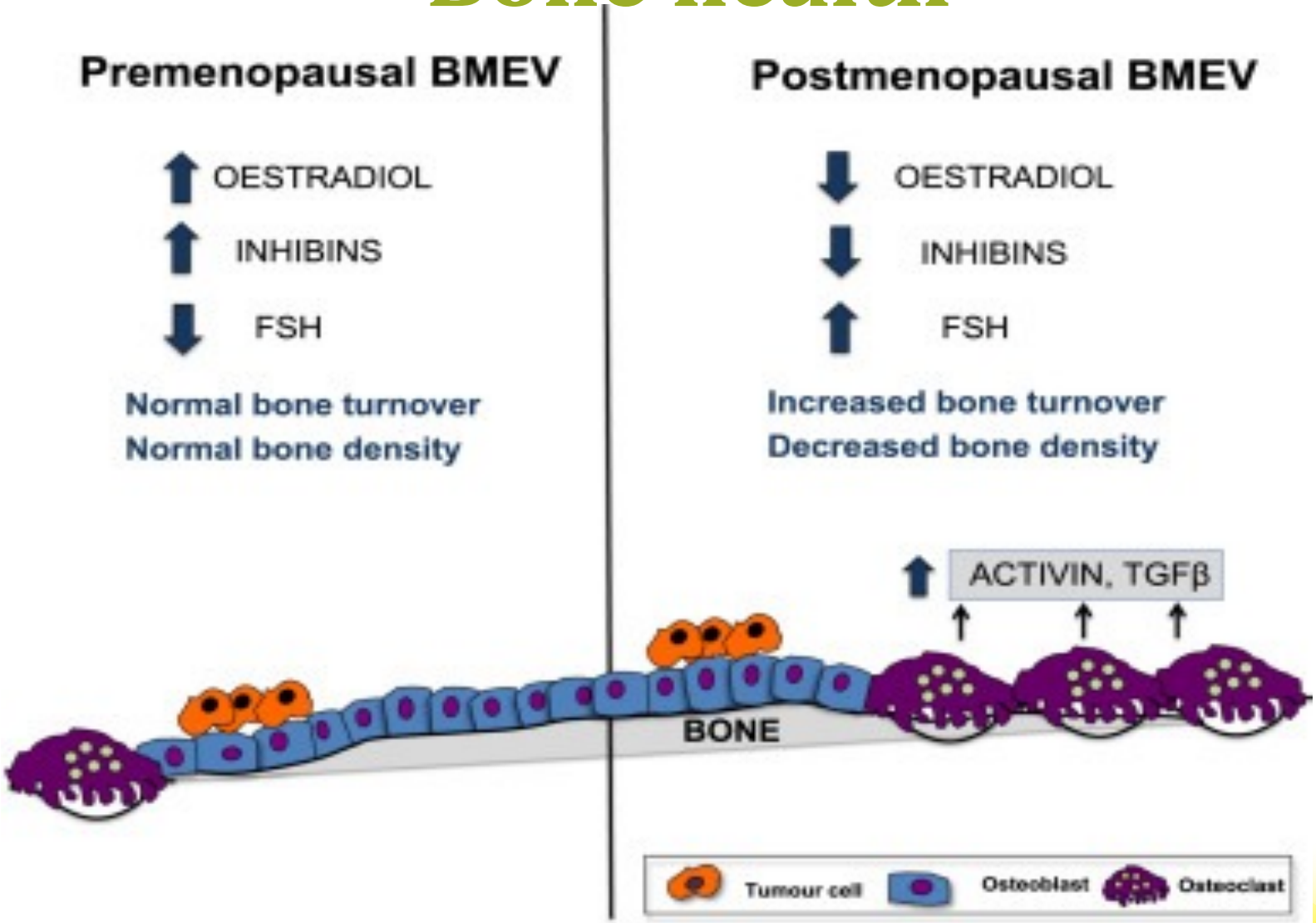
Menopause
Bone health



WILSON, Caroline. Reproductive hormones in breast cancer bone metastasis: The role of inhibins. Journal of bone oncology, 2016, vol. 5, no 3, p. 139-142.

Homocysteine & bone health

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Homocysteine as a Predictive Factor for Hip Fracture in Older Persons

Robert R. McLean, M.P.H., Paul F. Jacques, D.Sc., Jacob Selhub, Ph.D., Katherine L. Tucker, Ph.D., Elizabeth J. Samelson, Ph.D., Kerry E. Broe, M.P.H., Marian T. Hannan, D.Sc., L. Adrienne Cupples, Ph.D., and Douglas P. Kiel, M.D.

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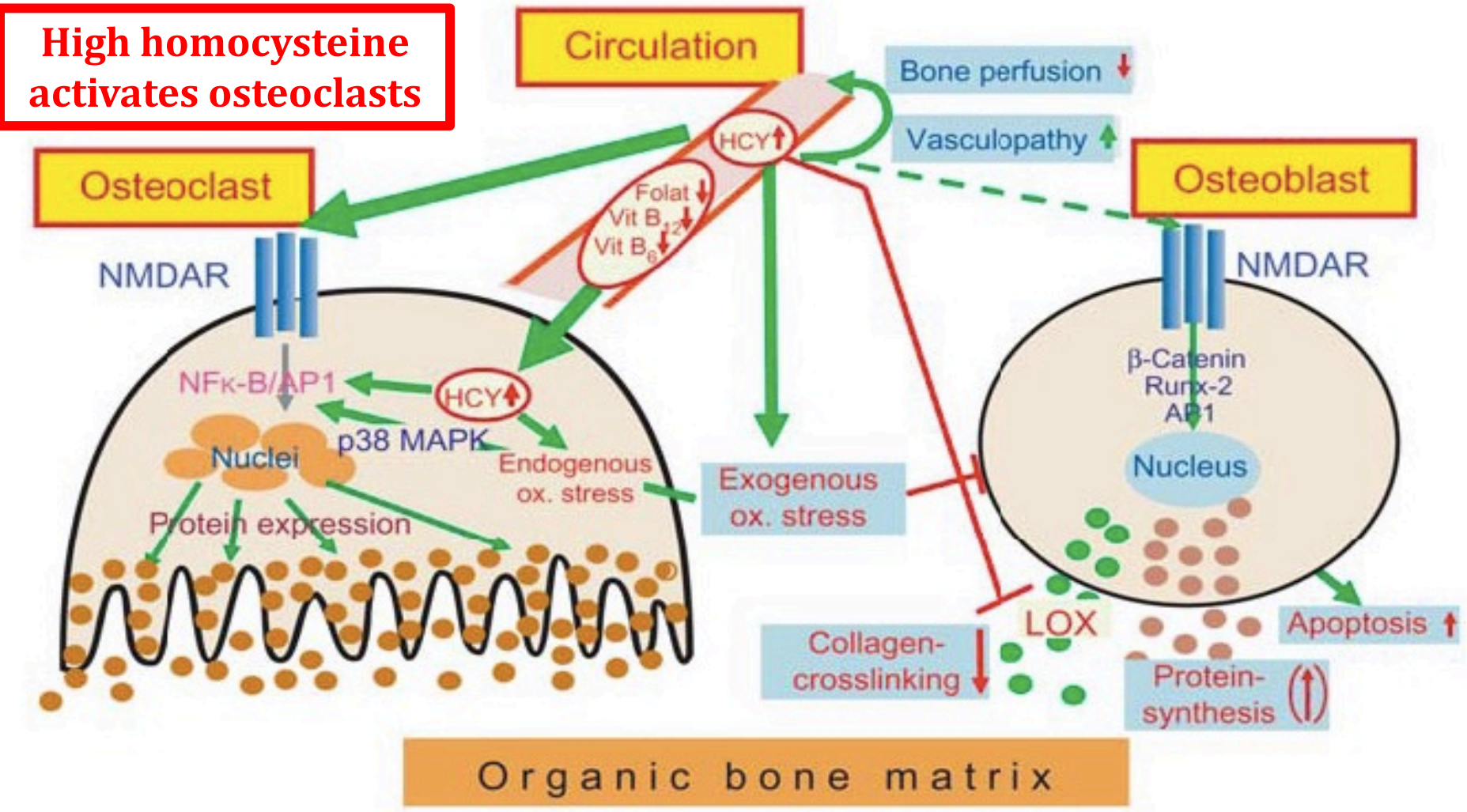
Homocysteine & bone health

High homocysteine activates osteoclasts



Herrmann, M., Peter Schmidt, J., Umanskaya, N., Wagner, A., Taban-Shomal, O., Widmann, T., ... & Herrmann, W. (2007). The role of hyperhomocysteinemia as well as folate, vitamin B6 and B12 deficiencies in osteoporosis–a systematic review. Clinical Chemical Laboratory Medicine, 45(12), 1621-1632.

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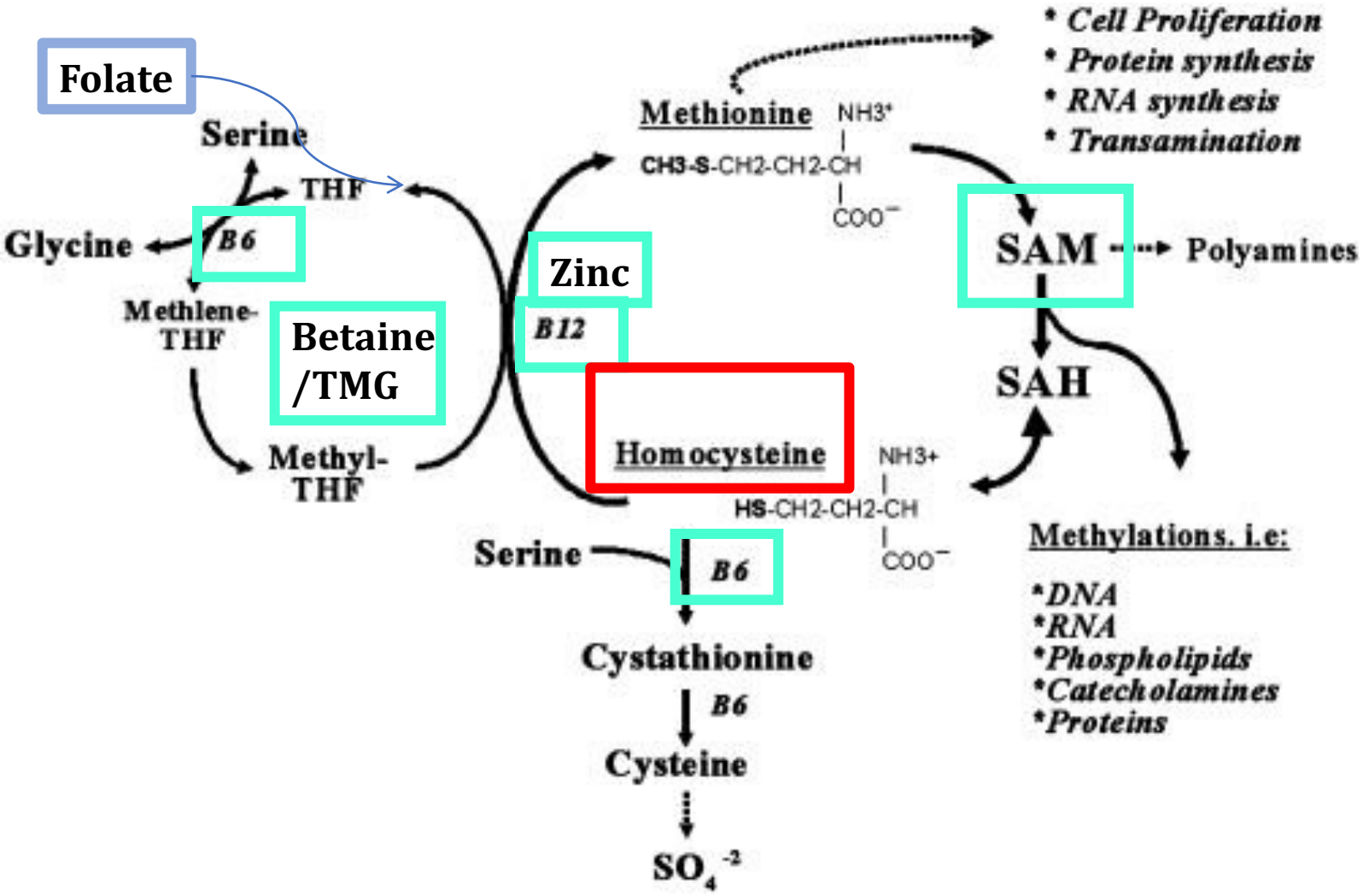
Homocysteine & bone health



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Troen AM, Lutgens E, Smith DE, Rosenberg IH, Selhub J. The atherogenic effect of excess methionine intake. Proc Natl Acad Sci U S A. 2003;100(25):15089-94.

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Solution(s)

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Homocysteine
Vitamin D, folate, B vitamins

Clin Chem Lab Med 2007;45(12):1621–1632 © 2007 by Walter de Gruyter • Berlin • New York. DOI 10.1515/CCLM.2007.362

Review

The role of hyperhomocysteinemia as well as folate, vitamin B_6 and B_{12} deficiencies in osteoporosis – a systematic review

Interplay of vitamin D, vitamin B_{12}, homocysteine and bone mineral density in postmenopausal females

Sundus Tariq[a,b], Saba Tariq[c,d], and Khalid Parvez Lone[e]

- *Tariq, S., Tariq, S., & Lone, K. P. (2018). Interplay of vitamin D, vitamin B12, homocysteine and bone mineral density in postmenopausal females. Health care for women international, 39(12), 1340-1349.*
- *Herrmann, M., Peter Schmidt, J., Umanskaya, N., Wagner, A., Taban-Shomal, O., Widmann, T., ... & Herrmann, W. (2007). The role of hyperhomocysteinemia as well as folate, vitamin B6 and B12 deficiencies in osteoporosis–a systematic review. Clinical Chemical Laboratory Medicine, 45(12), 1621-1632.*

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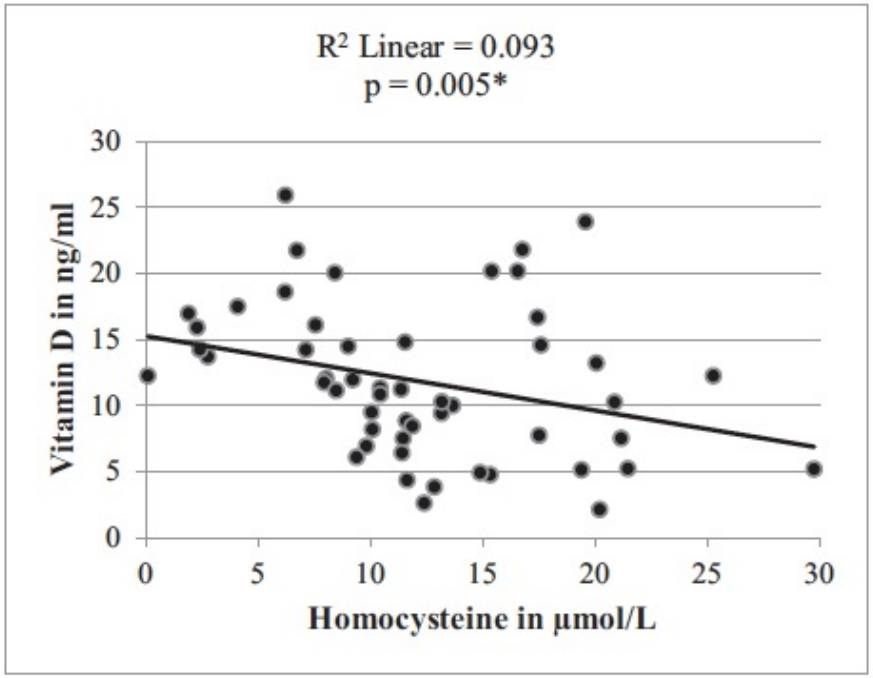
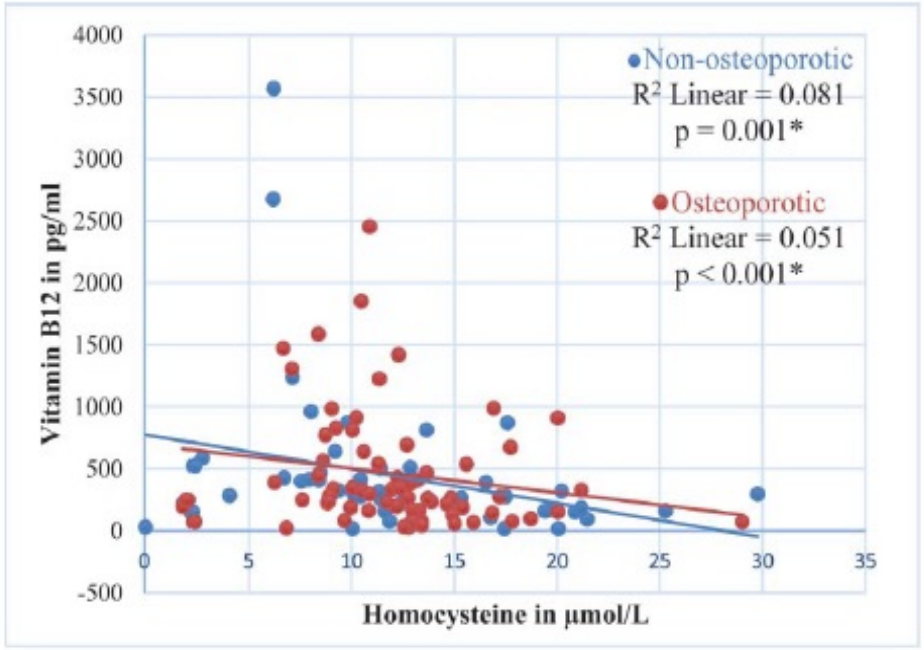
Homocysteine
Vitamin D, folate, B vitamins





* *p*-value ≤ 0.05 is considered statistically significant

Vitamin D_3 and B_{12} levels are inversely correlated to homocysteine levels

Tariq, S., Tariq, S., & Lone, K. P. (2018). Interplay of vitamin D, vitamin B12, homocysteine and bone mineral density in postmenopausal females. Health care for women international, 39(12), 1340-1349.

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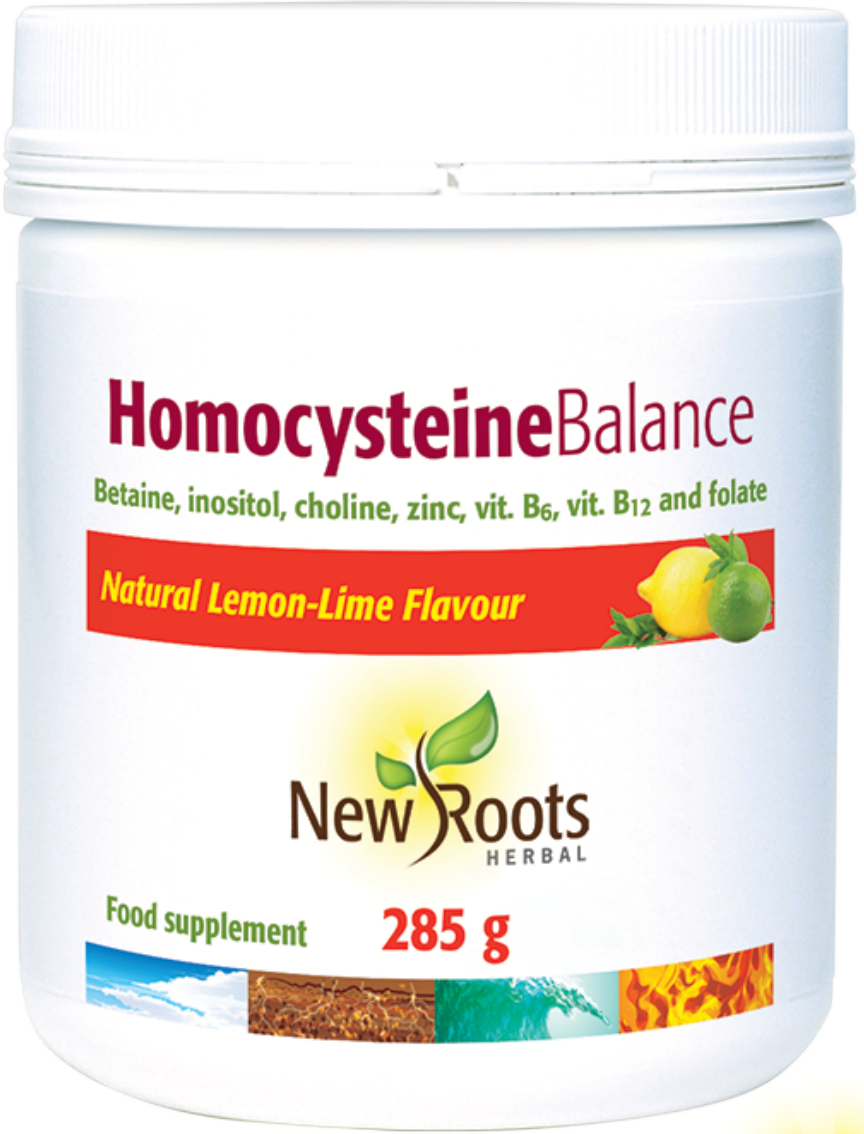
HOMOCYSTEINE BALANCE

- POWERFUL COMBINATION
- 7 SPECIFIC NUTRIENTS:
  - *TMG (BETAINE)*
  - *INOSITOL*
  - *CHOLINE*
  - *VITAMIN B6, B12 AND FOLATE*
  - *ZINC*
- NATURAL LEMON-LIME FLAVOUR
- **DOSE:**
  - **2 SCOOPS/DAY**



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Important notice…

- B_{12}

  Proton pump inhibitors (PPI), aspirin, antibiotics and metformin cause vitamin B_{12} deficit

- Folate
  - Metotrexate and alcoholism cause folate deficit

SUPPLEMENTATION IS NEEDED

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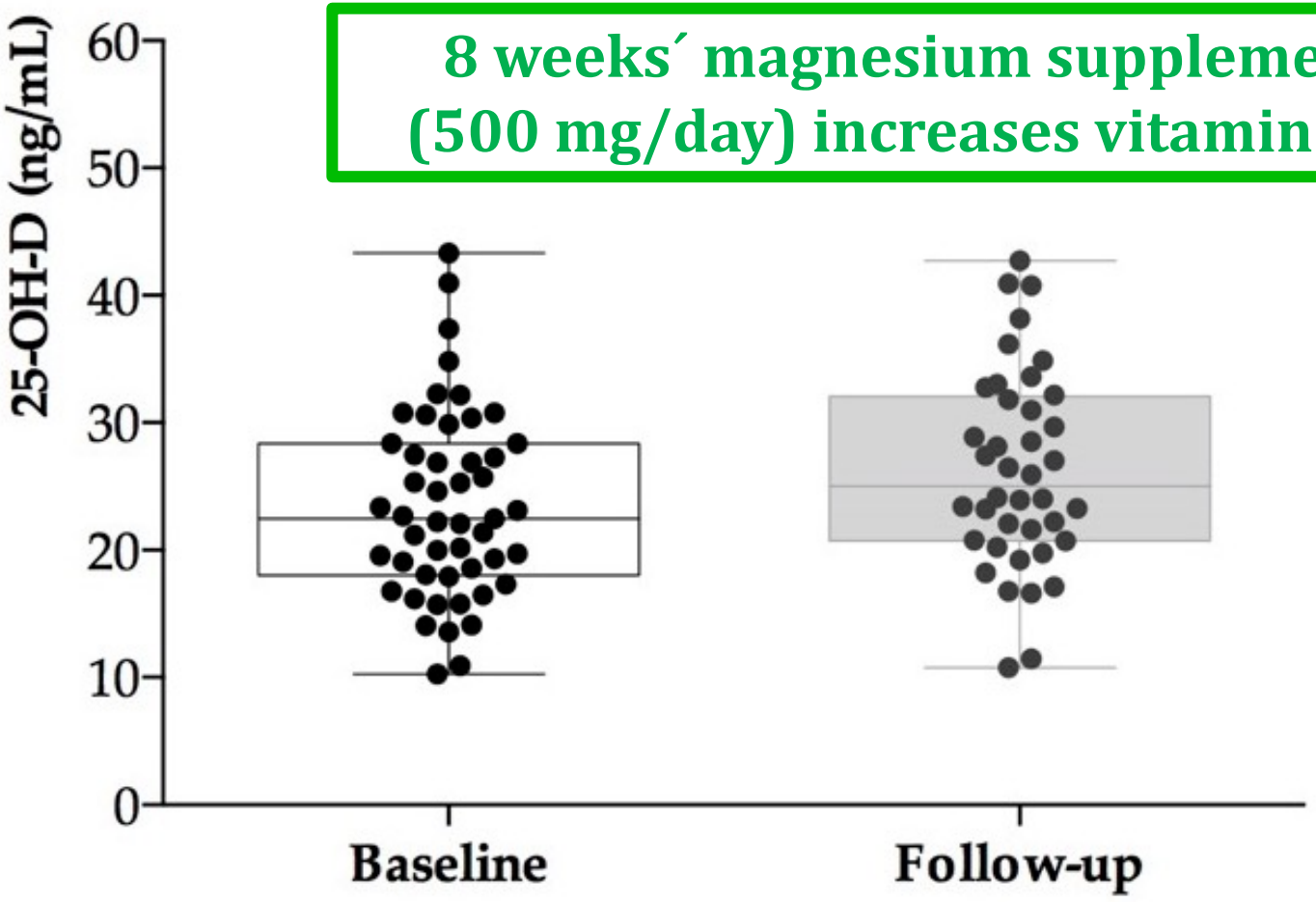
New Roots HERBAL

Osteoporosis
Vitamin D3 & magnesium

8 weeks´ magnesium supplementation (500 mg/day) increases vitamin D3 levels



Vázquez-Lorente, H., Herrera-Quintana, L., Molina-López, J., Gamarra-Morales, Y., López-González, B., Miralles-Adell, C., & Planells, E. (2020). Response of vitamin D after magnesium intervention in a postmenopausal population from the province of Granada, Spain. Nutrients, 12(8), 2283.

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New Roots HERBAL

Osteoporosis
Vitamin D_3 and magnesium

Vitamin D insufficiency and the blunted PTH response in established osteoporosis: the role of magnesium deficiency

O. Sahota · M. K. Mundey · P. San · I. M. Godber · D. J. Hosking

Conclusions: This study confirms that in patients with established osteoporosis, there is also a distinct group with a low vitamin D and a blunted PTH level and that Mg deficiency (as measured by the Mg loading test) is an important contributing factor.

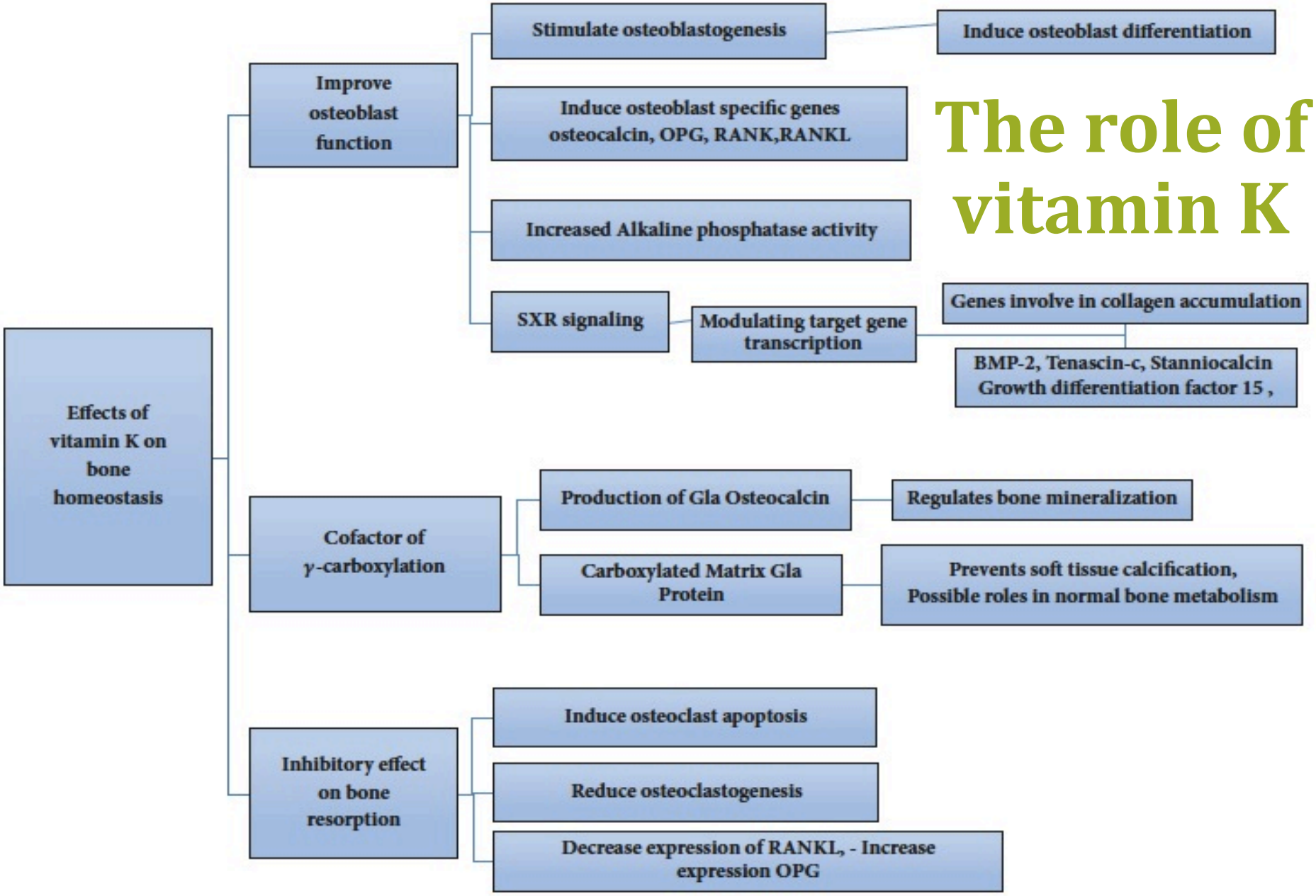
DOSE:
VITAMIN D_3: 4.000-10.000 UI
MAGNESIUM: 300-1000 mg

Healthy Institute

Sahota O, Mundey MK, San P, Godber IM, Hosking DJ. Vitamin D insufficiency and the blunted PTH response in established osteoporosis: the role of magnesium deficiency. Osteoporos Int. 2006;17(7):1013-21.

New Roots HERBAL

The role of vitamin K



Healthy Institute

Akbari, S., & Rasouli-Ghahroudi, A. A. (2018). Vitamin K and bone metabolism: a review of the latest evidence in preclinical studies. BioMed research international, 2018.

New Roots HERBAL

VITAMIN K2+D3

- POWERFUL COMBINATION
- WITH MCT
- 1 000 IU VITAMIN D3 PER 4 DROPS

- **DOSE:**
  - **4-16 DROPS/DAY**

Healthy Institute

New Roots HERBAL

Anxiety & depression
The role of magnesium

Association between magnesium intake and depression and anxiety in community-dwelling adults: the Hordaland Health Study

Felice N. Jacka, Simon Overland, Robert Stewart, Grethe S. Tell, Ingvar Bjelland, Arnstein Mykletun

To our knowledge this study is the first to test the hypothesis that magnesium intake is related to anxiety and depression in an epidemiological setting. While being cognisant of the limitations of the study, the present findings of an inverse association between magnesium intake and depression may have both public health and treatment implications. In primary

Jacka, F. N., Overland, S., Stewart, R., Tell, G. S., Bjelland, I., & Mykletun, A. (2009). Association between magnesium intake and depression and anxiety in community-dwelling adults: the Hordaland Health Study. Australian & New Zealand Journal of Psychiatry, 43(1), 45-52.

Healthy Institute

New Roots HERBAL

MAGNESIUM BISGLYCINATE PLUS

- 150 mg ELEMENTAL Mg PER CAPSULE
- MOST BIOVAILABLE FORM OF MAGNESIUM
- FORMULA INCLUDES L-TAURINE FOR INCREASED ABSORPTION

- **DOSE:**
  - **2-6 CAPS/DAY**

Healthy Institute

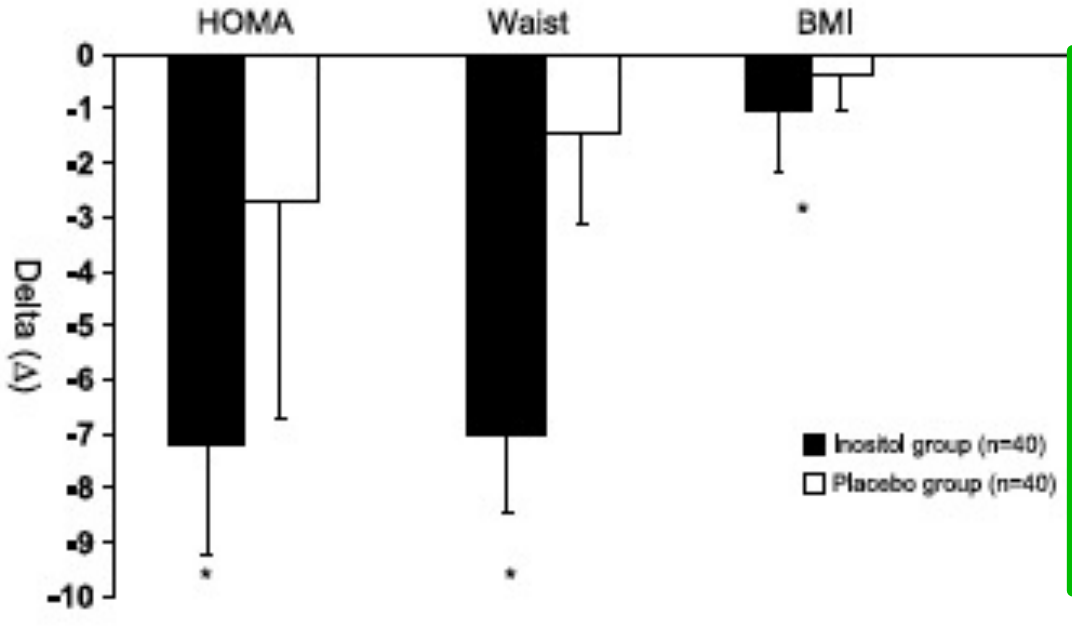
New Roots HERBAL

Myo-inositol

Brief Report Metabolic syndrome

Effects of myo-inositol supplementation in postmenopausal women with metabolic syndrome: a perspective, randomized, placebo-controlled study

Domenico Giordano, MD,[1] Francesco Corrado, MD,[2] Angelo Santamaria, MD,[2] Simona Quattrone, MD,[1] Basilio Pintaudi, MD,[3] Antonino Di Benedetto, MD,[3] and Rosario D'Anna, MD[2]



Improves

- ✓ HOMA-IR
- ✓ Waist circumference
- ✓ BMI
- ✓ Systolic and diastolic BP
- ✓ Triglycerides
- ✓ HDL-C

Healthy Institute

Sahota O, Mundey MK, San P, Godber IM, Hosking DJ. Vitamin D insufficiency and the blunted PTH response in established osteoporosis: the role of magnesium deficiency. Osteoporos Int. 2006;17(7):1013-21.

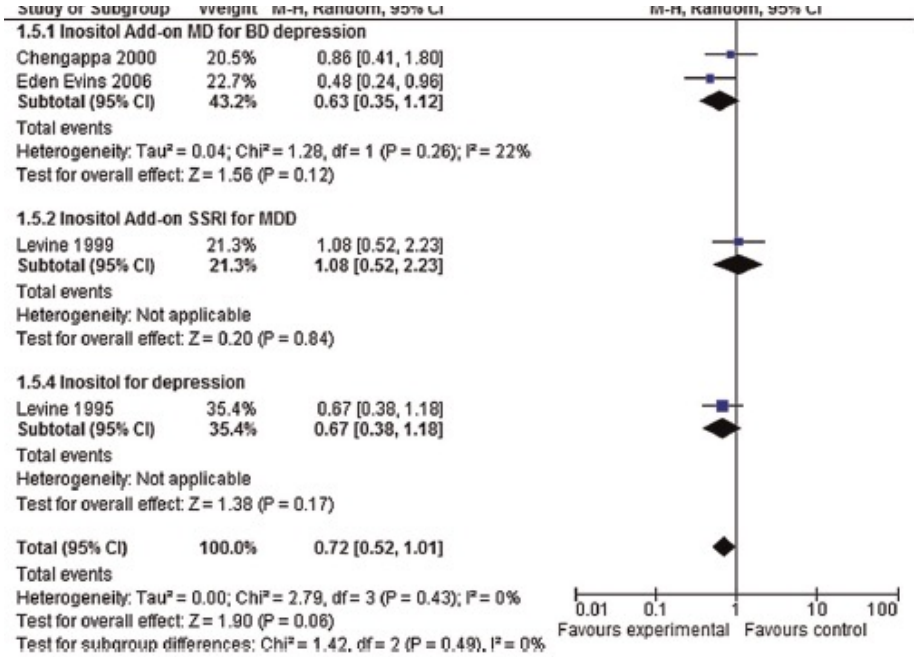
New Roots HERBAL

Myo-inositol
Anxiety & depression

A meta-analysis of inositol for depression and anxiety disorders

Tomohiko Mukai[†], Taro Kishi*[,†], Yuki Matsuda and Nakao Iwata

Department of Psychiatry, School of Medicine, Fujita Health University, Toyoake, Aichi, Japan

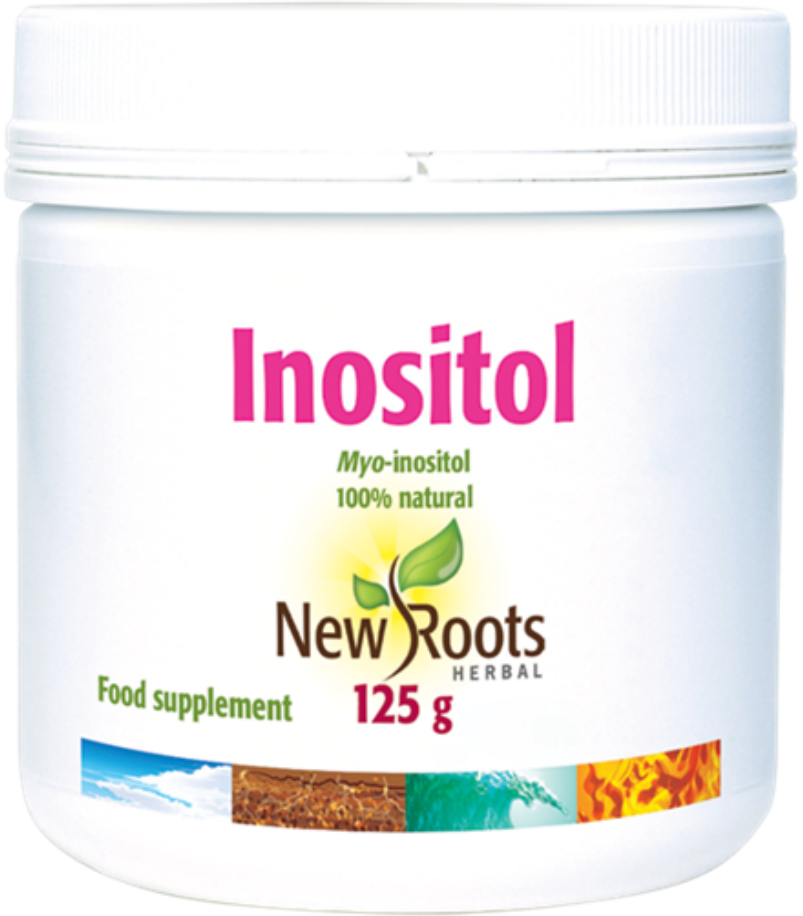


Mukai, T., Kishi, T., Matsuda, Y., & Iwata, N. (2014). A meta-analysis of inositol for depression and anxiety disorders. Human Psychopharmacology: Clinical and Experimental, 29(1), 55-63.

INOSITOL

- MYO-INOSITOL
- FROM NON-GMO RICE
- 100% NATURAL

- **DOSE:**
  - **½- 2 SCOOPS/DAY**



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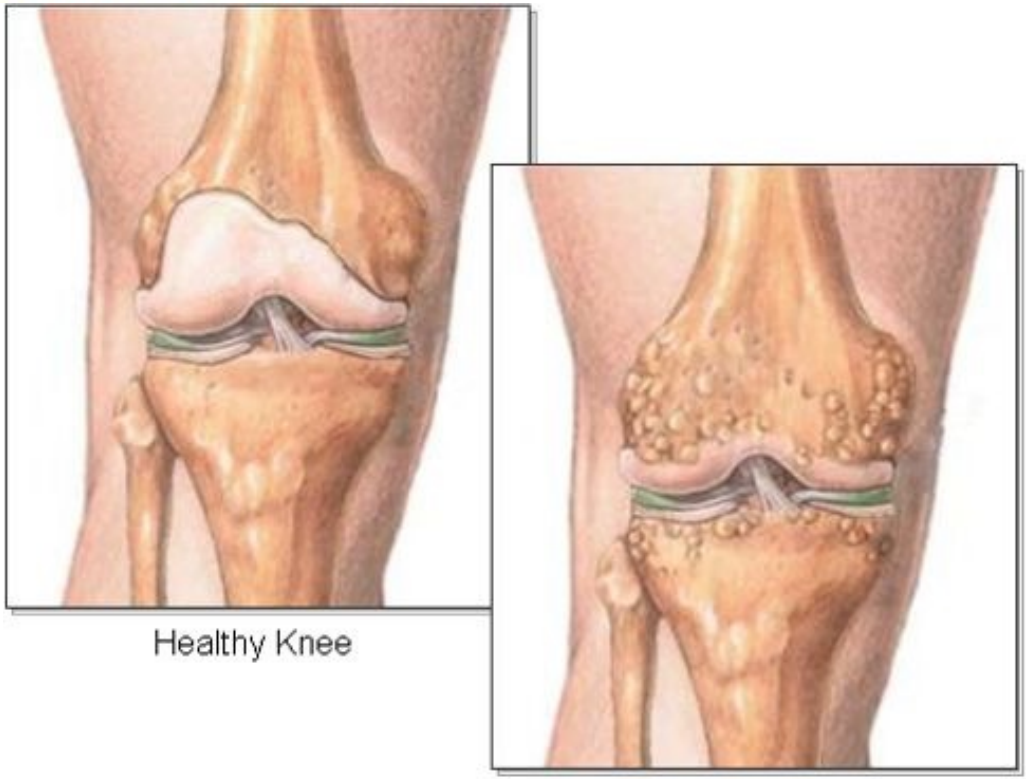
New Roots HERBAL

Cimicifuga racemosa
Menopause and bone/joint health

Cimicifuga racemosa and its triterpene-saponins prevent the Metabolic Syndrome and deterioration of cartilage in the knee joint of ovariectomized rats by similar mechanisms

Dana Seidlova-Wuttke[a], Nicole Eder[a], Vera Stahnke[a], Markus Kammann[c], Günter Stecher[c], Jutta Haunschild[c], Johannes T. Wessels[b], Wolfgang Wuttke[a,*]



Healthy Knee

Arthritic Knee

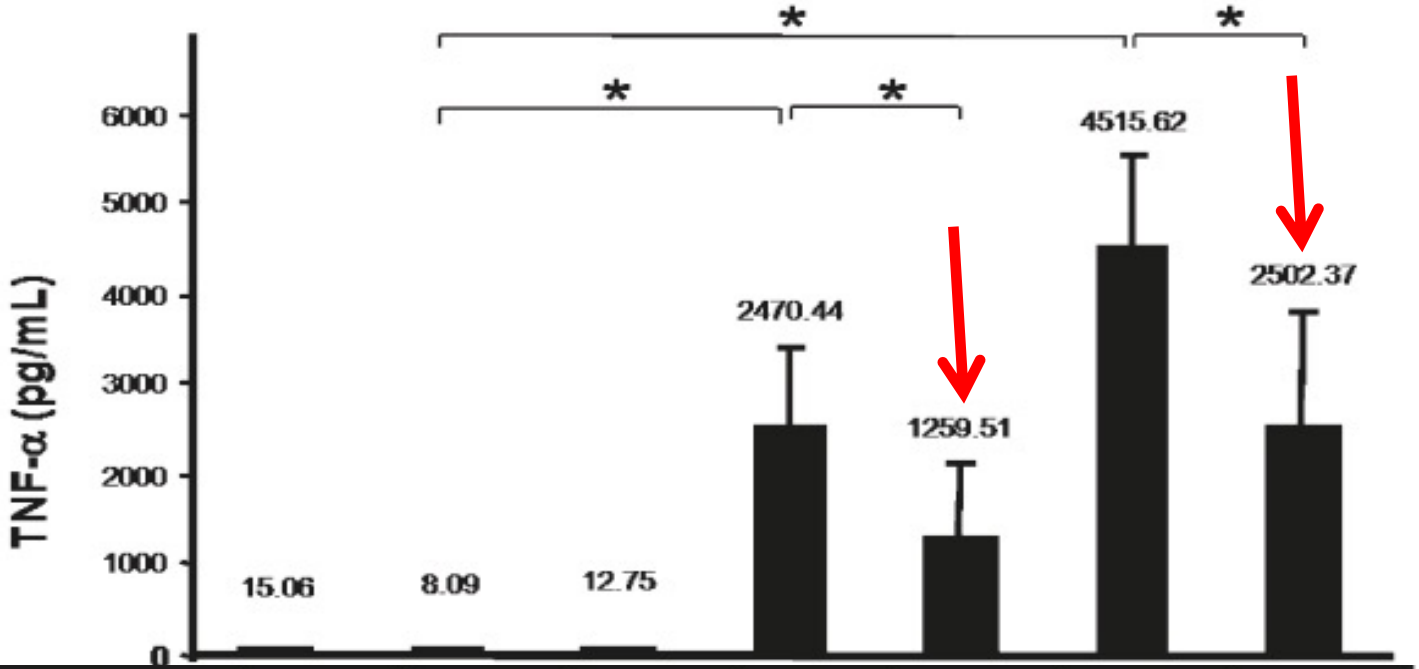
Healthy Institute

New Roots HERBAL

Cimicifuga racemosa
Menopause and bone/joint health

Identification of the Bioactive Constituent and Its Mechanisms of Action in Mediating the Anti-Inflammatory Effects of Black Cohosh and Related *Cimicifuga species* on Human Primary Blood Macrophages

Journal of Medicinal Chemistry Article



DMSO	-	+	-	+	-	+	-
Compound 1	-	-	+	-	+	-	+
LPS (ng/mL)	-	-	-	1	1	10	10

Yang, C. L., Chik, S. C., Li, J. C., Cheung, B. K., & Lau, A. S. (2009). Identification of the bioactive constituent and its mechanisms of action in mediating the anti-inflammatory effects of black cohosh and related Cimicifuga species on human primary blood macrophages. Journal of medicinal chemistry, 52(21), 6707-6715.

Healthy Institute

New Roots HERBAL

Cimicifuga racemosa
Hot flushes

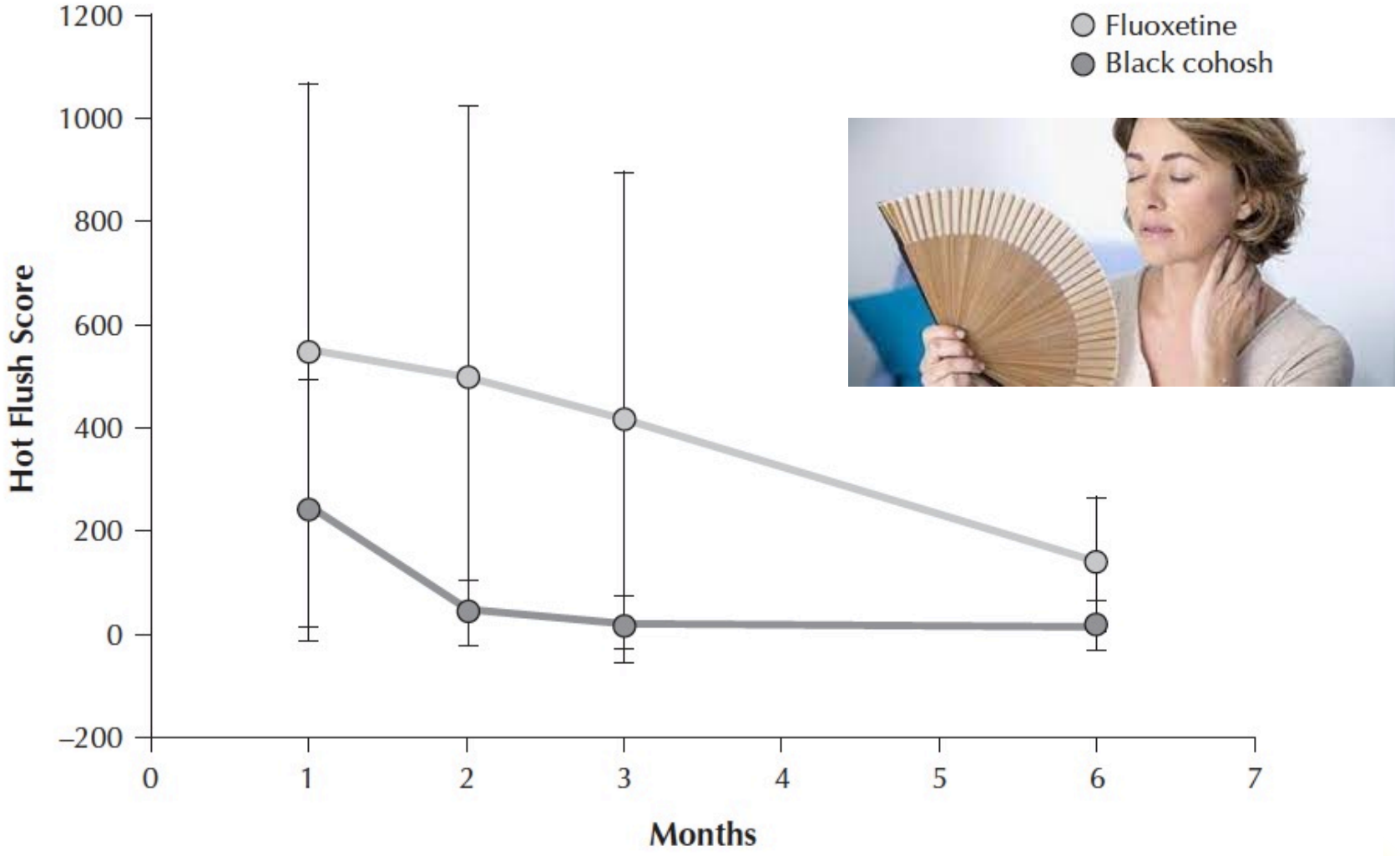
Variable	Black Cohosh (n=40) 1 mo	2 mo	3 mo	6 mo	Fluoxetine (n=40) 1 mo	2 mo	3 mo	6 mo
Hot flush score	239.3±256.2	39.8±67.2	19.2±51.9	18.7±49.0	542.6±528.7	499.6±527.1	417.8±481.0	134.8±133.7
Night sweat score	211.2±265.9	43.4±91.5	30.5±86.9	21.3±60.1	267.8±182.1	228.2±150.5	197.7±152.8	106.3±150.3

Healthy Institute

Oktem, M., Eroglu, D., Karahan, H. B., Taskintuna, N., Kuscu, E., & Zeyneloglu, H. B. (2007). Black cohosh and fluoxetine in the treatment of postmenopausal symptoms: a prospective, randomized trial. Advances in therapy, 24(2), 448-461.

New Roots HERBAL

Cimicifuga racemosa
Hot flushes



Oktem, M., Eroglu, D., Karahan, H. B., Taskintuna, N., Kuscu, E., & Zeyneloglu, H. B. (2007). Black cohosh and fluoxetine in the treatment of postmenopausal symptoms: a prospective, randomized trial. Advances in therapy, 24(2), 448-461.

Cimicifuga racemosa
Woman´s health

- ✓ Improves hot flushes and night sweats
- ✓ Improves vaginal dryness
- ✓ Oestrogenic activity (regulatory)
- ✓ Anti-histamine properties
- ✓ Serotonergic activity
- ✓ Improves mood disturbances
- ✓ Improves osteoblast and condroblast turnover

- *Wuttke, W., Gorkow, C., & Seidlová-Wuttke, D. (2006). Effects of black cohosh (Cimicifuga racemosa) on bone turnover, vaginal mucosa, and various blood parameters in postmenopausal women: a double-blind, placebo-controlled, and conjugated estrogens-controlled study. Menopause, 13(2), 185-196.*
- *Wuttke, W., Seidlova-Wuttke, D., & Gorkow, C. (2003). The Cimicifuga preparation BNO 1055 vs. conjugated estrogens in a double-blind placebo-controlled study: effects on menopause symptoms and bone markers. Maturitas, 44, S67-S77.*

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New Roots HERBAL

Menopause Isoflavones

Review

Utilization of Isoflavones in Soybeans for Women with Menopausal Syndrome: An Overview

Li-Ru Chen [1,2] and Kuo-Hu Chen [3,4,*]

Regarding the therapeutic effects on menopausal syndrome or other diseases, isoflavones have been found to alleviate vasomotor syndromes even after considering placebo effects, reduce bone loss in the spine and ameliorate hypertension and in vitro glycemic control. They may also alleviate

Useful for hot flushes, night sweats and bone loss in the spine

Healthy Institute

Chen, L. R., & Chen, K. H. (2021). Utilization of isoflavones in soybeans for women with menopausal syndrome: An overview. International Journal of Molecular Sciences, 22(6), 3212.

New Roots HERBAL

Phytotherapy in menopause

- ✓ *Vitex agnus castus* (chasteberry)
- ✓ *Dong quai*
- ✓ *Cimicifuga racemosa*
- ✓ *Salvia officinalis*
- ✓ Dandelion
- ✓ Isoflavones from: red clover, *dioscorea*
- ✓ *Humulus lupulus* (hops)

- ***TAGHIZADEH, ZIBA, et al. The study of the effect of vitex agnus-castus on the early menopausal complications in menopaused women. 2006.***
- ***Pitkin, J. (2012). Alternative and complementary therapies for the menopause. Menopause international, 18(1), 20-27.***

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New Roots HERBAL

MENOPEACE

- POWERFUL SYNERGY OF 6 PLANTS:
  - DONG QUAI
  - CHASTE-TREE (AGNUS CASTUS)
  - RED CLOVER
  - DANDELION
  - BLACK COHOSH
  - DIOSCOREA VILOSA
- **DOSE:**
  - **1-4 DAY**

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New Roots HERBAL

Women´s health
Ashwagandha

Body Weight Management in Adults Under Chronic Stress Through Treatment With Ashwagandha Root Extract: A Double-Blind, Randomized, Placebo-Controlled Trial

- ✓ Improves cortisol & ACTH levels
- ✓ Improves perceived stress and cravings
- ✓ Decreases BMI & weight

Choudhary, D., Bhattacharyya, S., & Joshi, K. (2017). Body weight management in adults under chronic stress through treatment with Ashwagandha root extract: a double-blind, randomized, placebo-controlled trial. Journal of evidence-based complementary & alternative medicine, 22(1), 96-106.

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New Roots HERBAL

ZEN PLUS

- POWERFUL COMBINATION:
  - *L-THEANINE*
  - *ASHWAGHANDHA*
  - *ASTRAGALUS*
  - *MAGNOLIA*
  - *PASSIFLORA*
  - *RHODIOLA*
  - *VITAMIN B COMPLEX*
- **DOSE:**
  - **2 CAPS/DAY**

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New Roots HERBAL

Case study

- ✓ *María, 50 years old*
- ✓ *Lack of period since 2 years*
- ✓ *Hot flushes and night sweats*
- ✓ *Sadness & higher anxiety perception*
- ✓ *Sleep disturbances (wakes up 3-4 times)*
- ✓ *Diet: low protein & fat, high carbohydrate intake*
- ✓ *Blood tests: high glucose, low estradiol, low progesterone, low vitamin D levels*

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New Roots HERBAL

Case study
Intervention

- ✓ *Increase protein & fat in the diet*
- ✓ *Lower carbohydrate intake*
- ✓ *Educate with sleep routine*
- ✓ *Meditation and increase physical activity*
- ✓ *2 g EPA+DHA/day WITH a meal*
- ✓ *VITAMIN D_3+K_2, 16 drops/day WITH a meal*
- ✓ *MENOPEACE, 3 caps/day*
- ✓ *INOSITOL, 4 g/day (divided in 2-3 meals)*

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New Roots HERBAL

Case study
After 2 months

- ✓ *Maintain eating habits*
- ✓ *Incorporate strength training and dancing*
- ✓ *VITAMIN D_3+K_2, 3 drops/day WITH a meal*
- ✓ *MENOPEACE, 2 caps/day*
- ✓ *Continue helping with stress management (anxiety levels have decreased), ZEN PLUS, 2/day*
- ✓ *Add MAGNESIUM BISGLYCINATE, 3 caps/day*

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New Roots HERBAL

What is the solution?

RELATIONSHIPS

BIOLOGY

FOOD & NUTRITION

GENETICS

ENVIRONMENT

IKIGAI

MOVEMENT

EVOLUTIONARY COHERENCE!

Ruiz-Núñez, B et al.(2013). Lifestyle and nutritional imbalances associated with Western diseases: causes and consequences of chronic systemic low-grade inflammation in an evolutionary context. The Journal of nutritional biochemistry, 24(7), 1183-1201.

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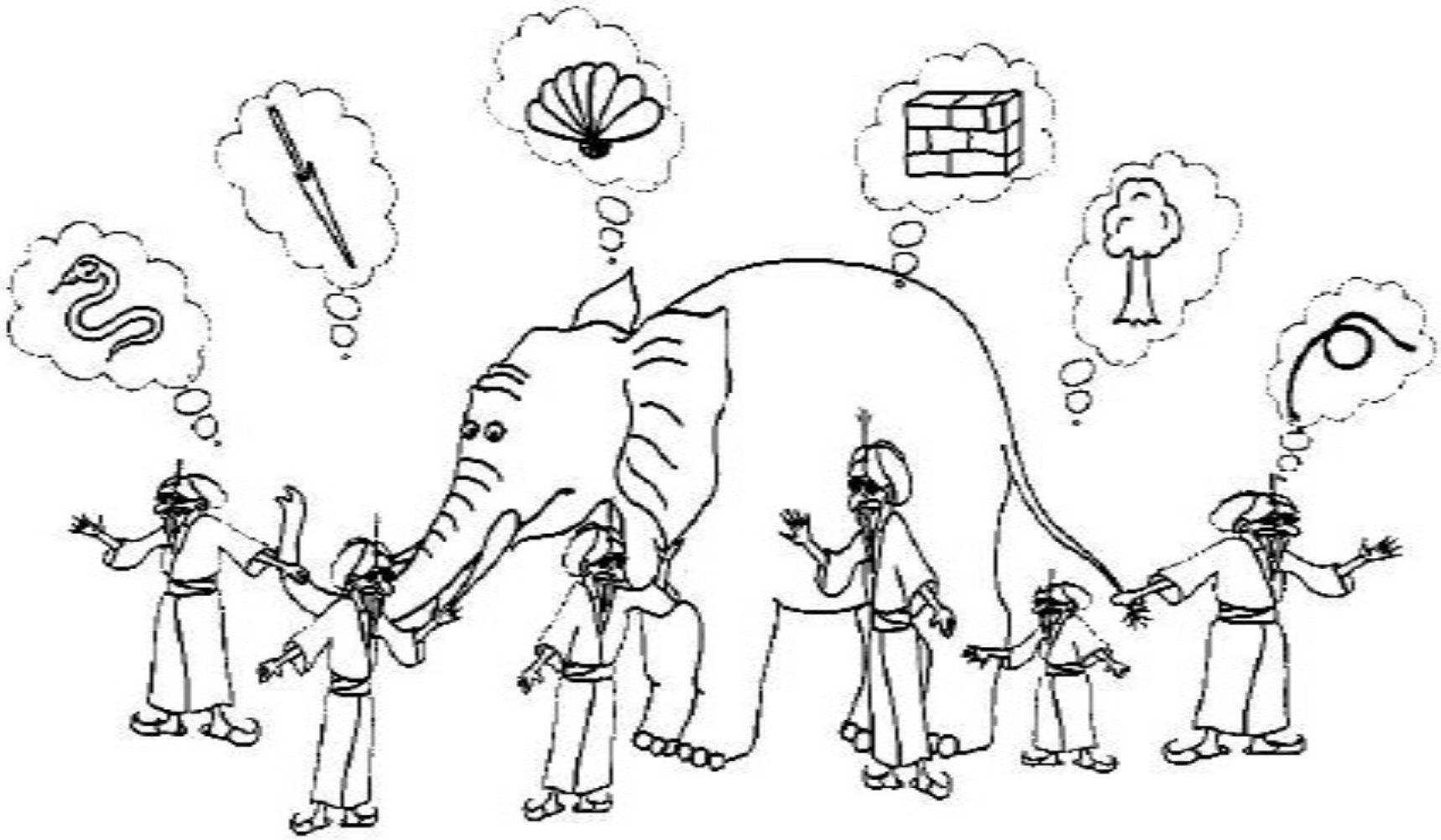
New Roots HERBAL

The Blind man and the Elephant



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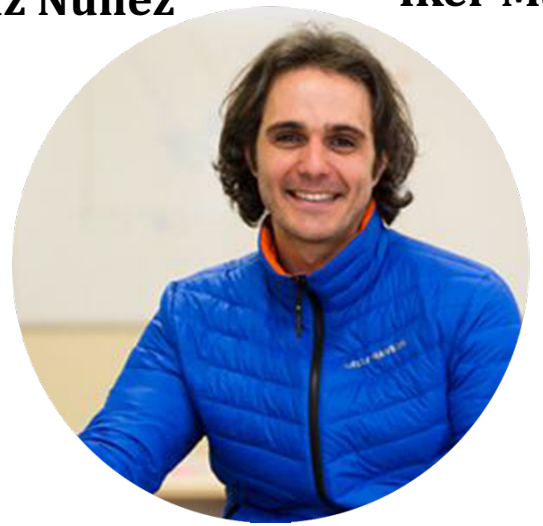
The Blind Men and the Elephant, John Godfrey Saxe, 1816-1887

New Roots HERBAL

Dr Begoña Ruiz Núñez

Iker Martínez Pérez

Verónica Martínez Vázquez



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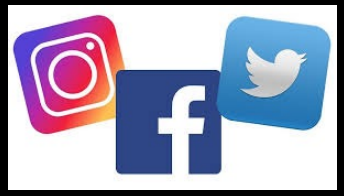
- ✓ In Ireland through ´Pure & Natural´ ---> www.pureandnatural.ie
- ✓ In the UK through ´Amrita Nutrition´ & ´The Natural Dispensary´ www.amritanutrition.co.uk & www.naturaldispensary.co.uk



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