

Life is Your Best Medicine



Tieraona Low Dog, MD

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

www.DrLowDog.com



• If the American public embraced a healthier lifestyle:

- *no smoking*
- *no or moderate alcohol consumption*
- *limited or no exposure to toxic chemicals*
- *healthy nutrition*
- *balance of exercise and rest*
- *stress management*
- *and healthy social networks*

93% of diabetes, 81% of heart attacks, 50% of strokes, and 36% of all cancers could be prevented.

Ford, et al *Arch Intern Med.* 2009; 169(15):1355-62.



Complexity of the Modern Living

- Poor diet, nutrient deficiencies
- Sedentary, high stress lifestyles
- Poor sleep, too much screen time
- Inadequate social support
- Strong emphasis on “knowing” and “having”

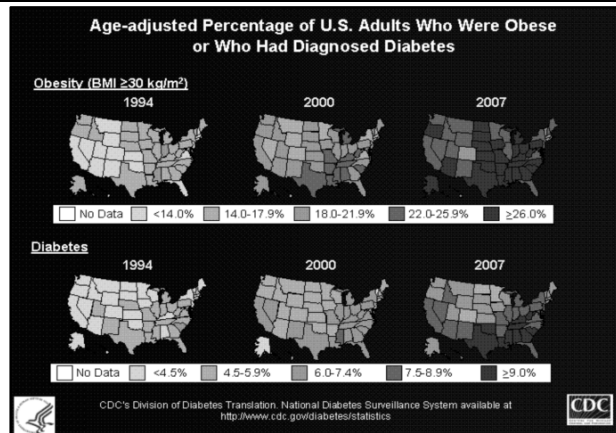
Much of what is making us sick cannot be fixed with more and more pills.....

Food is Foundational: Let's Start Here

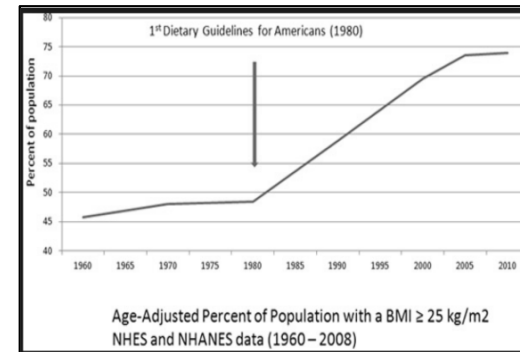


CDC results show that <18% of adults consumed the recommended amount of fruit and <14% consumed the recommended amount of vegetables.

www.cdc.gov/mmwr/preview/mmwrhtml/mm6426a1.htm Accessed December 20, 2016



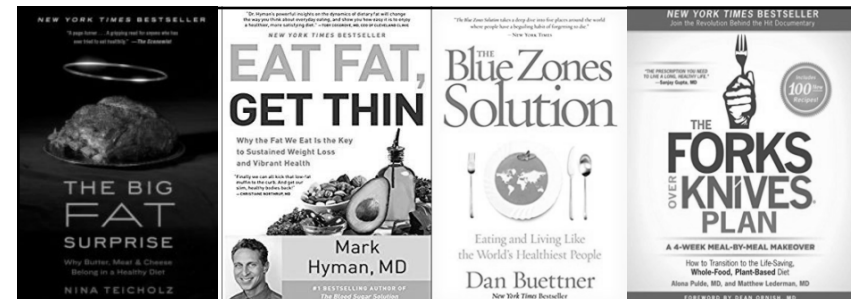
Diet and Obesity in US



Nutrition in the 21st Century



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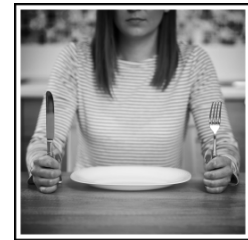
Is it any wonder that people are confused?



"THE FOOD YOU EAT
CAN BE EITHER
THE SAFEST
&
MOST POWERFUL
FORM OF MEDICINE
or
THE SLOWEST
FORM OF POISON."

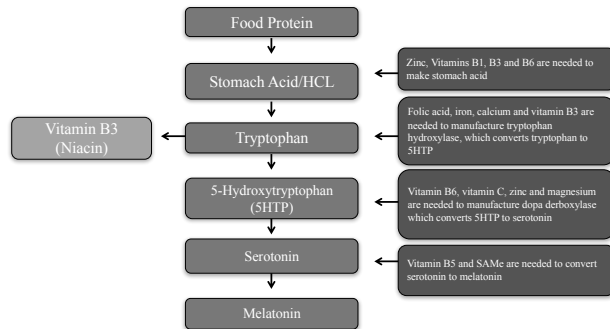
State of Our Nutrition: Take a Multi!

- 90 million Americans are low in vitamin D (<20ng/mL)
- 30 million are deficient in vitamin B6
- 18 million people have B12 deficiency
- ~16 million have low serum vitamin C
- 13% of Latinas and 16% of African American black women (ages 12-49) are iron deficient
- Women 25-39 borderline iodine insufficiency
- 50% Americans don't meet RDI for magnesium

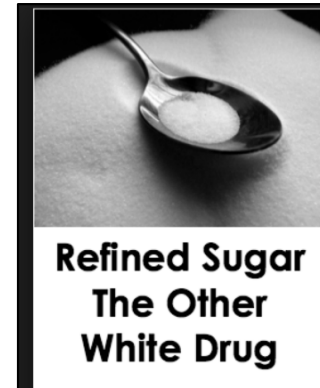


*CDC: 2nd National Report on the
Biochemical Indicators of Diet and Nutrition
in the U.S. population*

Serotonin and Melatonin Pathways



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November 2016

Sugar Industry and Coronary Heart Disease Research

A Historical Analysis of Internal Industry Documents

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> Author Affiliations

JAMA Intern Med. 2016;176(11):1680-1685. doi:10.1001/jamainternmed.2016.5394

Editorial
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Author
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Abstract

Early warning signals of the coronary heart disease (CHD) risk of sugar (sucrose) emerged in the 1950s. We examined Sugar Research Foundation (SRF) internal documents, historical reports, and statements relevant to early debates about the dietary causes of CHD and assembled findings chronologically into a narrative case study. The SRF sponsored its first CHD research project in 1965, a literature review published in the *New England Journal of Medicine*, which singled out fat and cholesterol as the dietary causes of CHD and downplayed evidence that sucrose consumption was also a risk factor. The SRF set the review's objective, contributed articles for inclusion, and received drafts. The SRF's funding and role was not disclosed. Together with other recent analyses of sugar industry documents, our findings suggest the industry sponsored a research program in the 1960s and 1970s that successfully cast doubt about the hazards of sucrose while promoting fat as the dietary culprit in CHD. Policy-

10 teaspoons of sugar = 1 can of non-diet soda



This equals 32
pounds of
sugar per year
simply from
soda

Glycemic Index and Load

- Glycemic Index: ranks carbohydrates based upon the impact of 50 grams of carbohydrate food on blood glucose response.
- Glycemic load: helps predict blood glucose response to more typical serving size of a specific carbohydrate food.

- One of the most popular dietary trends in US is the “low carb” diet.
- Perhaps instead of focusing on LOW CARB, we could emphasize **LOW GLYCEMIC LOAD CARBS**.



Health Benefits of Low Glycemic Load Diet

- Numerous studies in both adults and teens have found that low glycemic load diets are associated with:
 - Better weight control
 - Improvement in blood sugar
 - Reduction in triglycerides
 - Improved ovulation in obese women with infertility
 - Lower risk of depression
 - Lower risk of heart disease, particularly in women

Glycemic Load and Mood?

- 82 healthy weight and healthy overweight/obese, adults enrolled in randomized, crossover controlled feeding study.
- Compared to a low GL diet, consumption of 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 ($P = 0.04$), compared to low GL diet.

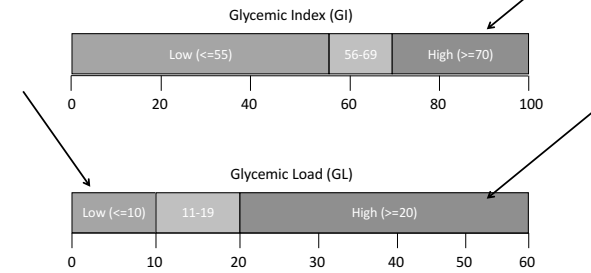


Breymeyer KL, et al. *Appetite* 2016; Dec 1;107:253-259.

Glycemic Index and Load

- **Glycemic Index:** ranks carbohydrates based upon the impact of 50 grams of carbohydrate food on blood glucose response.
- **Glycemic Load:** predicts blood glucose response to more typical serving size of a specific carbohydrate food.

Glycemic Index & Glycemic Load Rating Chart



Which One Would You Choose?

Banana

Glycemic Index = 52

Available Carbs = 24 grams

Glycemic Load = 14

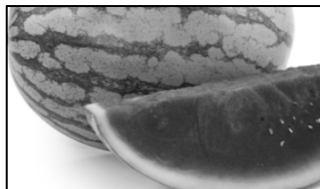


Watermelon

Glycemic Index = 72

Available Carbs = 10 grams

Glycemic Load = 8



Glycemic Load

Individual Food Portion

Low	0-10
Moderate	11-19
High	20+

Whole Day

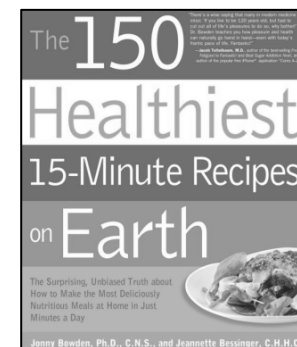
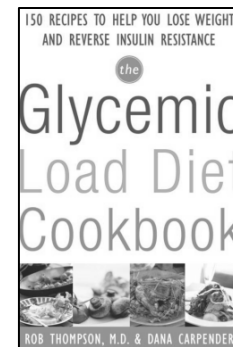
Low	< 80
Moderate	80-120
High	>120

Food	Serving Size	Glycemic Load
Grapefruit	½ large	3
Apple	1 medium	6
Banana	1 large	14
Raisins	1 small box	20
Watermelon	1 cup	8
Carrots	1 large	5
Orange	1 medium	6
Sweet potato	1 cup	17
Baked potato	1 medium	28
French fries	1 medium serving	26
Snickers	1 bar	35
Reese's cup	1 miniature	2
White table wine	5 ounces	1
Red table wine	5 ounces	1
Grape juice	6 ounces	12

Food	Serving Size	Glycemic Load
Asparagus	½ cup	2
Broccoli	1 cup	4
Green beans	1 cup	3
Tomato	1 medium	2
Subway sandwich Turkey breast	6 inch	17
Butter pecan ice cream	5.5 ounces (small)	22
Vanilla ice cream cone	4.5 ounces (small)	19
Potato chips, fat free	1 bag (8 ounces)	49
Tortilla chips, white corn	3.5 ounces	38
Eggo oat waffles	1 serving	13
Maple syrup	4 Tbsp	39
Egg, hard boiled	1	2
Apple juice	8 ounce	6

Food	Serving Size	Glycemic Load
Spaghetti	1 cup	38
Brown rice	1 cup	23
White rice	1 cup	33
White bread	1 slice	10
Whole grain bread	1 slice	5
Bagel, cinnamon raisin	1 3.5 inch	24
Pumpnickel bread	1 slice	6
Macaroni and cheese	1 cup prepared	31
Chocolate doughnut	1 doughnut (80 g)	25
Glazed doughnut	1 doughnut (80 g)	12
Kellogg's Frosted Flakes	¾ cup	20
Kellogg's Special K	1 cup	14
Post Bran Flakes	¾ cup	12
Post Raisin Bran	1 cup	25

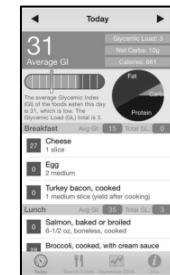
Resources

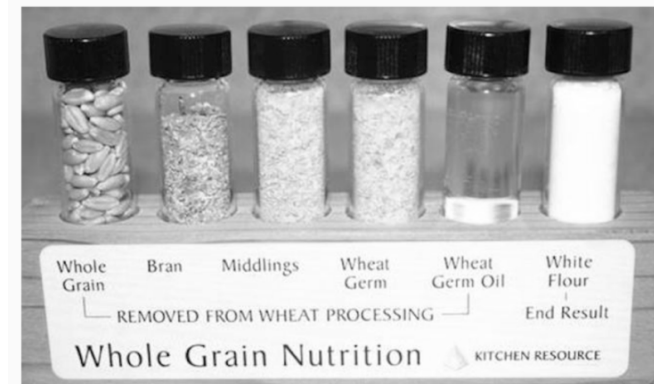
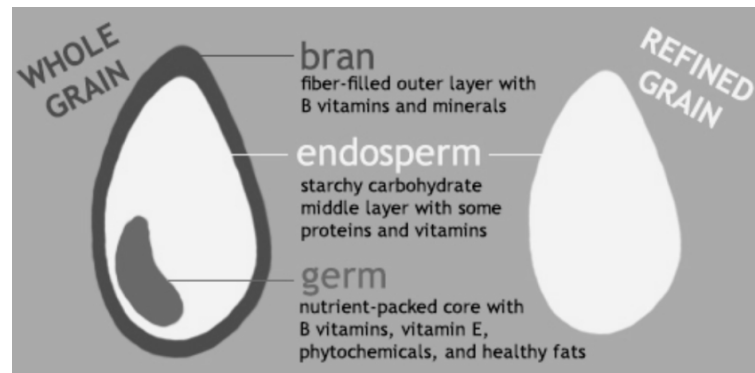


Get an App \$3.99



Low GI Diet Tracker

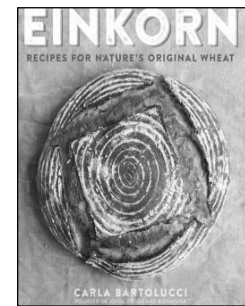
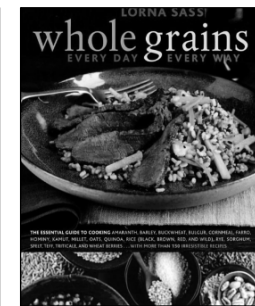




Some Tips

- 100% Whole Wheat (first ingredient!)
- Oats (skip the instant)
- Brown Rice (white has bran/germ removed, LOW in nutrients)
- Whole Rye (four times the fiber of whole wheat, most nutritious)
- Whole Grain Barley (not pearled: bran and germ have been removed)
- Buckwheat (loaded in magnesium, gluten-free)
- Quinoa (not a grain, it's a seed loaded in protein and omega 3)
- Whole Wheat Couscous (delicious and high in fiber)
- Corn (organic, non-GMO – increases healthy gut flora)

Some of My Favorite Cookbooks





FAT

- Most concentrated source of energy, more than twice carbohydrates or proteins.
- Acts as messengers in reactions that help control growth, immune function, reproduction and basic metabolism.
- Help absorb fat soluble vitamins (A, D, E, K).
- Certain fats, like *linoleic acid* and *alpha linolenic acid* (ALA), are “essential” because our bodies cannot produce them, we must get them in our diet.
- Makes foods taste flavorful and help us feel full.

SATURATED FAT

- Meat, dairy products, eggs
- Coconut and palm oil
- Solid at room temperature
- Increases LDL and HDL

UNSATURATED FAT

- Vegetable oils
- Liquid at room temperature
- Increases HDL, lowers LDL
- Includes monounsaturated
 - Olive oil, avocados, peanuts, almonds
- Polyunsaturated
 - Omega 3
 - EPA/DHA: fish/shellfish
 - ALA: flax, walnut, soy, canola
 - Omega 6
 - Corn oil, safflower oil, sunflower oil

Saturated Fat Debate

- Three large meta analyses (21 studies, 12 studies, and 76 studies) have all failed to show any significant evidence that saturated fat increases the risk for heart disease.
- It also has failed to find any significant evidence that increasing polyunsaturated fats and decreasing saturated fats lowers your heart risk.
- Choose a healthy variety of fats in the diet.....



Siri-Tarino, Amer J Clin Nutr 2010; 91 (3): 535-46.
Schwingshacki L, et al. *BMJ Open* 2014; 4(4):e004487.
Chowdhury R, et al. *Ann Intern Med* 2014; 160(6):398-406.



Butter/Trade Productions - Getty Images

DIET/NUTRITION

The Case Against Low-fat Milk Is Stronger Than Ever

Alice Park
Apr 04, 2016

For more, visit [TIME Health](#).



The Many Myths

- “Don’t drink whole milk. It is loaded in saturated fat.”
- “Butter is bad for your heart.”
- “Don’t eat cheese, it will make you fat.”
- “Eat yogurt but only no-fat.”

Full or Low Fat Dairy?

- Research shows full fat dairy products help reduce risk of gaining weight and may help protect against the development of type 2 diabetes.
 - Fat slows absorption of milk sugar and causes a slower rise in blood sugar, as well as a lower and slower release of insulin. Fatty acids in dairy, such as pentadecanoic acid and heptadecanoic acid, may also be protective against diabetes.
- No evidence that full fat dairy increases your risk of heart disease.
- Full fat dairy recommended for women trying to get pregnant as it reduces anovulatory infertility. Removal of the cream alters natural hormones in a fashion that impacts conception.
- Full fat dairy improves acne, low fat dairy aggravates it.
- Full fat dairy lower in lactose, better tolerated by lactose intolerant individuals.
- Like anything, however, MODERATION IN ALL THINGS and if you can’t tolerate or like dairy.... No problem!

Chavarro JE, et al. *Hum Reprod* 2007; 22(5):1340-7.
Alexander DD, et al. *Br J Nutr* 2016; 115(4):737-50

Coconut Oil (*Cocos nucifera*)

- Extensively used in tropical and subtropicals regions. Was widely consumed in US (behind animal and dairy fats) prior to production of edible oils.
- Rich in medium chain saturated fatty acids (e.g., lauric acid), directly absorbed from intestine to the liver to be used for energy production. It raises **both** LDL and HDL.
- Active against a variety of viruses and possesses antibacterial and antifungal activity (topically).



McCarthy MF, et al. *Open Heart* 2016; 3(2):e000467.
Eyre L, et al. *Nat Rev* 2016; 74(4):267-80

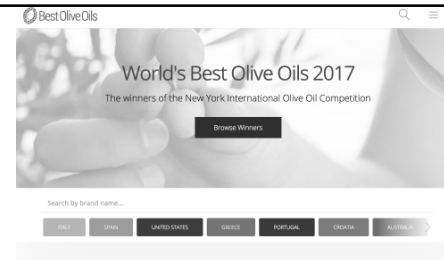
• Refined coconut oil is derived from dried

Olive Oil

- Cornerstone of Mediterranean diet. Rich in monounsaturated fat oleic acid (73%), loaded in antioxidants, and modest levels of vitamin E and K.
- Oleocanthal mimics effect of ibuprofen in reducing inflammation.
- Protects against heart disease and stroke; lowers total blood cholesterol, LDL-C, triglycerides; and improves HDL. Also has a mild blood pressure lowering effect.
- May offer additional protection against Alzheimer's disease, diabetes and cancer as part of a healthy diet.

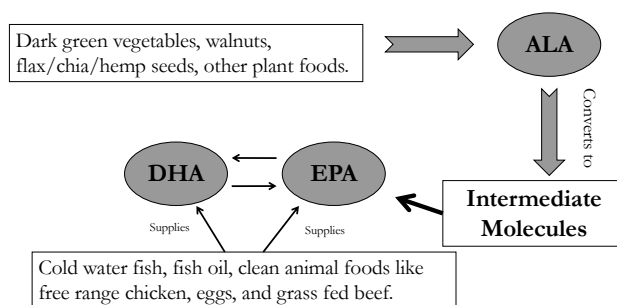


Hernandez A, et al. *Arterioscler Thromb Vasc Biol* 2014; 34(9):2115-9.
Crous-Bou M, et al. *BMJ* 2014;349:g6674



- Extra virgin olive oil is made simply by crushing olives and extracting the juice. It is the only cooking oil that is made without the use of chemicals and industrial refining.
- It 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

Omega 3 Fatty Acids from Plants and Animals



Fish and Seafood

- Fish and seafood are excellent sources of omega 3's
 - Beneficial for helping to prevent atherosclerosis and maintaining healthy blood pressure and blood flow.
 - Promote brain health and may help reduce the risk of depression.
 - Necessary for the health of the eyes. Can help reduce dry eye syndrome.
 - Crucial for health pregnancy and childhood development.
 - Help quell inflammation, which has been linked to many chronic disorders.



Omega 3 and Pregnancy

- Critical for brain and early eye development, particularly in 3rd trimester.
- Reduces risk of preterm labor and birth
- Reviewers found that supplementation with omega-3 fatty acids in the third trimester of pregnancy reduced the absolute risk of persistent wheeze or asthma and infections of the lower respiratory tract in the babies by approximately 33%.
- FDA recommends 2-3 servings of low mercury fatty fish per week during pregnancy.



Biggaard H, et al. *N Engl J Med* 2016;375(26):2530-9

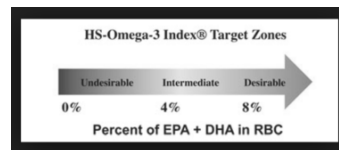
American Heart Association

- “Omega-3 fish oil supplements prescribed by a healthcare provider may help **prevent death** from heart disease in patients who recently had a heart attack and may **prevent death** and hospitalizations in patients with heart failure.”



Siscovick DS, et al. *Circulation* 2017; Mar 13.

Do You Know Your “O”?



- Omega-3 Index test is the gold standard for measuring the level of omega-3 in a person's body.
- In 2008 Dr. Bernadine Healy, cardiologist and past President of the AHA and first woman Director of the NIH said, “Before long, your personal Omega-3 Index just could be the new cholesterol—the *number you want to brag about*.”
- Note: you can order your own labs: requestatest.com

What About Eggs, Shrimp and Dietary Cholesterol?

- Provide essential fatty acids, proteins, choline, vitamins A and B12; selenium, and other critical nutrients at levels above or comparable to those found in other animal-sourced foods.
- Egg consumption not associated with an increased risk of heart disease in the general population.
- Past guidelines set 300-mg daily limit for dietary cholesterol. This was removed in new guidelines (e.g., eggs, shrimp)



Shin JY, et al. *Am J Clin Nutr* 2013; 98(1):146-59



Protein

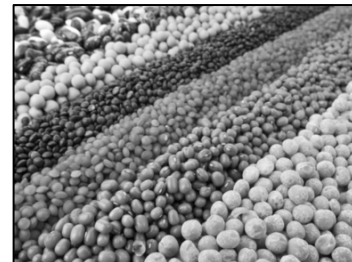


- From the Greek word *protos*, "first."
- Used to build new cells, maintain tissues (e.g., muscles, inner bone, hair, nails), create enzymes, make hemoglobin to carry oxygen, lipoproteins to transport cholesterol; present in inner and outer membrane of every living cell.
- Sources include meat, poultry, seafood, eggs, soy products, nuts, nut butters, beans, peas, and seeds. You need ~8 grams protein per 20 pounds body weight for adults.
 - Choose seafood two times weekly (low in mercury, high in omega 3s, sustainable)
 - Include beans and peas often in your diet, as a side or main dish
 - Avoid processed red meats, include modest amounts of other meats

Protein Rich Foods

Food	Portion Size	Protein (g) (approximate)
Meat, fish, or poultry	75g (2 ½ oz) / 125 mL (½ cup)	21
Firm tofu	150g / 175 mL (¾ cup)	21
Egg, chicken	2 large	13
Cheese	50 g (1 ½ oz)	12
Fortified soy beverage	250 mL (1 cup)	6-8.5
Cooked dried beans, peas, or lentils	175 mL (¾ cup)	12
Cow's milk	250 mL (1 cup)	9
Yogurt	175 mL (¾ cup)	8
Peanut butter or other nut spread	30 mL (2 Tbsp)	8
Nuts or seeds	60 mL (¼ cup)	7
Bread	1 slice (35g)	3
Cereals, cold	30 g	3
Cereals, hot	175 mL (¾ cup)	3
Pasta or rice	125 mL (½ cup)	3
Vegetables	125 mL (½ cup) or 250 mL (1 cup)	2
Fruit	1 fruit or 125 mL (½ cup)	1

Legumes Are Awesome!



- Soak larger dried legumes (kidney beans, chickpeas, black beans, red beans) for 4-24 hours in cold water before cooking. Change water 1-2 times to reduce gas.
- Use 3 cups water per cup of legumes in cooking.
- Use ladle to occasionally remove foam on top when cooking legumes
- Rinse canned beans before use to remove sodium
- Lentils are quick and easy to prepare - rinse till clear and remove

Soy Milk

- Highest in protein of dairy alternatives
- A good source of B-vitamins and soy has been shown to be heart healthy.
- It is also the least processed of **most** commercially available dairy alternatives.
- High in phytic acid, however, which can impair absorption of nutrients such as calcium, iron and zinc. (Fermented soy does not contain phytic acid: miso, tempeh)
- Purchase organic, non-GMO soy and look for unsweetened products to avoid high sugar.
- 1 cup soy milk ~ 8grams protein



Almond Milk

- 1 cup raw almonds (soaked overnight)
- 2-4 cups water
- 1 Medjool date
- 1/8 tsp vanilla extract

- Soak the almonds in bowl of water for 12-24 hours. Longer the soak, the creamier your milk.
- Strain almonds. Put almonds in blender, add water (less makes it creamier), and blend for 2 minutes. Strain through muslin cloth or nut milk bag. You can stop here OR
- Put strained milk into blender and add date and vanilla. Blend well. Refrigerate for up to 3 days.

- Only 90 calories per 8 ounces
- No saturated fats or cholesterol
- 25% of the daily value for vitamin D and almost half of the vitamin E and also provides some magnesium, zinc, calcium and other minerals.
- Lovely nutty flavor
- *Very little protein* (1 gram per cup)
- *Easy to make at home (you can*



Red Meat and Cancer



- Poultry and fish have neutral or beneficial effects regarding cancer/health.
- The American Institute for Cancer Research has made the following recommendations regarding red meats (**beef, lamb, pork**) based upon the data that links them to an increased risk of colon cancer:
 - Limit red meats to less than 18 ounces per week (this includes things like steak, hamburger, pork chops)
 - **Avoid** processed red meats.

Grass-Fed/Pasture-Raised or Grain Fed

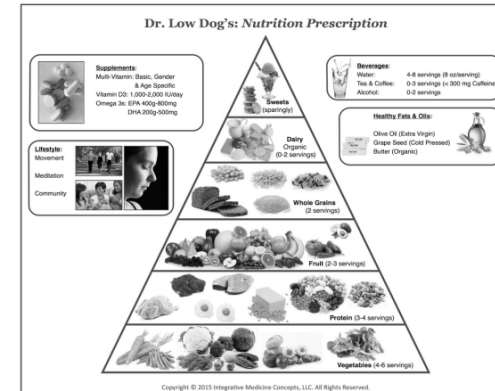


- The ethical and humane treatment of farm animals is an important consideration.
- There are many reasons to support organic and grass fed/finished animals.
- Grass fed fat higher in conjugated linoleic acid (CLA), stearic acid, vitamins A and E, as well as antioxidants.
- Organic pastured dairy and meats are up to ~50% higher in omega 3 fatty acids
- Organic meat and dairy means animals were given organic feed and did not receive growth hormones or antibiotics.



Dairy Products

- Lactase produced by intestinal cells allows lactose in milk to be digested and absorbed.
- Enzyme activity is highest after birth.
- Only 30% of global population able to produce enough lactase to digest and absorb lactose throughout adult life (highest in Scandinavian and northern Europeans).
- The vast majority, lactase declines to 5-10% of what was produced in infancy.
- When more lactose is consumed than can be digested, bloating, gas and diarrhea occur.

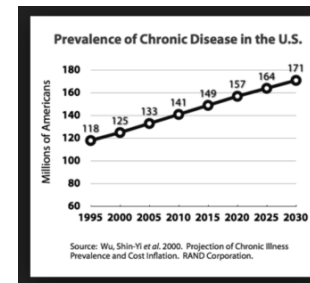


Eating alone will not keep a man well. He must also take exercise.



Hippocrates

Consequence of Inactivity



- Higher risk for heart disease, type 2 diabetes, certain cancers, Alzheimer's disease and increase lower back pain, depression and anxiety.
- Half of baby boomers in the US report having NO exercise.
- 80 million Americans over the age of 6 years of age are entirely inactive

Movement: *Sound Body = Sound Mind*

- Known since ancient times, exercise and physical activity are keys to a long and healthy life. Reducing risk of diabetes, heart disease, osteoporosis.
- Movement increases blood flow to the brain, promoting growth of new blood vessels, stimulating release of endorphins that diminish pain, as well as compounds that elevate mood and reduce tension.
- Regular exercise increases energy levels and eases fatigue. Just 20 minutes 3 x per week of moderate exercise can improve energy levels in just 4 weeks!
- Fatigue, low energy, pain and depressed mood all impact our emotional wellbeing. Make movement a habit!



- Meta-analysis: 92 studies (4,310 participants) for effect of physical activity on depression; 306 studies (10,755 participants) on anxiety concluded:

physical activity reduces depression and anxiety

Rebar AL, et al. *Health Psychol Rev* 2015; Mar 5:1-78.



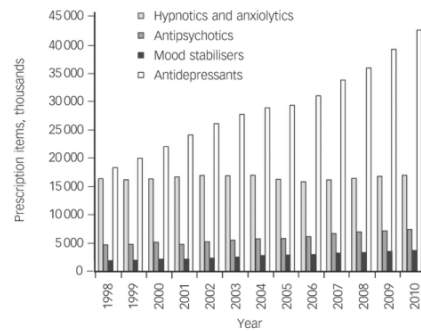
Motivation

- Use a fitness tracker – assess your baseline (normal activity 3 days) and see where you can improve.
- Use an app, join a class, grab a friend
- Make it a habit. Just *do* it.
- Do something you enjoy
- Focus on the *immediate* benefits you will feel once you start exercising regularly



A Nation On The Edge?

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

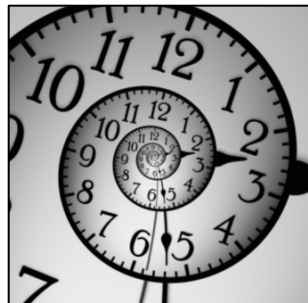
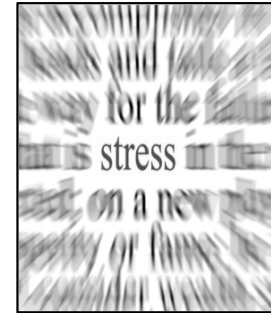


Stephen Ilyas, and Joanna Moncrieff BJP 2012;200:393-398

THE BRITISH JOURNAL
OF PSYCHIATRY

High cortisol levels are 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.



Biological Clock

- The most important regulator of the sleep wake cycle is our biological clock.
- Responsible for the 24 hour fluctuations in hormone secretion, body temperature and other bodily functions.
 - Deepest sleep is generally around 2 AM
 - Lowest body temp around 4:30 AM
 - High alertness 10 AM
 - Highest blood pressure ~6:30 PM
 - Highest body temperature ~ 7 PM
 - Melatonin secretion starts ~8-9 PM

Sleep Stages

- **Stage 1:** Lasts a few minutes, the first stage of sleep is light and easy to wake from. Muscle twitching common.
- **Stage 2:** Light sleep, ~20 minutes brain waves begin to slow, blood pressure and body temperature decrease.
- **Stages 3 and 4:** Move into a deep sleep and find it harder to wake from. This is when body repairs itself and boosts immune function. Also known as "delta" sleep.
- **Rapid eye movement (REM):** Final stage in sleep cycle, brain becomes more active and dreams occur. Brain is processing information and storing long-term memories. Heart rate and breathing increases. Gets longer and longer through the night - can last up to one hour.
- REM suppressors: alcohol, nicotine, blood pressure and anti-depressant meds

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

Lack of Sleep



- Tremendous amount of research shows that chronic sleep problems can lead to weight gain, obesity, diabetes (33% increased risk type 2 diabetes) and heart disease.
- According to CDC shows that 1 in 3 Americans do not get sufficient sleep.
- Studies show that as our time asleep declines, it impairs our working memory, processing speed and executive function. Interestingly, caffeine can *temporarily* counteract all but executive function.
- Women report more sleep disruption than men (pregnancy, childrearing, menopause), though men have more sleep apnea.

Shan Z, et al. *Diabetes Care* 2015;38(3):529-37.

Pain, Mood and More



- 50-80% of people with chronic pain have sleep disturbances. Pain can interfere with sleep and sleep disturbance can exacerbate pain.
- Depression and anxiety are higher in people with chronic pain and are also strongly correlated with self-reporting of insufficient sleep. A vicious forward feeding circle.
- Lack of exposure to sunlight and the use of bright lights at night increases the likelihood of disordered circadian clock.
- As we age, we tend to have a more disturbed and lighter sleep. Melatonin secretion declines with age, which may also impact sleep in older adults.

Cheattle MD, et al. Assessing and Managing Sleep Disturbance in Patients with Chronic Pain. *Sleep Medicine Clinics*, 2016;11(4): 531-541

Days Can Make For Better Nights!

- Wake at same time everyday and make your bed! Exercise early.
- Start morning with **exposure to sunlight** or consider using a dawn simulating device that slowly increases intensity of light for 30 minutes before awakening.
- Landmark study in 1989 found that when participants with seasonal affective disorder were exposed to either **simulated sunrise** or **both simulated sunset and sunrise for several days** that their depression either resolved or was greatly reduced. The circadian **rise and fall of melatonin** production occurred earlier with sunrise simulation or

The Bedroom

- No alarm clocks with display lights. Make sure there is no blue light emitting from the television or computers, or consider amber blue blocking glasses. Work **WITH** your body's normal production of melatonin, not against it.
- Turn down your thermostat to 65-68 F. Wear socks to bed if feet get cold.
- Use black out blinds or curtains to eliminate external light.
- Replace mattress every 10 years and pillows every 2 years.

Sleep Cycle



- Sleep Cycle sits under your pillow and gathers data to wake you up when you'll feel the least groggy. Easy-to-read graphs show your sleep patterns. Free.

Apps for Sleep

Deep Sleep



- Deep Sleep provides step-by-step instructions to guide you into state of deep relaxation. Andrew Johnson is awesome and his CDs are truly amazing. \$2.99

Cognitive Behavioral Therapy

- CBT has emerged as a recommended *first-line therapy for insomnia*. Digital CBT has been shown to be effective for improving sleep, as well as mental health and well-being.
- CBT-I typically consists of:
 - Psychoeducation about sleep and insomnia
 - Stimulus control
 - Sleep restriction
 - Sleep hygiene
 - Relaxation training
 - Cognitive therapy

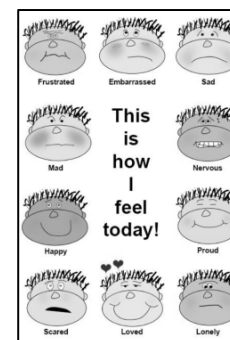


Luik AI, et al. Digital cognitive behavioral therapy for insomnia: a state of the science review. *Curr Sleep Med Rep* 2017; 3(2): 48–56

Summary

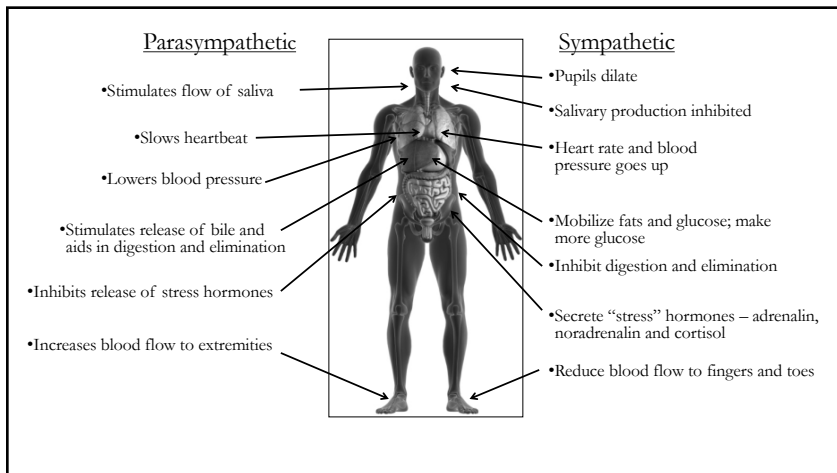
- Investing in a good night's sleep is time and money well spent.
- The recommendations I have provided can be very helpful.
- However, if you are living with chronic sleep problems, please ask your primary care provider to refer you to a sleep specialist.
- Conditions like chronic obstructive sleep apnea and restless leg syndrome can dramatically impact sleep quality and overall health. There are treatment options that can help!

Emotions



- A conscious mental reaction (such as anger or fear) subjectively experienced as strong feeling usually directed toward a specific object and typically accompanied by *physiological and behavioral changes in the body*.

Merriam Webster Dictionary



Mindfulness Meditation

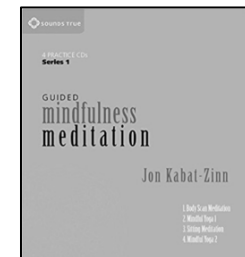
- Meditation is excellent for reducing stress perception and pain intensity, while elevating mood.
- Quiets the stream of thoughts that rage in our mind.
- Long-time meditators have greater activation of areas responsible for sustaining attention, processing empathy, integrating emotion and cognition.
- Review of 47 trials found that meditation improves:
 - Anxiety
 - Depression



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

Guided Mindfulness Meditation: A Complete Guided Mindfulness Meditation Program from Jon Kabat-Zinn

- Four-part home training course, this is simply one of the best ways to learn about mindfulness meditation.
- This might be a great choice for you if you feel anxious, are living with chronic pain, your stress is off the charts, or you just are interested in learning how to meditate without the spiritual overtones found in many other teachings.
- Pairs nicely with his book *Full Catastrophe Living*.
- This meditation program is one of the most researched in the world. You can purchase the audio CDs on Amazon for ~\$18.00



Meditation Resources

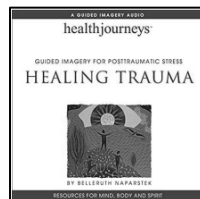
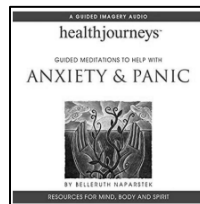
- Obviously a local class is the very best option. But there are books, CDS and yes, there are apps.....
- *Insight Timer* - ~4,000 guided meditations from more than 1,000 teachers (self-compassion, nature, stress, podcasts and more). More than 750 meditation music tracks. Free.
- *Headspace* – very good for beginners with 10 minute meditations. Free.
- *The Mindfulness App* – nice 5 days guided mediation program to get you started. Can be personalized and integrated into other health apps. Free.
- *Aura* – multiple teachers, from 3-10 minute daily meditations. Customizable. #1 new app on Apple in 2017. \$29 for 6 months.

Guided Imagery: *Imagine Yourself*.....

- An immersive, deeply relaxing intervention that uses calming words, soothing music and positive images to structure a healing experience.
- Like meditation, it focuses attention and calms the mind, working on those parts of the brain where the emotional self dwells.
- Imagery has been shown in clinical trials to reduce stress, anxiety, and depression; help with sleep; lower blood pressure, and help with posttraumatic stress.
- I have found guided imagery a fabulous tool for myself, kids and patients. Very helpful for those with ADHD, anxiety, depression, pain, insomnia.

Belleruth Naparstek

- Love, love, love her. Something for everyone.
- She has Guided Imagery Meditations for:
 - Anxiety and Panic
 - Anger and Forgiveness
 - Depression
 - Healing Trauma
 - Ease Grief
 - Relieving Stress
 - Undergoing Surgery
 - Chemotherapy and Radiation



Mind-Heart



- InterHeart Trial, an international study conducted in 52 countries that included more than 27,000 participants, revealed that depression, social isolation and a feeling of hopelessness increased a woman's risk of having a heart attack **more** than diabetes, high blood pressure, smoking, or obesity.

Rosengren A, et al. *Lancet* 2004; 364:953-962.

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



*Call it a clan, call it a network, call it a tribe, call it a family.
Whatever you call it, whoever you are, you need one.*

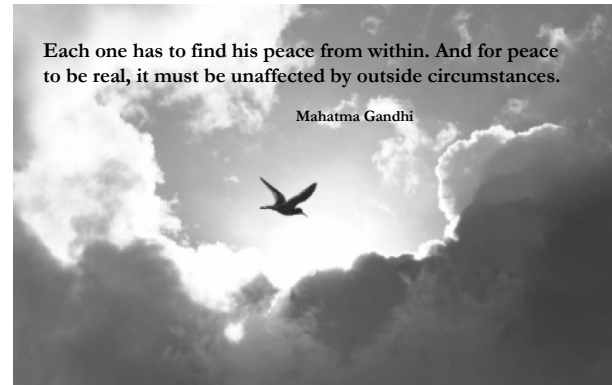
~ Jane Howard



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Each one has to find his peace from within. And for peace
to be real, it must be unaffected by outside circumstances.

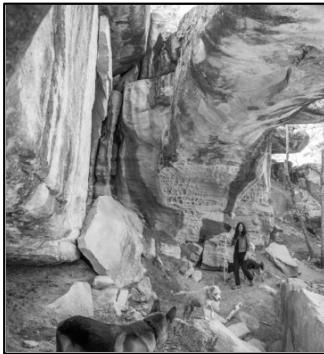
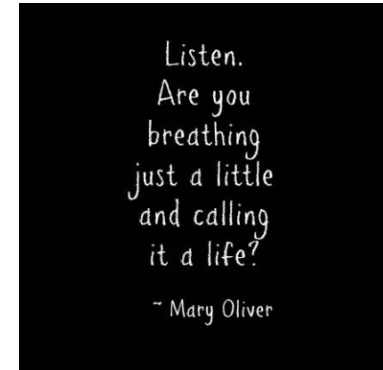
Mahatma Gandhi





Meaning and Purpose

- What truly gives a person a sense of *meaning and purpose* in life?
- How can one live from a “*deep place*” despite his or her pain?
- How does one feel the oneness, find the *holy and sacred* in the mundane?



“There are voices which we hear in solitude ...

but they grow faint and inaudible as we enter into the world.”

Ralph Waldo Emerson

Letting Go.....

“Healing may not so much be about getting better, but about letting go, of all the expectations, all of the beliefs, and becoming who you are.”

— Rachel Naomi

Remen, M.D.



