

Life is Your Best Medicine



Tieraona Low Dog, MD

Founder: Medicine Lodge Ranch

National Geographic's: "Life Is Your Best Medicine," "Healthy At Home," and "Fortify Your Life"

www.DrLowDog.com

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Energy Is Life.....



Things that sap energy:

- Poor diet/dehydration
- Nutrient deficiency
- Lack of physical activity
- Chronic stress
- Too many demands on time
- Anxiety or depression
- Poor sleep
- Hypothyroidism
- Chronic disease

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Hypothalamic Pituitary Adrenal Axis

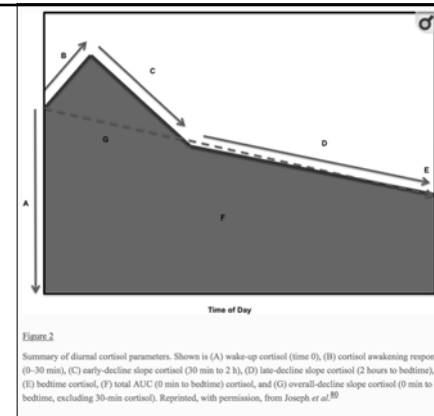
- **HPA axis tightly regulated system:** one of body's mechanisms for responding to acute and chronic stressors.
- **Chronic psychological stress:** state of mental/emotional strain where individual perceives demands exceed his/her adaptive capacity.
- **Chronic stress can impair feedback mechanisms** that return hormonal systems to normal, resulting in **chronic elevation/dysregulation in levels of cortisol, catecholamines, and inflammatory markers.**

Joseph J, et al. Cortisol dysregulation: the bidirectional link between stress, depression, and type 2 diabetes mellitus. *Ann N Y Acad Sci* 2017; 139(1):20-34

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Joseph J, et al. Cortisol dysregulation: the bidirectional link between stress, depression, and type 2 diabetes mellitus. *Ann N Y Acad Sci* 2017; 139(1):20-34

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Stress and the Immune System

- Long-term chronic stress leads to persistently high glucocorticoid levels
 - Causes immune cells to eventually develop glucocorticoid resistance
- Elevation of glucocorticoids can lead to dysregulation of both innate and adaptive immune responses
 - Results in **metabolic, immune, and mental disorders**
- Regulation of the hypothalamic-pituitary-adrenal (HPA) axis is a key for **preventing the immune complications of chronic stress**

Rahay MT. *Adv Exp Med Biol* 2018; 874:259-275. Kulkarni AD, et al. *Biomed Environ Sci* 2018; 31(9):686-699.

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Diet and Mood

- **Systematic review 18 studies:** DASH, low glycemic load, ketogenic and Paleo diets can improve mood more than others.
- **High** glycemic load meals significantly **increase cortisol** compared to control.
- **Protein and fat** significantly **decreased cortisol** compared to carbohydrate.
- **Low glycemic load diet is one approach** for those with HPA dysregulation.
- Don't forget about **endocrine disruptors!** Clean, organic, limited cans/plastics....



Arab A, et al. The association between diet and mood: A systematic review of current literature. *Psychiatr Res* 2019 Jan;271:428-437.
Marrero MJ, et al. Effects of single macronutrients on serum cortisol concentrations in normal weight men. *Physiology & Behavior* 2010; 101(5): 563-67

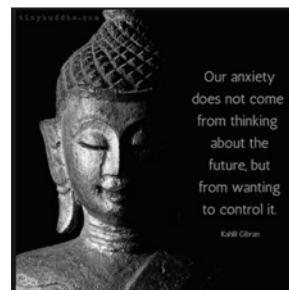
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Self-Soothe: Meditation

- Excellent for **reducing stress perception**.
- Quiets stream of thoughts raging in mind.
- Meta-analysis 45 studies: **reduces cortisol, C-reactive protein, blood pressure, heart rate, triglycerides and TNF-alpha**
- Review **47 trials:** meditation improves:
 - Anxiety
 - Depression
 - Pain



Goyal M, et al. *JAMA Intern Med* 2014; 174(3):357-68
Pascoe MC et al. *J Psychiatric Res* 2017; 95:156-178.

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Resources Reduce Stress Improve Sleep

- **Calm** – great app for guided meditation, bedtime stories, breathing exercises (free to \$60 annual subscription)
- **Insight Timer** - ~4,000 guided meditations >1,000 teachers (self-compassion, nature, stress, podcasts). Music tracks (free to \$5/mo)
- **Headspace** – meditation, videos, meditations music (free basic course, \$12.99 mo, \$95/year)
- **10% Happier** – performance enhancement. Busy people, stressed lives. (Free one week intro, then \$100 per year).
- **Buddhify** - for the more advanced meditator. Can sort by location, activity and/or emotion. (small monthly fee, premium is \$30/yr).

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Movement: *Sound Body = Sound Mind*



- Exercise and physical activity are keys to a long, healthy life.
- Increases blood flow to brain, promoting growth of new blood vessels. Stimulates release of endorphins that diminish pain, as well as compounds that elevate mood and reduce tension.
- Regular exercise increases energy levels and eases fatigue. *20 minutes three times per week of moderate exercise can improve energy levels in just four weeks!*
- Fatigue, low energy, pain and depressed mood all impact our emotional wellbeing. Make movement a habit!

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Micronutrient Deficiencies and Energy

- 90 million Americans are vitamin D deficient (using the Endocrine Society guidelines $< 20\text{ng/mL}$)*
- 30 million are deficient in vitamin B6*
- 18 million people have B12 deficiency*
- 16 million have vitamin C deficiency *
- 13% of Latinas and 16% of African American women (ages 12-49) are iron deficient*
- Women 25-39 overall have borderline iodine insufficiency*



CDC; 2nd National Report on the Biochemical Indicators of Diet and Nutrition in the U.S. population

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Vitamin C

- Potent antioxidant, activates folate, needed to convert tryptophan to serotonin, cofactor in synthesis of carnitine, thyroxine, norepinephrine, dopamine and immune cells
- Vitamin C levels decline rapidly during emotional and physical stress, and illness.
- CDC found ~16 million Americans very low levels of serum vitamin C.



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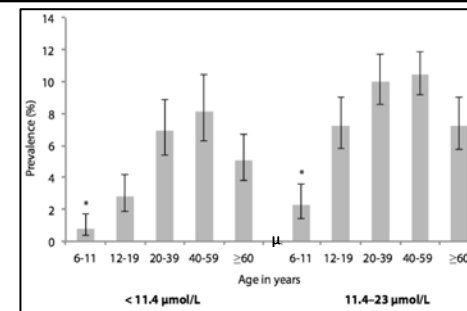


Figure H.1.1. Prevalence estimates of vitamin C deficiency (serum concentrations less than $11.4\ \mu\text{mol/L}$) and low vitamin C concentrations ($11.4\text{--}23\ \mu\text{mol/L}$) in the U.S. population aged 6 years and older by age group, National Health & Nutrition Examination Survey, 2003-2006.

Error bars represent 95% of confidence intervals. *Prevalence in children is significantly lower than prevalence in persons 20 years and older ($p < 0.05$).

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- Marked differences between women in menstrual blood loss (10-250 mL per menses).
- Heavy menstrual bleeding is a significant risk for iron deficiency and is often overlooked.
- Low iron *most common cause of anemia* in adolescent girls: detrimental to *mood and cognition*, as well as *physical well-being*.

Iron



Blitzer J, et al. *Gynecol Endocrinol* 2014;30(8):542-8.
Nelson AL, et al. *Am J Obstet Gynecol* 2015; 213(1):97.e1-6.
Cooper M, et al. *Health Rep* 2012;23(4):41-8.

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Review of Systems:

- Shortness of breath, fatigue
- Sensitivity to cold
- Muscular weakness
- Low blood pressure
- Restless legs
- Pica (chew ice or non-food items)

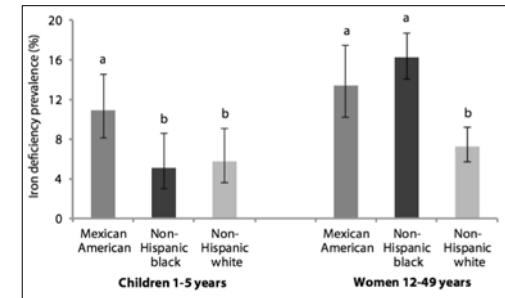


Figure H.3.a. Age-adjusted prevalence estimates of low body iron stores (<0 mg/kg) in U.S. children and women by race/ethnicity, National Health and Nutrition Examination Survey, 2005-2006.

Error bars represent 95% of confidence intervals. Bars are not sharing a common letter differ within children and women ($p < 0.05$). Age adjustment was done using direct standardization.

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Journal of the American College of Nutrition
ISSN: 0731-5724 (Print) 1541-1087 (Online) Journal homepage: <http://www.tandfonline.com/loi/jacn20>

A Food-Derived Dietary Supplement Containing a Low Dose of Iron Improved Markers of Iron Status Among Nonanemic Iron-Deficient Women

Christopher R. D'Adamo, James S. Novick, Termeh M. Feinberg, Valerie J. Dawson & Larry E. Miller

To cite this article: Christopher R. D'Adamo, James S. Novick, Termeh M. Feinberg, Valerie J. Dawson & Larry E. Miller (2018) A Food-Derived Dietary Supplement Containing a Low Dose of Iron Improved Markers of Iron Status Among Nonanemic Iron-Deficient Women, *Journal of the American College of Nutrition*, 37:4, 342-349, DOI: 10.1080/07315724.2018.1427158

To link to this article: <https://doi.org/10.1080/07315724.2018.1427158>

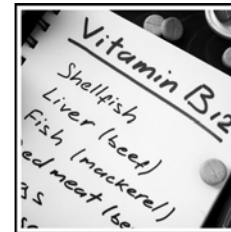
Product Used was Mega Food Blood Builder

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Vitamin B12 Deficiency



Bird JK, et al. *Nutrients* 2017; doi: 10.3390/nut070655
Jung SR, et al. *Intern Med J* 2015; 45(4):409-16.
Out M, et al. *J Diabetes Complications* 2018; 32(2):171-178;
Nasir M, et al. *Intern Emerg Med* 2015; 10(1):93-1026

- Institute of Medicine recommends adults > 50 yrs get B12 from **fortified foods/supplements**
- Deficiency: **tingling/numbness** in hands and feet, **fatigue**, shortness of breath, **loss of appetite**, **joint pain**, **depression**, **loss of taste and smell**, **cognitive impairment**, and **dementia**.
- 2015 meta-analysis: **80% increased risk B12 deficiency after 10 months of regular PPI use.**
- Meta analysis 29 studies: **245% increased risk B12 deficiency metformin use. Low B12 shown to increase progression of diabetic neuropathy.**

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Vitamin B6

(Pyroxidal-5-Phosphate)

- Involved in production of **serotonin, dopamine, melatonin, hemoglobin, protein metabolism, energy production**, and more.
- Deficiency: **depression; impaired cognition, attention, memory, and sleep.**
- OTC analgesics and OCPs** lower B6 levels.
- 30 million Americans deficient in B6.
- Vancouver BC; **12.4% prevalence** of B6 deficiency and suboptimal status in women 19-32 years of age.
- Need ~6 mg per day to maintain normal serum level.



Larsson SC, et al. *JAMA* 2010; 303(11):1077-83
Morris MS, et al. *Am J Clin Nutr* 2006; 87(5):1446-54
Uehli A, et al. *Am J Clin Nutr* 2014; 100(1):250-5
Ho CL, et al. *Nutrients* 2016; Sep 18(9).

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The Need for Sleep

- Biological requirement for life
- Sleep quality genetically driven** (lay down to sleep, sleep at night) and **environmentally driven** (working late at night, excessive caffeine or alcohol consumption).
- An abrupt shutdown of our perceptual interaction with environment.**



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Sleep Often Overlooked

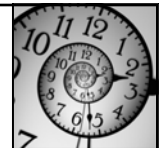
- Relationship** between disordered sleep and **obesity, insulin resistance, type-2 diabetes, cardiovascular disease, pain, impaired sex drive, poor cognition, diminished problem solving, depression, fatigue, premature aging, traffic accidents**, and more.... is **quite strong**.
- Clinical practice, understanding what is **important** to person; **dietary patterns, physical activity, predispositions** (self and family), **social connectedness**, patterns of **stress and sleep** are foundational no matter what issues are being experienced.

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Sleep Stages



- Stage 1:** Lasts few minutes, **light, easy to wake** from. Muscle twitching common.
- Stage 2:** Light sleep, brain waves begin to slow; BP and body temperature decrease.
- Stages 3 and 4:** Deeper sleep, harder to wake from. **Body repairs itself and boosts immune function.** Also known as “delta” sleep.
- Rapid eye movement (REM):** Final stage, brain becomes more **active and dreams occur.** Brain **processing information and storing long-term memories.** Heart rate and breathing increase.
- REM suppressors: **alcohol, nicotine, blood pressure and anti-depressant meds**

This cycle repeats ~90 minutes. As sleep progresses, REM cycles increase in length.

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Brighter Mornings Make For Better Nights!



- 1989 study found when participants with SAD were exposed to **simulated sunrise** or **simulated sunrise and sunset for several days** their depression resolved or was greatly reduced.
- Dawn simulation devices: those with **hard time falling asleep**
- Pricey – *Philips Wake-Up Light* with **Colored Sunrise Simulation** is top rated.

Terman M, Schlager D, Fairhurst S, et al. Dawn and dusk simulation as a therapeutic intervention. *Biol Psychiatry*. 1989;25:966-970.

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The Basics



1. Set a sleep schedule and stick to it.
2. Make your bedroom dark, quiet and cool.
3. Turn off electronics and or use blue light blocking technologies.
4. Watch the caffeine. Discontinue by noon if trouble sleeping.
5. Power naps: can be good if 20-30 minutes in duration
6. Limit alcohol intake.
7. Don't go to bed hungry.
8. Find ways to deal with "worries".....
9. Get sleep evaluation if sleep disruption and/or daytime fatigue continues

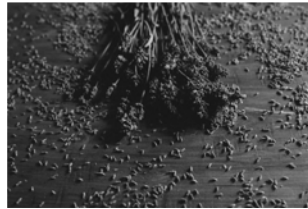
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Plants: Energy, Stress, Sleep

- Historically, many **plants were used to help ease nervous unrest and promote sleep.**
- Many (not all) are suitable and tasty as herbal teas. Some can be used as **aromatherapy.**
- Instead of thinking about plants as sleeping medicines, more appropriate to **think of them as relaxation and resiliency enhancers** to be used as an adjunct to lifestyle recommendations.



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Lemon Balm (*Melissa officinalis*)

- European Medicine's Agency: Traditional herbal medicine for relief of mild symptoms of mental stress and to aid sleep.
- German Commission E: **Nervous sleeping disorders.** Functional GI complaints.
- Animal models show **lavender and lemon balm increase sleep duration and shorten sleep latency.**
- Relieved test anxiety in healthy volunteers.



Mattei C, et al The Medical use of Lemon Balm (*Melissa officinalis*) and Valerian (*Valeriana officinalis*) as Natural Sedatives: Insight into their Interactions with GABA Transmission. *Int J Clin Pharmacol Pharmacother* Volume 1, 2016, 112

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Valerian (*Valeriana officinalis*)

- Long history using roots for restlessness and sleep.
- Review 16 studies: patients taking valerian had 80% greater chance of reporting improved sleep compared to placebo.
- WHO monograph: “**mild sedative, sleep promoting agent, milder alternative or substitute for stronger sedatives (e.g., benzodiazepines); and treatment of nervous excitation/sleep disturbances induced by anxiety.**”

apps.who.int/medicinedocs/en/d/Js2200e/29.html#js2200e.29
Bent S, et al. Valerian for Sleep: A Systematic Review and Meta-Analysis. *The American journal of medicine*. 2006;119(12):1005-1012



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European Medicines Agency: Valerian (2016)



- “For relief of sleep disorders, a single dose half to one hour before bedtime with an earlier dose during the evening if necessary.”
- “**Because of its gradual onset of efficacy valerian root is not suitable for acute interventional treatment of mild nervous tension or sleep disorders. To achieve an optimal treatment effect, continued use over 2-4 weeks is recommended.**”
- They do not recommend use in children under age 12 or during pregnancy.
- Single dose: **0.3-3 grams**. For mild symptoms of mental stress up to 3 times daily.

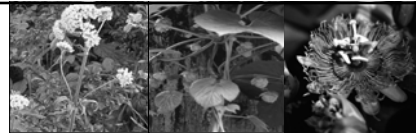
European Union herbal monograph on *Valeriana officinalis* L. www.ema.europa.eu/docs/en_GB/document_library/Herbal/_Herbal_monograph/2016/04/WC500205376.pdf

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To Sleep, Perchance to Dream



- Studies show **valerian and hops** superior to placebo for insomnia.
- WHO Valerian monograph: **mild sedative, sleep promoting agent**, milder alternative or substitute for stronger sedatives; and treatment of nervous excitation/sleep disturbances induced by anxiety.
- In 2013, University of Melbourne reviewers concluded there was evidence to support use of **passionflower for anxiety**.
- Combination of **valerian, hops, passionflower** equivalent to 10 mg zolpidem when taken nightly for two weeks in 91 patients with primary insomnia.

Maroo N, et al. *Indian J Pharmacol* 2013; 45(1):34-9
Sarris J, et al. *CNS Drugs* 2013; 27(4):301-19

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California Poppy Herb (*Eschscholzia californica*)

- Anxiolytic, analgesic, sedative activity.
- European Union monograph recognizes traditional use for **relief of mild symptoms of mental stress** and to **aid sleep**.
- It states “**standardized extract of California poppy can be used in the management of chronic pain and as a hypnotic-mild-sedative for the management of pain-related insomnia.**”



European Union herbal monograph on *Eschscholzia californica* Cham., herba. January 28, 2015
www.ema.europa.eu/docs/en_GB/document_library/Herbal_Community_herbal_monograph/2015/05/WC500186552.pdf

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- Significant **stress-protecting**, anxiolytic, analgesic, and anti-inflammatory effects^{1,2}
 - **Most calming adaptogen**
- 64 subjects with **chronic stress** randomized to ashwagandha extract (300 mg) or placebo BID x 60/days³
 - Ashwagandha group had significant reduction ($P<.0001$) in all **stress-assessment** scales on day 60, and **serum cortisol levels** were substantially reduced ($P=.0006$) relative to the placebo group

Ashwagandha Root (*Withania somnifera*)



1. Dar NJ, et al. *Cell Mol Life Sci* 2015;72(23):4445-4460; 2. Ramakanth GS, et al. *J Ayurved Integr Med* 2016;7:151-157; 3. Chandrasekhar K, et al. *Indian J Psychol Med* 2012;34(3):255-262.

1. Dar NJ, et al. *Cell Mol Life Sci* 2015;72(23):4445-4460; 2. Ramakanth GS, et al. *J Ayurved Integr Med* 2016;7:151-157; 3. Chandrasekhar K, et al. *Indian J Psychol Med* 2012;34(3):255-262.

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- RCT 52 subjects **chronic stress: 3placebo or 300 mg ashwagandha extract** BID for 8 weeks
- Primary efficacy measures
 - **Perceived Stress Scale and Food Cravings Questionnaire**
- Secondary measures
 - Oxford Happiness Questionnaire, Three-Factor Eating Questionnaire, serum cortisol, body weight, and body mass index
- Ashwagandha group had significant improvements in primary and secondary measures; no adverse effects
- **“Ashwagandha root extract might help body weight management in adults under chronic stress.”**

Ashwagandha and Weight Management?



Choudhary D, et al. *J Evid Based Complementary Altern Med* 2017;22:96-106.

Choudhary D, et al. *J Evid Based Complementary Altern Med* 2017;22:96-106.

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Ashwagandha and Joint Pain

- Animal models show ashwagandha has analgesic, anti-inflammatory, and chondroprotective effects
- **60 patients with knee pain** randomized to ashwagandha extract (250 mg or 125 mg root + leaves) or placebo twice daily for 12 weeks
- **At 12 weeks, significant reduction in** Western Ontario and McMaster Universities Osteoarthritis Index (**WOMACK**) and **knee swelling index noted in 250 mg BID group ($P<.001$) and 125 mg BID group ($P<.05$)**
- Pain significantly reduced in both groups ($P<.01$)
- Group taking 250 mg BID showed earliest efficacy at 4 weeks
- **Well tolerated**



Ramakanth GS, et al. *J Ayurved Integr Med* 2016;7:151-157

Ramakanth GS, et al. *J Ayurved Integr Med* 2016;7:151-157.

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Summary of Other Studies

- Review 5 studies: greater improvements on **anxiety and/or stress scales** than placebo¹
- RCT in healthy subjects showed improved cognitive and psychomotor performance²
- No significant drug interactions
- **Stressed, poor sleep, pain, emotional eater**

1. Pratte MA, et al. *J Alt Complement Med* 2014;20:901-908; 2. Pingali U, et al. *Pharmacognosy Res* 2014;6(1):12-18.



1. Pratte MA, et al. *J Alt Complement Med* 2014;20:901-908; 2. Jhareshish SP, et al. *Complement Ther Med* 2016;27:25-29; 3. Dongre S, et al. *Biomol Res* 2015;24:154-154; 4. Pingali U, et al. *Pharmacognosy Res* 2014;6(1):12-18.

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Ashwagandha and Thyroid

- 50 subjects **subclinical hypothyroidism** and elevated TSH levels (4.5-10 μ IU/L) ages 18-50 years age randomized to 600 mg/d ashwagandha extract (n = 25) or placebo (n = 25) for 8-weeks
- **Ashwagandha effectively normalized serum thyroid indices during time period (TSH, T4 and T3).**



Sharma, A.K. Efficacy and safety of ashwagandha root extract in subclinical hypothyroid patients: a double blind randomized placebo-controlled trial. *J Altern Complement Med* 2018; 24(3):243

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Rhodiola rosea L.

- Perennial with thick leaves and stem; yellow, fragrant flowers
- Part Used: **root and rhizomes**
- Used traditionally to increase **physical endurance, work productivity, longevity, resistance to high altitude sickness, and for fatigue, GI ailments, and nervous disorders.**
- **Anti-fatigue agent** in Sweden, most commonly used psychostimulant in officially registered herbal medicinal products.



Khana K, et al. Golden root: A wholesome treat of immunity. *Biomed Pharmacother* 2017; Mar;87:496-502.

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Table 1
Randomized and non-randomized clinical trials of Rhodiola in mental fatigue, stress-induced fatigue, fatigue syndrome and asthenia.

Adaptogen (active principle)	Indication for use and/or pharmacological activity	Number of trials	Number of subjects	Grade of recommendation	
				EMEA ^a	NSR ^b
<i>Rhodiola rosea</i> (Rhodiolidide)	Mental fatigue: Rhodiola can improve attention in cognitive function in fatigue after single and repeated administration.	3	257	A	A
	Fatigue syndrome: Rhodiola has anti-fatigue effect in physical, emotional, and mental exhaustion.	1	60	A	B
	Mild depression: Rhodiola has an anti-depressive effect	1	89	A	B
	Stimulating effect: Rhodiola can improve mental performance after single dose administration	3	419	B	B
	Stimulating effect: Rhodiolidide can improve mental performance after single dose administration	1	46	B	

^a Grade of recommendation based on the European Medicines Agency Assessment Scale [EMA/HMPC/104613/2005]:
 Grade A. Evidence levels quality Ia, Ib - Requires at least one randomized controlled trial as part of the body of literature of overall good consistency addressing the specific recommendation;
 Grade B. Evidence levels IIa, IIb, III - Requires availability of well-conducted clinical studies but no randomized clinical trials on the topic of recommendation;
 Grade C. Evidence level IV - Requires evidence from expert committee reports or opinions and/or clinical experience of respected authorities but indicates absence of directly applicable studies of good quality.

^b Grade of recommendation according to Natural Standards Evidence-Based Validated Grading Rationale (Bosch and Ullrich, 2005):
 Grade A. Strong scientific evidence - Statistically significant evidence derived from: (i) more than two properly conducted randomized controlled trials (RCT), or (ii) one properly conducted randomized controlled trial, and one properly conducted meta-analysis, or (iii) multiple RCTs with a clear majority of the properly conducted trials and with supporting evidence in basic science, animal studies or theory;
 Grade B. Good scientific evidence - Statistically significant evidence derived from: (i) one or two properly conducted randomized trials, or (ii) one or more properly conducted meta-analysis, or (iii) more than one cohort/case control/non-randomized trials and with supporting evidence in basic science, animal studies or theory.

Panossian AG. Rosenroot (*Rhodiola rosea*): Traditional use, chemical composition, pharmacology and clinical efficacy. *Phytotherapy* 2010; 17(7): 481-93

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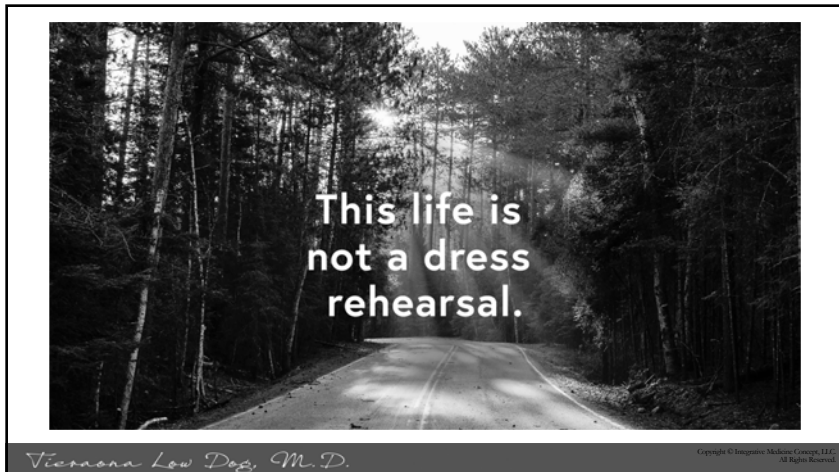
Energy from the Ground Up

- Clinicians must be good detectives when it comes to addressing the needs of patients/clients who report low energy and feeling tired.
- Rule out medical conditions that could be contributing to fatigue (e.g., anemia, thyroid, auto-immunity, sleep apnea, restless legs, depression, micronutrient deficiencies, dehydration, and more).
- Partner with patients to create lifestyle interventions that are most likely to yield positive benefits and fit with finances, culture, time, age, etc.

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Movement: *Sound Body = Sound Mind*

- Exercise and physical activity keys to long and healthy life. **Reduces risk of diabetes, heart disease, osteoporosis.**
- Movement **increases blood flow to brain, release compounds that diminish pain, elevate mood and reduce tension.**
- More than **400 studies** show *exercise can reduce risk depression/anxiety.*



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High levels of stress hormones linked to high blood pressure, high cholesterol, high blood sugar, insulin resistance, insomnia, weight gain, headaches, mood swings, depression, and increased risk of infections.

Scientists believe that prolonged elevation of stress hormones may shorten our lifespan by 15 years.

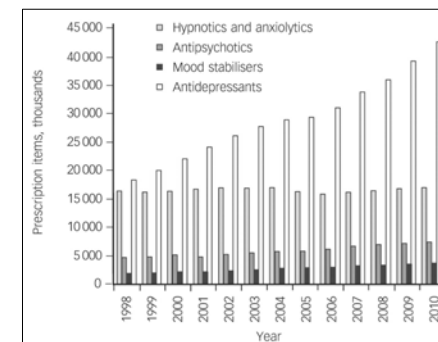


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Trends in prescriptions of major classes of psychiatric drugs 1998–2010.



Stephen Ilyas, and Joanna Moncrieff BJP 2012;200:393-398

THE BRITISH JOURNAL OF PSYCHIATRY

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The World Today

- We strongly emphasize **biological explanation** for depression and anxiety, as evidenced by **extensive use of antidepressants and anxiolytics**.
- There remains **little** focus on **physiological, nutritional, societal, communal, familial and spiritual underpinnings**.
- “I take my Effexor and go to a **job I hate** and then home to a house full of **kids** that are **out of control** and a husband that **barely talks to me**. Is my depression better? **Yea, I guess.**”
- **Complex world**. We often have unrealistic expectations. **Isolation** is common, **financial problems**, **lack of purpose, meaning**, a sense of **despair, hopelessness** – the world has less color and texture.

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What is Your Body Telling You?

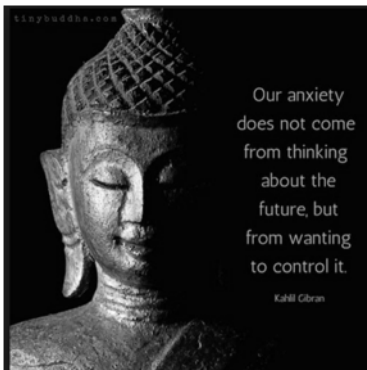


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Relax



- A good way to deal with **anxiety and high stress** is to **occasionally sidestep the analytical part of your brain** by practicing **relaxation, meditation and/or using guided imagery**.

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Mindfulness Meditation

- Helps with **stress perception and pain intensity, elevates mood**. Quiets stream of thoughts.
- Long-time meditators have greater activation of areas responsible for **sustaining attention, processing empathy, integrating emotion and cognition**.
- Review of **47 trials** found that meditation improves:
 - Anxiety
 - Depression
 - Pain



Goyal M, et al. *JAMA Intern Med* 2014; 174(3):357-68

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Meditation Resources

- **Insight Timer** - ~4,000 guided meditations from more than 1,000 teachers (self-compassion, nature, stress, podcasts and more). More than 750 meditation music tracks. Free.
- **Headspace** – good for beginners with 10 minute meditations. Free.
- **Mindfulness App** – nice 5 day guided mediation program to get you started. Can be personalized and integrated into other health apps. Free.
- **Calm** – nice app for relaxation and bedtime stories....

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Loneliness, Social Isolation & Your Health

- 148 studies on the effects of social isolation on health found it is:

- As bad as smoking 15 cigarettes a day.
- As dangerous as being an alcoholic.
- As harmful as never exercising.
- Twice as dangerous as obesity.

Cacioppo JT, et al. *Ann N Y Acad Sci* 2011; 1231:17-22
Holt-Lunstad J, et al. *PLoS Med* 2010; 7:e1000316



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"But until a person can say deeply and honestly, 'I am what I am today because of the choices I made yesterday,'that person cannot say, 'I choose otherwise.'"

Stephen Covey



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