The Emergence of Lifestyle Medicine: Evidence-Based Strategies for Preventing, Treating, and Reversing Chronic Disease

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Learning Objectives

1. **Define** lifestyle medicine and explain its role in preventing, treating, and, in appropriate circumstances, reversing chronic disease.
2. **Describe** the six pillars of lifestyle medicine and summarize evidence supporting their integration into clinical care.
3. **Apply** practical health behavior change strategies to help patients identify and achieve meaningful lifestyle goals.
4. **Identify** opportunities to integrate lifestyle medicine into routine clinical workflows and connect patients with appropriate community resources.
5. **Develop** a personal SMART goal and identify one actionable strategy for incorporating lifestyle medicine into their clinical practice.

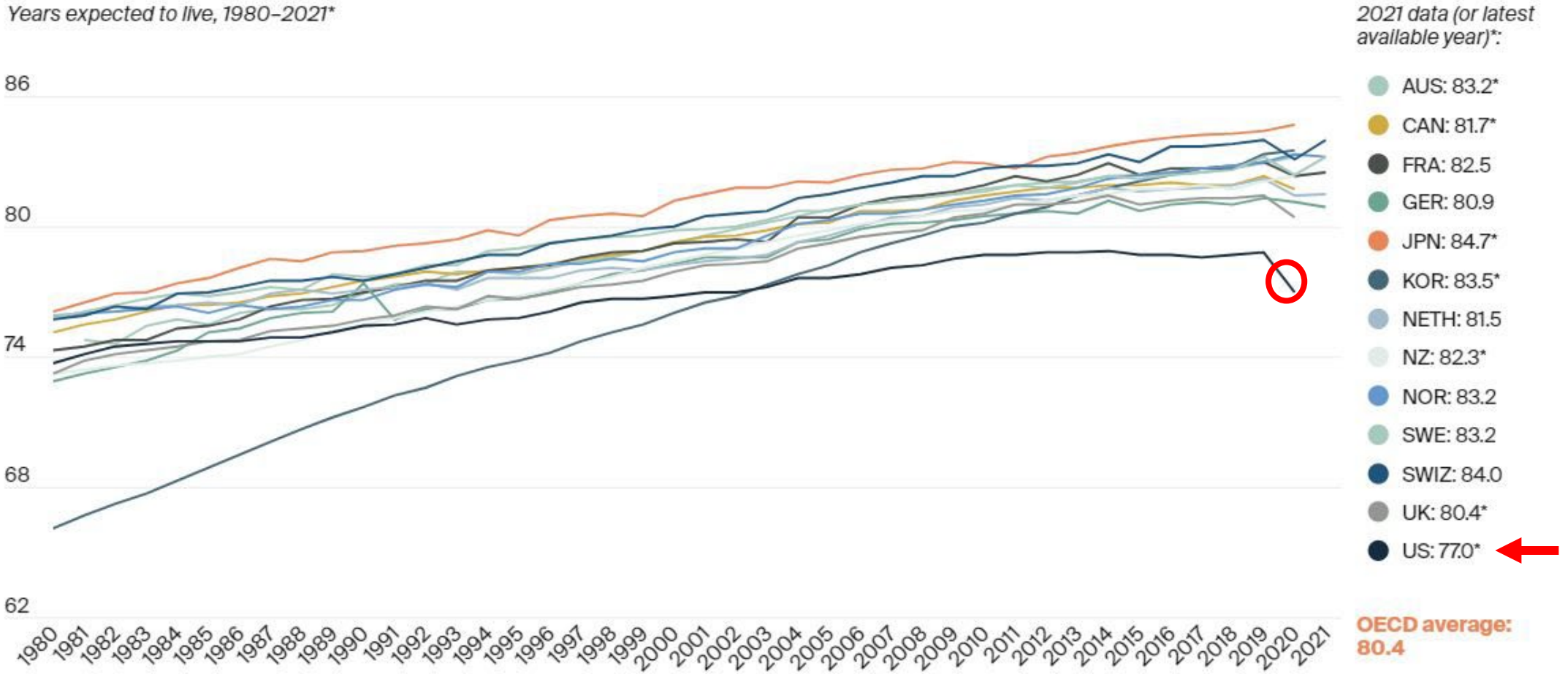

HOW YOU DOIN?

How Are We Doing?

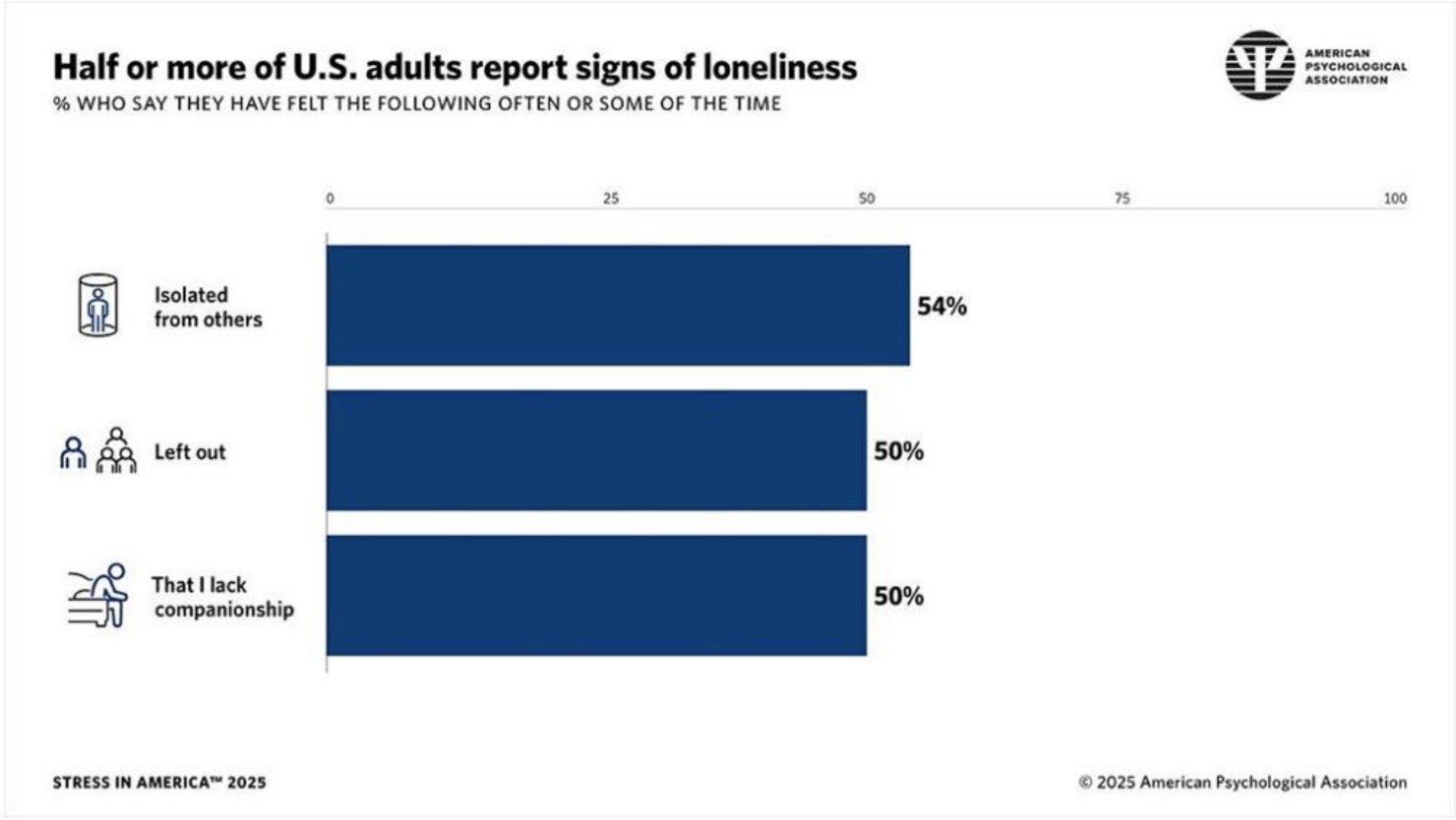
Domain	US Statistics
Chronic Disease	3 in 4 adults have ≥1 chronic condition, >50% have ≥ 2 chronic conditions
Diabetes/Prediabetes	>40 million Americans have diabetes, >115 million Americans have prediabetes
HTN	>48% of adults
CVD Mortality	>900,000 die from CVD annually, 1 out of every 3 deaths
Weight Status	>40% of adults with obesity, 32% are overweight >21% of children age 2-19 with obesity, >15% are overweight
Mental Health	1 in 5 adults diagnosed with depression 1 in 5 adults diagnosed with anxiety
Youth Mental Health	40% of high school students report symptoms of depression
Healthcare Spending	$5.3 trillion annually, $15,474 per person

https://www.cdc.gov/chronic-disease/about/index.html; https://www.cdc.gov/diabetes/php/data-research/; https://www.cdc.gov/high-blood-pressure/data-research/facts-stats/; https://www.cdc.gov/heart-disease/data-research/facts-stats/; https://www.cdc.gov/nchs/data/hestat/hestat111.htm; https://www.cdc.gov/nchs/data/hestat/hestat112.htm; https://www.cdc.gov/mental-health/about-data/conditions-care.html; https://www.cms.gov/data-research/statistics-trends-and-reports/national-health-expenditure-data/historical

U.S. life expectancy at birth is three years lower than the OECD average.



Source: Munira Z. Gunja, Evan D. Gumas, and Reginald D. Williams II, *U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes* (Commonwealth Fund, Jan. 2023). https://doi.org/10.26099/8ejv-yc74



https://www.apa.org/pubs/reports/stress-in-america/2025





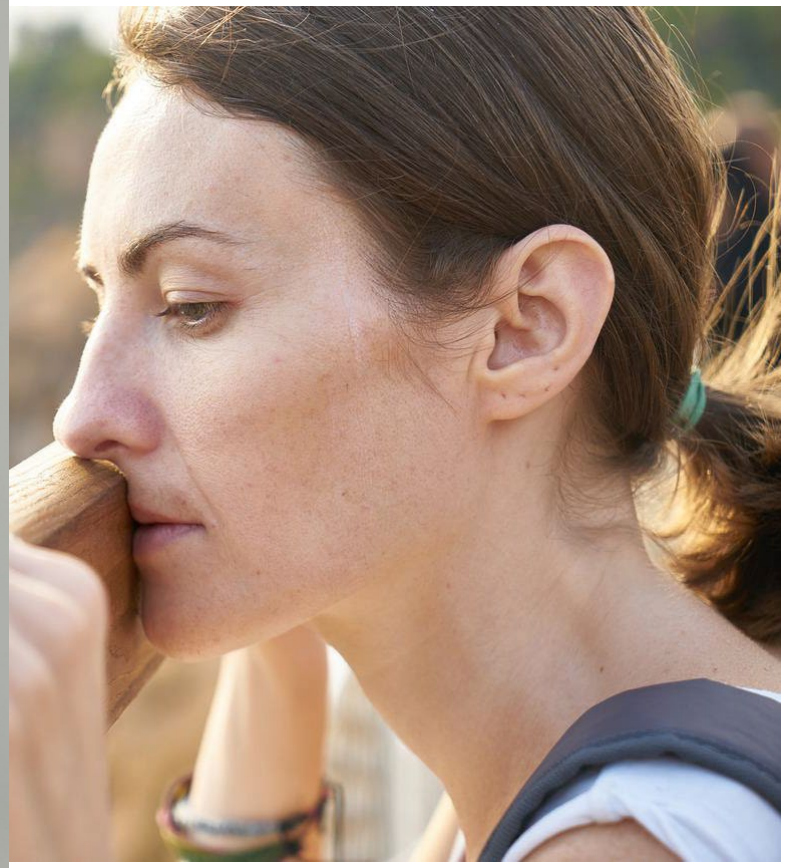










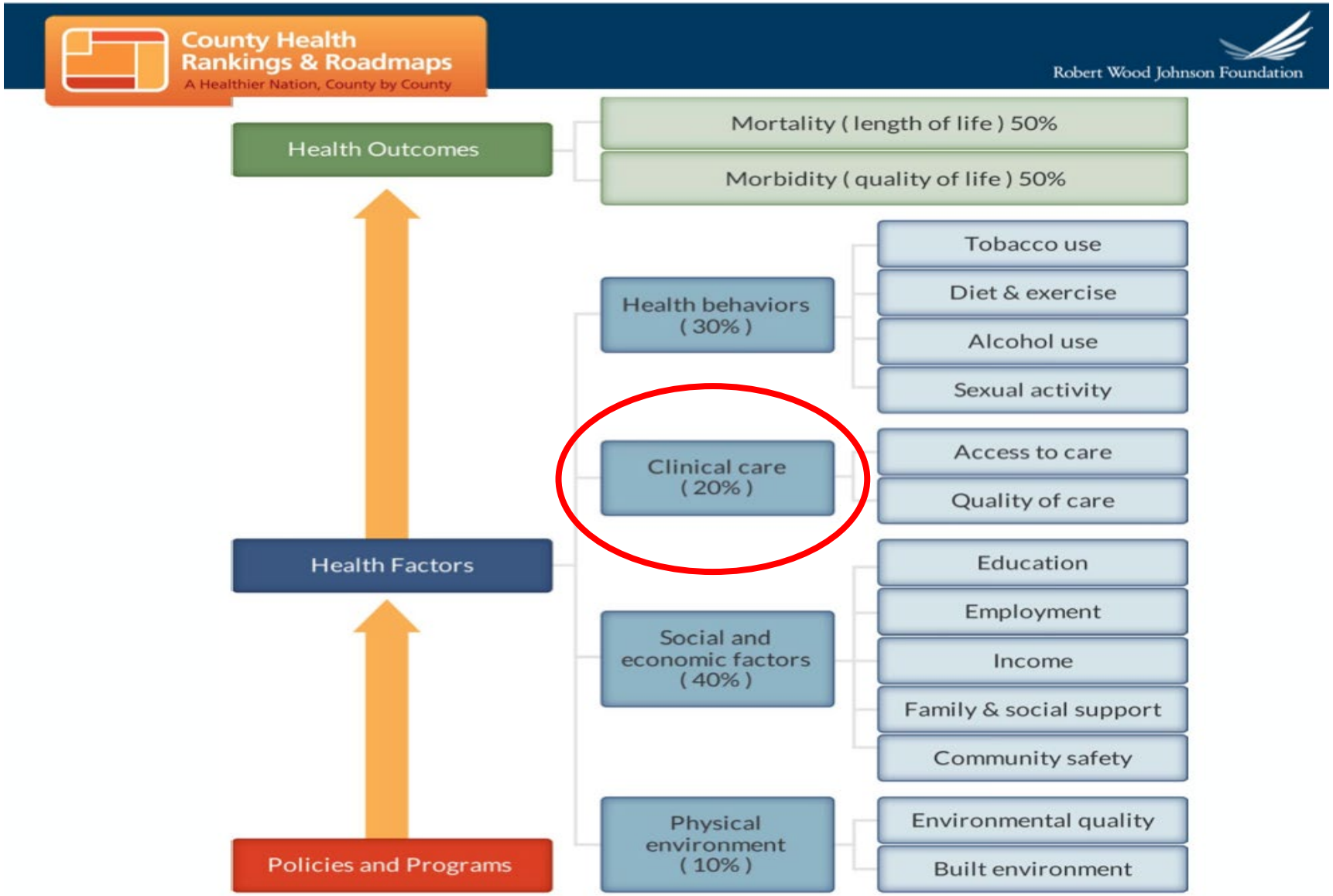


We've never had more information or technology available to help us live long, healthy lives….and yet we are still so stressed, confused and unhappy…



What Can We Do?




County Health Rankings & Roadmaps
A Healthier Nation, County by County
Robert Wood Johnson Foundation
Health Outcomes
Mortality (length of life) 50%
Morbidity (quality of life) 50%
Health Factors
Health behaviors (30%)
Tobacco use
Diet & exercise
Alcohol use
Sexual activity
Clinical care (20%)
Access to care
Quality of care
Social and economic factors (40%)
Education
Employment
Income
Family & social support
Community safety
Physical environment (10%)
Environmental quality
Built environment
Policies and Programs



“You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.”

-R. Buckminster Fuller

What is Lifestyle Medicine?

Lifestyle medicine is the **evidence-based** practice of helping **individuals and communities** with comprehensive **lifestyle changes** (including nutrition, physical activity, stress management, social support, restorative sleep and avoidance of toxic exposures) to help **prevent, treat, and even reverse** the progression of chronic diseases by addressing **underlying causes**.

Sanger, M., Katz, D., Egger, G., Lianov, L., Schulz, K. H., Braman, M., … & Ornish, D. (2014). Lifestyle medicine potential for reversing a world of chronic disease epidemics: from cell to community. *International Journal of Clinical Practice*, *68*(11), 1289–1292.

AMERICAN COLLEGE OF Lifestyle Medicine

The Six Pillars

Healthful eating

Physical activity

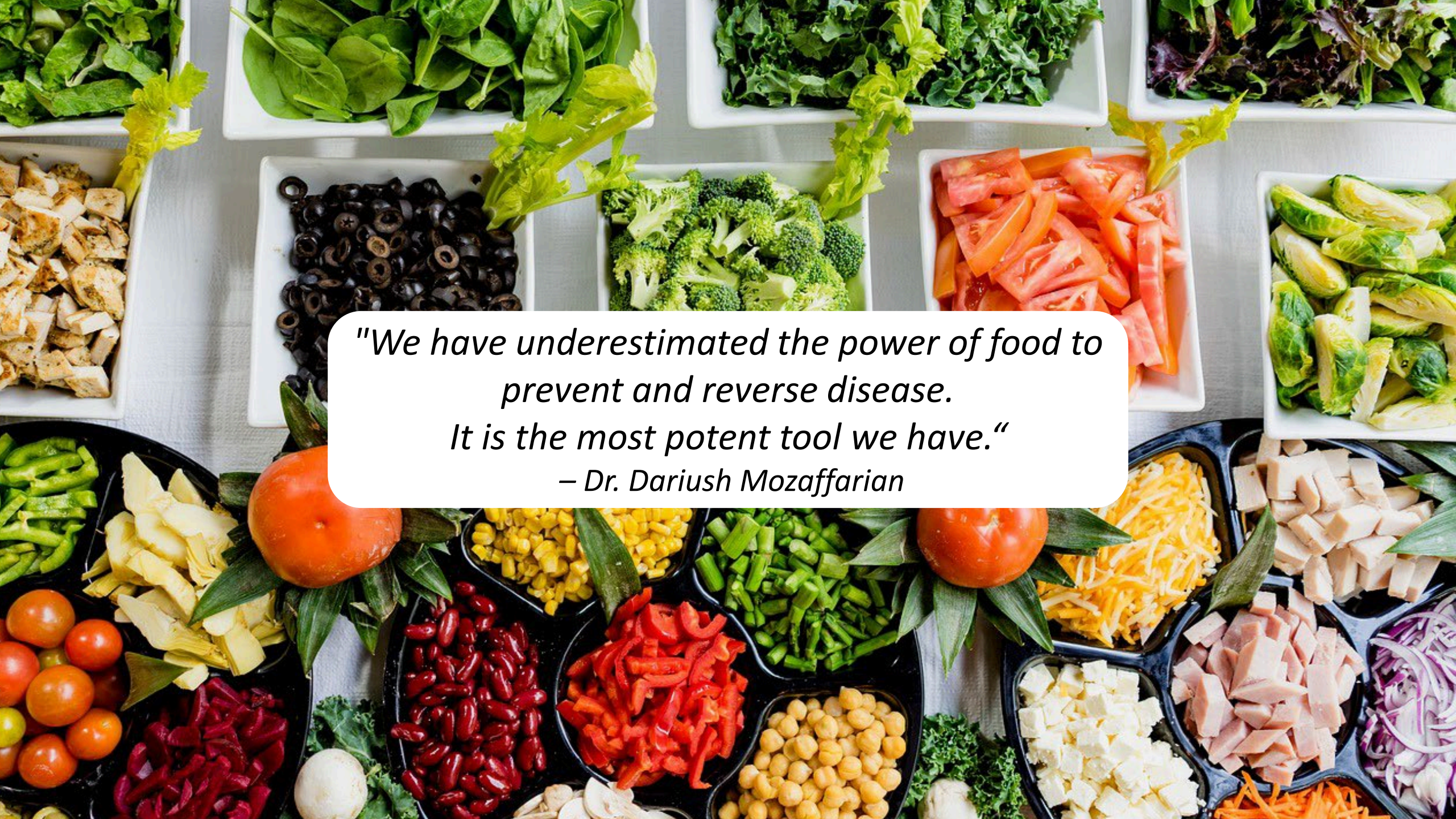
Restorative Sleep

Avoid Risky Substances

Social Connection

Stress management




"We have underestimated the power of food to prevent and reverse disease.
It is the most potent tool we have."
– Dr. Dariush Mozaffarian


Mediterranean Diet
Flexitarian Diet
Whole 30 Diet
Low-Carb Diet
DASH Diet
Intermittent Fasting
Paleo Diet
Vegetarian Diet
Vegan Diet
Ketogenic Diet



American Heart Association.



American Stroke Association.

A division of the
American Heart Association.



International Society of Hypertension



World Health Organization



AMERICAN COLLEGE OF Lifestyle Medicine



AMERICAN COLLEGE of CARDIOLOGY®



American Diabetes Association®

Summary of Recommendations

Follow a **low-sodium**, **high-potassium** dietary pattern that includes **consumption of** ample servings of **fruits**, **vegetables**, **whole grains** and **legumes**;
while **limiting** amounts of **saturated fat**, **red meat** and **processed red meat**, processed foods containing **added sugars**, **sodium** and **refined grains** and **sugar-sweetened beverages** as the preferred nutritional approach



Vs.



Replacement of just **3%** of calories from animal protein with an equivalent amount of plant protein is associated with an **11% decreased** risk of CVD mortality in men and a **12% decreased** risk in women

Huang J, Liao LM, Weinstein SJ, Sinha R, Graubard BI, Albanes D. Association Between Plant and Animal Protein Intake and Overall and Cause-Specific Mortality. *JAMA Intern Med*. 2020;180(9):1173-1184. doi:10.1001/jamainternmed.2020.2790

Fiber is Your Friend!

Fun Facts!

For each 10 gram **increase** in daily fiber consumption, how much will I **decrease** my risk of all-cause mortality?

10%

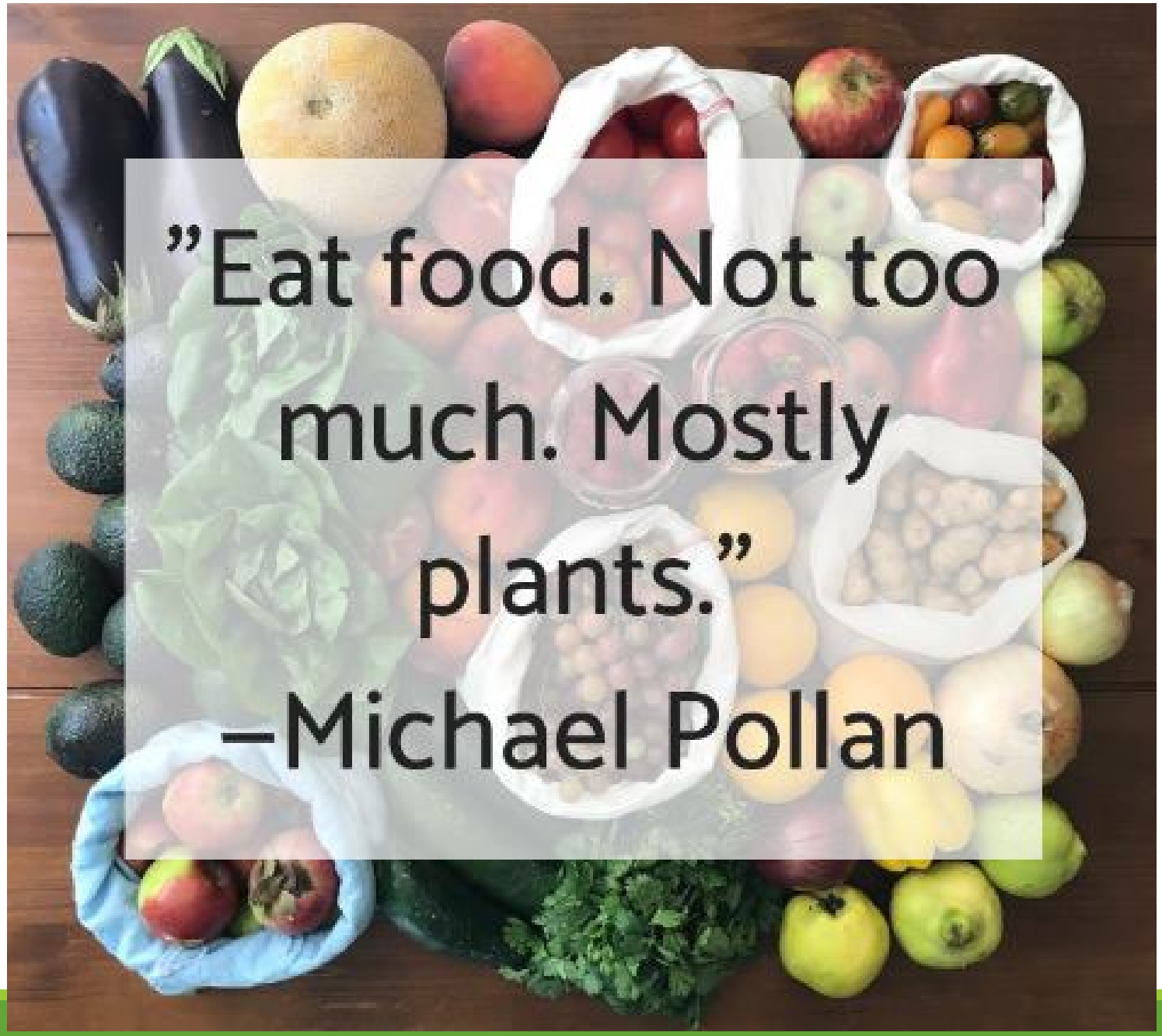
Where can I find 10 grams of fiber?

One cup cooked chickpeas – 12.5 grams of fiber

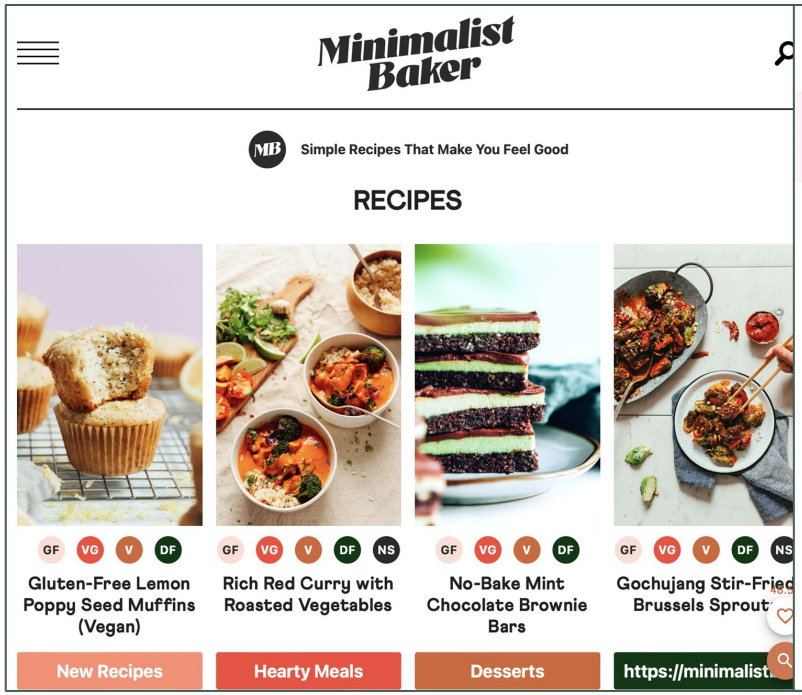
One cup of raspberries or blackberries – 8 grams of fiber

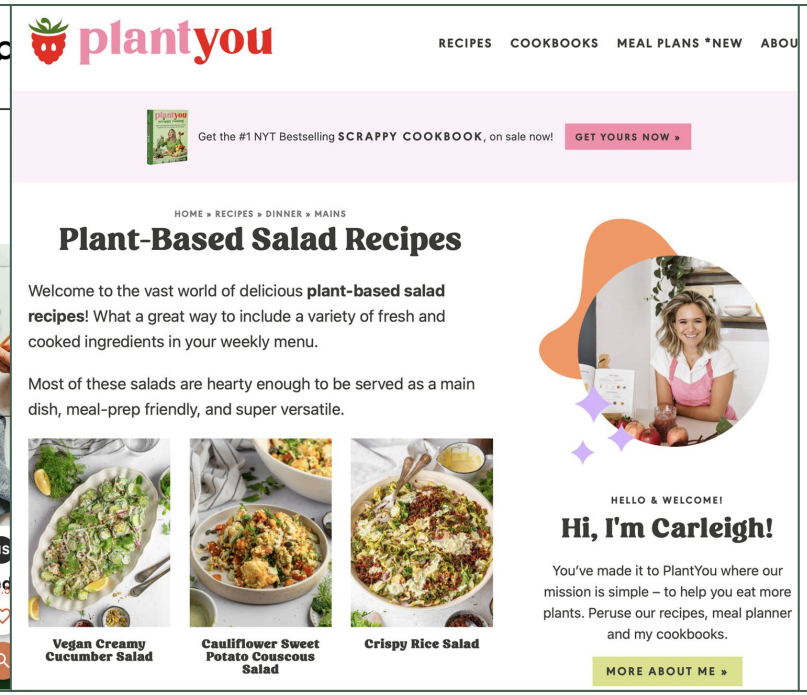
One cup of cooked rolled oats – 4 grams of fiber

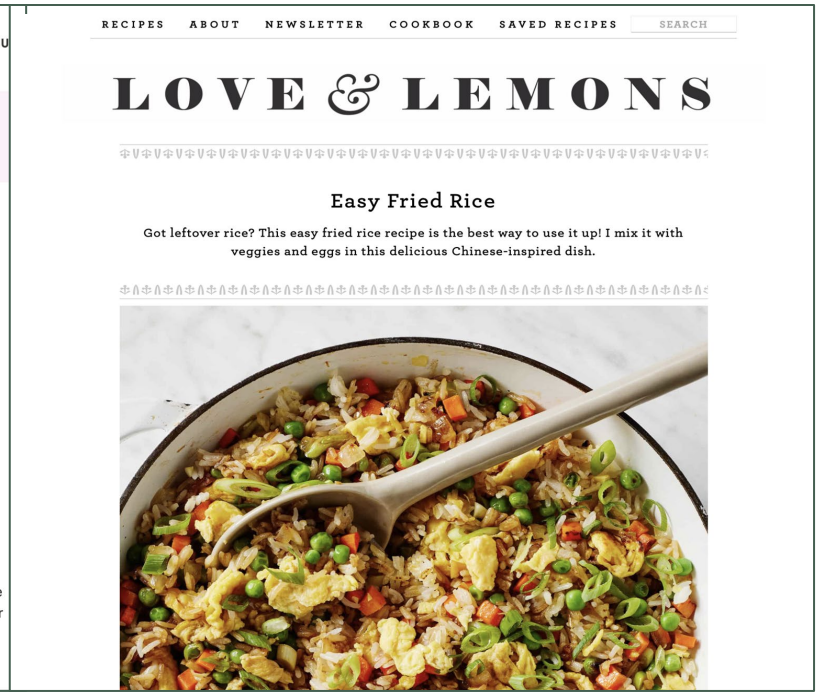
Yang Y, Zhao LG, Wu QJ, Ma X, Xiang YB. Association between dietary fiber and lower risk of all-cause mortality: a meta-analysis of cohort studies. *Am J Epidemiol*. 2015;181(2):83-91. doi:10.1093/aje/kwu257


”Eat food. Not too much. Mostly plants.”
–Michael Pollan

Plant-Forward Recipe Sites to Explore







“Those who do not find time for exercise will have to find time for illness.”

-The Earl of Derby



Adult Physical Activity Goals

150-300 minutes moderate physical activity/week

OR

75 minutes vigorous physical activity/week

Strength/Resistance training all major muscle groups at least **2x/week**

Age 65+
Balance and Neuromotor activities like yoga, tai chi, dance, etc.

The Power of Physical Activity



<500 MET minutes/week – 22% reduction in mortality

500-999 MET minutes/week – 28% reduction in mortality

≥1000 MET minutes/week – 35% reduction in mortality

Hupin, D., Roche, F., Gremeaux, V., Chatard, J. C., Oriol, M., Gaspoz, J. M., ... & Edouard, P. (2015). Even a low-dose of moderate-to-vigorous physical activity reduces mortality by 22% in adults aged≥ 60 years: a systematic review and meta-analysis. *British Journal of Sports Medicine*, *49*(19), 1262-1267.

Resistance Training

- Resistance Training (RT) decreases all-cause and CVD mortality **independent of aerobic activity**
- The lowest risk of CVD and all-cause mortality is attained at RT of **2 times/week** with up to an hour of total duration



Liu Y, Lee DC, Li Y, Zhu W, Zhang R, Sui X, Lavie CJ, Blair SN. Associations of Resistance Exercise with Cardiovascular Disease Morbidity and Mortality. Med Sci Sports Exerc. 2019 Mar;51(3):499-508. doi: 10.1249/MSS.0000000000001822. PMID: 30376511; PMCID: PMC7385554.

Lean Muscle Mass a Predictor for Longevity

- NHANES III cohort
- Men ≥55, Women ≥65
- Muscle mass calculated via bioelectrical impedance
- Median follow-up 13.2 years
- **20% decreased** risk for all-cause mortality for adults in the highest quartile of lean muscle mass compared to the lowest quartile



Srikanthan P, Karlamangla AS. Muscle mass index as a predictor of longevity in older adults. Am J Med. 2014 Jun;127(6):547-53. doi: 10.1016/j.amjmed.2014.02.007. Epub 2014 Feb 18. PMID: 24561114; PMCID: PMC4035379.

Physical Activity Decreases Risk of Chronic Disease

- ↓ Dementia 32%
- ↓ Diabetes 50%
- ↓ Breast Cancer 18%
- ↓ Recurrent Breast Cancer 50%
- ↓ Colon Cancer 60%
- ↓ Prostate Cancer 10%-30%
- ↓ Depression 50%
- ↓ Anxiety symptoms
- ↓ Hypertension 40%
- ↓ Heart Disease 40%
- ↓ Stroke 27%
- ↓ Atrial Fibrillation 48%

And So Much More!!

Larson et al., 2006; Wei et al., 1999; McTiernan et al., 2003; Holmes, Chen, Feskanich, Kroenke, & Colditz, 2005; Slattery & Potter, 2002; Hochberg et al., 2012; Shepard, 2017; Dunn, Trivedi, Kampert, Clark, & Chambliss, 2005; Sayeed et al., 2019; Barlow et al., 2005; Hu et al., 2000; Mozaffarian, Furberg, Psaty, & Siscovick, 2008



How Much Sleep Do You Need?

AGE	AMOUNT OF SLEEP
3-5 years	11-13 hours/day
5-12 years	9-11 hours/day
12-18 years	8.5-9.5 hours/day
Adults	7-9 hours/day

http://www.cdc.gov/Features/Sleep/

The Importance of Sleep

Sleep deprivation causes:

- Increased sympathetic mediators
- Increased cortisol
- Increased ghrelin
- Decreased leptin
- Decreased growth hormone
- Impaired glucose tolerance



Chen, X. et at. “Is Sleep Duration Associated With Childhood Obesity? A Systematic Review and Meta-analysis.” *Obesity* (2008) 16, 265-274.

Sleep and Cardiovascular Disease

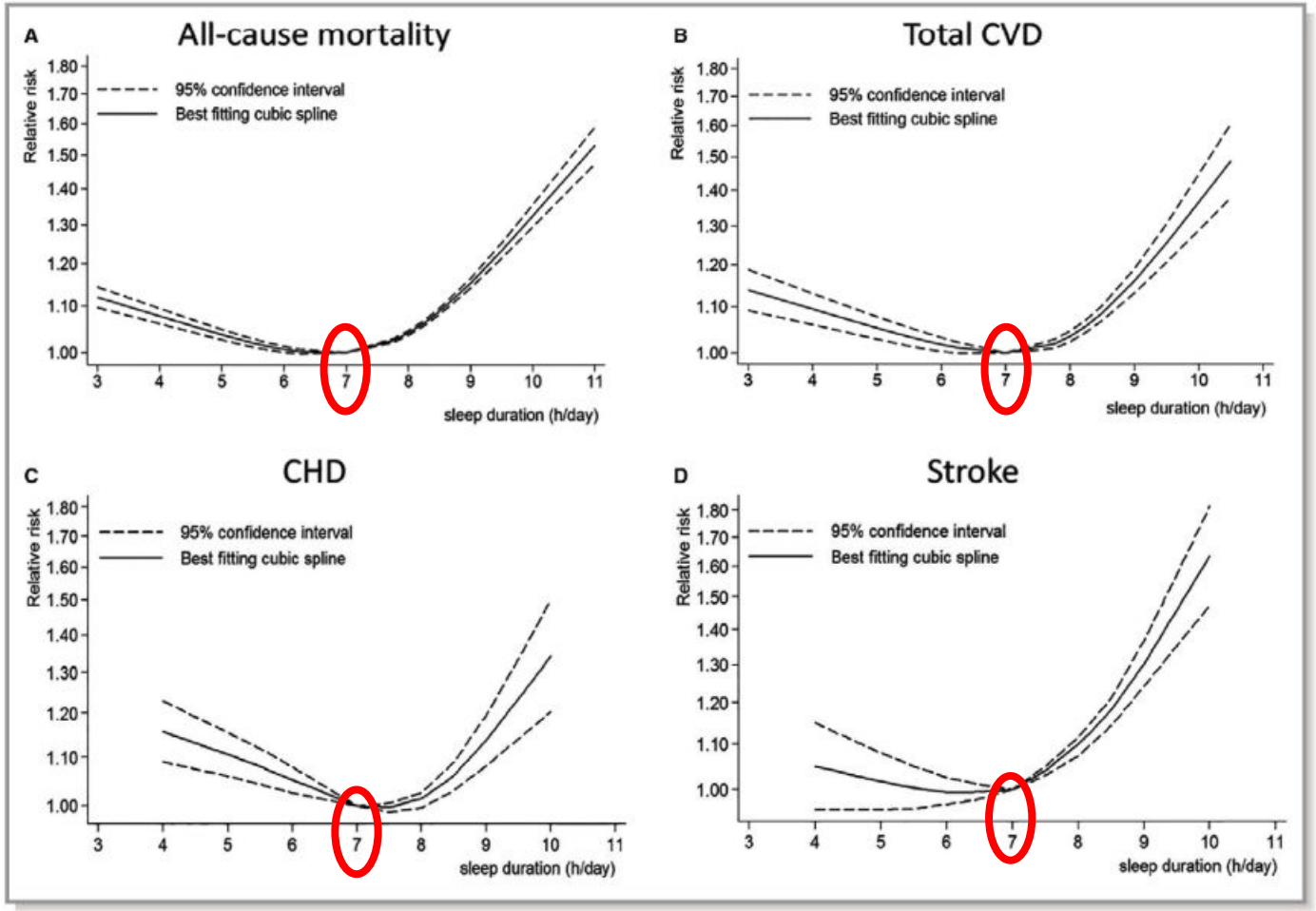


Figure 2. Nonlinear dose-response analyses of sleep duration and risk of all-cause mortality (A), total CVD (B), CHD (C), and stroke (D). CHD indicates coronary heart disease; CVD, cardiovascular disease.

Yin J, Jin X, Shan Z, et al. Relationship of Sleep Duration With All-Cause Mortality and Cardiovascular Events: A Systematic Review and Dose-Response Meta-Analysis of Prospective Cohort Studies. *J Am Heart Assoc*. 2017;6(9):e005947. Published 2017 Sep 9. doi:10.1161/JAHA.117.005947

Epigenetic Effects of Sleep

Balanced Crossover Design Study with 26 participants

- Week 1 - <6 hours of sleep
- Week 2 – Sufficient sleep (average 8.5 hours)

Blood samples collected for Transcriptome Analysis

Conclusion

- One week of sleep deprivation altered the function of **711** genes, including some involved in **circadian rhythm, metabolism, inflammation, immunity and oxidative stress**



Möller-Levet, C.S., et al. (2013). Sleep loss and the human blood transcriptome. *Proceedings of the National Academy of Sciences*, *110*(12), E1132-E1141. doi:10.1073/pnas.1217154110

“Peace…
It does not mean to be in a place where there is no noise, trouble or hard work. It means to be in the midst of those things and still be calm in your heart.”

- Unknown



Effect of Chronic Stress

Fight or Flight response

- Increase sympathetic mediators
- Decrease parasympathetic mediators
- Suppresses immune system

Chronic Stress

- Increase cortisol
  - Increase fat deposition
  - Increase appetite
  - Increase craving for carbohydrates and fat
  - Weight gain



Cannon, W. B. (1932). *The wisdom of the body*. New York: W.W. Norton & Company, Inc.

Cannon, W. B. (1920). *Bodily changes in pain, hunger, fear and rage: an account of recent researches into the function of emotional excitement.* New York: D. Appleton and Company.

Pasquali, R (2012). The hypothalamic-pituitary-adrenal axis and sex hormones in chronic stress and obesity: pathophysiology and clinical aspects *Annals of the New York Acad Sci*.Aug;1264:20-35.

Effect of Chronic Stress

- Increased risk of depression
- Increased risk of anxiety
- Increased risk of cardiovascular disease
- Accelerated HIV progression
- Increased risk of diabetes
- Increased inflammatory mediators:
  - IL-1B, IL-4, IL-6, IL-10, TNF-alpha, interferon-gamma



Cohen S, Janicki-Deverts D, Miller GE. Psychological Stress and Disease. *JAMA.* 2007;298(14):1685–1687.

Hackett RA, Steptoe A. Psychosocial Factors in Diabetes and Cardiovascular Risk. Curr Cardiol Rep. 2016 Oct;18(10):95.

Marsland AL, Walsh C, Lockwood K, John-Henderson NA. The effects of acute psychological stress on circulating and stimulated inflammatory markers: A systematic review and meta-analysis. Brain Behav Immun. 2017 Aug;64:208-219.

“Attention is the rarest and purest form of generosity. ”

-Simone Weil

Social Connection

Nurture a supportive social group

- Harvard Study of Adult Development
  - The quality of our relationships is more important than wealth, status and power in determining longevity and happiness

Loneliness is a modifiable risk factor

- Health and Retirement Study
- Loneliness associated with decline in ADLs, mobility, difficulty climbing stairs and upper extremity tasks
- **Loneliness increased risk of death**
  - **22.8% vs. 14.2%**



Robert Waldinger TEDx "What Makes a Good Life? Lessons from the Longest Study on Happiness": https://www.youtube.com/watch?v=8KkKuTCFvzI
Perissinotto CM, Stijacic Cenzer I, Covinsky KE. Loneliness in older persons: a predictor of functional decline and death. Arch Intern Med. 2012 Jul 23;172(14):1078-83.



“Good relationships keep us happier and healthier. Period.”

— Robert Waldinger



OK…sounds great. But does it work in the real world?

Effect of Lifestyle Habits

- Over 23,000 middle-aged participants
- Evaluated lifestyle factors:
  - BMI<30
  - No tobacco use
  - 3.5 hr/week or more physical activity
  - High intake fruits, vegetables, whole grains and low red meat consumption
- Following all **4** healthy lifestyle factors resulted in a **78%** decreased risk of developing chronic disease compared to 0 healthy lifestyle factors

Healthy Living Is the Best Revenge: Findings From the European Prospective Investigation Into Cancer and Nutrition–Potsdam Study. *Arch Intern Med.* 2009;169(15):1355–1362. doi:10.1001/archinternmed.2009.237

AHA Simple 7

No tobacco use

Eat a healthy diet

Be physically active

Maintain a healthy body weight

Manage blood pressure

Control cholesterol

Reduce blood sugar

1% of Americans have ideal numbers **for all 7**

Essential 8

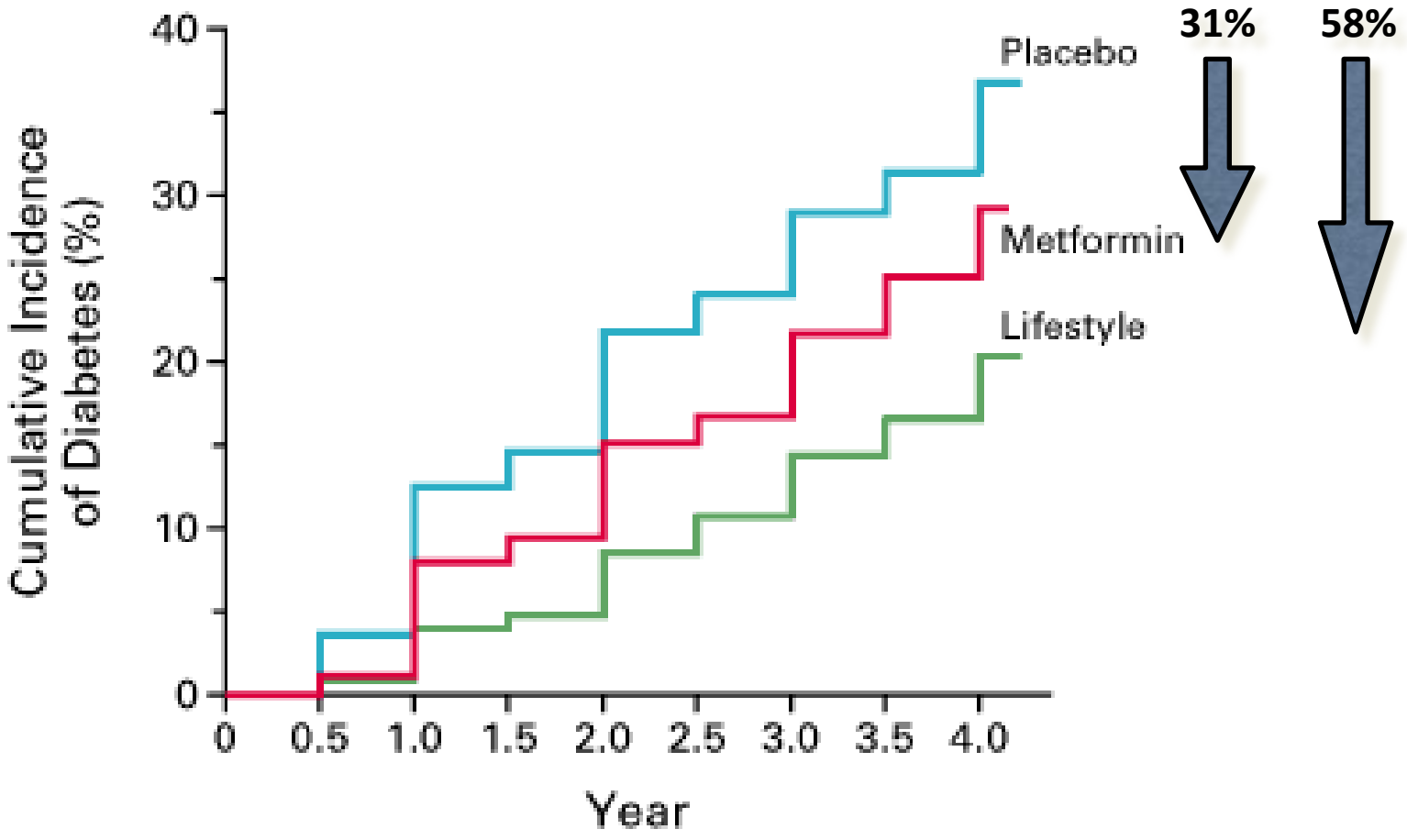
Added “Get Healthy Sleep”

https://www.heart.org/en/healthy-living/healthy-lifestyle/lifes-essential-8

https://playbook.heart.org/lifes-simple-7/

Therapeutic Dose

Diabetes Prevention Program



DPP Research Group NEJM (2002): 346 (6): 393

Diabetes

- Participants: 20 men with type 2 DM, currently on insulin therapy
- Fed high-carbohydrate, high-fiber diet that was ***weight-maintaining***
- Followed for 16 days
- Overall insulin requirements decreased 60%
- 11 participants were able to stop insulin entirely
- Serum cholesterol dropped an average of almost 80 points
- This is the **POWER of PLANTS**

J W Anderson, K Ward; High-carbohydrate, high-fiber diets for insulin-treated men with diabetes mellitus, *The American Journal of Clinical Nutrition*, Volume 32, Issue 11, 1 November 1979, Pages 2312–2321

Diabetes

- 74 week randomized, controlled clinical trial comparing effect of low-fat, vegan diet vs. ADA diet
- 99 participants with Type 2 DM, living in community setting, no meals provided
- Weight loss:
  - Vegan: **-4.4 Kg**, ADA: **-3.0 Kg**
- HgbA1C change:
  - Vegan: **-0.34**, ADA: **-0.14**
- Total cholesterol:
  - Vegan: **-20.4**, ADA: **-6.8**
- LDL:
  - Vegan: **-13.5**, ADA: **-3.4**

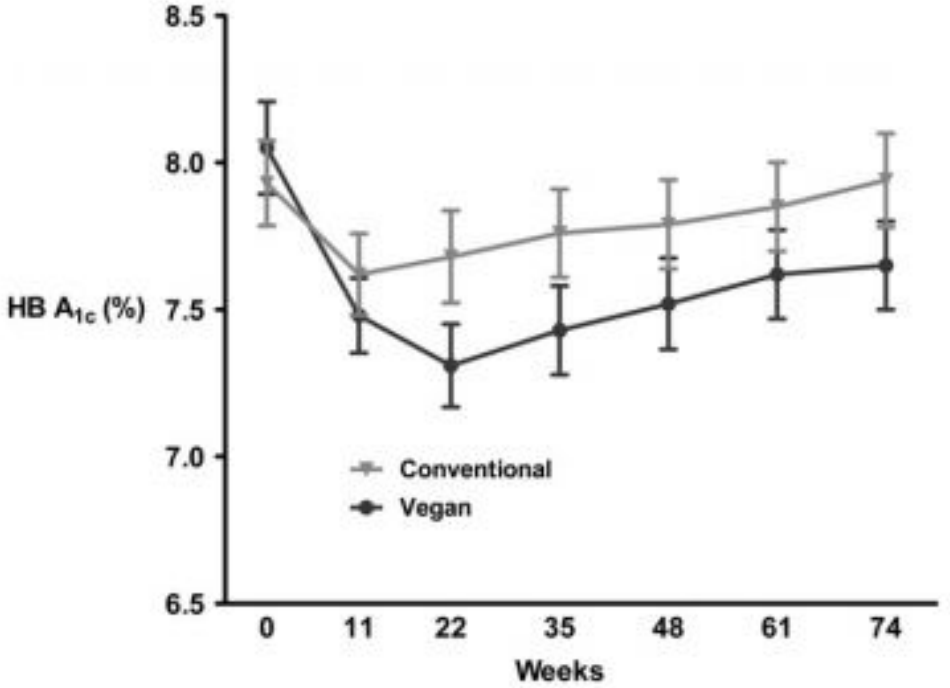


FIGURE 1. Glycated hemoglobin (HB A_{1c}) values for all participants (n = 49 vegan diet; n = 50 conventional diet). The mean (±SD) data shown are last values before any change to diabetes medications carried forward. t Test for between-group comparison of changes from baseline to final values, $P = 0.03$.

Barnard ND, Cohen J, Jenkins DJ, et al. A low-fat vegan diet and a conventional diabetes diet in the treatment of type 2 diabetes: a randomized, controlled, 74-wk clinical trial. *Am J Clin Nutr*. 2009;89(5):1588S–1596S. doi:10.3945/ajcn.2009.26736H

Cardiovascular Disease

- Patients self-selected, non-randomized
- Considered adherent if they removed meat, fish, eggs, dairy and added oils
- Emphasis on eating green leafy vegetables daily, lots of fruit, vegetables, whole grains
- After 3.7 years 89% were still adherent
  - Separate cohort 77% still adherent after 12 years

FIGURE 1
Restoration of myocardial perfusion[2]

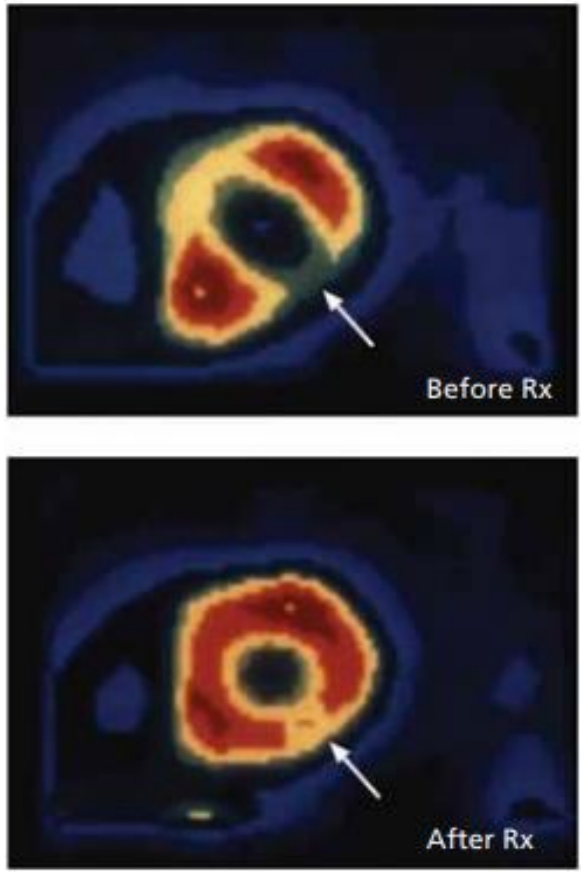
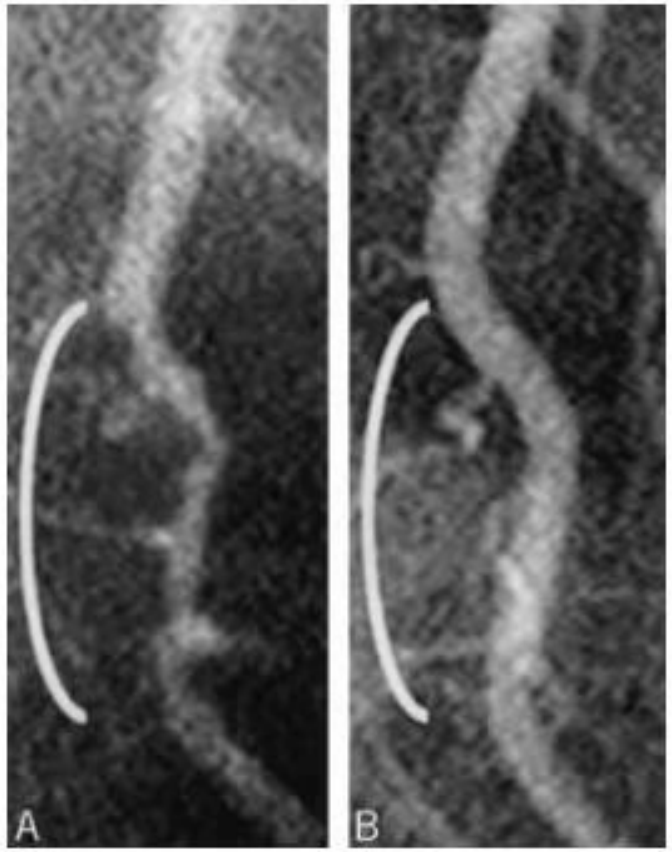


FIGURE 2
Reversal of coronary artery disease[4]

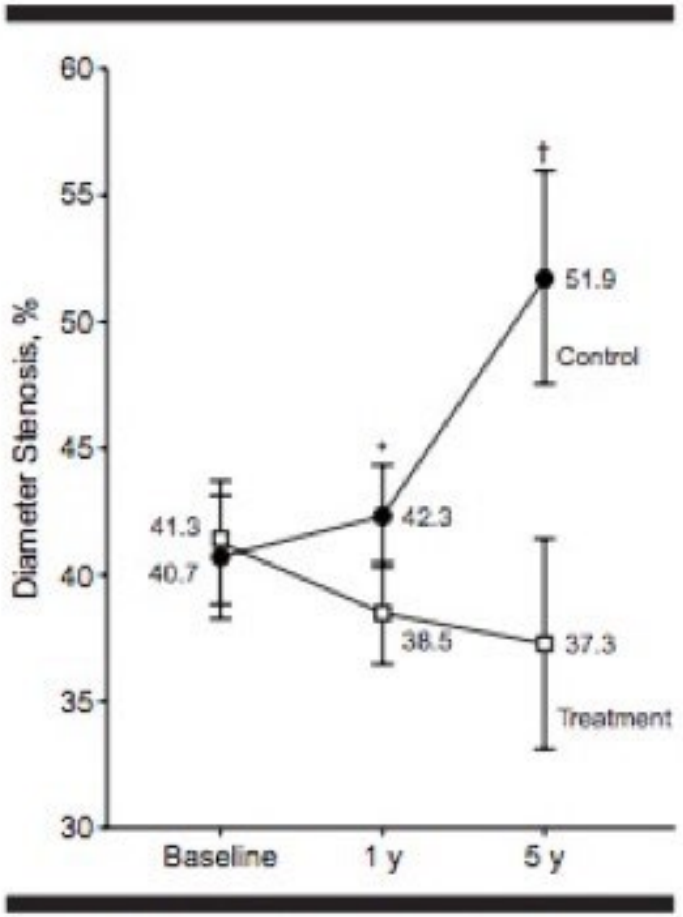


Esselstyn CB, Gendy G, Doyle J, Golubic M, Roizen M. A Way to Reverse CAD. The Journal of Family Practice. 2014, July; 63(7):356-364b

Ornish Lifestyle Heart Trial

Eat Well, Move More, Stress Less, Love More

- Randomized-control study
- Control Group: **10.6% *increase*** in mean coronary artery stenosis
- Intervention Group: **3.4% *decrease*** in mean coronary artery stenosis
- Overall **14% difference** in mean artery stenosis between control group and intervention group



Ornish, D., Schwitz, L. W., Billings, J. H., Brown, S. E., Gould, K. L., Merritt, T. A., … & Brand, R. J. (1998). Intensive lifestyle changes for reversal of coronary heart disease. The *Journal of the American Medical Association, 280*(23), 2001-2007.

“Knowledge alone does not change behavior”

Behavior Change

- Identify and understand the behavior you want to change
  - What are the triggers?
  - What is the reward?
  - What could I do differently?
    - **Replacement** works better than **willpower**
    - Don't "resist" the habit – pick a new action to follow the trigger or avoid the trigger
  - Plan for the trigger and be ready with the replacement
- How can I set up my environment to make the behavior the default choice?
- Who are my Allies and who are my Accomplices?
- Don't let "lapses" become "relapses"

Readiness Ruler

How motivated do you feel now to make changes (or how important is it to you to make changes)?

1	2	3	4	5	6	7	8	9	10

Why did you choose that number?

How confident are you that you will be able to make changes?

1	2	3	4	5	6	7	8	9	10

Stephen Rollnick

Lifestyle Change Prescription

Set a SMART Goal

- SPECIFIC
- MEASURABLE
- ACHIEVABLE
- RELEVANT
- TIME BOUND



Case Studies

70 yo female, retired teacher, Kellyn school volunteer for several years

Follow-up with her family doctor after wellness visit blood work

- HgbA1c – 6.5
- Fasting blood sugar – 156
- Random blood sugar in the office – 256

Social Hx – no tobacco, no alcohol, no other substances.

- Lives with husband, adult son and two dogs

Family Hx

- Father – CAD, HTN, hyperlipidemia, osteoarthritis
- Mother – Alzheimer's DX, hyperlipidemia, impaired glucose tolerance
- Sister – HTN, hyperlipidemia
- Two sons – both with Type 2 diabetes

Her Doctor Recommended:

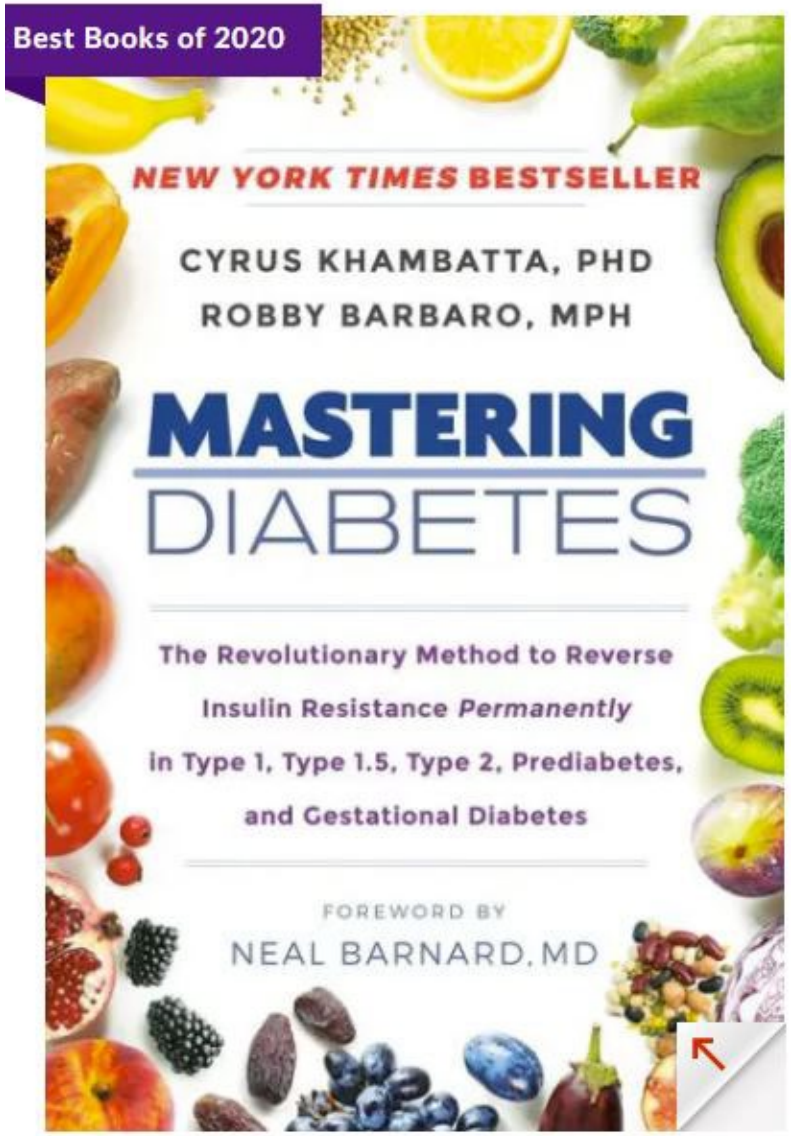
- Metformin 500 mg po BID
- Try to limit carbohydrates
- Referral to diabetes education
- Check random blood sugars once daily
- Follow-up in 3 months



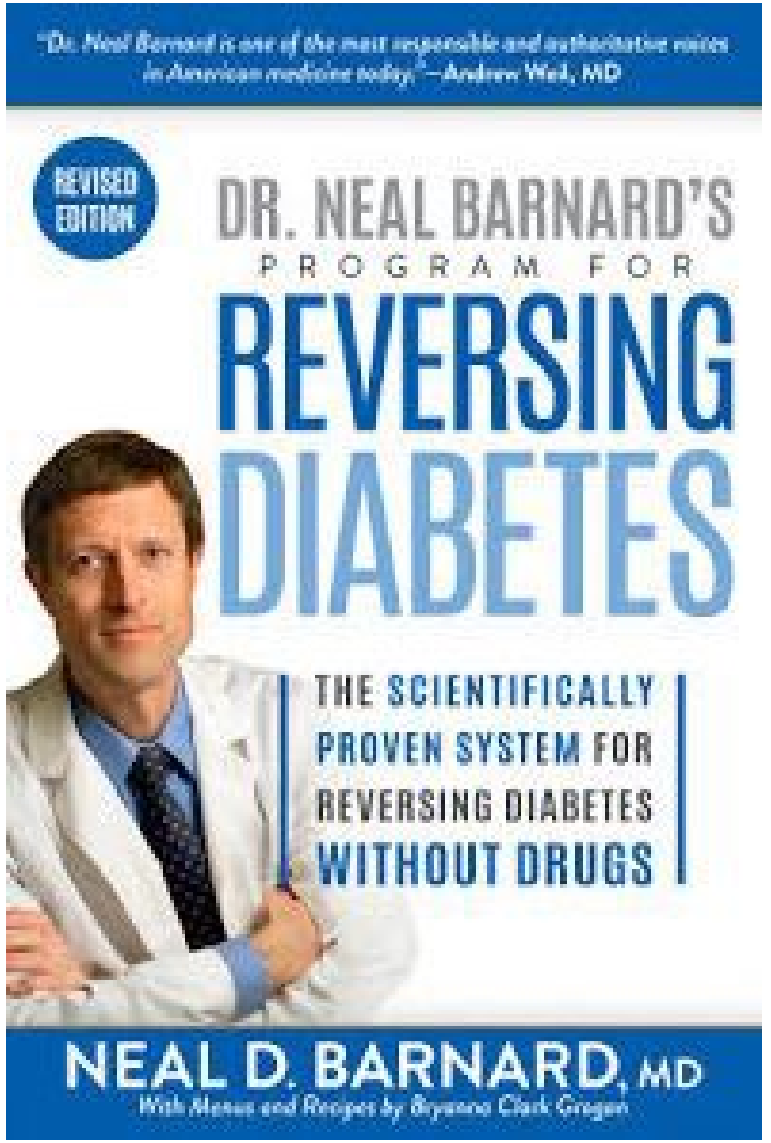
Patient was concerned about the new diagnosis of diabetes and wanted to try to avoid medication if possible. She asked whether a lifestyle medicine approach would be OK for her to try?

Initial Plan We Created Together

- Check blood sugar before breakfast and before dinner daily
  - Text results to me, keep log in Excel
- Change breakfast to WFPB (steel cut oats, berry crumble, etc.)
- Start walking (or other physical activity – she likes yoga) daily, aim for at least 30 minutes but every little bit helps.
- Aim to walk in the yard with her dogs for 10 minutes after dinner daily
- Eat a salad before lunch or dinner daily with at least a cup of leafy greens
- Limit processed snack foods – AVOID the sugar-free “diabetic” snacks
- Sent recipes for Kellyn Chili and Harvest Vegetable Soup – batch cooking

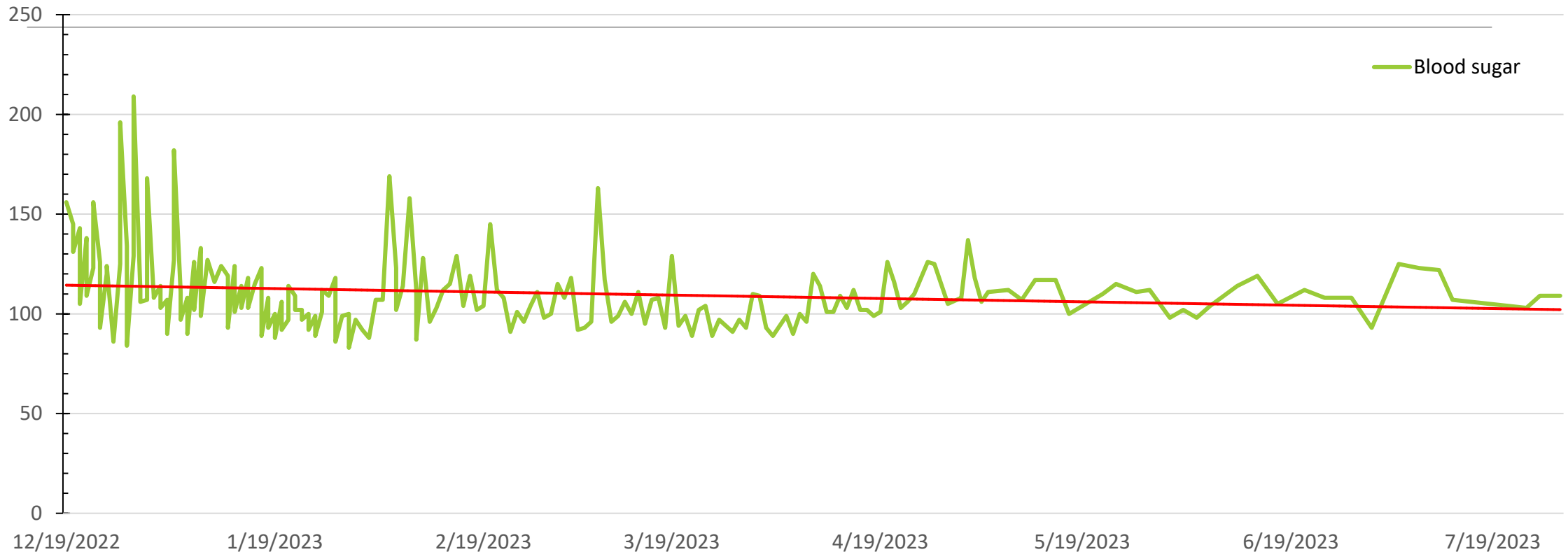


https://www.masteringdiabetes.org/

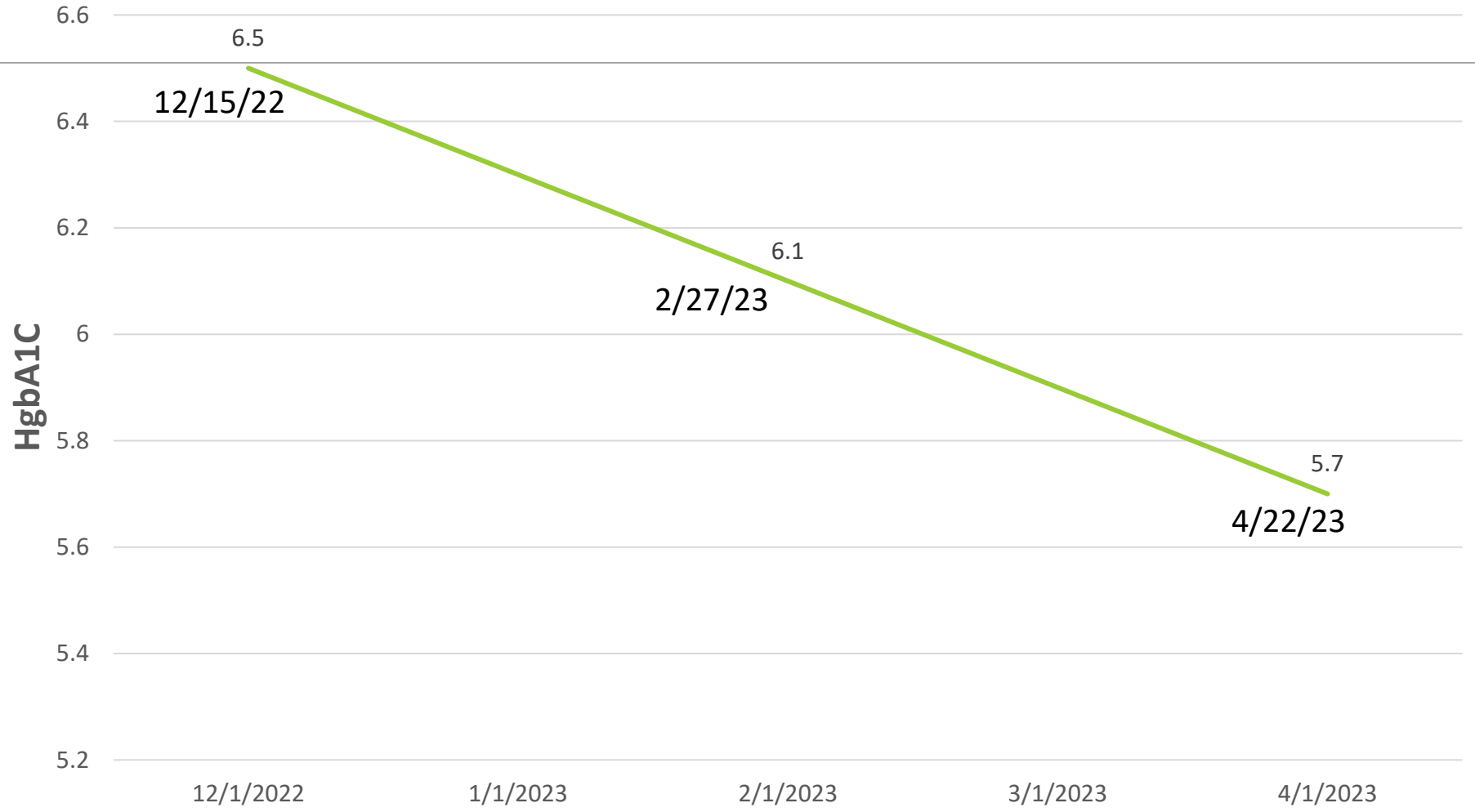


https://www.pcrm.org/vegankickstart

Pre-Meal Blood Sugar Log



HgbA1C



HgbA1C – 5.6
August 2023

25 lb weight loss = 13.6% initial body weight



Case Study F.W.
I will never forget the first time…

- I participated in and experienced the true transformative potential of Lifestyle Medicine.
- December 11, 2019 - I met with F.W. for his routine annual physical. For him, the encounter was not routine. That day he was empowered and motivated to take control of his health – and he did just that.
- His results were dramatic, relevant, rapid, and long lasting.

Case Study – F.W.

F.W. is 65yo male, Retired PhD Chemist whom I have cared for since March of 2014.

Past Medical History

- Hyperlipidemia
- Coronary artery calcifications on CT
- Erectile dysfunction
- Palpitations
- Overweight with a BMI of 28.

Baseline Lifestyle

- Avid cyclist (50 miles per week)
- Predominantly home cooked meals.
- Typically consisting of baked chicken or salmon, a starch, and a vegetable
- Completely avoids fast food and only occasionally eats out.
- Less than one alcoholic drink per day, no tobacco, no recreational drugs.

Case Study F.W. Clinical Challenge

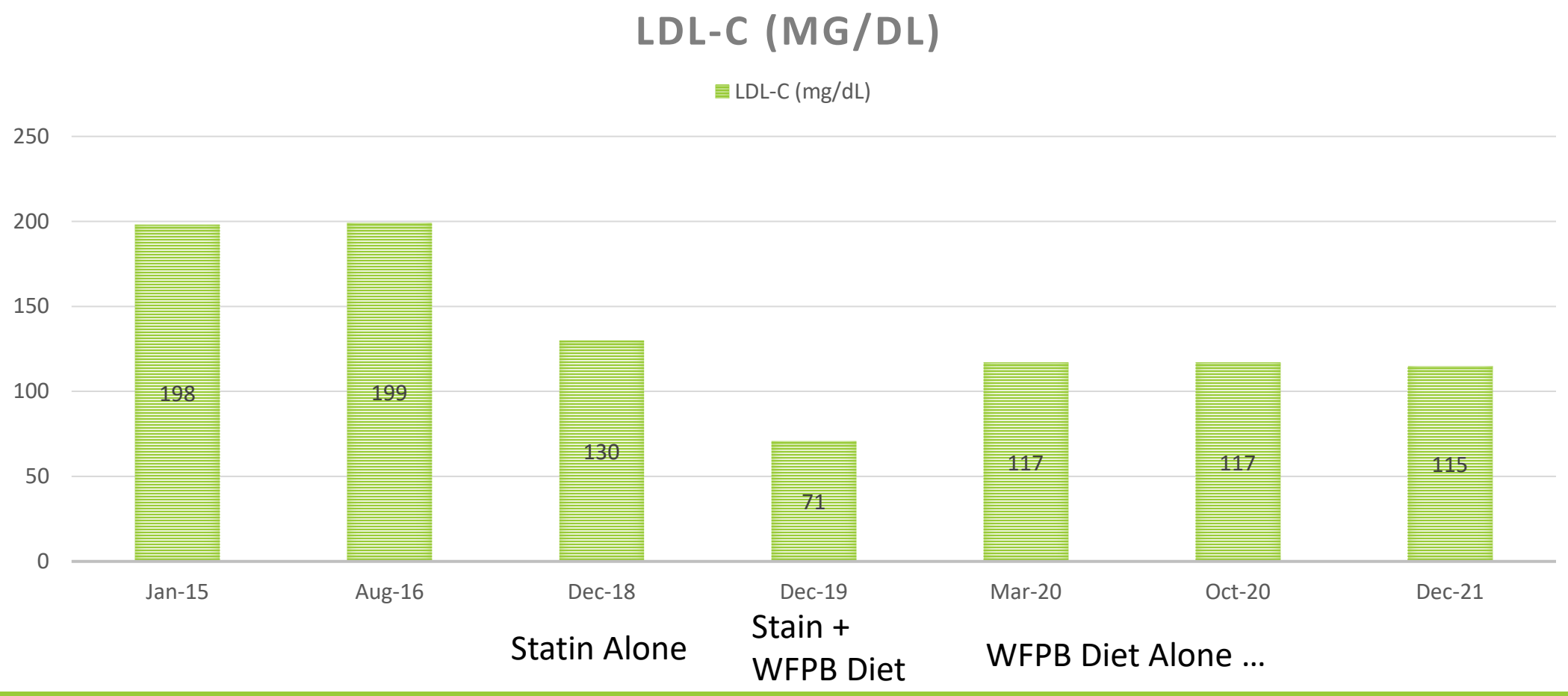
- Despite what most would consider an active, healthy lifestyle he struggled with his weight and cholesterol.
- Historically his LDL cholesterol approached 200 mg/dL prior to the initiation of statin therapy.
- He was very resistant to the initiation of statin therapy for years but eventually agreed to atorvastatin 20 mg nightly in April of 2018.
- After initiation of Atorvastatin his LDL cholesterol was lowered to 130 mg/dL.

Case Study F.W.
Lifestyle changes

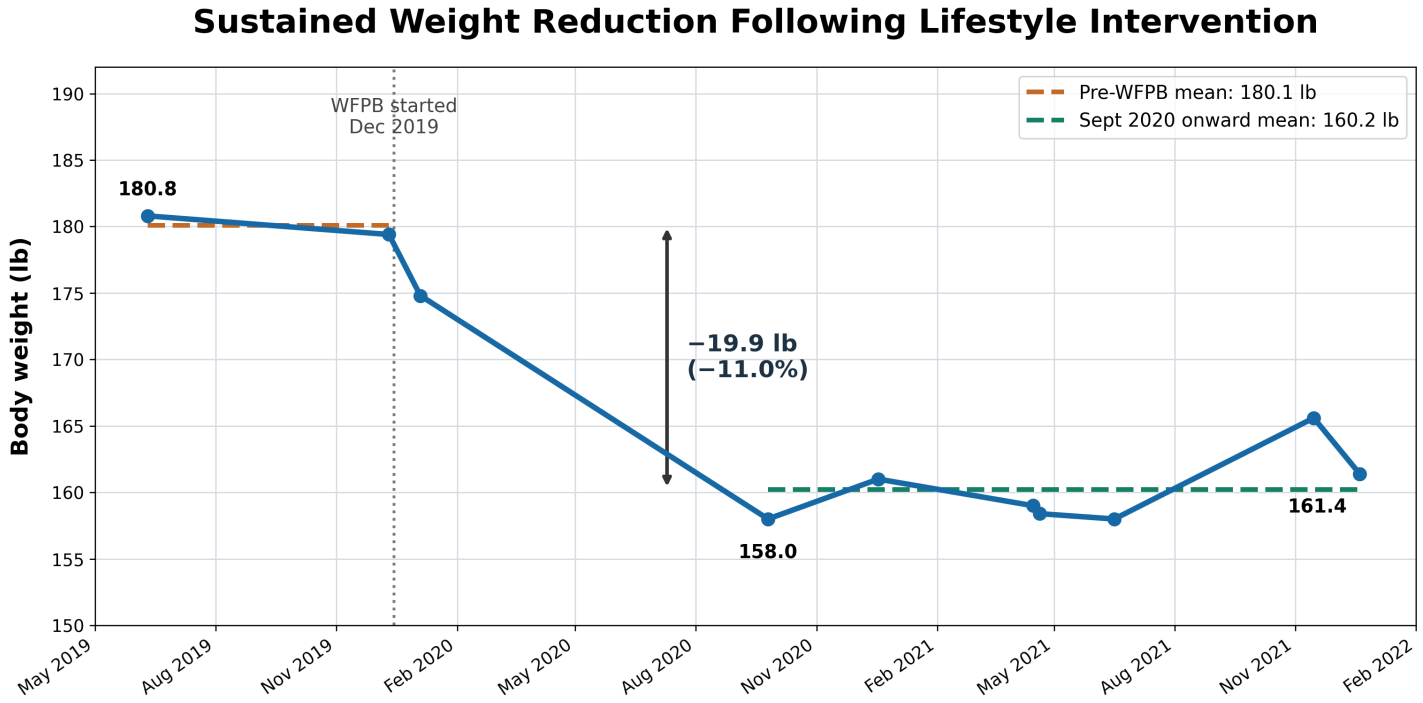
- Adopted a whole-food plant-based (WFPB) diet.
- Eliminated meat, dairy products, and eggs.
- Limited but did not eliminate the use of oil which was predominantly olive oil.
- Avoided highly processed foods (eliminated potato chips, etc).
- Increased exercise frequency to nearly daily.
- Discontinued all alcohol (Thanksgiving 2019).
- Added a vitamin B12 and Vitamin D3 supplementation.

...He checked his labs 19 days after his physical on December 30, 2019…

Case Study F.W.
Impact of Lifestyle on LDL-C



Case Study F.W.
Impact of Lifestyle on Weight



Dashed lines represent arithmetic means of observed weights in each period (not fitted trends).

Case Study F.W.
In his own words Patient engagement via EMR portal

12/30/2019

“I've only been on the wfpb diet for about 2 1/2 weeks. Is it possible that this much improvement could have occurred so quickly?”

“I do feel better and have more energy, and I feel like I'm climbing hills on my bike better than I have in a long time.”

01/21/2020

“I'm continuing with a wfpb diet, and am pretty strict about. In fact, haven't had a bite of meat, dairy, or eggs since I started it on about Dec. 15. No potato chips or the like either.”

“I haven't felt any heart palpitations since about a week after the dietary change. I've also been exercising nearly every day. I've dropped about 20 lbs. since Thanksgiving (when I totally stopped drinking alcohol) as well.”

Case Study F.W. Conclusion

- What happened after he adopted a whole-food, plant-based dietary pattern was remarkable—not only in his laboratory results, but also in his weight, symptoms, and overall quality of life.
- Even patients already following conventional health recommendations may experience additional benefits from targeted lifestyle interventions.
- Being an agent of positive change as an antidote to burn out.
- Positive interactions such as these bring the joy back into medicine.

Experiential Activity

Lifestyle Medicine in Clinical Practice

Lifestyle Medicine in Clinical Practice How to Apply It

Conversation Starters: Books, Cookbooks, Posters (What is Lifestyle Medicine), Videos.

Current Lifestyle Inventory: Diet, Movement, Substances, Sleep, Stress, Social.

Motivation to Change: Future goals. Symptoms. Family history.

Barriers to Change: Physical, Financial, Social, Temptations, Readiness

Patient Centered and Established Goals

Empowerment: Provide Knowledge and Hope. Share the evidence that lifestyle can have a powerful impact on health outcomes.

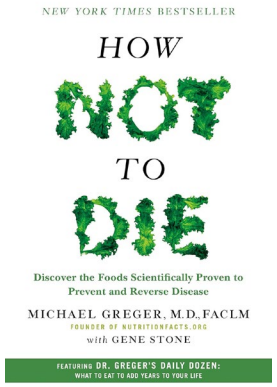
Resources: Add to After Visit Summary or print Handouts. Books, Documentaries, Lending Library, Websites, Recipes, Meal planners, Infographics, Group activities, Walk with a doc, Cooking classes.

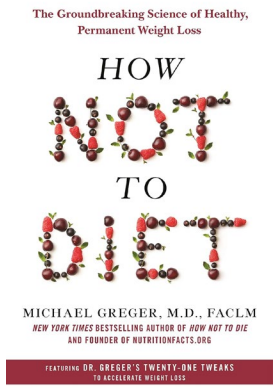
Non-Judgement: Change is hard. Focus on small changes. Celebrate each success. Motivate with positive outcomes (less pain, more energy, etc) not fear.

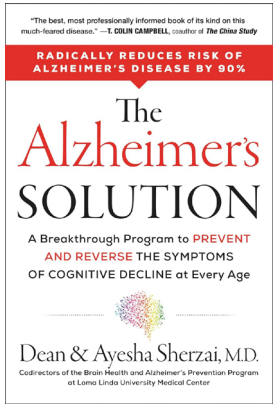
Lifestyle Medicine in Clinical Practice Conversation Starters

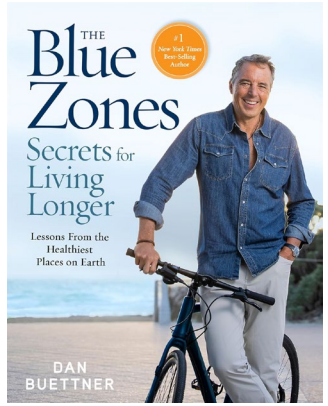
Posters Like This

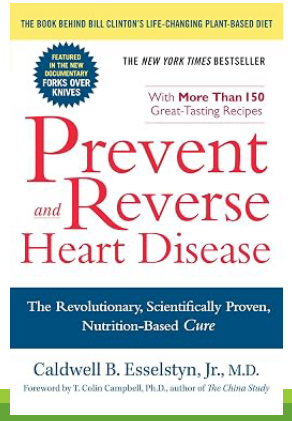
Books Like This

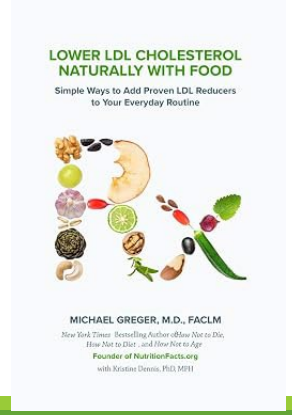


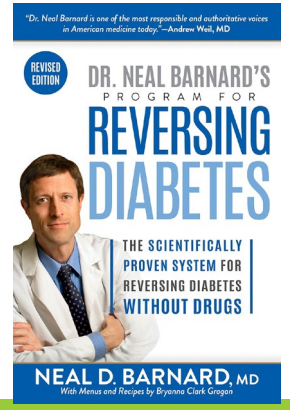


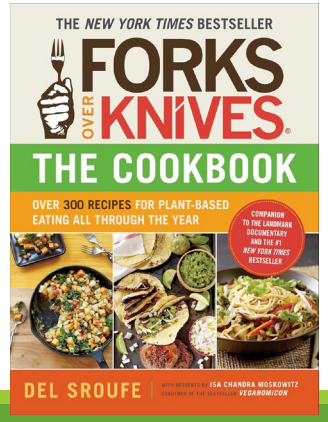












AMERICAN COLLEGE OF
Lifestyle Medicine

A WHOLE FOOD, PLANT-BASED PLATE

Nutrition Prescription for Treating & Reversing Chronic Disease

The American College of Lifestyle Medicine Dietary Lifestyle Position Statement for Treatment and Potential Reversal of Disease: ACLM recommends an eating plan based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.



Include a wide array of fiber-filled, nutrient-dense, and antioxidant-rich whole plant foods at every meal. Use a variety of herbs and spices to enhance flavors.

lifestylemedicine.org

- **Focus on whole fruits and vegetables and eat a rainbow of color.**

Vegetables: Dark leafy greens (spinach, kale, arugula, etc.), broccoli, squash, zucchini, carrots, tomatoes, beets, peppers, mushrooms, onions, celery, cauliflower, cucumbers, white & sweet potatoes, green peas, cabbage, whole plant fats (avocados, olives), and more.

Fruits: Apples, bananas, grapes, citrus fruit, berries, peaches, pears, pineapple, kiwi, plums, watermelon, starfruit, mangoes, just to name a few.

- **Drink water for hydration.**
- **Eat a variety of plant protein.**

Legumes: Peas and beans, including kidney beans, pinto beans, white beans, black beans, lima beans, black-eyed peas, garbanzo beans (chickpeas), split peas and lentils, edamame, tofu.

Nuts and seeds: Almonds, pistachios, walnuts, pecans, nut butters, pumpkin/sunflower/chia/flax seeds, and more.

- **Choose whole grains.**

Amaranth, barley, brown rice, buckwheat, bulgur, millet, popcorn, rye, quinoa, whole oats, whole grain bread/tortillas/cereals/flours, to name a few.





AMERICAN COLLEGE OF
Lifestyle Medicine

TIPS TO GET YOU STARTED ON A WHOLE FOOD, PLANT-BASED DIET





Take your journey to a healthy lifestyle step-by-step.

- **STEP 1: Enjoy** – Keep plant-based meals you already enjoy in your meal rotation.
- **STEP 2: Adapt** – Give your favorite recipes a plant-based makeover.
- **STEP 3: Explore** – Begin incorporating new plant-based foods into each week.

Plan ahead.

- Use meal planning apps or a simple calendar to plan meals in advance.
- Set aside time to batch prepare ingredients so meals can be thrown together quickly on busy weeknights. Pre-chop vegetables and cook large portions of grains and beans.

Make the 'healthy choice' the easy choice.

- Keep fresh produce in a bowl on the counter and at eye-level in the fridge so it is the first thing you reach for when wanting a snack.
- Stock your pantry with staple ingredients that can be assembled into a quick meal.

Work with a Registered Dietitian to assist in transitioning to a 100% plant-based dietary lifestyle, the health-protecting, disease-fighting prescription.

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Game plan for eating away from home and traveling.

- Check menus ahead of time. Pair side dishes together to create a hearty meal.
- Ask if the kitchen is willing to make a dish with vegetables, beans and whole grains.
- When traveling, pack your own meals or stop at grocery stores instead of fast food.

Include the entire family.

- Allow children to pick a new fruit or vegetable to try each week.
- Start a tomato plant on the porch and have children water and take care of it.
- Assign age-appropriate kitchen tasks to everyone in the family.

Set goals each week on your journey to improved nutrition.

- Identify specific, measurable and attainable steps you can take each week. Instead of "eat more vegetables," set a SMART goal to "make half your dinner plate vegetables five nights this week."
- Celebrate success each and every step of the way!

lifestylemedicine.org







Lifestyle Medicine in Clinical Practice Current Lifestyle Inventory

Discuss the Six Pillars of Lifestyle Medicine as related to the patient

Diet – Typical breakfast, Lunch, Dinner, Snacks, Drinks

Movement – How much, how often, what type

Substances – Any tobacco, alcohol, drugs

Sleep – How much, is it restorative, might they have sleep apnea

Stress – How much, what type, how do they deal with it.

Social – What sort of social support system do they have.

ACLM has partnered with EPIC to make available modules to document Lifestyle

Lifestyle Medicine in Clinical Practice What is their Motivation to Change

- What goals does the patient have?
- Lose weight. Why?
- Avoid conditions that negatively impacted family members.
- Play with the grandchildren.
- Less Pain. Feel better. Musculoskeletal, Gastrointestinal, Anxiety, Depression.
- Less prescription medications.
- Prevent Dementia.
- Prevent Heart Disease.
- Prevent Cancer.
- Healthy Relationships.

Lifestyle Medicine in Clinical Practice Barriers to Change

- Physical – Joint pain or physical injury, breathlessness, fatigue
- Financial – Need to work too many hours, cannot afford healthy food, cannot afford gym
- Social – Need to care for young children or aging patents, spouse brings in unhealthy tempting foods.
- Temptations – identify temptations.
- Readiness – assess readiness and interest in change.
- Habits – identifying old habits. Introducing and reinforcing healthy habits.

Lifestyle Medicine in Clinical Practice Empowerment

- Empower patients.
- Provide Knowledge and Hope.
- Share the evidence that lifestyle can have a powerful impact on health outcomes.

FOCUS ON
THE POSITIVE

Lifestyle Medicine in Clinical Practice Resources

- Add information to the **After Visit Summary**. Use pre-prepared EPIC Smart Phrases. Have pre-printed hand outs.
- Books. Cookbooks. Documentaries. Weblinks. Meal Planners. Recipes. Cooking classes. Walk with a Doc.
- Lending library.
- Community outreach.

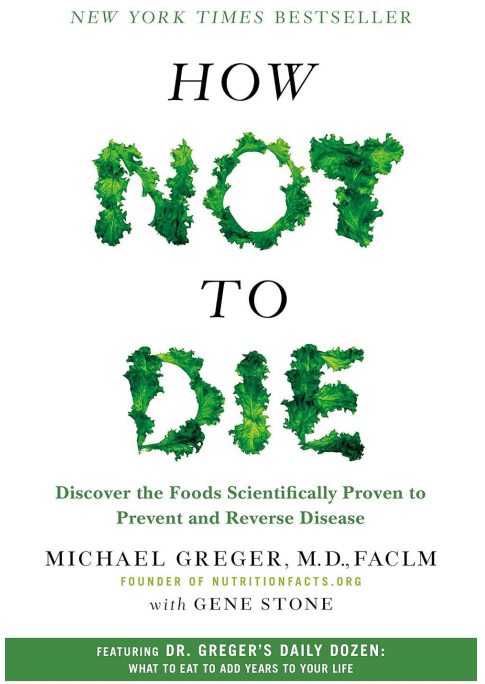
Lifestyle Medicine in Clinical Practice Examples of EPIC Smart Phrase for AVS

Recommended Book (especially in audiobook format):

How Not to Die: Discover the Foods Scientifically Proven to Prevent and Reverse Disease

by Michael Greger M.D. FACLM

https://nutritionfacts.org/



Lifestyle Medicine in Clinical Practice Keys to Success

- Listen.
- Be Sincere.
- Be Patient.
- Be the best example you can be. “Walk the Walk”
- Sneak it in. Discuss lifestyle at any visit where it is relevant to the patient’s goals. Leverage your relationship with the patient. Have patience. (like planting a seed).
- Be available. Via the EMR portal, phone or regularly scheduled office visits.
- Provide resources.
- Provide accountability and positive reinforcement if the patients wish.
- Be informed. Get Certified in Lifestyle medicine or take Lifestyle Medicine related CME.

Additional Resources - Websites

- American College of Lifestyle Medicine - https://lifestylemedicine.org/
- American College of Sports Medicine “Exercise is Medicine” - https://acsm.org/eim/
- NutritionFacts.org - https://nutritionfacts.org/
- Physician’s Committee for Responsible Medicine (PCRM) - https://www.pcrm.org/good-nutrition/plant-based-diets/recipes
- Forks Over Knives - https://www.forksoverknives.com/
- Blue Zones - https://www.bluezones.com/
- Dr. Dean and Ayesha Sherzai (The Brain Docs): https://www.thebraindocs.com/

Additional Resources - Books

- "**How Not To Die**" – Michael Greger, MD
- "**Proteinaholic**" – Garth Davis, MD
- "**Blue Zones**" – Dan Buettner
- "**Salt, Sugar, Fat**" – Michael Moss
- "**Undo It! How Simple Lifestyle Changes Can Reverse Most Chronic Diseases**" – Dean Ornish, MD
- "**Mastering Diabetes**" – Cyrus Khambatta and Robby Barbaro
- "**Dr. Neal Barnard's Program for Reversing Diabetes**" – Neal Barnard, MD
- "**The Pleasure Trap**" – Doug Lisle, PhD
- "**Prevent and Reverse Heart Disease**" – Caldwell B. Esselstyn, Jr. MD
- "**Fiber Fueled**" – Will Bulsiewicz, MD
- "**Dopamine Nation**" – Anna Lembke, MD

Additional Resources - Videos

TEDx talks:

- Meagan Grega, MD, FACLM "Why Lifestyle is the BEST Medicine”: https://www.youtube.com/watch?v=efGa8QD8pU4
- Param Dedhia, MD “Sleep: The Secret to Living the Best 1/3 of Your Life”: https://www.youtube.com/watch?v=KnD0uQIalg8
- Robert Waldinger “What Makes a Good Life? Lessons from the Longest Study on Happiness”: https://www.youtube.com/watch?v=8KkKuTCFvzI
- Dr. Wendy Suzuki “The Brain Changing Benefits of Exercise”: https://www.ted.com/talks/wendy_suzuki_the_brain_changing_benefits_of_exercise
- Dr. Yami Cazorla “Chicken to Chickpeas: A 30-Day Experiment Changed my Life”: https://www.youtube.com/watch?v=yIA9gAtabmg

Additional Resources - Videos

Movies:

- Plantwise - https://www.adventhealth.com/plantwise-documentary/videos
- Forks Over Knives - https://www.forksoverknives.com/the-film/
- The Game Changers (rent on Amazon)- https://www.amazon.com/dp/B07YSWRJ45?lv=shuf&channelId=500&plpRedirect=mhFallback
- Code Blue: Redefining the Practice of Medicine - https://www.codebluedoc.com/

The Healthy Neighborhood Immersion Strategy: Connecting Clinic and Community


Two Rivers
Health & Wellness Foundation


HEALTHY NEIGHBORHOOD IMMERSION STRATEGY
Families
Kellyn Schools
Kellyn Food Access
School Districts
Relationships
Infrastructure
Impact
Community Partners
Kellyn Culinary
Kellyn Lifestyle Medicine
Healthcare Partners
Making the Healthy Choice the Easy Choice


Real Food
makes me
feel...
good

Greater Lehigh Valley, PA

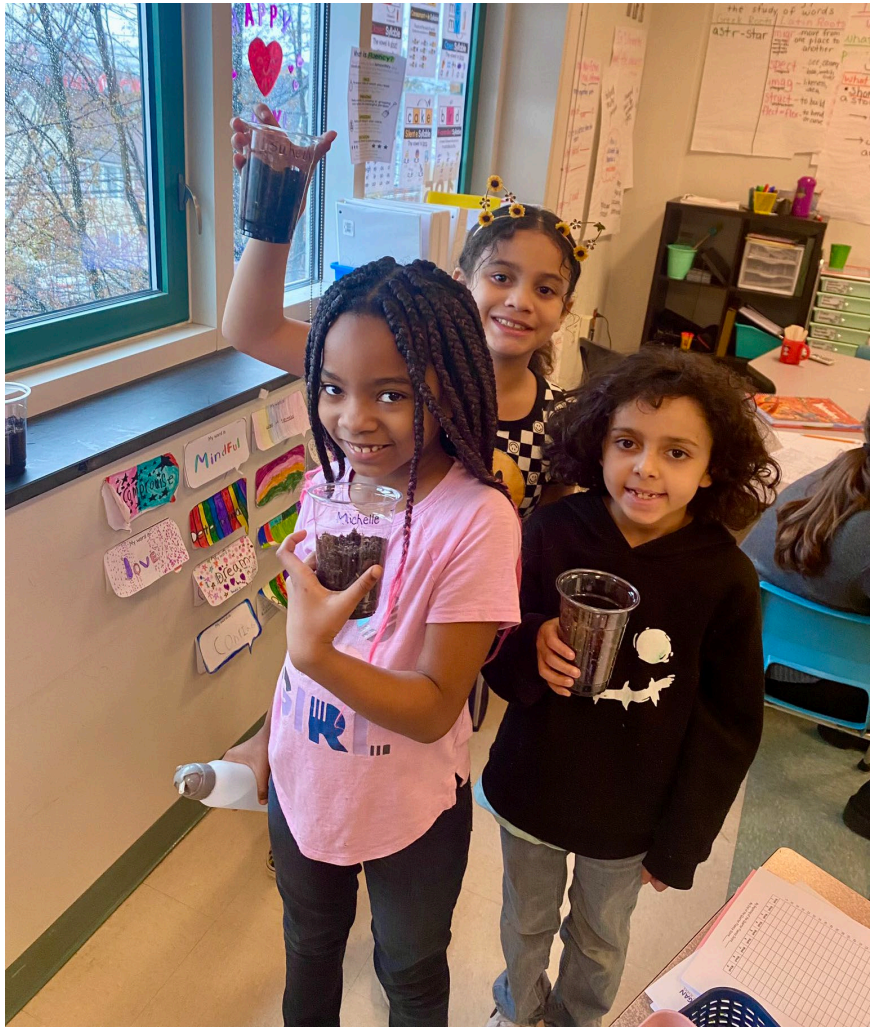
- Large metropolitan community
- Over 840,000 residents
- Mix of urban/suburban/rural

- 3rd largest population center in PA
- 10 colleges/universities
- 8 areas designated as food deserts
  - Northampton, Lehigh and Warren Counties



Kellyn Schools

- **9** School Districts
- **47** Elementary Schools
- **45** schools with “Garden as a Classroom” program
- 3rd grade “Eat Real Food”
- 4th grade “Healthy Choices”
- 5th grade “Building Your Healthy Lifestyle Tool Kit”
- Reach **11,000+** students yearly




Kellyn
Healthy choices
Kellyn
Kellyn
Healthy choices
Kellyn
Healthy choices
facts:
Brooke
Kellyn
sproutbrite






THANK
YOU
KELLYN
FOUNDATION


306






106.1
BLI
LONG ISLAND

“You do not rise to the level of your goals. You fall to the level of your systems”

-James Clear


Barbecue
Party Size!
Classic
Party Size!
Party Size!
French Onion
Lay's
Chile Limón
Lay's
Southern Biscuits & Gravy
Lay's
Lightly Salted
Lay's
Lightly Salted
Lay's
Lightly Salted


LIMITED
EDITION

Eat Real Food Mobile Market





Kellyn Food Access - ACLM Diabetes Remission Project


Rotary
Club of Easton


SAMPLE:
EGGPLANT
CAPPONATA
ON REQUEST
FRESH CUT:
MELONS








EAT REAL FOOD

Local Farms











Plant Powered Meals











https://healthyfood.kellyn.org/

Kellyn Kitchens and Culinary Medicine







"Chef Amanda's meals were critical to me in realizing that **plant-forward meals were delicious**."

"We have eliminated processed foods completely. I have better energy. I used to cringe at the word vegan or vegetarian, but I realized that I can **just eat healthy and not worry about a label**. I lost weight and have more energy."




DUKE
SILVER
Levi's







“Knowledge alone does not change behavior”

Kellyn Lifestyle Medicine





“You are the average of the five people you spend the most time with”

-Jim Rohn


autumn
LEAVES &
pumpkins
PLEASE
Pitt

Therapeutic Lifestyle Change Program

Participants Demonstrate:

- ⬇ Weight
- ⬇ A1C
- ⬇ Blood Pressure
- ⬇ Triglycerides
- ⬇ Pain
- ⬆ Mood
- ⬆ Energy
- ⬆ Sleep



Participant Testimonials

"Previously I had constant pain in my feet and my hands. This program has certainly changed my life in a very positive way!“

“I lost seventeen pounds, dropped two pant sizes, lowered cholesterol, decreased medication, slept better, lowered blood sugar to normal levels.”

"I am very thankful to be part of this program. I feel much better. I have more energy. I am not tired all the time, and I am not in pain."





Why Lifestyle is the BEST Medicine

TEDx-LehighRiver

March 10, 2020



Questions?

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Eric.Mueller@jefferson.edu