## Life is Your Best Medicine



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

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"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

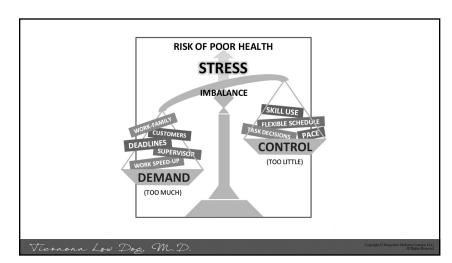


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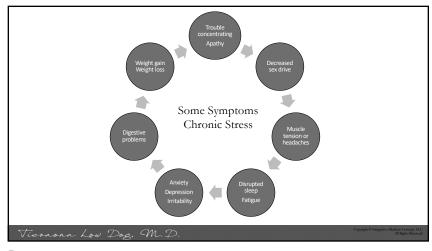
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Rest & Sleep

Healthy Nutrition & Hydration

Nurture Spirit & Passions

Nurture Spirit & Time Management

Stress & Time Management

Stress & Time Management

Nurture Spirit & Stress & Time Management

Stress & Time Management

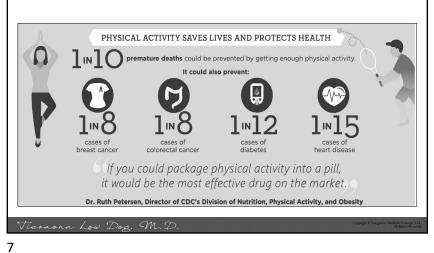
Stress & Time Management

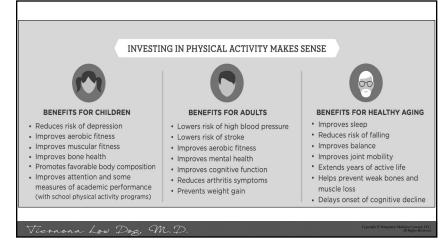
Stress & Time Management

Nurture Spirit & Stress & Time Management

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#### Nutrition Matters

Dietary factors are single most important cause of death in U.S.

- · Dietary factors
- Tobacco smoking
- High blood pressure
- High BMI
- High plasma glucose
- · Elevated cholesterol



JAMA 2018

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Sugar & Cardiovascular Risk

- Diets high in sugar increase total-, LDL-cholesterol, and triglycerides. To match cholesterol increases seen with *typical* sugar consumption, you'd need to consume saturated fat at a level ~40% of daily calories (typical intake is ~10 %).
- Human/animal data show high sugar diets impair glucose tolerance, cause insulin resistance, elevate uric acid, and alter platelet function.
- Added sucrose and fructose increases leptin resistance (satiety hormone), increasing
  weight gain; causes NAFLD, most common cause of liver disease in US, and is a strong
  risk factor for coronary heart disease.
- American Heart Association recommends women limit added sugar intake to 6 tsp/d (25 g); men limit to 9 tsp/d (37.5 g). Americans consume roughly triple this amount.

Chhabra R, et al. Mayo Clin Proc. 2013;88:1259-65; Vasselli JR, et al. Advances in Nutrition (Bethesda, Md) 2013;4:164-75.

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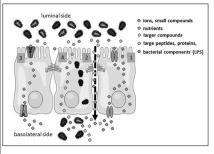
## Sugars

- Table sugar (sucrose): bond one glucose molecule and one fructose molecule
- HFCS: 55% fructose Agave syrup: 55-90% fructose. Coconut sugar: 35-40% fructose Honey: 21-43% Maple syrup: ~4%
- Every cell in our body readily converts glucose into energy. But liver cells are one of few types of cells that can convert fructose to energy.
- Large amounts of "free" fructose taxes the liver and increases risk of non-alcoholic fatty liver disease.





Sugars and Gut Health



• High blood sugar and excessive sugar intake disrupt the intestinal barrier, increase gut permeability and cause profound gut microbiota dysbiosis, resulting in a disturbance in mucosal immunity that enhances infection susceptibility and drives inflammation.

Amone D, et al. Clin Gastroenterol Hepatol 2022 Sep;20(9):1912-1924.e7.

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## Eat MORE fiber, Eat LESS sugar



Bibbo S, et al. Eur Rev Med Pharmacol Sci 2016; Nov;20(22):4742-4749. Wegh CAM, et al. Expert Rev Gastroenterol Hepatol. 2017 Nov;11(11):1031-1045. Young RP, et al. Am J Respir Cell Mol Biol 2016;54:161-169.

- 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)*
Raspberries	1 cup	8.0
Pear	1 medium	5.5
Apple, with skin	1 medium	4.5
Banana	1 medium	3.0
Orange	1 medium	3.0
Strawberries	1 cup	3.0

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

15 16

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

- Most concentrated source of energy—more than twice that of carbohydrates or proteins.
- Act as messengers in reactions that help control growth, immune function, reproduction, and basic metabolism.
- · Makes foods flavorful and help us feel full.
- Include a variety of healthy fats in the diet:
  - Extra virgin olive, sunflower, avocado, peanut oil
  - · Avocados

Healthy Fats

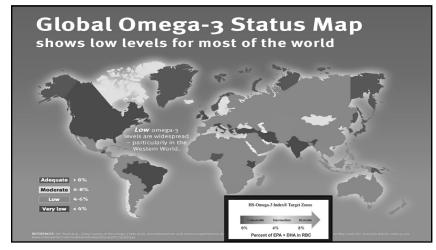
- Nuts
- Fish and seafood (omega-3 fatty acids)

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- Extra virgin olive oil made simply by crushing olives. Only cooking oil made without the use of chemicals and industrial refining.
- Must be produced entirely by mechanical means without the use of any solvents, and under temperatures that will not degrade the oil.
- Olive oil should be kept refrigerated for optimal shelf life.
- To find top olive oils that meet rigorous quality standards: www.bestoliveoils.com



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#### Low Fat or Full Fat Dairy and CVD Risk Factors



- Randomized study: 72 participants with metabolic syndrome
- Four-week run in limiting dairy intake to ≤3 servings/week of nonfat milk.
- Then randomly assigned for 12 weeks to one of the following diets:
- Continue limited-dairy diet

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- Diet containing 3.3 servings/d of low-fat milk, vogurt and cheese
- Diet containing 3.3 servings/d full-fat milk, yogurt, and cheese
- In men and women with metabolic syndrome, a diet rich in full-fat dairy had no adverse effects on fasting lipid profile or blood pressure compared with diets limited in dairy or rich in low-fat dairy. Dairy fat, when consumed as part of complex whole foods, does not adversely impact classic CVD risk factors.

Schmidt KA, et al. Am J Clin Nutr 2021 Sep 1;114(3):882-892

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#### Dietary Cholesterol

- In 2015, Dietary Guidelines for Americans eliminated historical upper limit of 300 mg dietary cholesterol/day and shifted to more general recommendation that cholesterol intake should be limited.
- DIETFITS trial randomized 609 adults aged 18-50 years with BMI 28-40 kg/m<sup>2</sup> to a healthy low carb (HLC) or healthy low-fat (HLF) diet for 12 months.
- At 12 months, participants consumed average  $460 \pm 227 \text{ mg/day of dietary}$ cholesterol (76% consumed more than 300 mg/d). No significant change in LDL-C, HDL-C, or triglycerides.
- Increase in dietary cholesterol partly due to replacing refined grains with eggs.

Vergara M, et al. Nutrients 2021 Jun 4;13(6):1935.

Whole Eggs, Choline and Metabolic Syndrome



- 23 participants with metabolic syndrome randomized to three whole eggs/day or choline supplement (~400 mg choline/d for both) for 4 weeks.
- After 3-week washout period, allocated to the alternate treatment.
- During egg period: higher concentrations vitamin E and selenium noted (p < 0.01).
- No change in plasma total, LDL-, or HDL-cholesterol, triglycerides, or glucose, compared to baseline or between treatments.
- Interleukin-6 was reduced in both groups, while whole eggs also lowered Creactive protein, insulin, and insulin resistance compared to baseline.

DiBella M, et al. Nutrients 2020 Oct 13;12(10):3120.

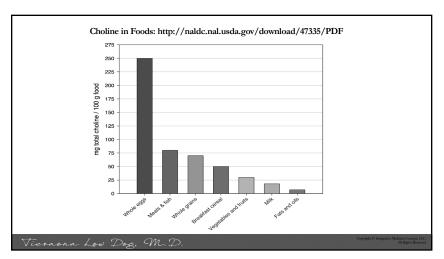
#### Choline

- · American Congress of Obstetricians and Gynecologists, American Academy of Pediatrics, Europe Food Safety Authority, WHO: choline as crucially important during pregnancy.1
- Choline key nutrient in early neurodevelopment and for lifelong mental health.1
- Pregnant women 450 mg/d, lactating women 550 mg/d.
- Review 38 animal and 16 human studies: supplementing over first 1,000 days of life:
  - · Supports normal brain development
  - · Protects against neural and metabolic insults, particularly when the fetus is exposed to alcohol
  - Improves neural and cognitive functioning.<sup>2</sup>



1. Schwarzenberg SJ. Pediatriss. 2018:141. doi: 10.1542/peds.2017-3716. 2. Derbyshire E, et al. Nutrients 2020 Jun 10;12(6):1731

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#### Protein Needs



- From Greek protos, "first." Build new cells, maintain tissues (e.g., muscles, hair, nails), create enzymes, make hemoglobin, lipoproteins to transport cholesterol; present in membrane of
- Protein depravation studies: breakdown periodontal ligaments, degeneration of gingival tissues, and resorption of alveolar bone. Danish study: inverse relationship high protein intake and
- Sources: meat, poultry, seafood, eggs, soy products, nuts, nut butters, beans, peas, and seeds.
  - Choose seafood 2 x weekly (low in mercury, high in omega 3s, sustainable).
- Include beans and peas often in your diet, as a side or main dish.
- Poultry regularly, red meat 10 ounces per week. Avoid processed red meats.

Adegboye AR, et al. Calcium, vitamin D, casein and whey protein intakes and periodontitis among Danish adults. Public Health Nutr. 2016; 19:503–51

#### How Much Protein Per Day?



- ~0.8 g/kg body weight for adults
- (Multiply weight in lb. x 0.36)
- 150 pounds = 55 g/d
- 180 pounds = 65 g/d
- •1.0-1.2 g/kg for those over age 60\*
  - 150 pounds = 69-81 grams
  - 180 pounds = 81-98 grams
- •1.2–1.5 g/kg competitive athletes

\*NOT for those with kidney disease.

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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.



Gangwisch JE, et al. High Glycemic Index Diet as a Risk Factor for Depression: Analysi From the Women's Health Initiative. Am J Che Natr 2015 Aug; 102(2):454-63. AlAmmar WA, et al. Food and Mood: the Corresponsive Effect Carr Natr Rep. 2020 Sep.9(3):296-308.

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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)

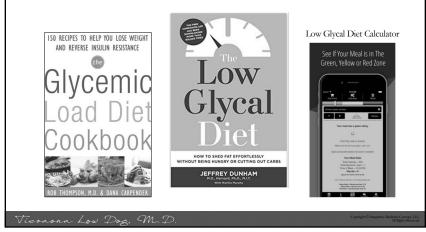


Breymeyer KL, et al. Appetite 2016; Dec 1;107:253-259.

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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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#### Reducing Environmental Exposures

- 1. Eat **fresh** rather than processed food, when possible
- 2. Organic fruits/vegetables, dairy; grass fed/finished meats, free range eggs, when possible
- 3. Reduce consumption of foods/beverages in cans and plastic containers (avoid recycling #3 and #7)
- 4. Do not heat or store foods in plastic
- 5. Minimize use of personal care products containing fragrances (skindeep.org)
- 6. Avoid garden/household/pet pesticides or fungicides. Use integrated pest management for home/yard.
- 7. Use water filtration system (ewgs-water-filter-buyingguide), consider HEPA filters in home



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# TAKE A MULT Na $B_2$

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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: 2<sup>nd</sup> National Report on the Biochemical Indicators of



## Cognitive Behavioral Therapy for Insomnia



- American College of Physicians officially endorsed what multiple metaanalyses 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: <a href="https://behavioralsleep.org/index.php/directory/north-america/united-states">https://behavioralsleep.org/index.php/directory/north-america/united-states</a>

Oral Lavender Essential Oil

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

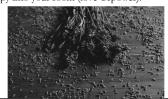


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### Essential Oils for Relaxation & Sleep

- 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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### 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?

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#### Loneliness, Social Isolation, & Your Health

- · Poor social relationships associated with 29% increase in risk of heart disease and 32% increased risk of stroke.
- •148 studies on the effects of social isolation on health found it is:
  - •= 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 near usease and stroke systematic review and meat-analysi longitudinal observational studies. Heart. 2016 Jul 1;102(13):1009-16.
   Cacioppo JT, et al. Ann N Y Acad Sci 2011; 1231:17-22

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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

familial, and spiritual underpinnings.

Yeah, I guess."

The World Today

• We strongly emphasize biological explanation for depression and anxiety, as

· 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?

evidenced by extensive use of antidepressants and anxiolytics.

- 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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## 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.)

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Henry David Thoreau, Walden

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.



Getting Down and Dirty With Nature Our interactions with wilderness are powerful reminders of what it is to be human, especially for kids trying to

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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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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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kindness CARINGheartfelt friendship Gharity Lunconditional PEACE Charity Lunconditional PEACE Charity Lunconditional PEACE attitude Compassion give blessings forgiveness TRUTH purpose abundance HOPE intention. Oneness abundance SPIRITUAL JOY

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 \_\_\_\_\_\_."

Listen.
Are you
breathing
just a little
and calling
it a life?

~ Mary Oliver

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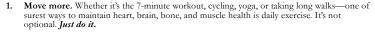
"You must have a room, or a certain hour or so a day, where you don't know what was in the newspapers that morning, you don't know who your friends are, you don't know what you owe anybody, you don't know what anybody owes to you. This is a place where you can simply experience and bring forth what you 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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- 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.
- 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.**
- 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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