

"When we are born, we are set upon a path and that path is our medicine road.

All the choices we make along the way affect our thoughts, our relationships, our health, and the world around us."

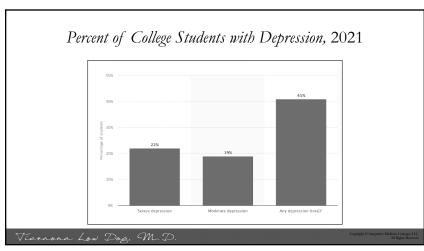
Grandma Jo

Vienna Los Dao, M.D.

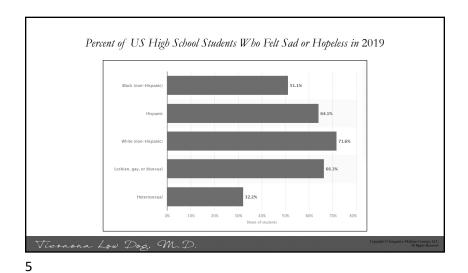
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■ Mental Health Prescriptions Spike Amid Pandemic Fears Increase in weekly prescriptions for anti-anxiety, anti-insomnia and antidepressant medications in the U.S.* During this pandemic, 34.1% increased use of anxiolytics, antidepressants, and sleeping agents started early 14.8% and has shown little signs of slowing. Anti-anxiety Antidepressants * Figures show the increase in prescriptions for the week ended March 16 over the week ended February 15, 2020. Based on an analysis of prescription claims among a sample of more than 31.5 million commercially insured individuals. statista 🗷 (c) (i) (=)



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RISK OF POOR HEALTH

STRESS

IMBALANCE

SKILL USE

FEXIBLE SCHEDULE

FASK DECISIONS PACE

CONTROL

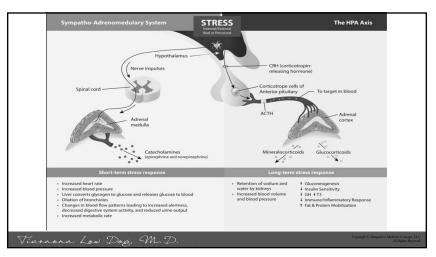
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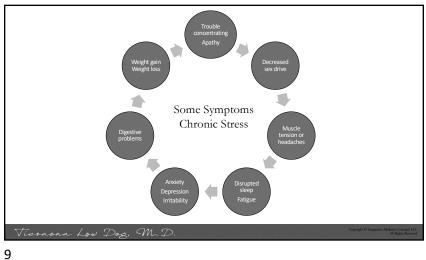
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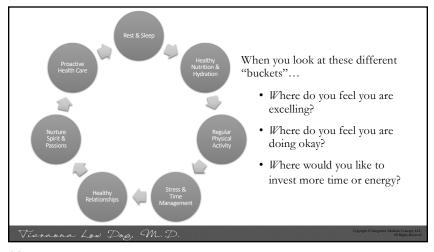


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Persistent Stress Takes a Toll Millions of people suffer from these clusters of symptoms. A personalized plan fatigue bills money stress that includes learning to manage stress, eat nourishing food, get regular problems work DEPRESSIGN mood swings PRESSURE failur worry upset headache pair health sadness EXHAUSTED ANXIOLUV tension despair panic angst MENTAL OVERLOAD nervous strain tense NERVES relationships physical activity, maintain healthy relationships, consider basic family change negative worrying mood disorders irritability temper agitated overwhelmed loneliness FATIGUE bills money STRESS problems work depression mood swings PRESSURE failure supplementation, and sometimes take medication, can lead to better quality of life. worry upset HEADACHE pain

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Glycemic Load & Mood

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Mood Effects Food Choice and Vice Versa

- How we feel affects what we eat and what we eat affects the way we feel.
- Drinking sweetened beverages and eating more refined foods associated with an increased risk of depression in longitudinal studies.
- Women's Health Initiative (n = 87,618 women): Women with a higher intake of **dairy products**, **fiber**, **fruit** (not juice), and **vegetables** had significantly **LOWER** odds of depression; women with higher *refined grain* consumption had **INCREASED** *odds of depression*.



AlAmmar WA, et al. Food and Mood: the Corresponsive Effect Carr Natr Rep 2020 Sep;9(3):296-308.

- 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:

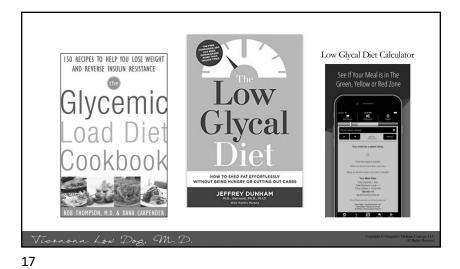
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- 38% higher score for depressive symptoms (P = 0.002)
- 55% higher score for total mood disorder (P = 0.05)
- 26% higher score for fatigue/inertia (P = 0.04)



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



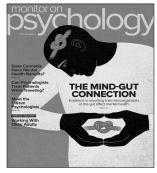
Human Microbiome Project

- 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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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.

Cappight & Integrative Medicare Councy, LD

Past theory **Present discovery** From: Liang S, et al. Int J Mol Sci 2018 Chronic Healthy Chronic **Psychotherapy** stress stress **Antibiotic Psychobiotics Poor diet Prebiotics** Medication Susceptibility Unhealthy **FMT** lifestyle genes **Psychological** Microbiota-gut-brain axis dysfunction dysfunction

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**Two Bugs Noticeably Absent*

*Flemish Gut Flora Project (1054 healthy adults): 173 diagnosed with depression or poor quality-of-life intake; research team compared their microbiomes with those other participants.

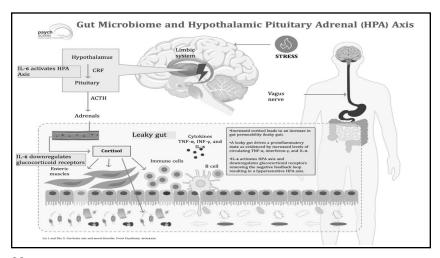
*Two kinds of microbes, *Copronacus* and *Diallister*, missing from microbiomes of depressed subjects, but not those with a high quality of life. Findings true, even after age, sex, or antidepressant use, all of which influence the microbiome, were accounted for.

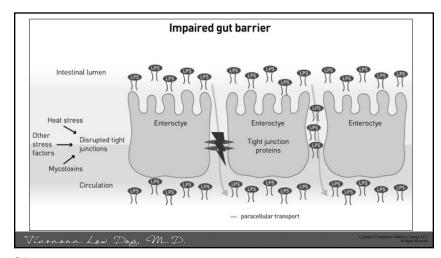
*1064 Dutch people: researchers found same two species missing among those who were depressed but not in those with high quality of life.

Intriguing...

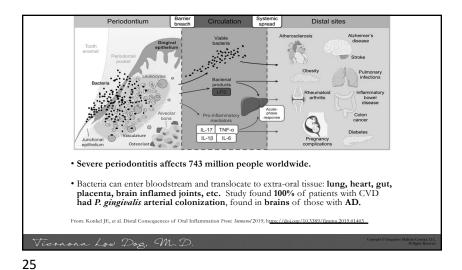
*Valles-Colomer M, et al. The neuroactive potential of the human gut microbiota in quality of life and depression. *Nature Microbiology* 2019; 4: 623–632

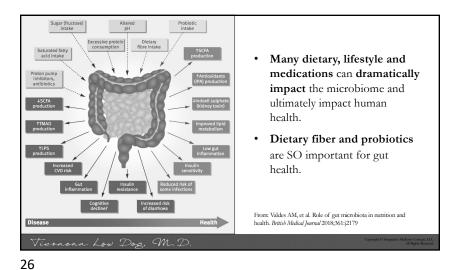
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Probiotics

- · Live microorganisms when administered in adequate amounts confer a health benefit to the host.
- Probiotics support the immune response via enhanced phagocytic capacity and activity, stimulation of specific immunoglobulins, and maintenance of intestinal barrier function.



Arunachalam K, Gill HS, Chandra RK. Enhancement of natural immune function by dietary consumption of Bifidobacterium lactis (FIN019). Eur J Clin Nutr. (2000) 54:263-7.

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Probiotics Quiet the Brain

- UCLA study: women with no GI or psychiatric problems randomly assigned to one of three groups for four weeks:
 - Fermented milk (yogurt) with 5 strains of probiotics twice daily
 Non-fermented milk product (control group) twice daily

 - · No intervention group
- Researchers did functional brain MRI before and after intervention to look for brain changes in response to an emotional attention task.
- Group consuming fermented milk had calmer brains during emotional task. Other groups showed opposite trend, more brain hyperactivity.
- Look for probiotic blends of Lactobacillus and Bifidobacterium.

Tillisch, K. et al. Consumption of fermented milk product with probiotic modulates brain activity. Gastroenterology 2013; 144(7), 1394-

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Eat MORE fiber, Eat LESS sugar



• Low fiber, high sugar diets reduce Bifidohacterium 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

Bibbo S, et al. Eur Rev Mul Pharmand Sci 2016; Nov;20(22):4742-4749.
Wegh CAM, et al. Expert Rev Gastmentent Hipstal 2017 Nov;11(11):1031-1045.
Young RP, et al. Am J Respir Call Mul Biol 2016;54:161-169.
Kranz S, et al. Ads Natz 2012;3 (1): 47-53.

Vieraona Low Log, W.

Serving Total fiber Fruits (grams)* size Raspberries 1 cup Pear 1 medium 5.5 Apple, with skin 1 medium 4.5 1 medium Orange 3.0 1 medium 3.0 Strawberries 1 cup

Vegetables	Serving size	Total fiber (grams)*
Green peas, boiled	1 cup	9.0
Broccoli, boiled	1 cup chopped	5.0
Turnip greens, boiled	1 cup	5.0
Brussels sprouts, boiled	1 cup	4.0
Potato, with skin, baked	1 medium	4.0
Sweet corn, boiled	1 cup	3.5
Cauliflower, raw	1 cup chopped	2.0
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)*
Spaghetti, whole-wheat, cooked	1 cup	6.0
Barley, pearled, cooked	1 cup	6.0
Bran flakes	3/4 cup	5.5
Quinoa, cooked	1 cup	5.0
Oat bran muffin	1 medium	5.0
Oatmeal, instant, cooked	1 cup	5.0
Popcorn, air-popped	3 cups	3.5
Brown rice, cooked	1 cup	3.5
Bread, whole-wheat	1 slice	2.0

Legumes, nuts and seeds	Serving size	Total fiber (grams)*
Split peas, boiled	1 cup	16.0
Lentils, boiled	1 cup	15.5
Black beans, boiled	1 cup	15.0
Baked beans, canned	1 cup	10.0
Chia seeds	1 ounce	10.0
Almonds	1 ounce (23 nuts)	3.5
Pistachios	1 ounce (49 nuts)	3.0
Sunflower kernels	1 ounce	3.0

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

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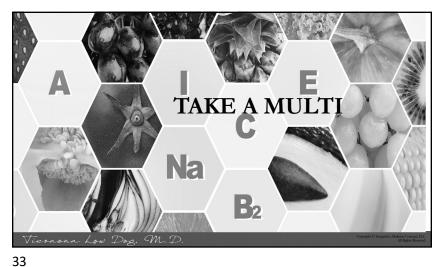
Beverages

- 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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Real State of Our Nutrition

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

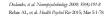


CDC: 2nd National Report on the Biochemical Indicators of Diet and Nutrition in the U.S. population

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Exercise & 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.







To Sleep is to Heal



- 1. Make your bedroom dark, quiet, and cool. Invest in good mattress and pillows.
- 2. Turn off TV, computers, tablets, and smart phones 1 hour before bedtime.
- 3. Avoid caffeine after 12:00 PM (e.g., coffee, tea, soda, chocolate).
- 4. Limit alcohol intake and don't drink within 2-3 hours of bedtime.
- 5. Try not to exercise within 2 hours of bedtime.
- 6. Consider a hot bath 1-2 hours before bedtime.
- 7. Try to not to eat right before bed. A glass of warm milk, bowl of cereal okay.
- 8. Keep same sleep schedule 7 days a week.
- 9. Get sleep evaluation if sleep disruption and/or daytime fatigue continues.

Cognitive Behavioral Therapy for Insomnia

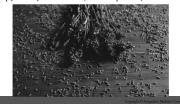
- American College of Physicians officially endorsed what multiple meta-analyses have found: **CBT for insomnia,** or CBT-I, is best treatment for chronic insomnia and should be first line of treatment.
- Sleepio, Somly, Calm Sleep School, provide in-person/on-line.
- There are purely digital programs if therapist not available.
- To find trained sleep specialist: https://behavioralsleep.org/index.php/directory/north-america/united-states



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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



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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 Neurosci (2017). https://doi.org/10.1007/s00406-017-0852-4



Calm App Pzizz App Based on Cognitive Behavioral Therapy for Insomnia (CBT-I) Best I've used by a mile lelps me fall asleep o Luik AI, et al. Digital cognitive behavioral therapy for insomnia: a state of the science review. Curr Sleep Med Rep 2017; 3(2): 48-56

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Reflection



- What type of physical activity/exercise do you enjoy the most? How often do you do it? What is getting in your way?
- Do you feel rested when you wake up in the morning? Do you lay awake at night? Wake up early? What have you tried? What could you do to improve your sleep and ensure adequate rest?

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What We Think Matters



- Is this 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?

Transport / Dea M. D.

Loneliness, Social Isolation, & Your Health

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,

 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.

• "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?

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

• Equal to smoking 15 cigarettes a day

familial, and spiritual underpinnings.

Yeah, I guess."

- As dangerous as being an alcoholic
- As harmful as never exercising
- Twice as dangerous as being **obese**



Valtoria NK, et al Loneliness and social isolation as risk factors for coronary heart disease and stroke systematic review and meta-analysis of longitudinal observational studies. Hunt. 2016 Jul 1;102(13):1000-1

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Self Soothing

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.



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



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

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Resources for Stress Reduction

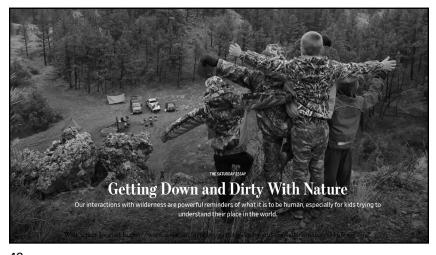
- · Calm Great app for guided meditation, bedtime stories, breathing exercises. (free to \$60 annual subscription)
- Insight Timer ~4,000 guided meditations >1,000 teachers (self-compassion, nature, stress, podcasts). Music tracks (free to \$5/mo.)
- · Headspace Meditation, videos, meditations music. (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.)

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, Walden

5/18/22



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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To see a World in a grain of sand

And a Heaven in a wildflower

Hold Infinity in the palm of your hand

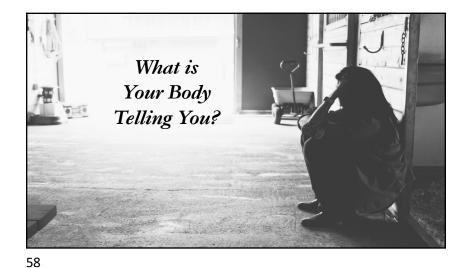
And Eternity in an hour......



William Blake, Auguries of Innocence

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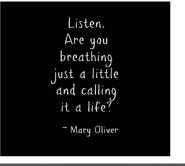




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Meaning & Purpose

- What truly gives a person a sense of *meaning and purpose* in life?
- How does one feel the oneness, find the holy and sacred in the mundane?
- "If I only had one day left to live, I'd want to ______."



a Low Doc. M.D.

"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

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It doesn't have to be the blue iris, it could be weeds in a vacant lot, or a few small stones; Just pay attention, 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.



Mary Oliver, Praying

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- 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.
- 2. Eat food. Minimally processed, low glycemic load, diverse, and largely plant-based diet. Avoid endocrine disruptors in plastics, skin care products, pesticides. 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.
- 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.



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