

# Update in Internal Medicine 2023

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## Lifestyle Medicine 101

Bethany Agusala, MD

Assistant Professor, General Internal Medicine

Diplomate, American Board of Lifestyle Medicine

# Objectives

- Describe the 6 pillars of Lifestyle Medicine (LM)
- Outline literature supporting lifestyle change to prevent and treat disease
- Define recommendations for LM pillars
- Apply LM in your daily practice by shifting from expert to coach
  - Core coach skill – Setting SMART goals

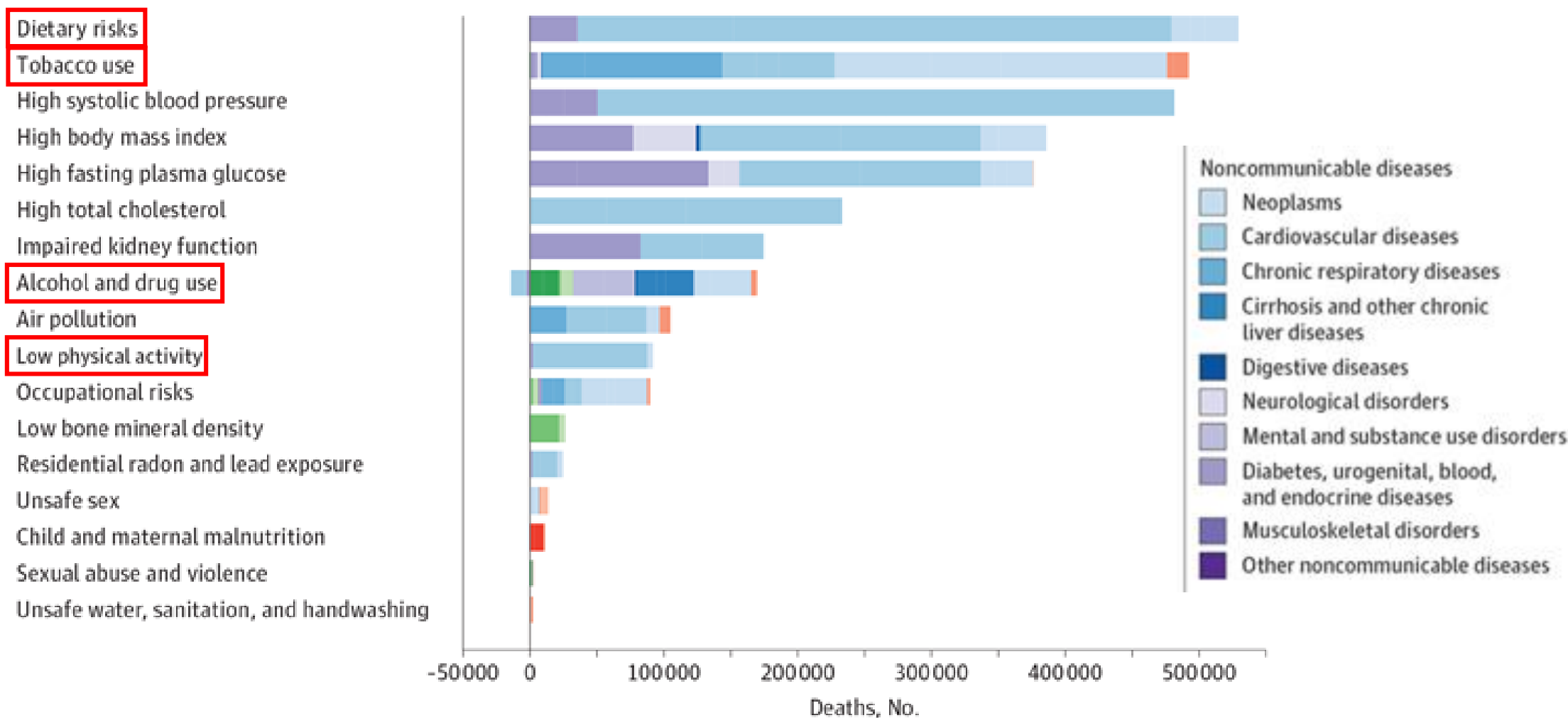
# Patient case

- 55 yo man presenting as new patient

	2016 (diagnosis)	2021 (Before)	2022 (After)
A1c	13.3	6.1	6.2
Total Chol	176	160	127
LDL	126	108	80
HDL	37	40	39
Trig	67	60	40
Blood pressure	178/104	167/74	122/67
BMI	34.5	32.1	29.3
Meds	Lisinopril-HCTZ Metformin Lantus (started)	Lisinopril-HCTZ Metformin Sitagliptin Pravastatin 40	

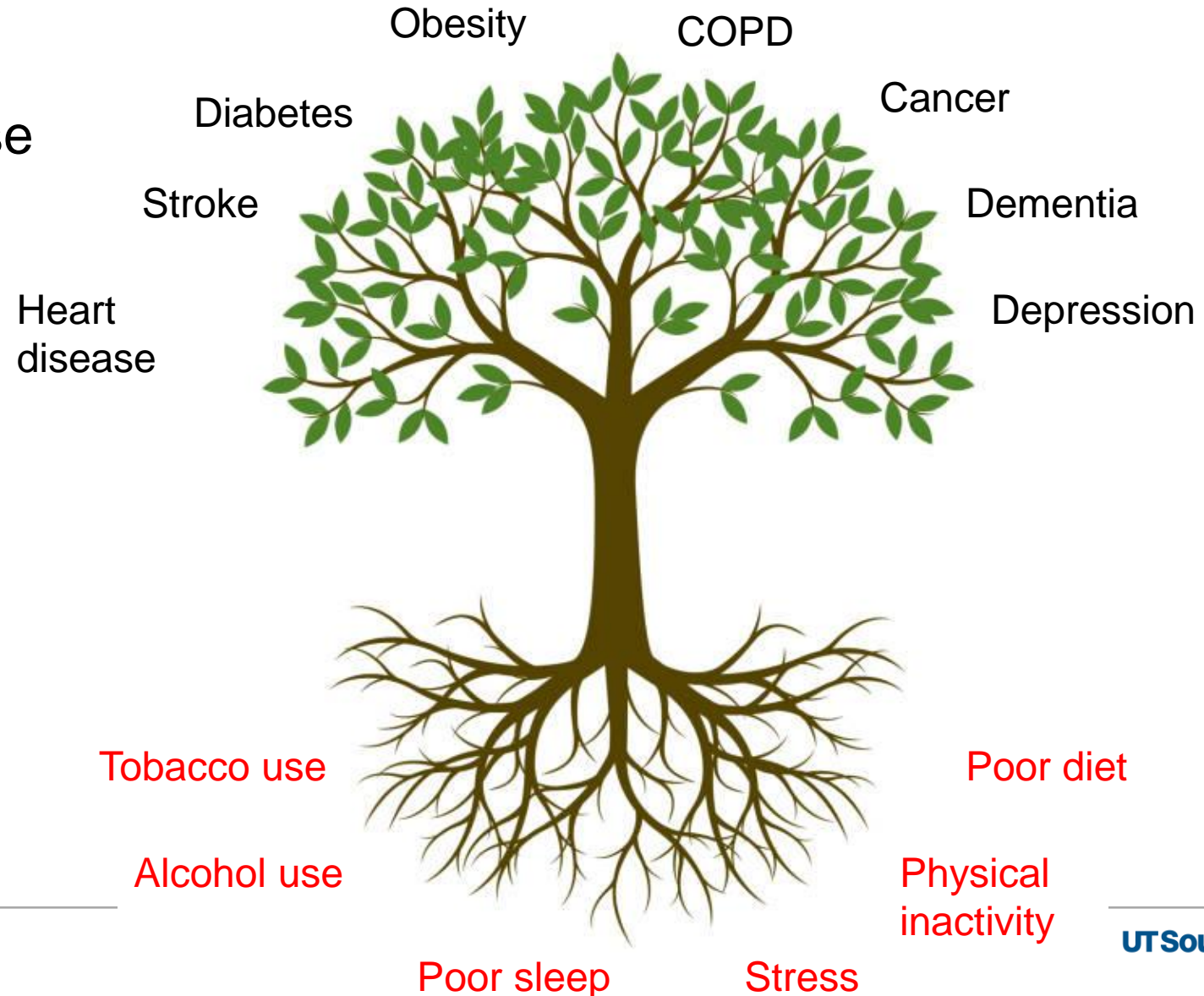
“I never thought I would be able to get off diabetes medication.”

# Lifestyle Among Top Risk Factors for Mortality



# Framework for Chronic Disease Management

- Focus on root cause instead of treating consequences



# What is Lifestyle Medicine?



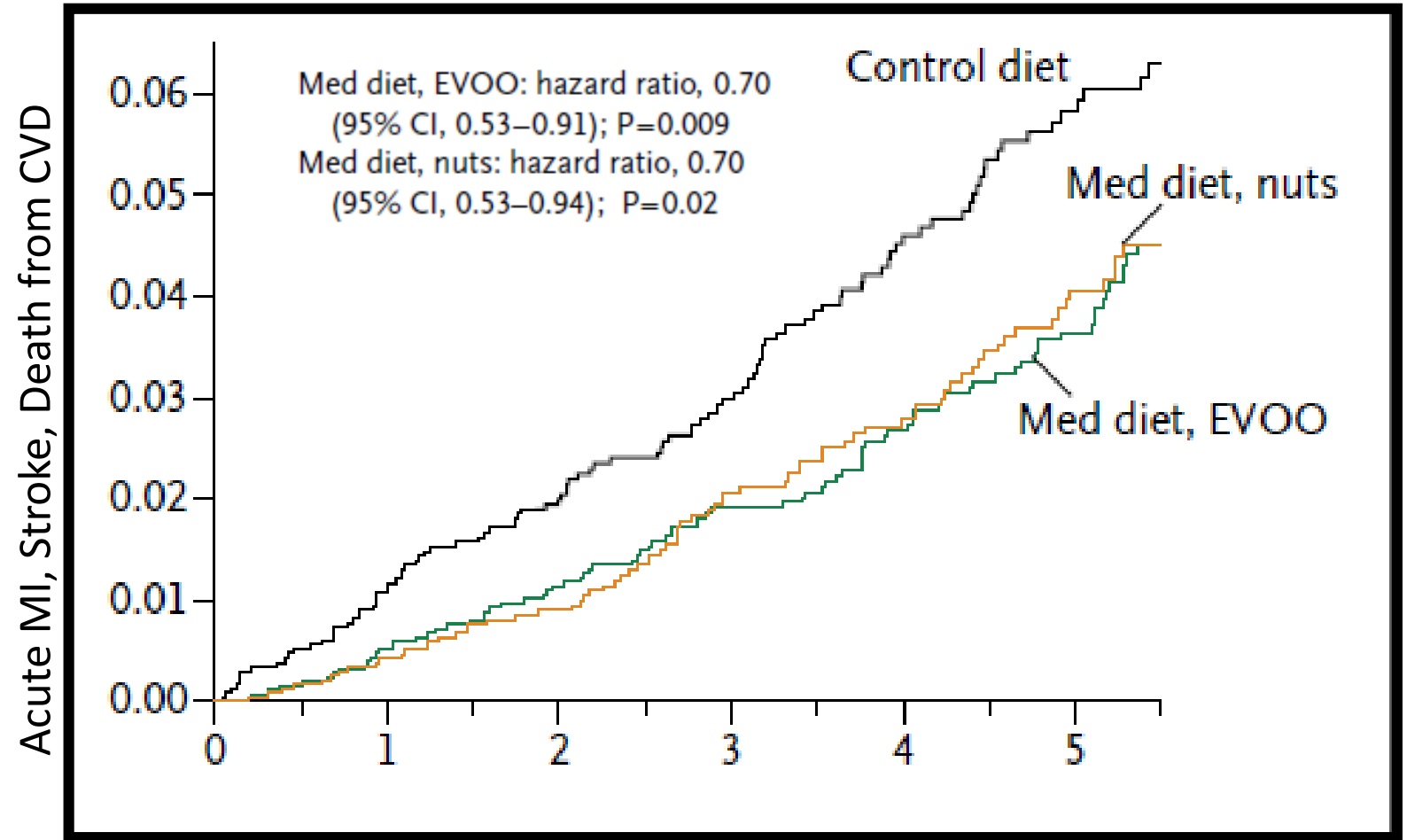


# Nutrition



# Mediterranean Diet and Primary Prevention of CVD: PREDIMED

Mediterranean Diet  
(plus nuts or olive  
oil) reduced major  
cardiovascular  
events

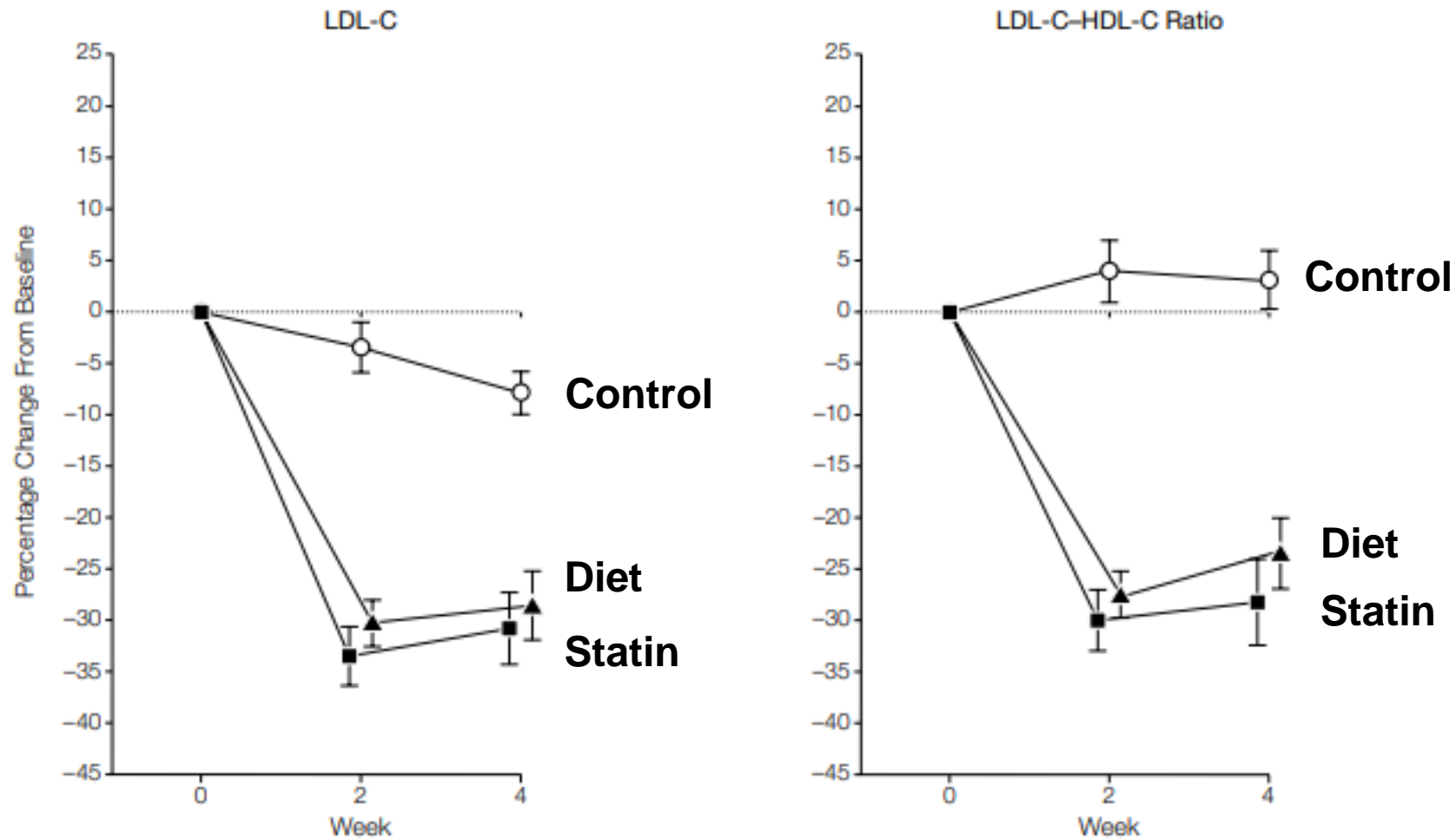


EVOO: 1 L per week

Nuts: 30g/week walnuts, hazelnuts, almonds



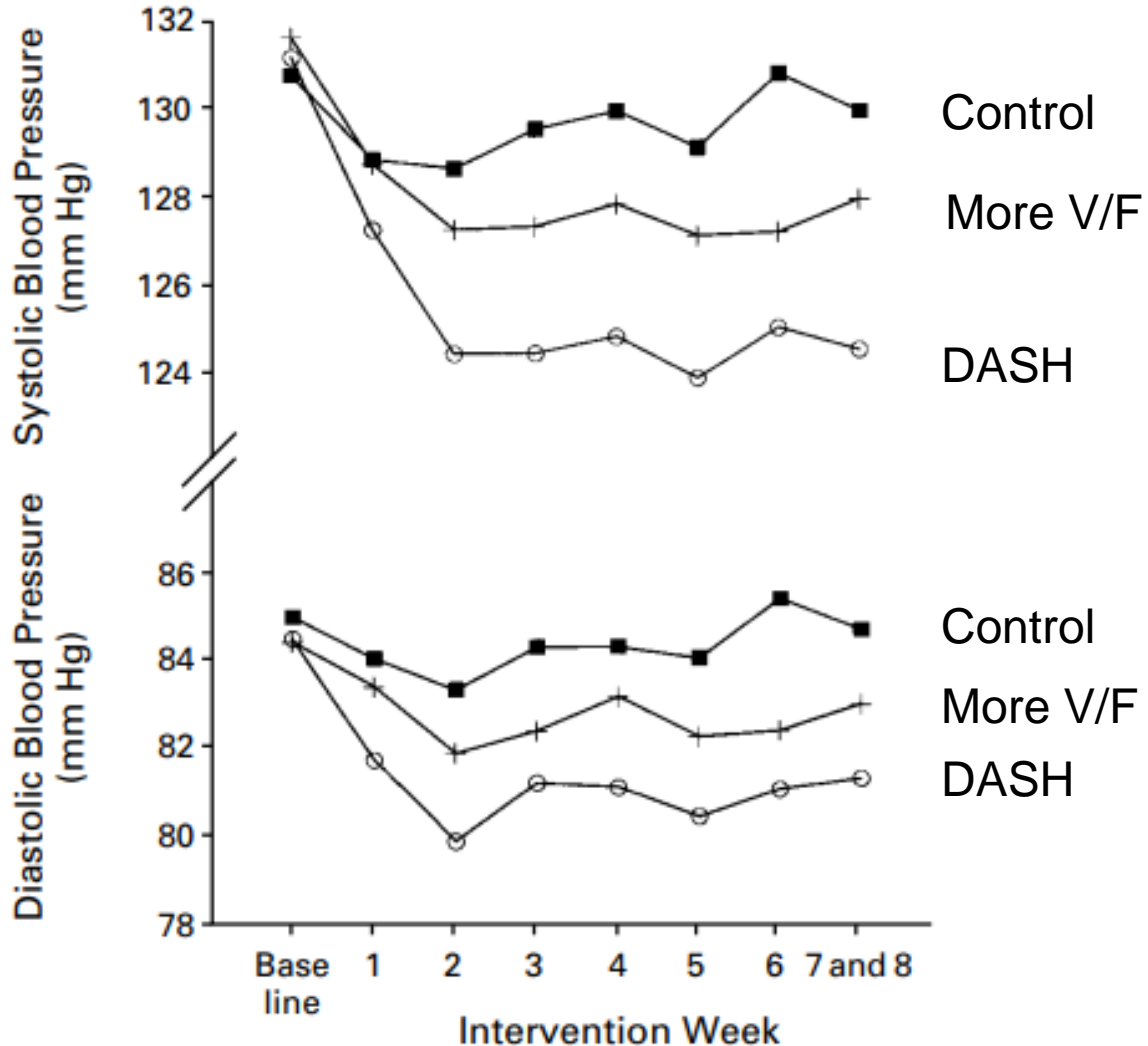
# Portfolio Diet



High fiber diet, soy, nuts, and plant sterols reduced LDL similarly to lovastatin

# DASH Diet

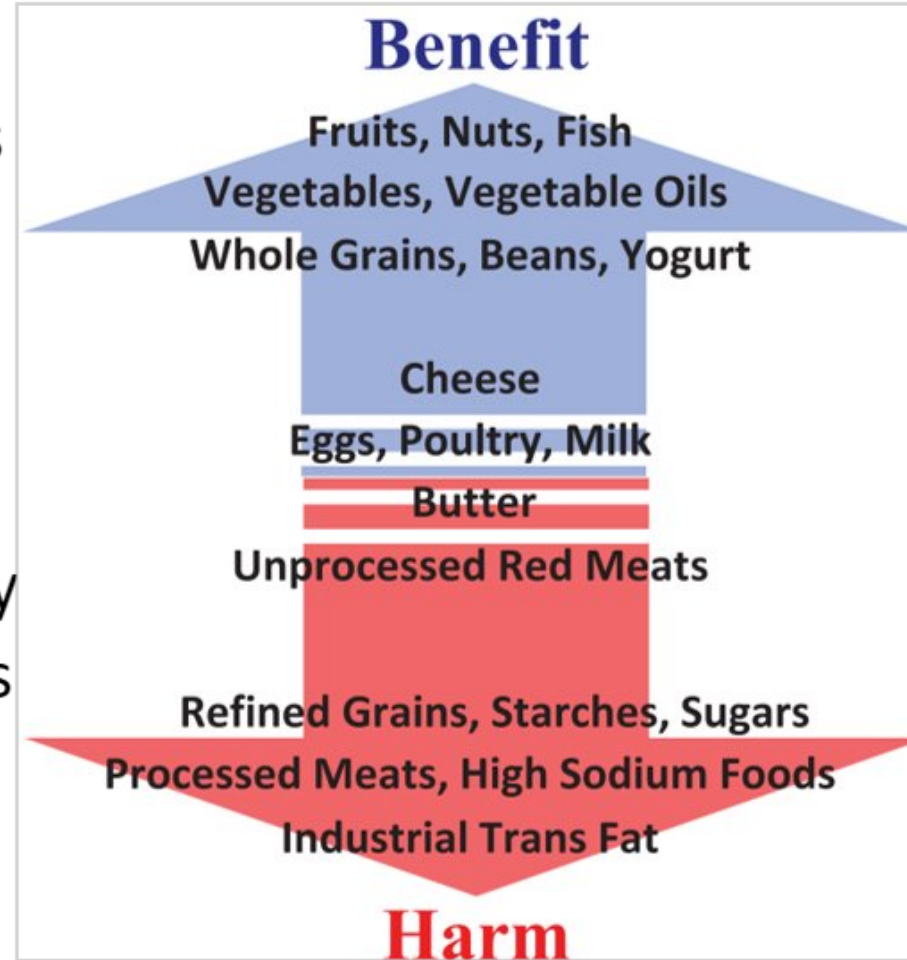
DASH diet  
significantly lowered  
blood pressure  
compared to standard  
American diet



# Evidence-Based Nutrition

- **Consume MORE:**

- Fruits & Veggies
- Nuts & Seeds
- Legumes
- Whole grains
- Fish
- Fermented dairy
- Unsaturated oils



- **Consume LESS:**

- Refined grains, starches
- Processed meats
- Sodium
- Sugar
- Trans-fat
- Unprocessed red meats

# Healthy Plate

Have plenty of  
vegetables and fruits

Eat protein foods

Make water  
your drink  
of choice



Choose  
whole grain  
foods

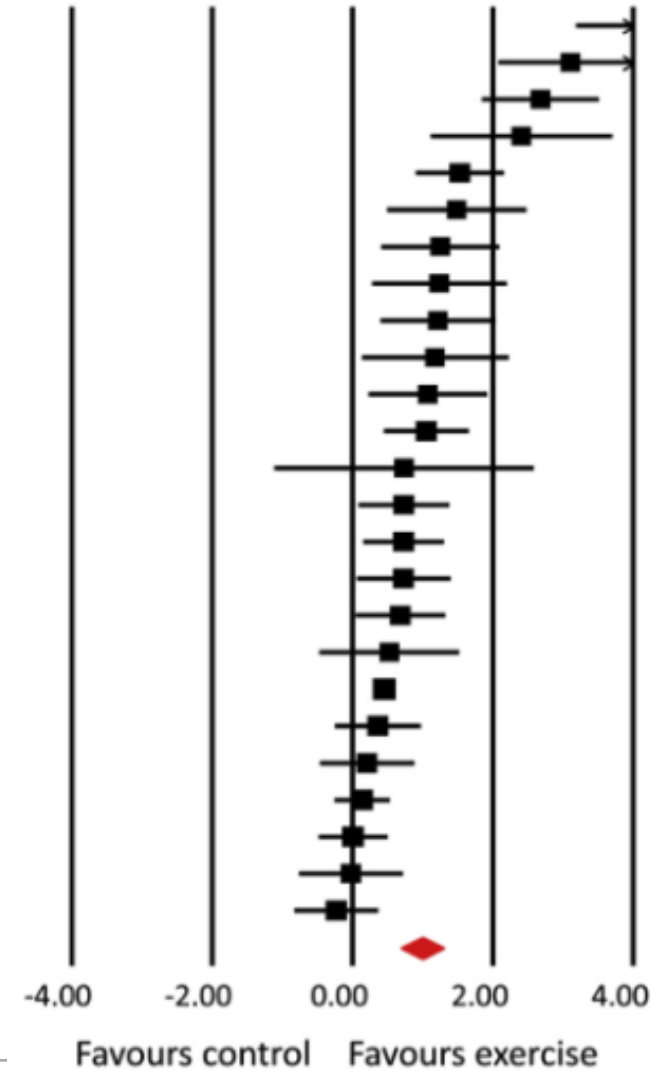
# Physical Activity



# Exercise and Depression

Meta-analysis of RCTs of  
exercise v. control

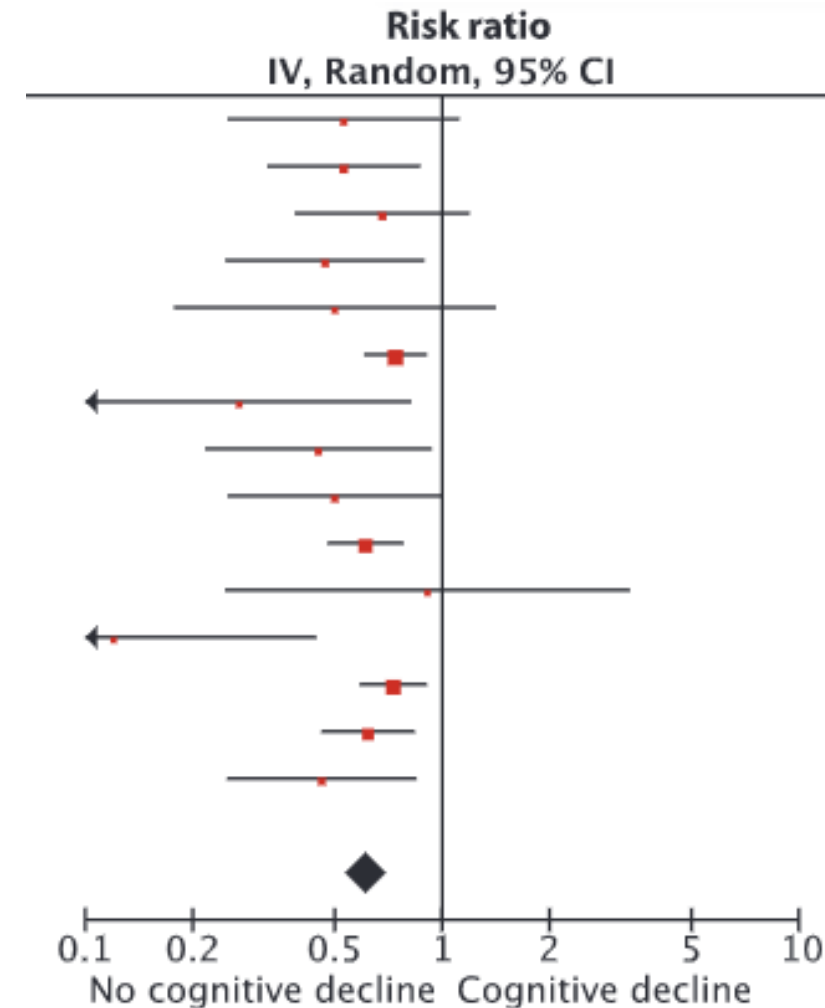
Exercise large and  
significant positive effect  
on depression





# Exercise and Cognitive Decline

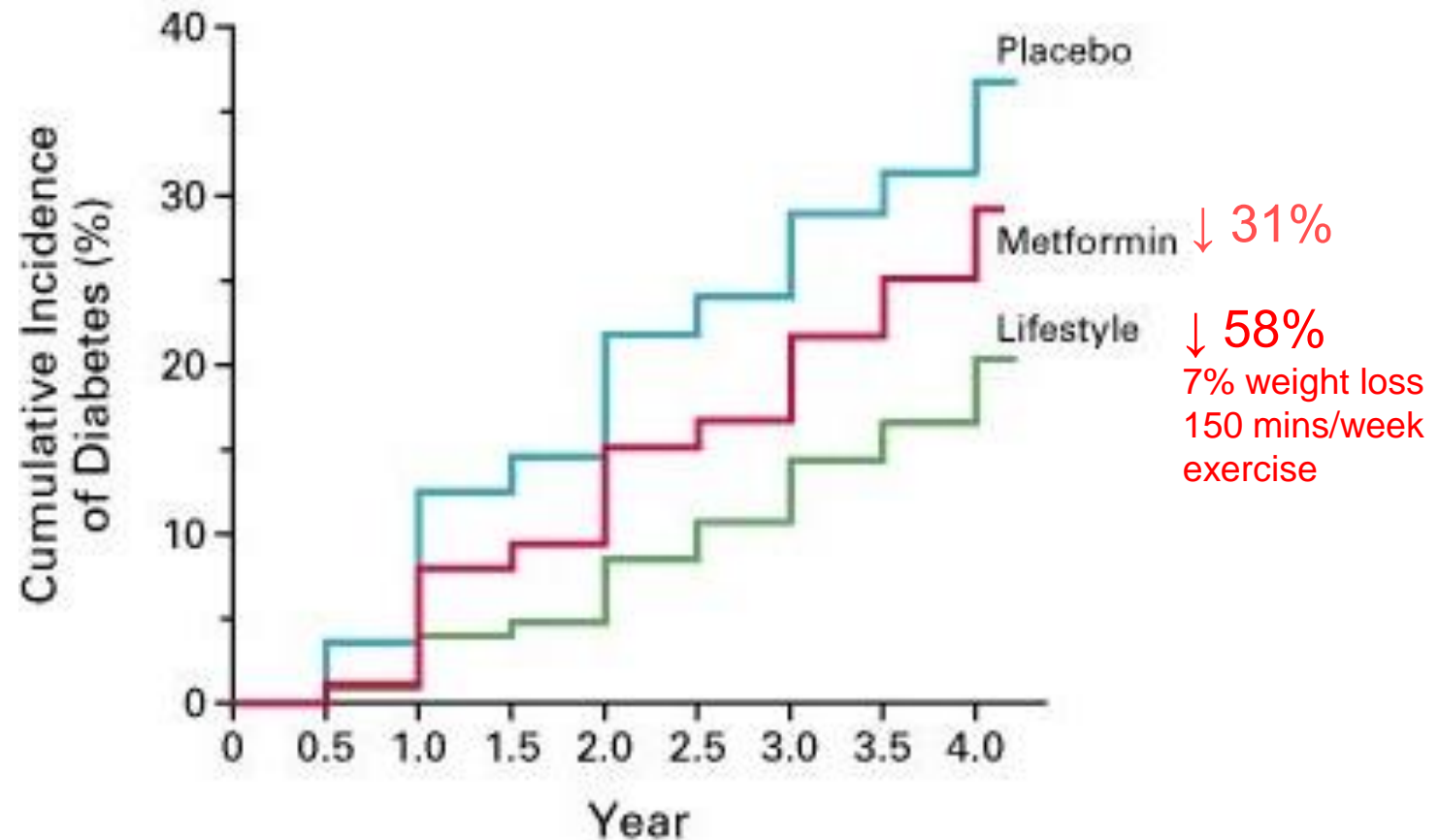
Meta-analysis of prospective cohorts  
All levels of physical activity protective against cognitive decline compared to sedentary behavior



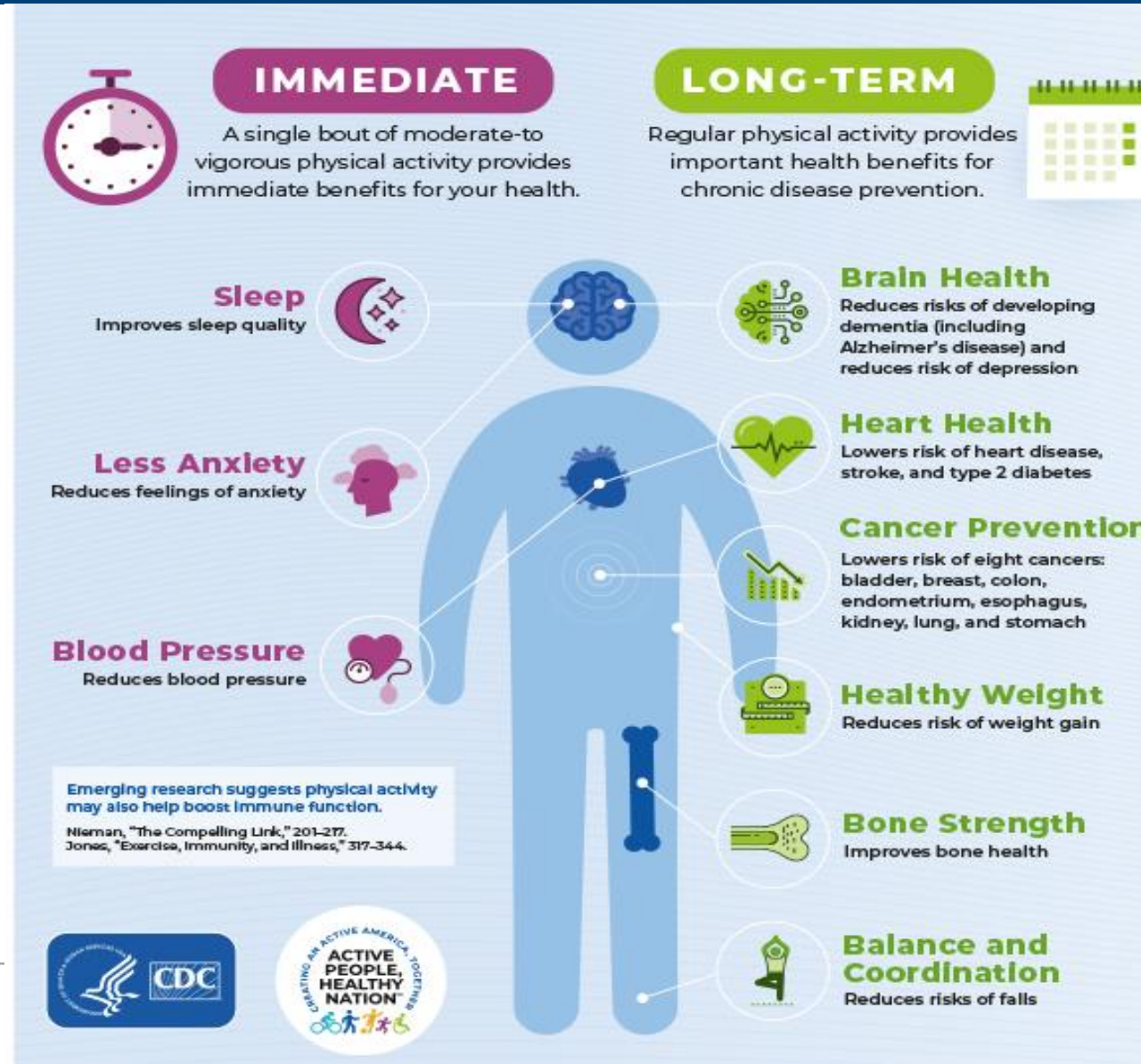
# Diabetes Prevention Program

Lifestyle changes better than metformin and placebo in reducing diabetes incidence in high- risk patients

Even among those failing to meet the weight loss goal of 7% during the first year, individuals meeting the PA goal had a 44% reduction in diabetes incidence



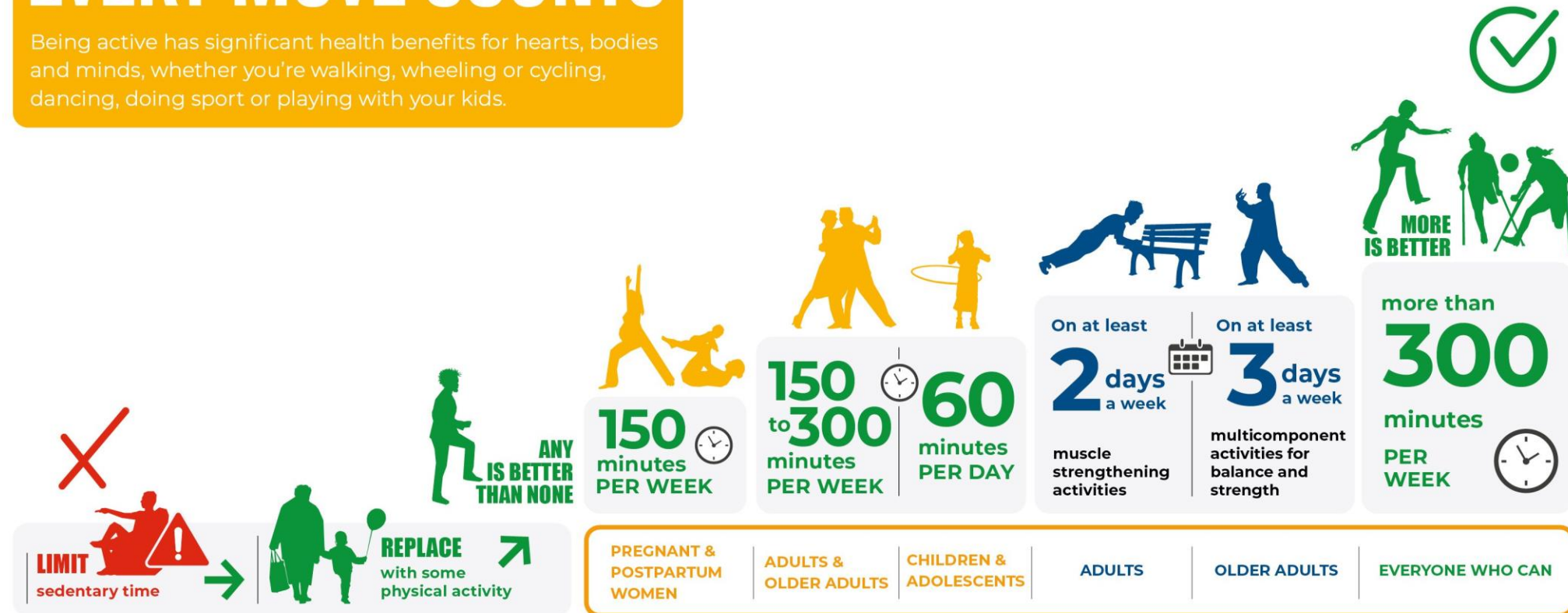
# Health Benefits of Exercise



# How much is enough?

## EVERY MOVE COUNTS

Being active has significant health benefits for hearts, bodies and minds, whether you're walking, wheeling or cycling, dancing, doing sport or playing with your kids.



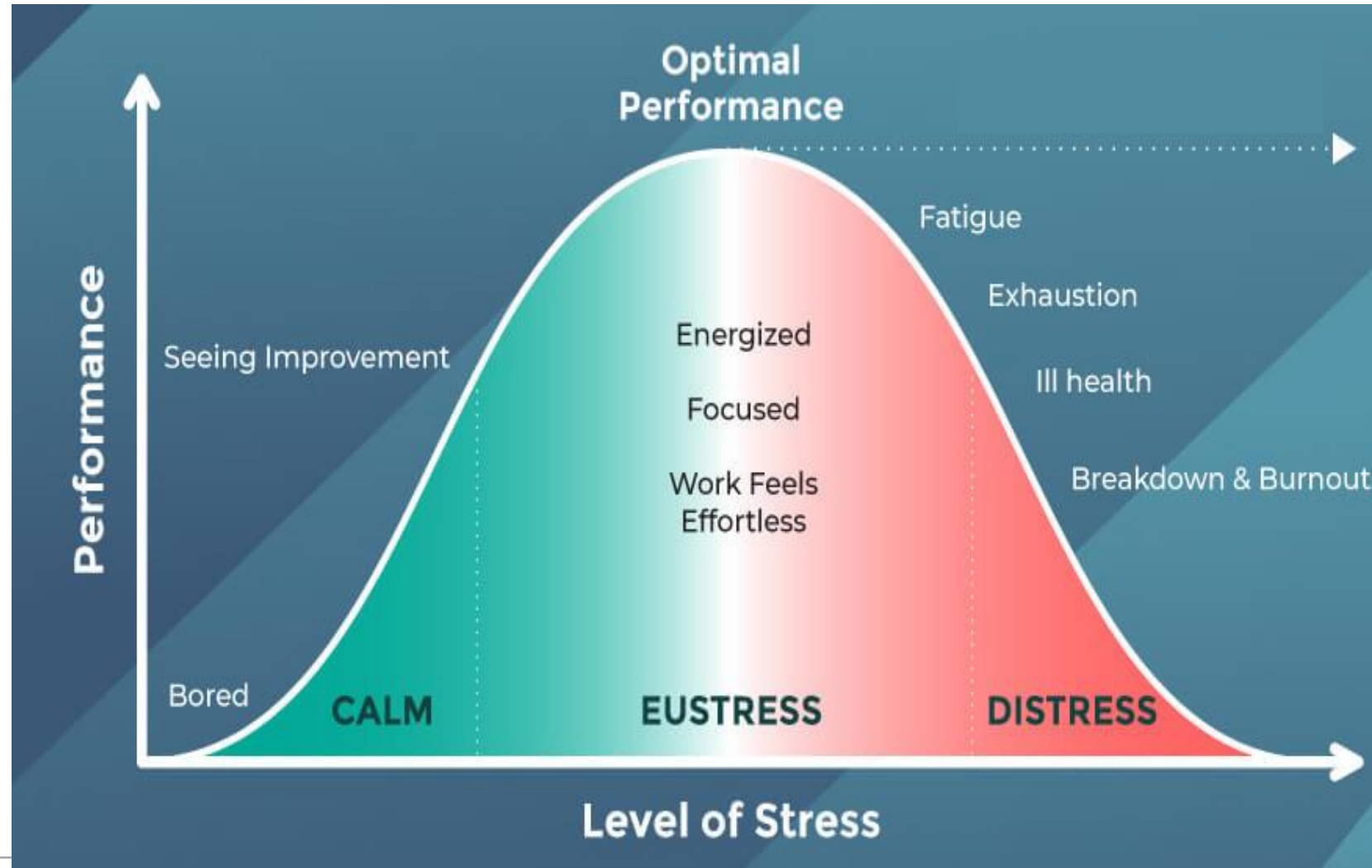
# Stress Management





# What is Stress?

- Defined by Dr. Hans Selye in 1936 – response of the body to any demand for change





# Stress Reduction and Chronic Back Pain

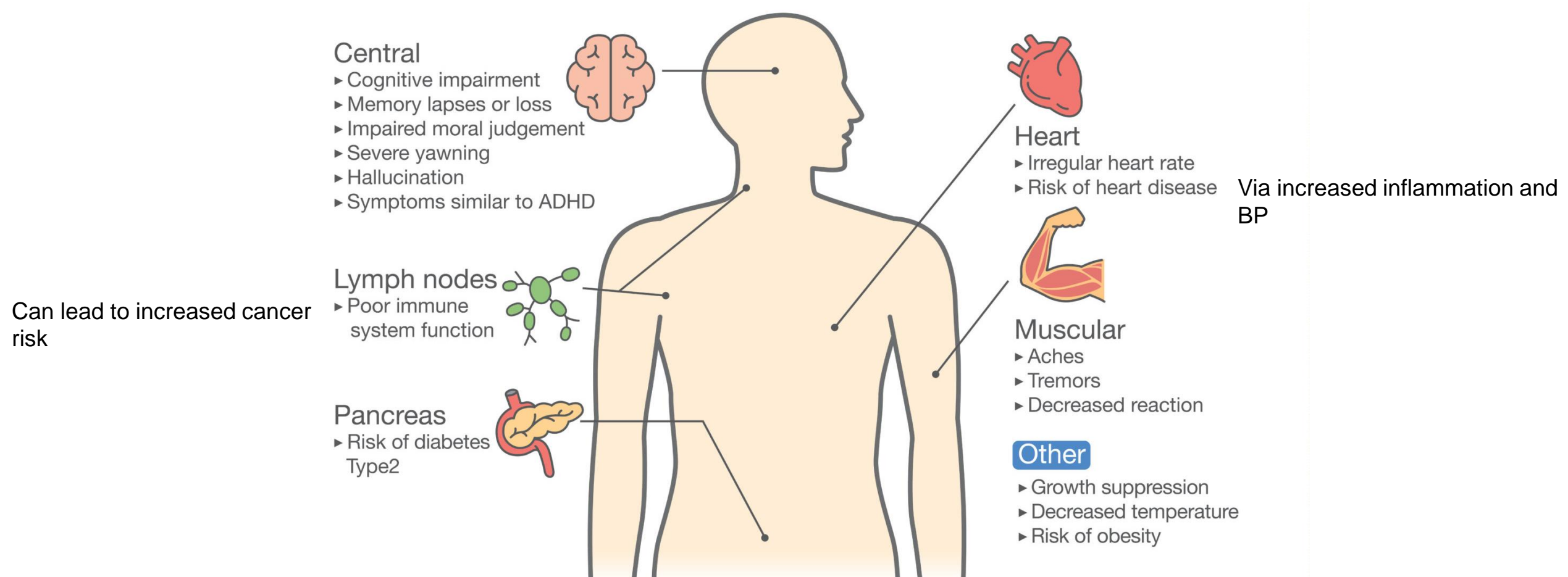
- Mindfulness-based stress reduction as effective as CBT
- Both better than usual care
- Significant improvement in disability and pain severity

% (95% CI) With Clinically Meaningful Improvement				
Follow-up Week	Usual Care	Mindfulness-Based Stress Reduction	Cognitive Behavioral Therapy	P Value for Omnibus <sup>c</sup>
Roland Disability Questionnaire Results				
4	27.3 (20.3-36.6)	34.5 (26.8-44.3)	24.7 (18.1-33.8)	.23
8	35.4 (27.6-45.2)	47.4 (38.9-57.6)	51.9 (43.6-61.7)	.04 <sup>d</sup>
26	44.1 (35.9-54.2)	60.5 (52.0-70.3)	57.7 (49.2-67.6)	.04 <sup>d</sup>
52	48.6 (40.3-58.6)	68.6 (60.3-78.1)	58.8 (50.6-68.4)	.01 <sup>d</sup>
Pain Bothersomeness Results				
4	20.6 (14.6-28.9)	19.1 (13.3-27.4)	21.7 (15.3-30.6)	.88
8	24.7 (18.1-33.6)	36.1 (28.3-46.0)	33.8 (26.5-43.2)	.15
26	26.6 (19.8-35.9)	43.6 (35.6-53.3)	44.9 (36.7-55.1)	.01 <sup>d</sup>
52	31.0 (23.8-40.3)	48.5 (40.3-58.3)	39.6 (31.7-49.5)	.02 <sup>d</sup>

# Sleep



# Effects of Sleep Deprivation

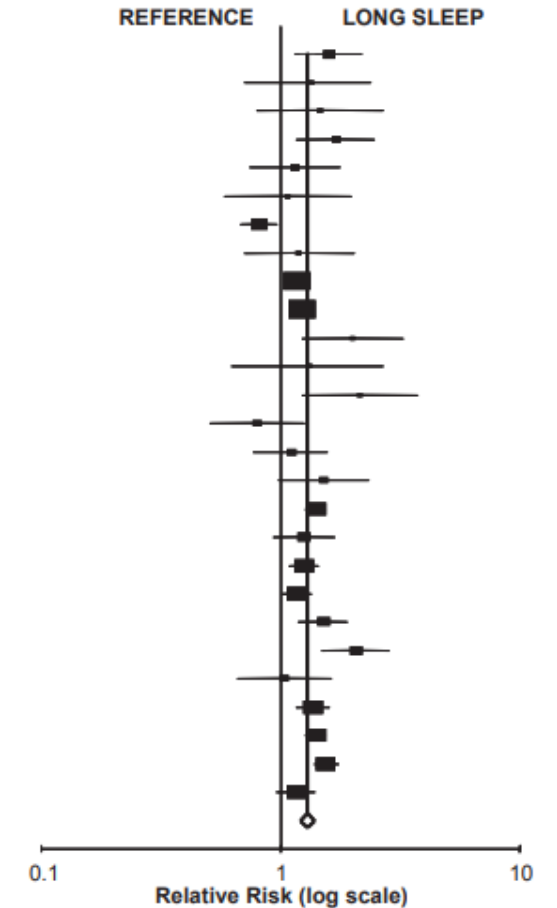
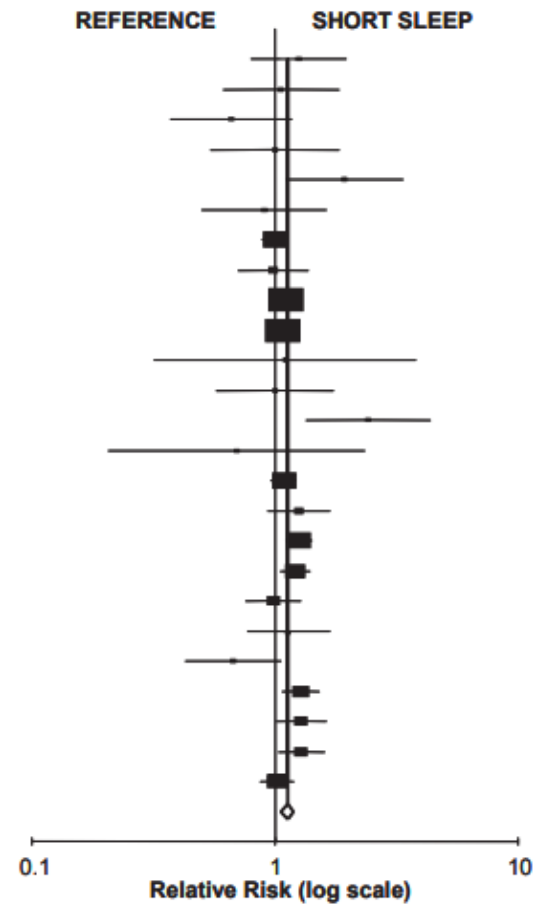


# Sleep Duration and Mortality

Meta-analysis of cohort studies

Both too little and too much sleep associated with increased mortality

Greater risk of death for sleep < 7 hours and > 9 hours

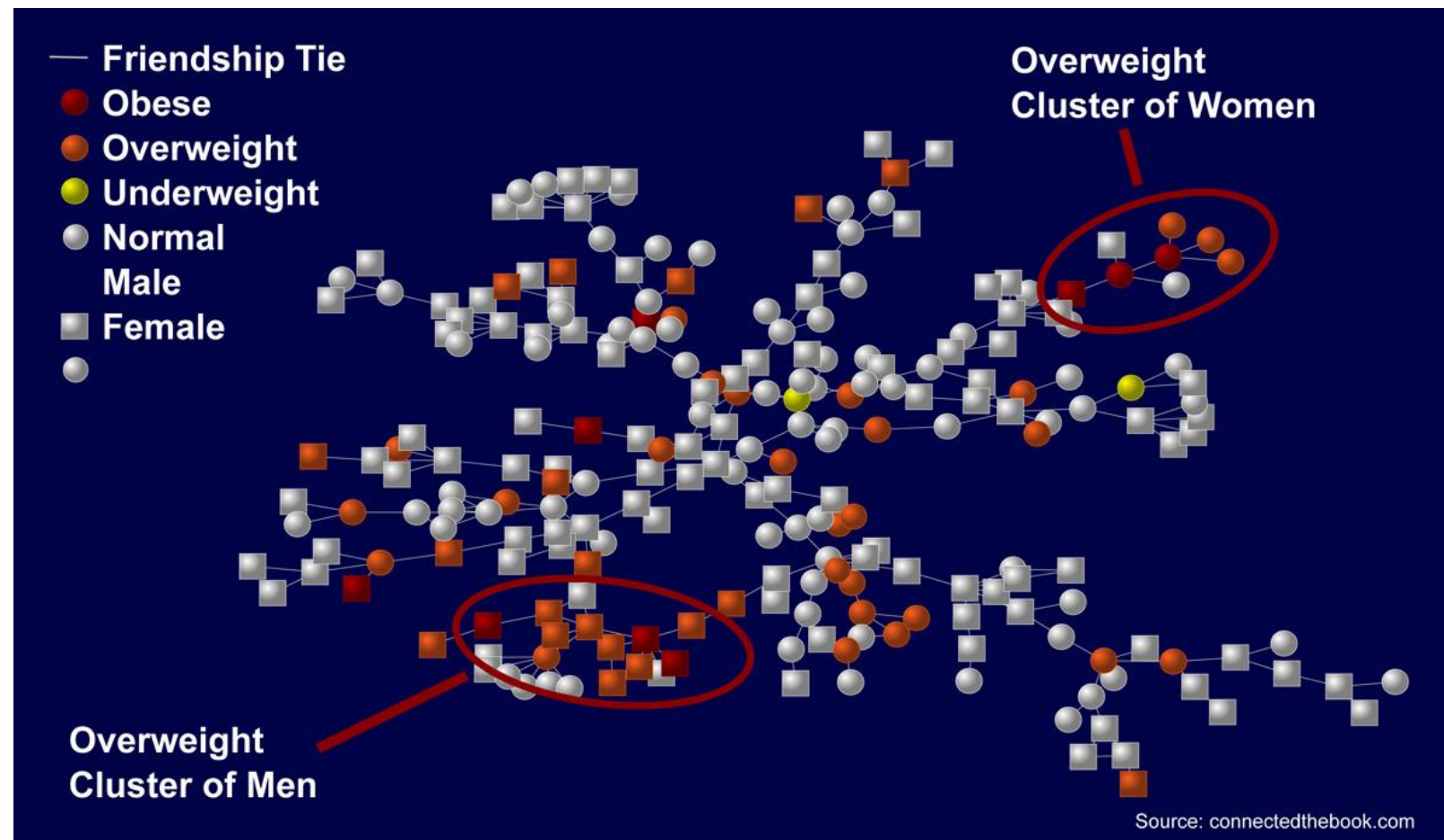


# Positive Social Connections



# Influence Health Behavior

- Obesity is “contagious”





# Promotes Cognitive Functioning

- Social interaction facilitates better cognitive functioning
- Participating in a discussion requires executive functioning
- Listening to others, understanding their viewpoints, memorizing data, updating information, inhibiting inappropriate responses



# Avoiding Risky Substances



# How to Foster Behavior Change

- Changing Your Mindset



# Expert v. Coach

Expert	Coach
Treats patients	Helps patients help themselves
Educates	Builds motivation, confidence, engagement
Relies on skills/knowledge of provider	Relies on patient self-awareness and insights
Strives to have all the answers	Strives to help patients find their own answers
Focuses on problem	Focuses on what is working well
Advises	Collaborates



# Key Coaching Skill

- Setting SMART goals



# Being SMART





# Examples

“Sure Doc, I’ll eat more vegetables”

- Non-specific
- Provider-driven rather than patient-centered

“I will eat ½ cup of steamed broccoli 3 days/week for next month”

- Specific/Measurable – amount and type of food
- Achievable – agreed upon with patient
- Relevant – choosing a goal that will further their health
- Time-based – frequency and duration

# Assessing Attainability

- Check for confidence  
How confident are you in this goal?
- Ideally  $\geq 7$   
If not, reset goal to more achievable one



# Accountability

- After SMART goal setting
- Follow-up MyChart message

Return in: 4 Weeks 6 Weeks **2 Months** 3 Months 4 Months 6 Months 1 Years  
2 Years 3 Years

2 Days Weeks **Months** Years


Return on: 5/4/2022 ☒ Approximately

☐ PRN

For: follow up

[Hide additional options](#)

**Additional Details**

Check-out note:  Insert SmartText

Follow-up:

Instructions:

☒ Remind me to: Check on action plan

Days after visit is signed: 30

# Takeaways

- 6 Pillars of Lifestyle Medicine
- Evidence-based field
- Prevent and treat chronic disease
- Expert -> Coach
- Set SMART goals



# Connect

- Email: [Bethany.Agusala@utsouthwestern.edu](mailto:Bethany.Agusala@utsouthwestern.edu)
- Twitter or Instagram: @BAgusalaMD



# References

- The US Burden of Disease Collaborators. The State of US Health, 1990-2016: Burden of Diseases, Injuries, and Risk Factors Among US States. *JAMA*. 2018;319(14):1444–1472.
- “Mission/Vision.” *The American College of Lifestyle Medicine*, American College of Lifestyle Medicine, 2019, [https://www.lifestylemedicine.org/ACLM/About/Mission\\_Vision/ACLM/About/Mission\\_Vision.aspx?hkey=0c26bcd1-f424-416a-9055-2e3af80777f6](https://www.lifestylemedicine.org/ACLM/About/Mission_Vision/ACLM/About/Mission_Vision.aspx?hkey=0c26bcd1-f424-416a-9055-2e3af80777f6)
- Estruch R et al. Primary Prevention of Cardiovascular Disease with a Mediterranean Diet Supplemented with Extra-Virgin Olive Oil or Nuts. *NEJM* 2013;368: 1279-1290
- Jenkins DJA, Kendall CWC, Marchie A, et al. Effects of a Dietary Portfolio of Cholesterol-Lowering Foods vs Lovastatin on Serum Lipids and C-Reactive Protein. *JAMA*. 2003;290(4):502–510.
- Appel LJ, Moore TJ, Obarzanek E, Vollmer WM, Svetkey LP, Sacks FM, Bray GA, Vogt TM, Cutler JA, Windhauser MM, Lin PH, Karanja N. A clinical trial of dietary patterns on blood pressure. *N Engl J Med*. 1997; 336:1117–1124.
- Mozaffarian D. Dietary and Policy Priorities for Cardiovascular Disease, Diabetes, and Obesity: A Comprehensive Review. *Circulation*. 2016 Jan 12;133(2):187-225
- Knowler WC, Barrett-Connor E, Fowler SE, et al. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med*. 2002;346(6):393-403.
- Hamman RF, Wing RR, Edelstein SL, et al. Effect of weight loss with lifestyle intervention on risk of diabetes. *Diabetes Care*. 2006;29(9):2102–7



# References

- Sofi F, Valecchi D, Bacci D, et al. Physical activity and risk of cognitive decline: a meta-analysis of prospective studies. *J Intern Med* 2011; 269: 107–17.
- Schuch FB, Vancampfort D, Richards J, Rosenbaum S, Ward PB, Stubbs B. Exercise as a treatment for depression: A meta-analysis adjusting for publication bias. *Journal of Psychiatric Research* 2016; 77:42-51.
- Cherkin DC, Sherman KJ, Balderson BH, Cook AJ, Anderson ML, Hawkes RJ, Hansen KE, Turner JA. Effect of Mindfulness-Based Stress Reduction vs Cognitive Behavioral Therapy or Usual Care on Back Pain and Functional Limitations in Adults With Chronic Low Back Pain: A Randomized Clinical Trial. *JAMA*. 2016;315(12):1240-1249.
- Cappuccio FP, D'Elia L, Strazzullo P, Miller MA. Sleep Duration and All-Cause Mortality: A Systematic Review and Meta-Analysis of Prospective Studies. *SLEEP* 2010;33(5):585-592
- Lewis et al. Tastes, ties, and time: A new social network dataset using Facebook. *com. Social networks*. 2008;30(4):330-342.
- Ybarra O, et al. Mental exercising through simple socializing: Social interaction promotes general cognitive functioning. *Personality and Social Psychology Bulletin*. 2008;34(2):248-259.
- Frates, B, Bonnet, JP, Joseph, R, & Peterson, JA. (2019) *Lifestyle Medicine Handbook: An Introduction to the Power of Healthy Habits*. Monterey, CA: Healthy Learning.

# Additional Resources

- [American College of Lifestyle Medicine](#)
  - [Free CME](#)



- [Exercise is Medicine](#)



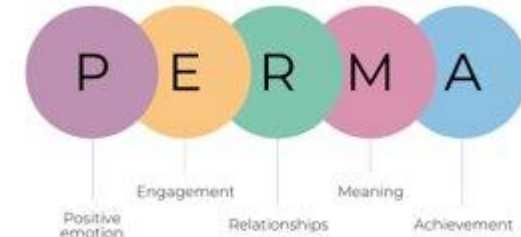
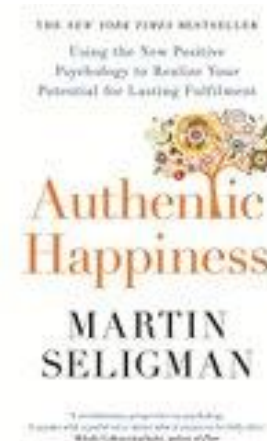
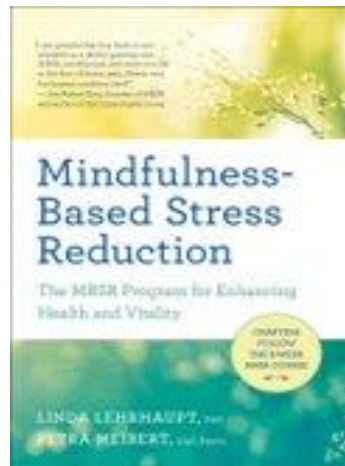
# Additional Resources – Stress Management

- Meditation Apps



- Positive Psychology

- Mindfulness-based stress reduction



# Additional Resources - Sleep

## Books

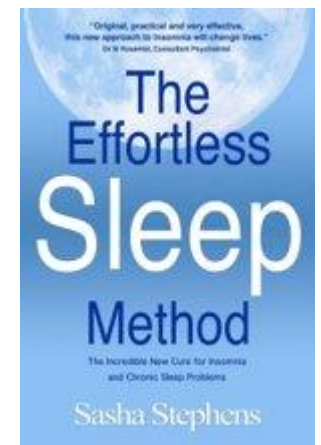
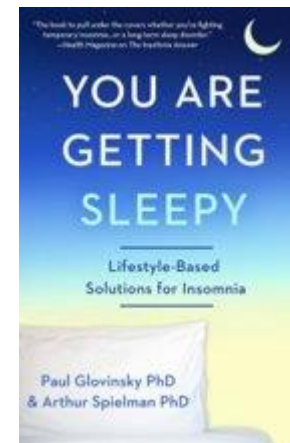
- Quiet Your Mind and Get to Sleep by Colleen Carney PhD
- The Effortless Sleep Method by Sasha Stephens
- You are Getting Sleepy: Lifestyle-Based Solutions for Insomnia by Paul Glovinsky PhD and Arthur Speilman PhD

## Online CBT-I

- <https://www.cbtforinsomnia.com/>
- [VA CBT app](#)
- [Sleepio](#) – may be covered by insurance
- [Somryst](#) – formerly Shuti

## Other

- [iRest Meditation for Sleep](#)



# Smoking Cessation Resources

- [American Society of Clinical Oncology](#)
- Quit Lines
  - 866-QUIT-4-LIFE
  - 800-LUNGUSA
  - 800-QUIT-NOW
- Support groups
- Apps
  - NCI Quit Pal
  - CDC quitSTART

