Favorite Supplement Brands

- Thorne (wide range)
- Pure Encapsulations (wide range)
- NOW (wide range, value price)
- MegaFood (multivitamins, prenatal)
- NatureMade (third party tested, good quality)
- Nordic Naturals (omega 3, kid's multi gummies)
- Carlson's (omega 3)
- Smarty Pants and Zarbees (for children)
- Nature's Way, Gaia, and Traditional Medicinals for herbal products.

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Favorite Protein Bars

- **RX Bar** (12 g protein, O g added sugar, 5 g fiber)
- Aloha Plant Based (14 g protein, 13 g fiber)
- Layers Protein Bar (15 g protein, 3 g added sugar)
- Epic Meat Bars (9-15 g protein, 0 added sugar)
- **Clif Bar Whey Protein** (14 g prot, 3 g fiber, 5 g sugar)
- Kind Protein (12 g protein, 5 g fiber, 6 g sugar)
- Naked Nutrition Peanut Butter (15 g protein, 6 grams fiber, 13 grams sugar)



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Resiliency in Uncertain Times



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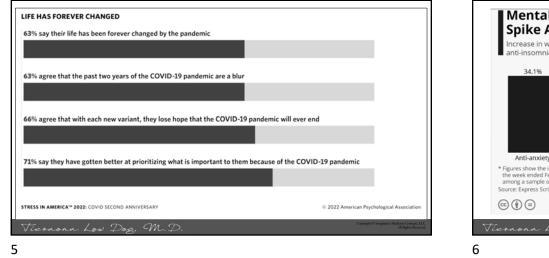
Chair: US Pharmacopeia Dietary Supplement Admissions, Evaluation and Labeling Expert Committee Clinical Assoc. Professor of Medicine University of Arizona (retired)

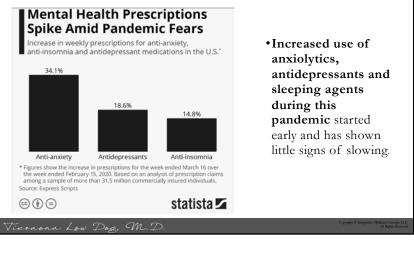
Guiding Teacher: NY Zen Center Fellowship in Contemplative Medicine

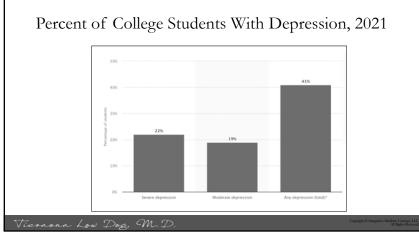
Tieraona Low Dog, MD

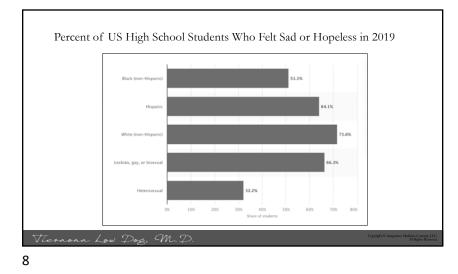
National Geographic's Lije Is Your Best Medicine Healthy At Home Fortify Your Life Guide to Medicinal Herbs

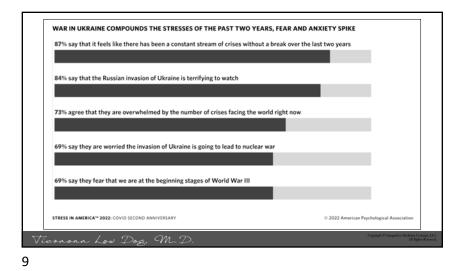
www.DrLowDog.com



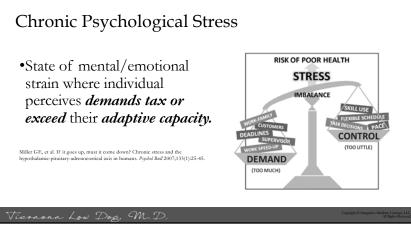


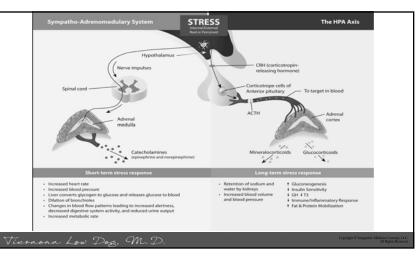












- Cortisol has circadian pattern, rapidly rising after awakening, peaking after 30– 45 min, then gradually declining over course of the day.
- Depression associated with alterations in diurnal cortisol curve: blunted cortisol awakening response and/or flattening of the diurnal cortisol curve.
- Flattening of diurnal cortisol curve is also associated with insulin resistance and type 2 diabetes mellitus.

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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	Time of Day		

Summary of diamal cortical parameters. Shown is (A) what-op cortical (time 0), (0)) cortical awakening response (-) O minis, (C) carry-keine show cortical mode in the 2 AL, (D)) actication show cortical, (A) heavis babelinnis, (2) bablinne cortical, (P) stral AUC (0) min to bablinniy cortical, and ((r)) overall-decline shope cortical (0) min to bablinne, excluding 30-min corticaly. Reprinted, with permission, flown Joseph et al.^(B)

> tive Medicine Concept, LLC. All Rights Reserved.

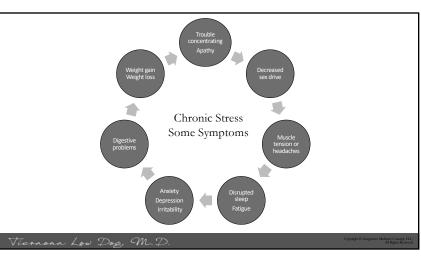
> > 14

Impairs Feedback Loops

Health Outcome Subtype	1	Statistics for each study				Correlation and 95% CI				
	Correlation	Lower limit	Upper limit	Z-Value	p-Value					
Anxiety	-0.084	-0.173	0.006	-1.836	0.066	1	1	•	1	- 1
Cancer	0.231	0.143	0.315	5.065	0.000			-		
CVD	0.098	-0.034	0.226	1.460	0.144			•		
Depression	0.106	0.047	0.165	3.494	0.000			•		
Externalizing	0.254	0.126	0.373	3.834	0.000					
Fatigue	0.167	0.048	0.281	2.741	0.006					
Inflammation/Immune	0.288	0.091	0.464	2.833	0.005					
Internalizing	0.129	0.037	0.219	2.741	0.006			•		
Obesity/BMI/Adipose	0.093	0.035	0.150	3.157	0.002			•		
Other Mental Health	0.176	0.012	0.330	2.096	0.036			-		
Other Physical Health	0.125	0.042	0.206	2.958	0.003			•		
						-1.00	-0.50	0.00	0.50	1.
						s	teeper Slo	e F	latter Slop	e

From: Adam EK, et al. Diurnal Cortisol Slopes and Mental and Physical Health Outcomes: A Systematic Review and Meta-analysis Psychoneuroendocrinology. 2017 Sep; 83: 25–41.

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• Chronic stress impairs feedback mechanisms that return hormonal

systems to normal, resulting in chronic elevation/dysregulation in

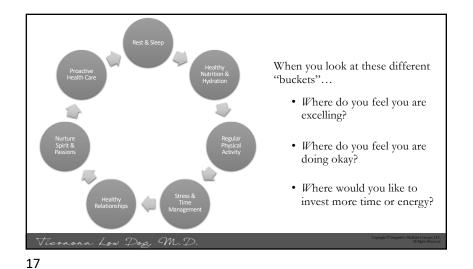
• Glucocorticoids and proinflammatory cytokines enhance the

depression and possibly other neurological disorders.

conversion of tryptophan to kynurenine; decreasing synthesis of

brain serotonin and melatonin - a link between stress, inflammation

levels of cortisol, adrenal hormones, and inflammatory markers.



Persistent Stress Takes a Toll



• *Regardless of what we call it,* millions of people suffer from these clusters of symptoms, and a personalized plan that involves stress management, dietary counseling, supplements, exercise, lifestyle changes, and sometimes medication can lead to better quality of life.

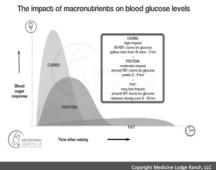
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Refined Carbohydrates

- If you overdo processed/refined carbs, blood sugar goes up, insulin is released, store extra glucose as fat, drives inflammation.
- Blood sugar goes up and then can plummet, leaving one tired and disrupting sleep/wake cycle.
- Eating lots of carbs makes one crave lots of carbs (dopamine rush).
- High carb/sugar diets cause dysbiosis and degrade intestinal barrier, leading to systemic inflammation.



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Glycemic Load & Mood

 82 healthy weight or healthy overweight or obese, adults enrolled in 28 day randomized, crossover-controlled feeding study.

- Compared to low GL diet, a high GL diet resulted in:
 - 38% higher score for *depressive* symptoms (P = 0.002)
- 55% higher score for *total mood* disorder (P = 0.05)
- 26% higher score for *fatigue/inertia* (P = 0.04)

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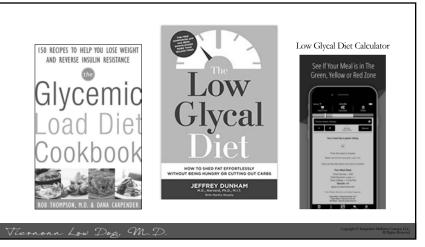
Breymeyer KL, et al. Appetite 2016; Dec 1;107:253-259.

Too Much Sugar, Not Enough Fiber

- Consumption of *sweetened beverages and* refined foods are associated with an increased risk of depression in numerous longitudinal studies.
- Women's Health Initiative (n = 87,618 women): higher consumption of dairy products, fiber, fruit (not juice), and vegetables significantly associated with LOWER odds of depression; refined grain consumption associated with INCREASED odds of depression in menopausal and post-menopausal women.



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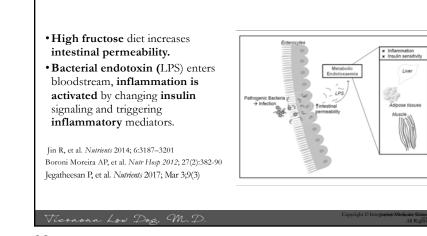
Enteric Nervous System: The Second Brain



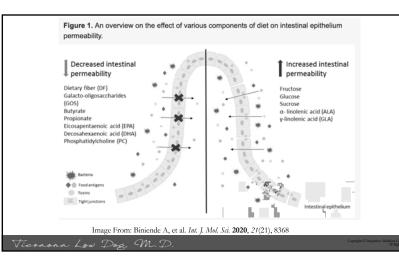
100 million nerve cells from esophagus to rectum: controls digestion and propulsion through GI tract. Gut bacteria produce neurotransmitters: dopamine, serotonin, norepinephrine, GABA, acetylcholine, melatonin; critical for mood, sleep, anxiety, concentration, reward, and motivation.

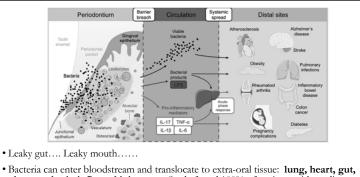
- Serotonin is associated with **depression and** happiness—90% is made in GI tract, not the brain.
- Gut microbiota can change *how* our brains react to events/stressors.

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Bacteria can enter bloodstream and translocate to extra-oral tissue: **lung, heart, gut, placenta, brain inflamed joints, etc.** Study found 100% of patients with cardiovascular disease had *P. gingivalis* arterial colonization, found in brains of those with AD.

From: Konkel JE, et al. Distal Consequences of Oral Inflammation Front. Immunol 2019; https://doi.org/10.3389/fimma.2019.01403



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Human Microbiome Project

- Massive NIH research initiative cataloging microorganisms living in and on our body starting in 2007.
- Led to *rapidly growing appreciation* for incredible and diverse impact these organisms have on our health and well-being.
- Gut bacteria produce vitamins, break down food; their presence or absence linked to obesity, inflammatory bowel disease, IBS, anxiety, depression, food allergies, neuroinflammation, GI infections, HTN, diabetes, metabolic syndrome, and more.
- Our resiliency, our ability to recover quickly from stressors, may be a function of *which bacteria inhabit or don't inhabit our gut*.

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Eat MORE fiber, Eat LESS sugar



Bibbo S, et al. *Eur Rev Mul Pharmanl Sci* 2016, Nov;20(22):4742-4749. Weigh CAM, et al. *Expert Rev Continention* [Apartal 2017 Nov;11(11):1031-1045. Young RP, et al. *Ampli Chapter Cell Mull Biol* 2016;54:161-169. Kranz S, et al. *Adv Natr* 2012, 3(1):47-53.

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- Low fiber, high sugar diets reduce Bifidobacterium and degrade barrier function, key part of innate immunity.
- Loss of barrier function increases inflammation, neuroinflammation, depression and anxiety.
- Adequate Intake Fiber:
 38 g/d men, 26 g/d women

Fruits	Serving size	Total fiber (grams)*	Vegetables	Serving size	Total fibe (grams)*
			Green peas, boiled	1 cup	9.0
Raspberries	1 cup	8.0	Broccoli, boiled	1 cup	5.0
Pear	4 manufactures			chopped	
ear 1 medium 5.5	5.5	Turnip greens, boiled	1 cup	5.0	
Apple, with skin	1 medium	4.5	Brussels sprouts, boiled	1 cup	4.0
Banana	1 medium	3.0	Potato, with skin, baked	1 medium	4.0
			Sweet corn, boiled	1 cup	3.5
Orange	1 medium	3.0		·P	
	, medium		Cauliflower, raw	1 cup chopped	2.0
Strawberries	1 cup	3.0	Carrot, raw	1 medium	1.5

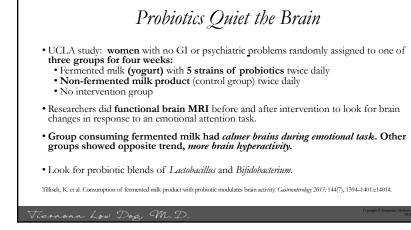
https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/high-fiber-foods/art-20050948

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Grains	Serving size	Total fiber (grams)*	Legumes, nuts and seeds	Serving size	Total fiber (grams)*
Spaghetti, whole-wheat, cooked	1 cup	6.0	Split peas, boiled	1 cup	16.0
Barley, pearled, cooked	1 cup	6.0	Lentils, boiled	1 cup	15.5
Bran flakes	3/4 cup	5.5	Black beans, boiled	1 cup	15.0
Quinoa, cooked	1 cup	5.0	Baked beans, canned	1 cup	10.0
Oat bran muffin	1 medium	5.0	Chia seeds	1 ounce	10.0
Oatmeal, instant, cooked	1 cup	5.0	Almonds	1 ounce (23 nuts)	3.5
Popcorn, air-popped	3 cups	3.5	Pistachios	1 ounce (49	3.0
Brown rice, cooked	1 cup	3.5		nuts)	
British, whole-whist	1 slice	3.3	Sunflower kernels	1 ounce	3.0

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Beverages

- Your primary beverage of HYDRATION should be water.
- Add fruit, cucumbers, mint leaves
- Make your own **"bubbly"**
- **Coffee and tea** are fine (3–4 cups/d). Watch caffeine if *sensitive* to its effects.
- Herbal tisanes lovely addition for an afternoon or evening beverage
- Traditional Medicinals and Yogi have many excellent offerings
- Alcohol: limit 1 serving/d if you drink

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Exercise and Health

- 80 million Americans 6 years and older are entirely inactive
- Relationship between physical activity and cardiovascular, metabolic, neurological, immunological and bone health well-established.
- Shown to reduce the harmful effects of stressors when performed at moderate intensities.
- Meta-analysis of **398 studies** consistently shows exercise benefits **mood, depression and anxiety.**

Deslandes, et al. Neuropsychobiology 2009; 59(4):191-8 Rebar AL, et al. Health Psychol Rev 2015; Mar 5:1-78

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Sleep: The Basics



- 1. Make your bedroom dark, quiet, and cool. Invest in good mattress and pillows.
- 2. Turn off electronics and/or use blue light blocking technologies.
- 3. Sleep Cycle for Phone
- 4. Watch the caffeine. Discontinue by 10 AM if trouble sleeping.
- 5. Power naps: limit to 20-30 minutes in duration.
- 6. Limit alcohol intake. Don't go to bed hungry.
- 7. Find ways to deal with "worries"
- 8. Get sleep evaluation if sleep disruption and/or daytime fatigue continues.
- 9. 2 mg controlled-release melatonin 1-2 hrs. before bed (4-6 weeks and re-evaluate).

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To Sleep, to Fall, to Let Go, to Open...

- An abrupt shutdown of our perceptual interaction with environment.
- To fall asleep is an act of faith, a deep trust that whatever is going on in life, you can let it go, put it on hold so that you can **sleep** deeply and **awaken** with the energy and resilience to face whatever lies ahead.
- Letting go can be hard.

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Essential Oils for Relaxation/Sleep

- Dilute 1–2 drops essential oil in 1 teaspoon carrier oil (almond, olive, coconut) before using on your skin.
- Put 12 drops essential oil in ½ ounce water and ½ ounce vodka and put in mister. Mist onto pillowcase/bedding before bed. Mist into room to reduce tension.
- Diffusers are great way to deliver aromatherapy into your room (love Urpower)
- My favorites for relaxation and sleep are:
 - Lavender
 - Rose
 - Jasmine Ylang-ylang
- Neroli
- Chamomile
- Chamomi

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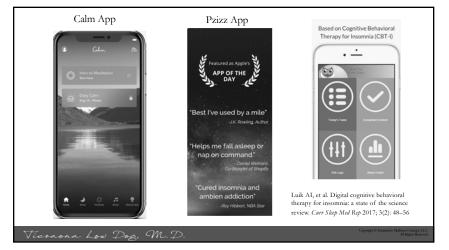
Oral Lavender Essential Oil (Lavendula angustifolia)

Meta-analysis randomized, double-blind, placebo-controlled trials show Silexan, essential oil from lavender licensed in 14 countries worldwide, has pronounced anxiolytic effect and beneficial effect on sleep. Adverse events similar to placebo.

Moller HJ, et al. Efficacy of Silexan in subthreshold anxiety: meta-analysis of randomised, placebo-controlled trials. *Eur Arch Psychiatry Clin Neurosis* (2017). https://doi.org/10.1007/s00406-017-0852-4

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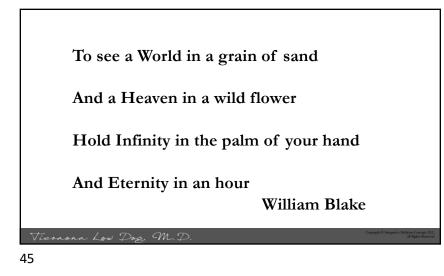




- Reflection
 - What type of physical activity/exercise do you enjoy the most?
 - Has your level of physical activity changed since the pandemic began? Is so, in what way?
 - Do you feel rested when you wake up in the morning? Do you lay awake at night? Wake up early?
 - Has your sleep changed over the past year?
 - Share how this has impacted your sense of well-being and the one thing you could do to improve your sleep.

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I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived.

Henry David Thoreau

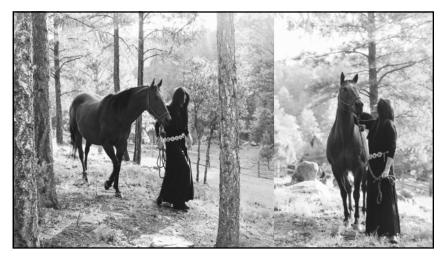
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Whoever you are, no matter how lonely, the world offers itself to your imagination, calls to you like the wild geese, harsh and exciting – over and over announcing your place in the family of things.

Mary Oliver, Wild Geese

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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? Yeah, I guess."
- Complex world. We often have unrealistic expectations. Isolation is common, financial problems, lack of purpose, meaning, a sense of despair, hopelessnessthe world has less color and texture.

What We Think Matters



- Is it a challenge or a threat?
- Do I have the resources to handle it?
- Are my thoughts helpful/ dysfunctional?
- What is my self-talk? Where does it come from?
- Is this what I was taught or what I believe?

Loneliness, Social Isolation, & Your Health

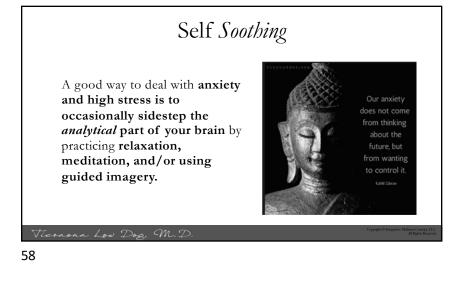
• 148 studies on the effects of social isolation on health found it is:

- Equal to smoking 15 cigarettes a day
- As dangerous as being an alcoholic
- As harmful as never exercising
- Twice as dangerous as being obese



Valtorta NK, et al Loneliness and social isolation as risk factors for coronary heart disease and s Cacioppo JT, et al. Ann NY Acad Sci 2011; 1231:17-22

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Mindfulness Meditation

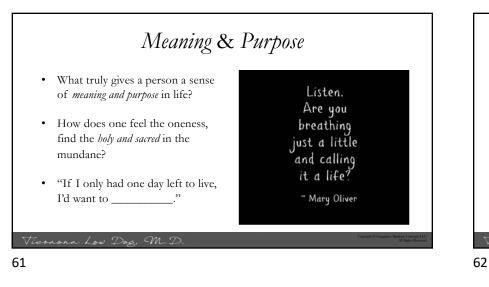
- Helps with stress perception and pain intensity, elevates mood. Quiets stream of thoughts.
- · Long-time meditators have greater activation of areas responsible for sustaining attention, processing empathy, integrating emotion and cognition.
- · Review of 47 trials found that meditation improves:
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

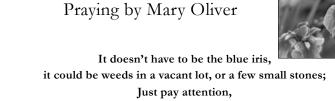


Goyal M, et al. JAMA Intern Med 2014; 174(3):357-68

Resources for Stress Reduction

- 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 more advanced meditator. Can sort by location, activity and/or emotion. (small monthly fee, premium is \$30/yr.)





then patch a few words together and don't try to make them elaborate, this isn't a contest but the doorway into thanks, and a silence in which another voice may speak.

"You must have a room, or a certain hour or so a day, where you don't know what was in the newspapers that morning, you don't know who your friends are, you don't know what you owe anybody, you don't know what anybody owes to you.



This is a place where you can **simply experience** and bring forth **what you are and what you might be.** This is the place of **creative incubation. At first** you may find that **nothing happens there**. But if you have a **sacred place and use it, something** eventually will happen."

- Joseph Campbell





- 1. Move more. Whether it's the 7-minute workout, cycling, yoga, or taking long walks—one of surest ways to maintain heart, brain, bone, and muscle health is daily exercise. It's not optional. *Just do it.*
- Eat food. Minimally processed, low glycemic load, diverse, and largely plant-based diet. Organic, local, and/or humanely raised when possible. Avoid endocrine disruptors. And stay hydrated. Water should be primary beverage for hydration.
- 3. Meditate. Meditation widens the gap between trigger and response, allowing you to feel a greater calm and awareness. It's a **game changer** for almost anyone.
- 4. Stay connected. Social isolation and loneliness is as dangerous as being an alcoholic or being obese. Invest in your friends and family.
- 5. Take a multi. Many lack when it comes to key micronutrients. Age/gender appropriate.
- 6. Be tech smart. Technology makes life easier and more complex. Use **blue light blocking** glasses at night, make one day each week **tech free, limit email in the evening.**
- 7. Nurture spirit. The search for meaning and purpose is a fundamental part of being human. A richly nourished inner life is a source of strength during hard times. Look inward. Honor mystery.

Vieraona Low Dog, M.D.

