

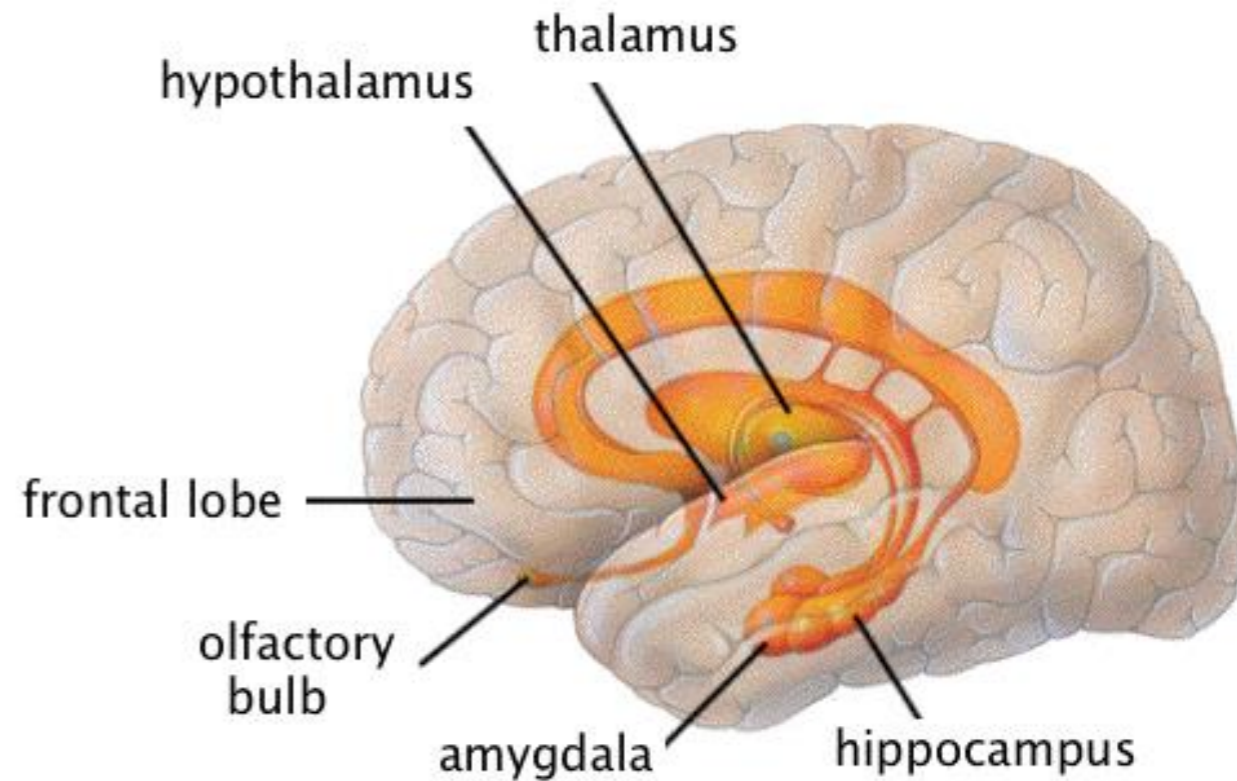
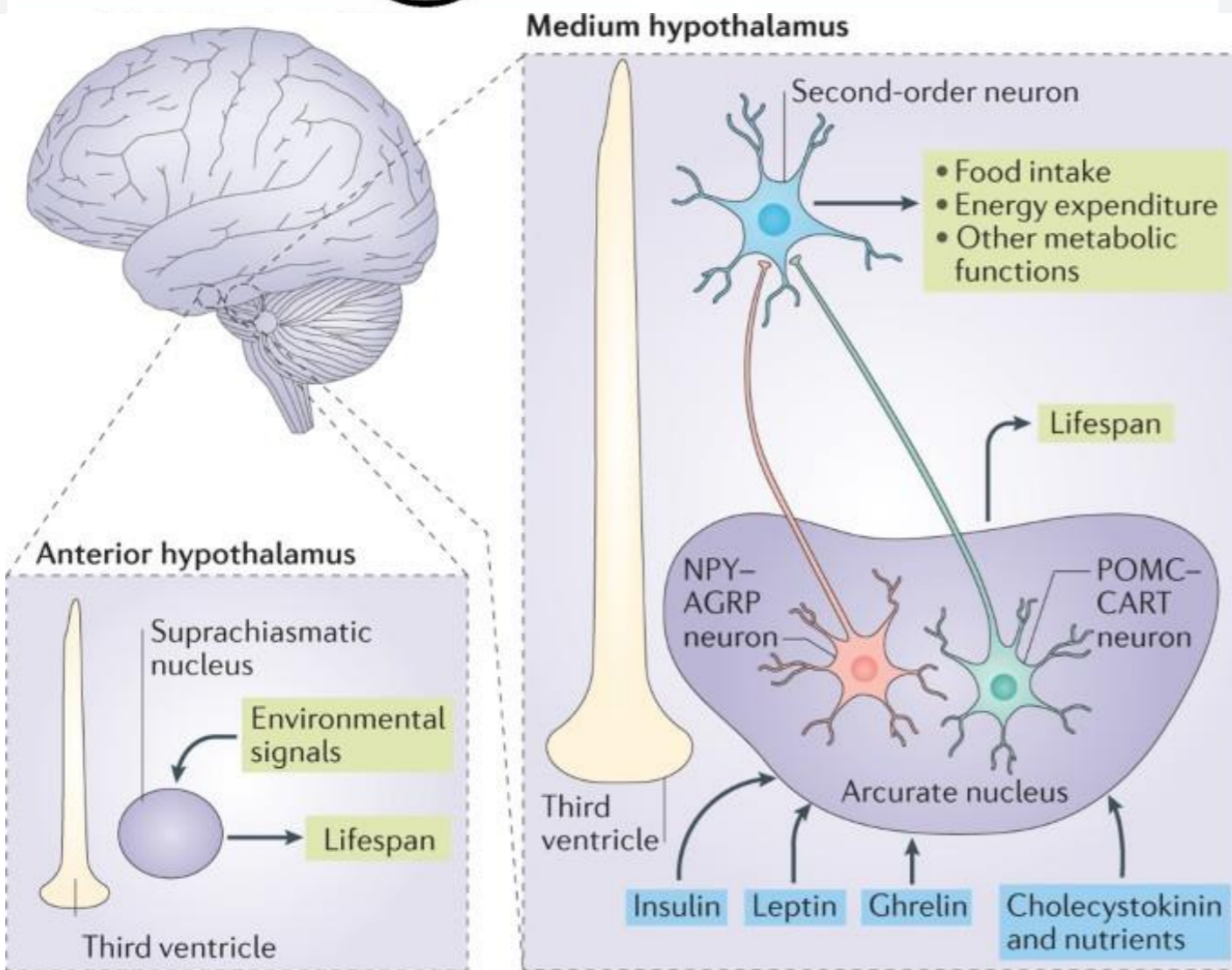
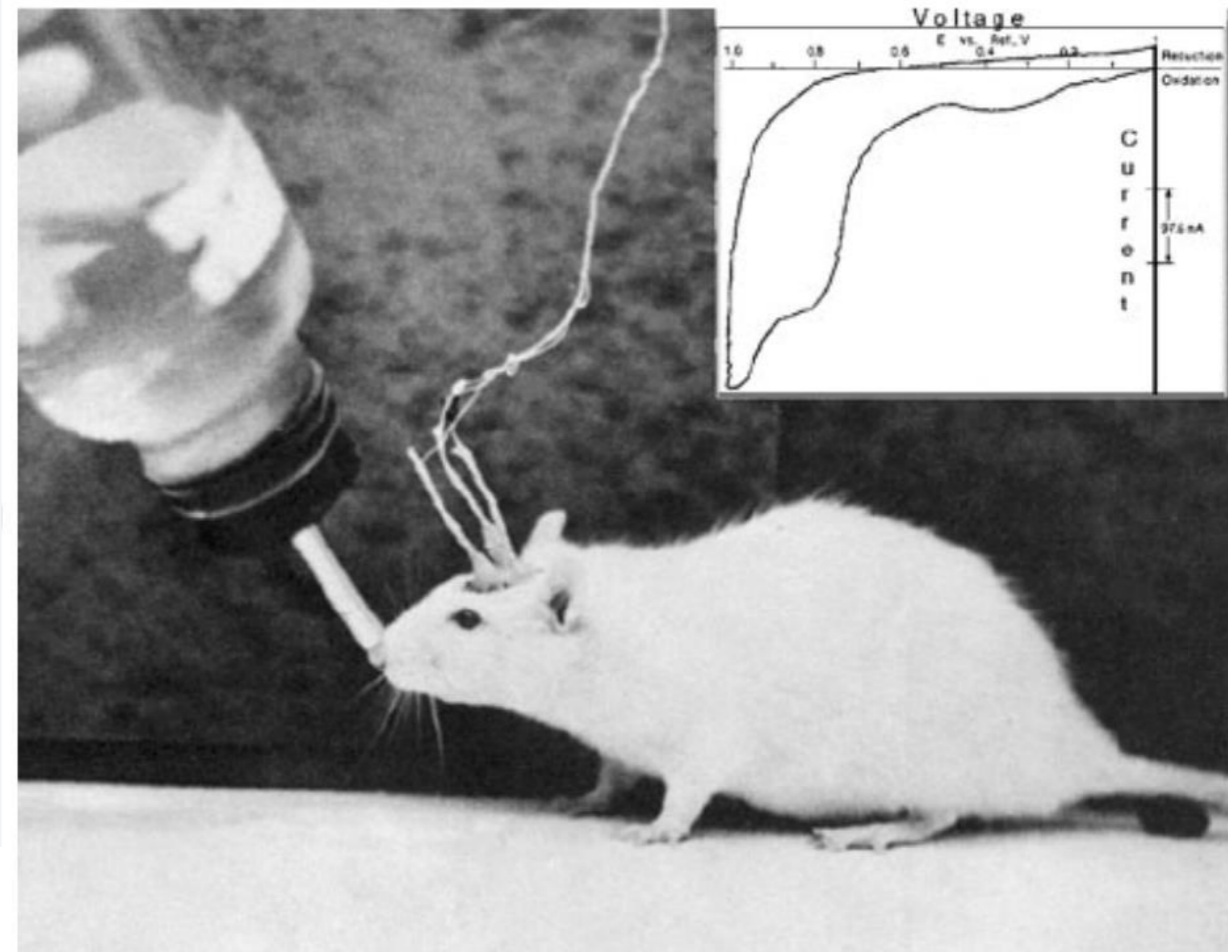
Preventing Weight Regain

Dr. Jennifer Montis, Lynda Montis



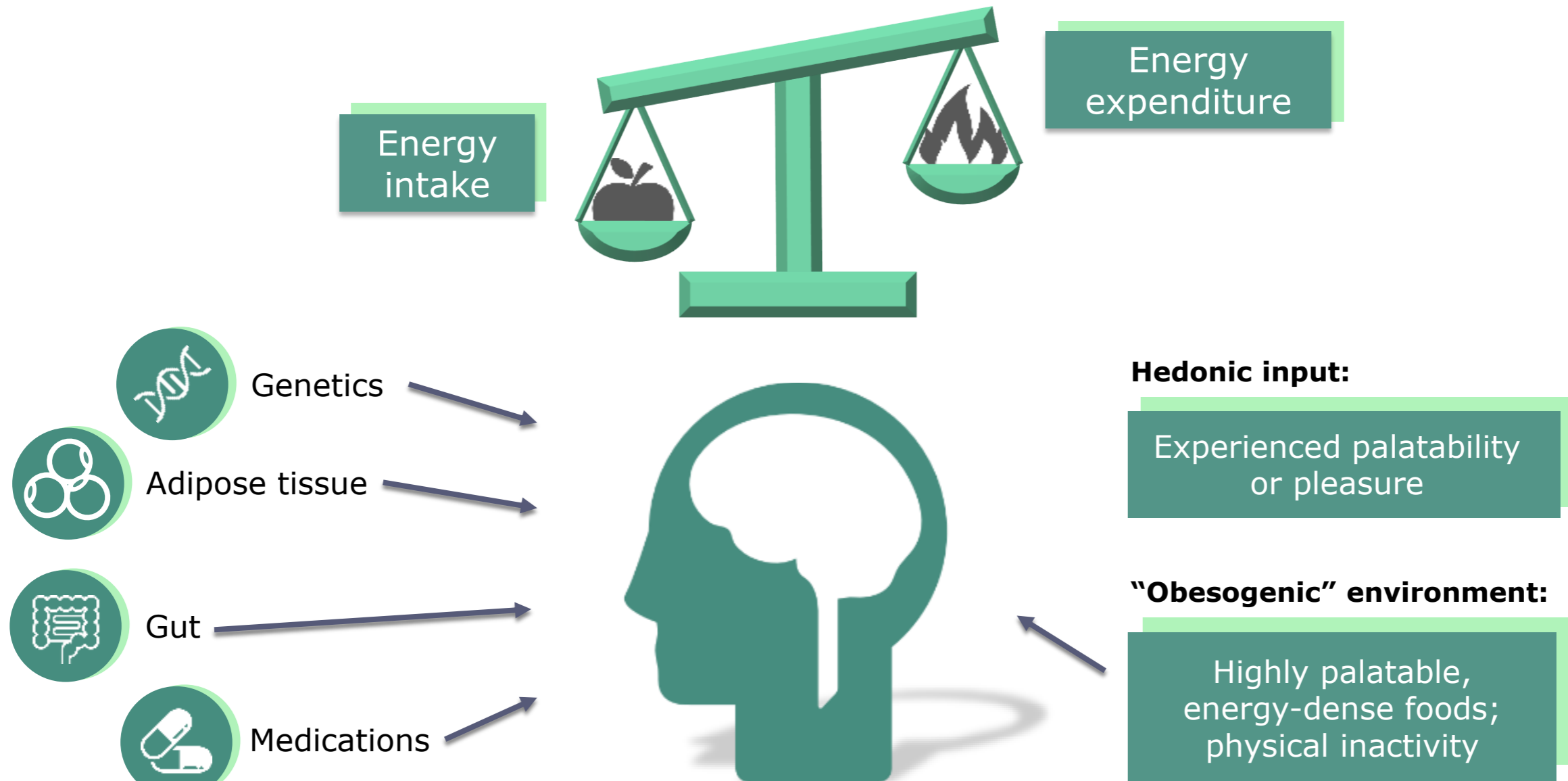
OBEESITY

Is it Really a Disease?

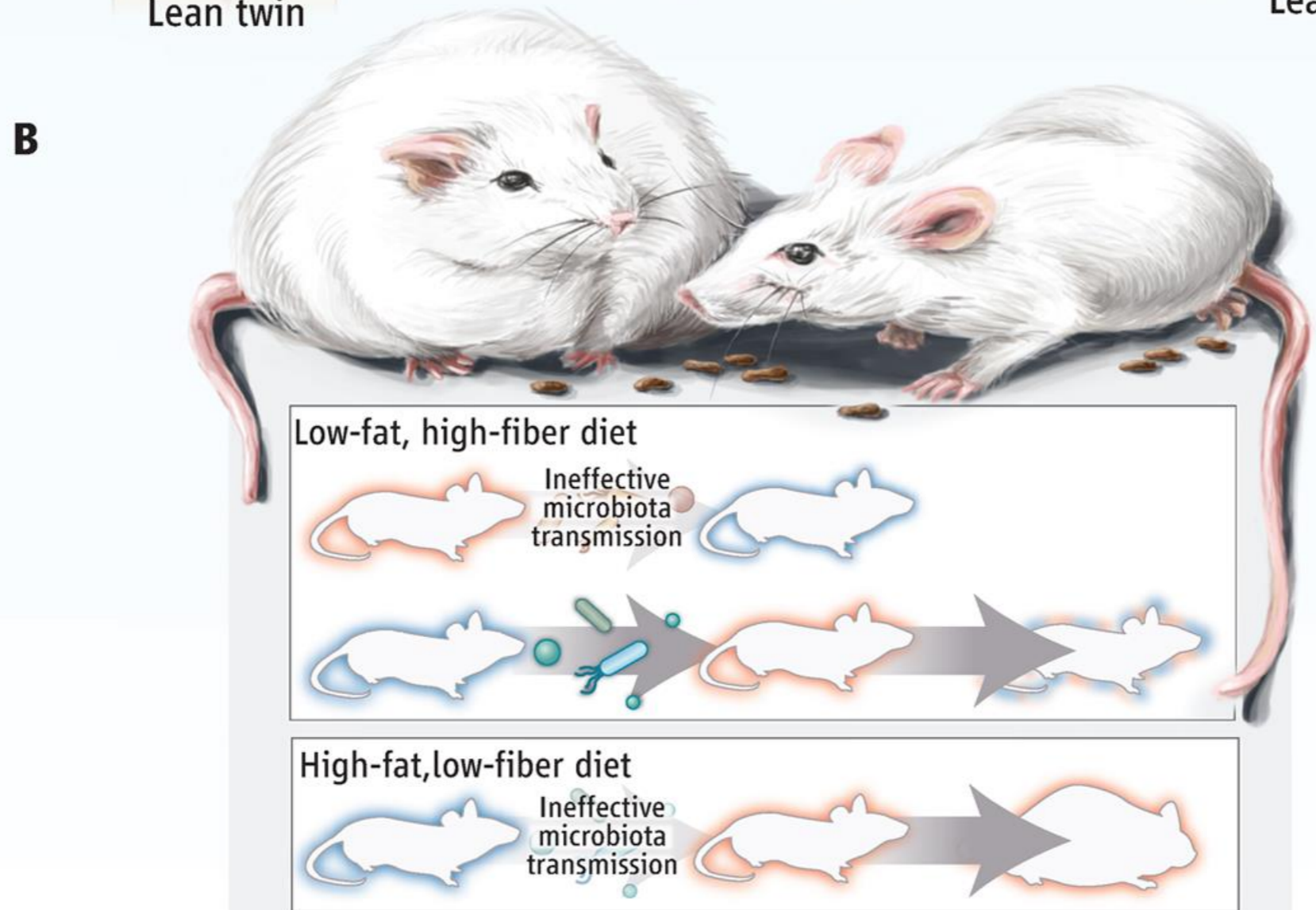
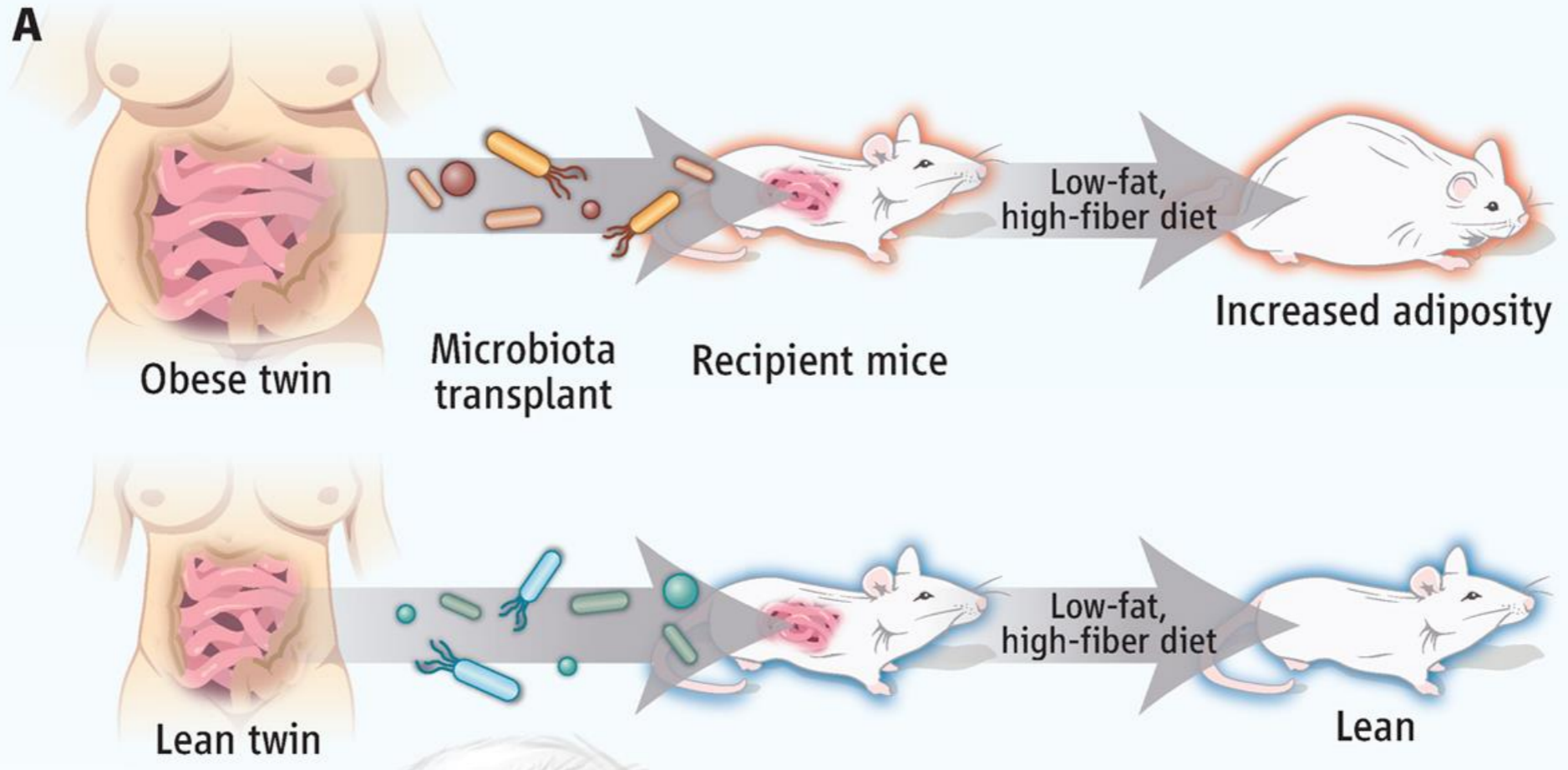




The pathophysiology of obesity is complex

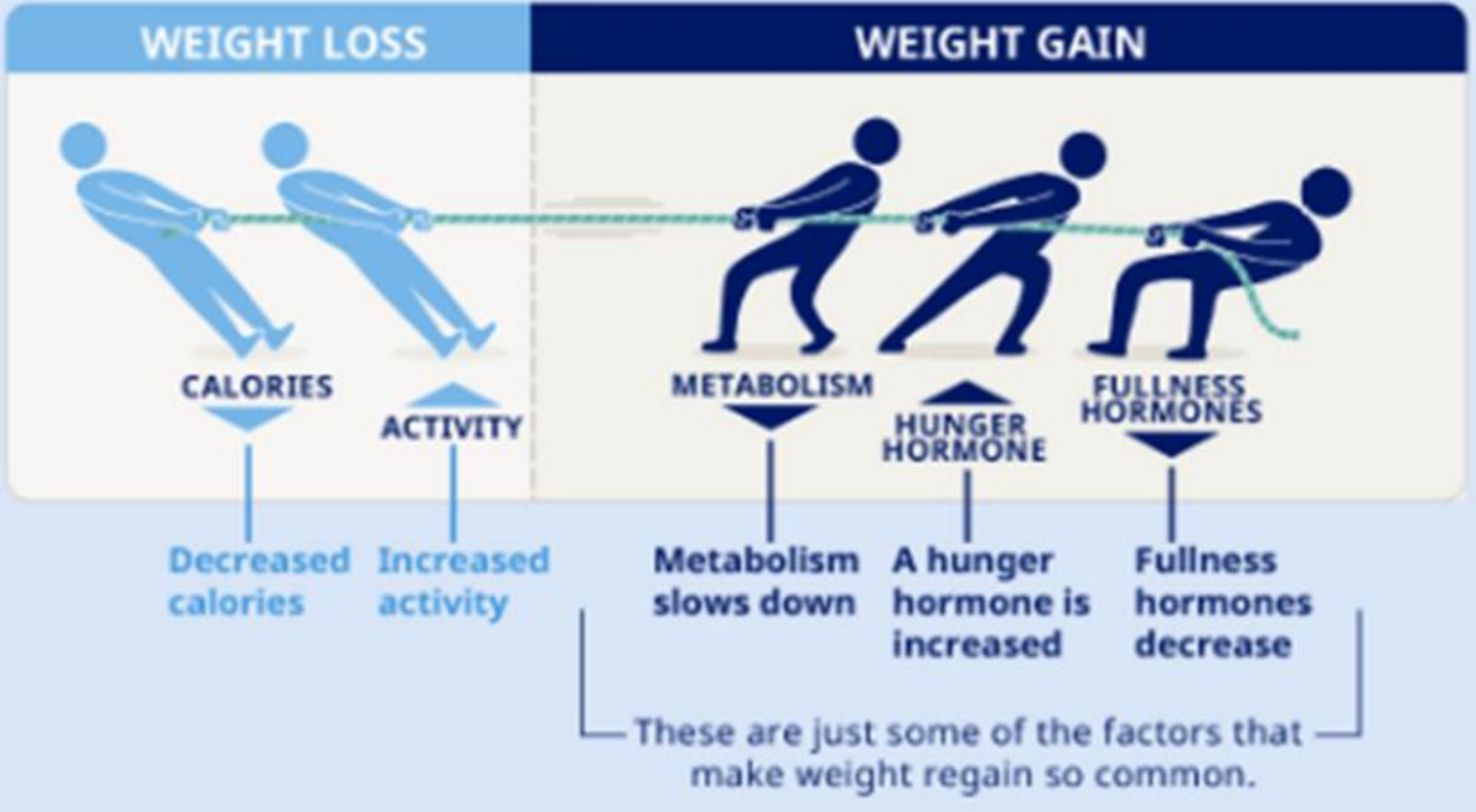


1. Woods SC et al. Int J Obes Relat Metab Disord. 2002;26 Suppl 4:S8-S10; 2. Ludwig DS. JAMA. 2014;311:2167-2168; 3. Speliotes EK et al. Nat Genet. 2010;42:937-948; 4. Garvey WT et al. Endocr Pract. 2014;20:977-989. 5. Bray GA and Ryan DH. Ann NY Acad Sci. 2014;1311:1-13.



Why does
weight loss not
cure obesity?





Before, After, ... After the After



How do you lose weight and keep it off?



The National Weight Control Registry

HOW TO JOIN RESEARCH FINDINGS SUCCESS STORIES WHO WE ARE FOR CURRENT REGISTRY MEMBERS

The National Weight Control Registry

The National Weight Control Registry (NWCR), established in 1994 by [Rena Wing, Ph.D.](#) from Brown Medical School, and [James O. Hill, Ph.D.](#) from the University of Colorado, is the largest prospective investigation of long-term successful weight loss maintenance. Given the prevailing belief that few individuals succeed at long-term weight loss, the NWCR was developed to identify and investigate the characteristics of individuals who have succeeded at long-term weight loss. The NWCR is tracking over 10,000 individuals who have lost significant amounts of weight and kept it off for long periods of time. Detailed questionnaires and annual follow-up surveys are used to examine the behavioral and psychological characteristics of weight maintainers, as well as the strategies they use to maintaining their weight losses.

Research findings from the National Weight Control Registry have been featured in many national newspapers, magazines, and television broadcasts, including [USA Today](#), [Oprah magazine](#), [The Washington Post](#), and [Good Morning America](#).

Are you a successful loser?

Join the study!

How to Join
Recruitment for the Registry is ongoing. If you are at least 18 years of age and have maintained at least a 30 pound weight loss for one year or longer you may be eligible to join our research study.

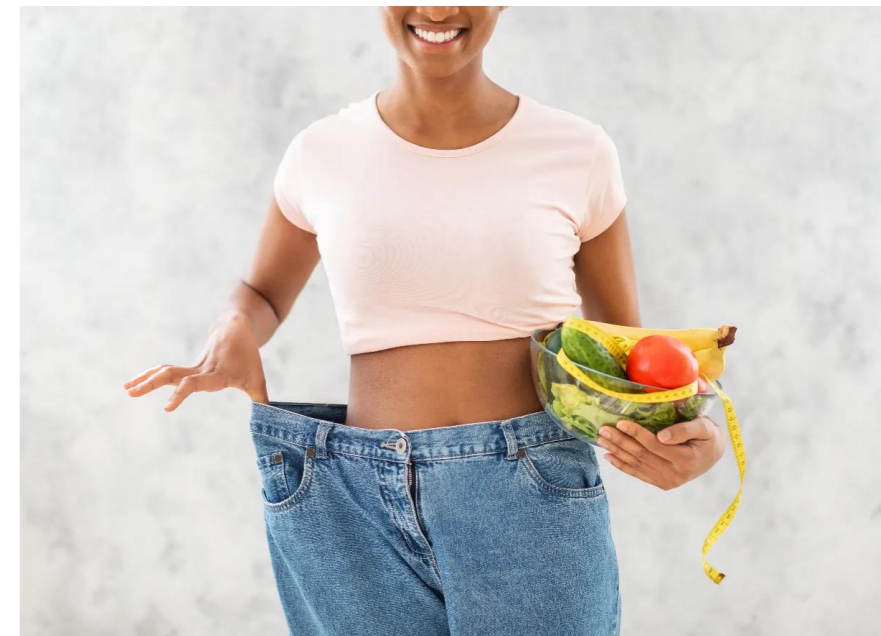
For Current Registry Members
Have you relocated over the past year? Please update your contact info [here](#).

Research Findings
Learn more about our research. To date, we have published articles describing the eating and exercise habits of successful weight losers, the behavioral strategies they use to maintain their weight, and the effect of successful weight loss maintenance on other areas of their lives.

Success Stories
Registry members' weight loss stories are diverse and inspiring. Read about the accomplishments of some of our members.

How do you lose weight and keep it off?

- National Weight Control Registry
- largest prospective observational study of weight maintenance out there
- individuals who have maintained a weight loss of at least 30 lbs for at least 1 year
- identify behaviours associated with long term weight loss success.



Keeping Weight Off



- 98% modify their food intake in some permanent way: portion control, whole food, plant based.
- 90% exercise at least 1 hour per day, burning at least 400 calories per session (self reported, over estimation)
- 78% eat breakfast every day – need to individualize
- 75% weigh themselves once a week - Accountability
- 62% watch less than 10 hours of TV per week – Perils of prolonged sitting
- average daily calorie intake for women = 1306 cal, average daily calorie intake for men = 1685 cal (self reported, underestimation)

Successful Weight Loss Maintenance



Advanced

Save

Email

Send

> [Obes Rev.](#) 2020 May;21(5):e13003. doi: 10.1111/obr.13003. Epub 2020 Feb 12.

Successful weight loss maintenance: A systematic review of weight control registries

Catarina Paixão¹, Carlos M Dias^{2 3}, Rui Jorge^{4 5}, Eliana V Carraça¹, Mary Yannakoulia⁶,
Martina de Zwaan⁷, Sirpa Soini⁸, James O Hill⁹, Pedro J Teixeira¹, Inês Santos^{1 10}

Affiliations + expand

PMID: 32048787 PMCID: [PMC9105823](#) DOI: [10.1111/obr.13003](#)

[Free PMC article](#)

Successful Weight Loss Maintenance

- Systematic review of weight control registries, 52 peer reviewed articles studied.
- “having healthy foods available at home, regular breakfast intake, increasing vegetable consumption, decreasing sugary and fatty foods, limiting certain foods, and reducing fat in meals. Increased physical activity was the most consistent positive correlate of weight loss maintenance.”



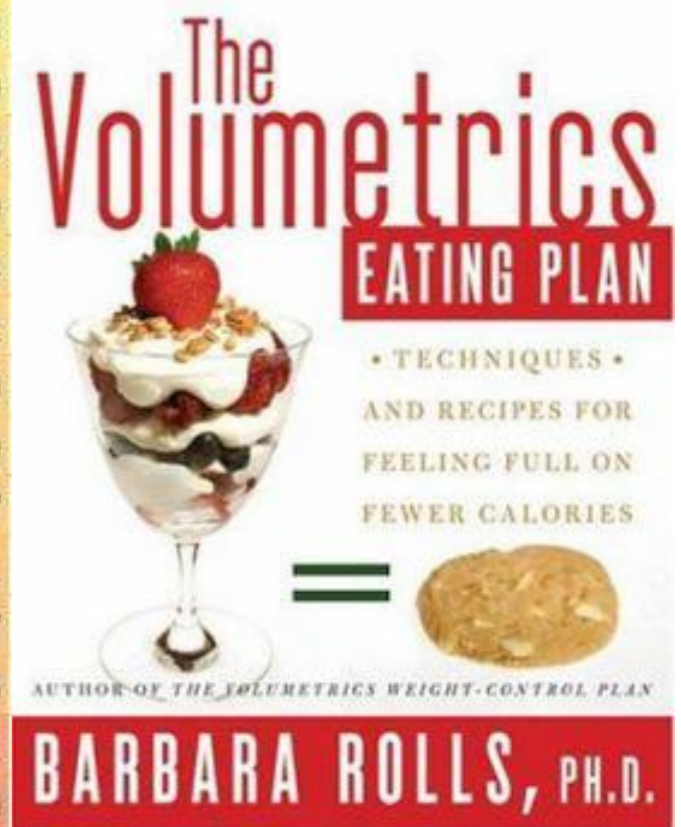
"I have a PhD in nutrition science. I'm still changing my diet to this day as I do more studies or learn of a different cultural food attribute that I like."

~Dr. Christopher D. Gardner, Director of Nutrition Studies at Stanford Prevention Research Center.



Calorie Density – A Good Place To Start

Food	Density (cal/g)	Food	Density (cal/g)
Lettuce	0.15	Quinoa	1.43
Spinach	0.23	Salmon	1.45
Watermelon	0.30	Egg	1.48
Strawberry	0.32	Avocado	1.60
Carrot	0.40	Whole wheat bread	2.48
Orange	0.48	Steak	2.50
2% milk	0.50	White Bread	2.64
Apple	0.52	Burger (Patty)	2.82
Grapes	0.69	Mozzarella chese	3.00
Boiled Potato	0.87	Raisins	3.00
Banana	0.89	French fries	3.07
Ketchup	1.00	Black Beans	3.41
Skinless Chicken breast	1.10	Frosted flakes	3.67
Brown Rice	1.10	Mayonnaise	3.86
Fish (tilapia)	1.13	Nutella	5.41
Tuna	1.16	Peanuts	6.00
White Rice	1.30	Butter	7.21
Spaghetti	1.31	Olive Oil	8.85
Tenderloin Pork	1.36		Evidenced Fitness



Fibre/Microbiome

"It's time to wake up and harness the power of 39 trillion microbes in your gut: dive into *Fiber Fueled* and find out how." —WILLIAM W. LI, MD, *New York Times* bestselling author of *Eat to Beat Disease*

The Plant-Based Gut Health Program
for Losing Weight, Restoring Your Health,
and Optimizing Your Microbiome

FIBER FUELED

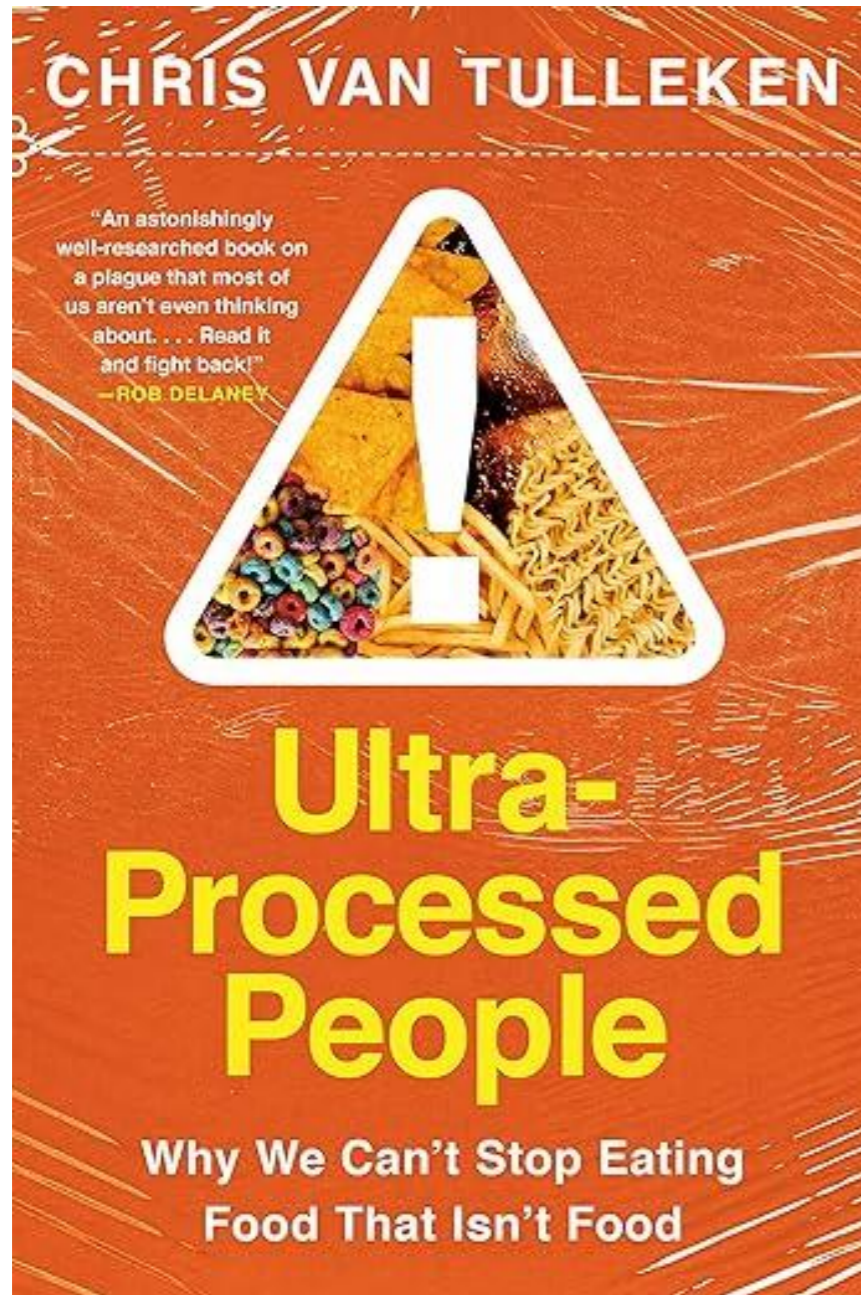


NEW YORK
TIMES
BESTSELLER

WILL BULSIEWICZ, MD, MSCI



Ultra Processed Food





Food Environment



Don't Kid Yourself

- If it is in the house you are going to eat it
- Don't use up your willpower in your own home
- Improve your grocery shopping



Planning

- Planning is key
- Don't leave it to chance
- Default = easiest, most calories dense food
- Keep healthy, ready to go snacks
- Have low calorie food readily available - eye level, clear containers
- Pack food when you are on the go, travelling etc.



Food Environment

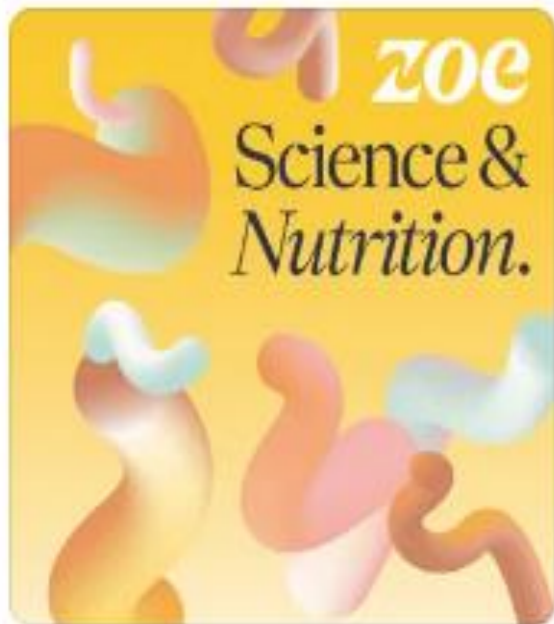
- If you must keep unhealthy food in the home...
- Take time, pause, reflect
- make it difficult
- Table scape makes a difference - smaller dishes
- Send leftovers home with guests





Mastering Healthy Eating Habits

How To Master Healthy Eating Habits

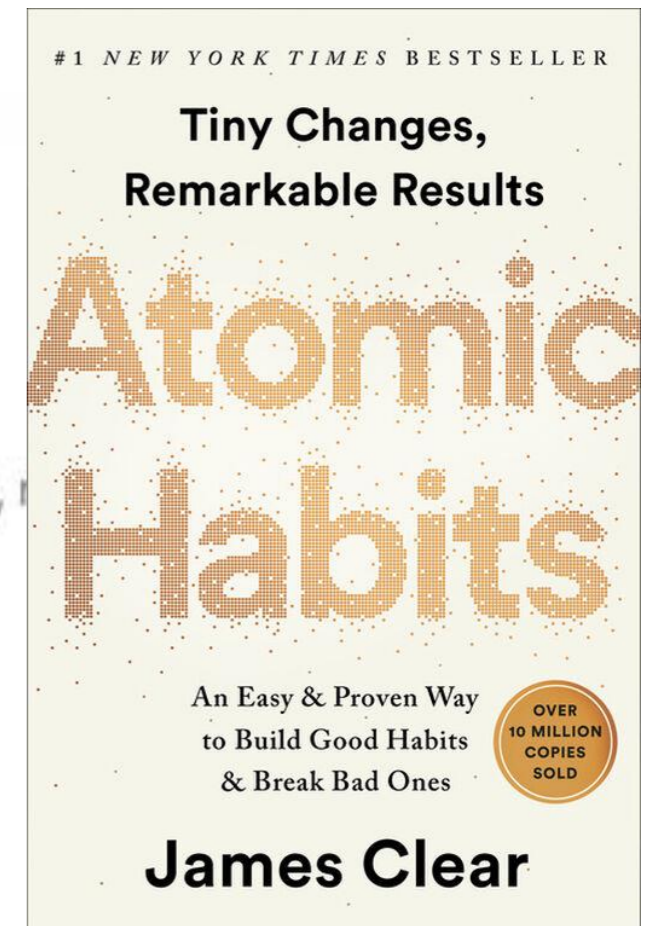


Jan 18, 2024 · 1h, 3min

How to master healthy eating habits with James Clear

ZOE Science & Nutrition

Learn four rules to change habits and improve eating: make it obvious, make it easy, make it satisfying.



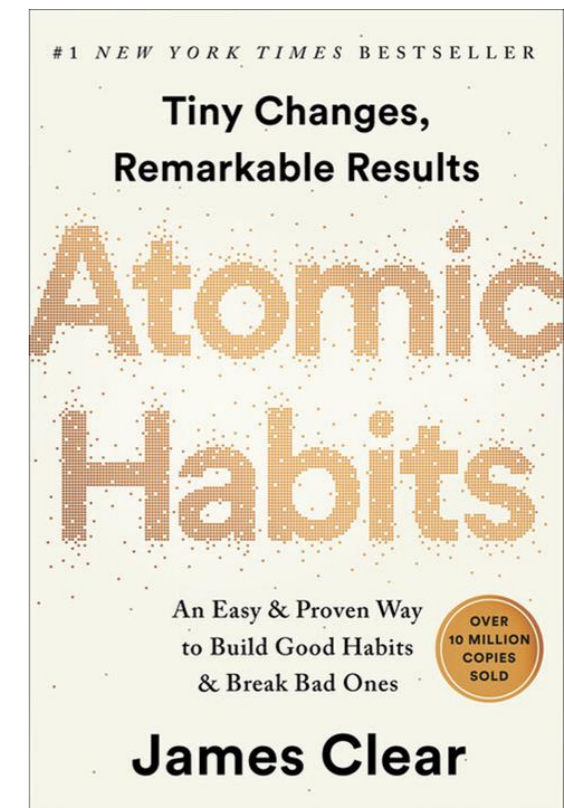
What Makes Change Difficult?



- Current food environment - economic reality
- Dynamic contrast - effect on brain
- Ultra-processed food - effect on gut microbiome - effect on brain/desire

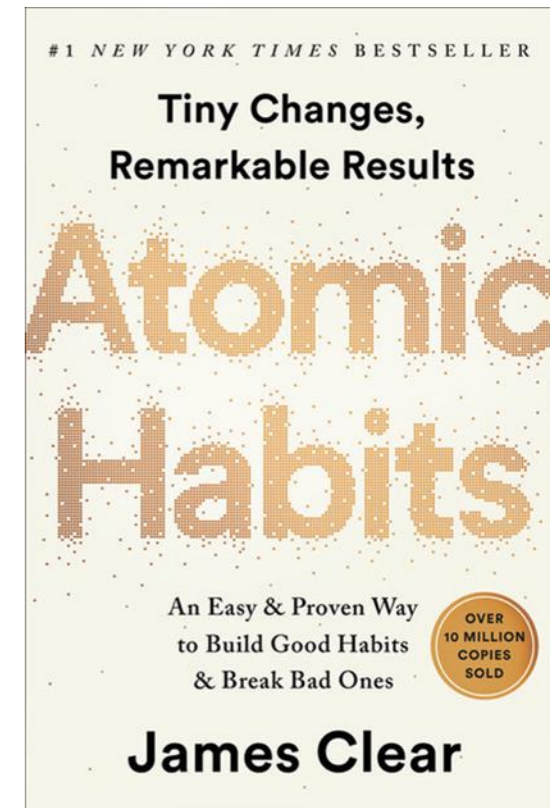
Connection Between Good Habits & Desired Identity

- "Every action you take is a vote for the type of person you want to become."
- problem of focusing on goals - counterproductive
- have an honest conversation
- resultant happiness from each choice you make
- need for habits to change/evolve as life changes



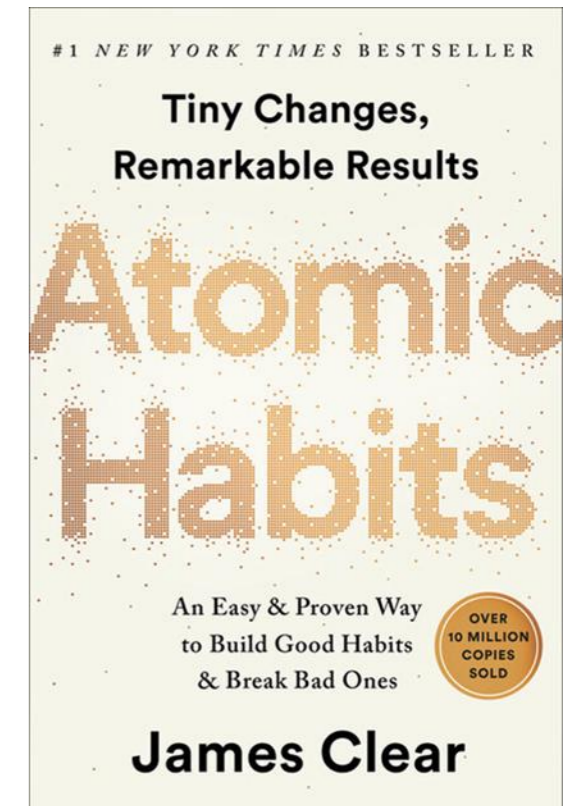
Four Laws of Behaviour Change - To Build A Good Habit

- 1). Make it obvious - physical environment
- 2) Make it attractive - social environment
- 3) Make it easy - 2 minute rule
- "A habit must be established before it can be improved."
- 4) Make it satisfying/enjoyable - brain is wired to notice/remember rewards



To Break A Bad Habit

- 1) Make it invisible - remove cue
- 2) Make it unattractive - bring negative feelings to mind
- 3) Make it difficult - add steps, increase friction
- 4) Make it unsatisfying - layer on cost or consequence of action



Ways To Start New Habits

- 1) Implementation Intention Formula: I will (BEHAVIOUR) at (TIME) in (LOCATION).
- 2) Habit Stacking - pairing a new habit with existing habit.
Example: After I have my morning tea I will meditate for 1 minute.
- 3) Bundling - a habit you want to do (listen to music/book) with a habit you need to do (going for a walk).
- 4) Surround yourself with people who have the habits you want for yourself. Right tribe.

Maintaining Habits - Preventing Backsliding

- "Studies have shown ... people who exhibit the greatest willpower are the ones who are tempted the least."
(Make it obvious.)
- "The desire to belong will often overpower the desire to improve. You want to join groups where your desired behaviour is the normal behaviour." (Make it attractive.)
- "What can I stick to - even on bad days?" (Make it easy.)
- "Never miss twice." Be kind to yourself - avoid the spiral of repeated mistakes.



Movement

THE PELVIC GIRDLE





EXERCISE
Some is Good
More is Better
Everything Counts

Yoni Freedhoff

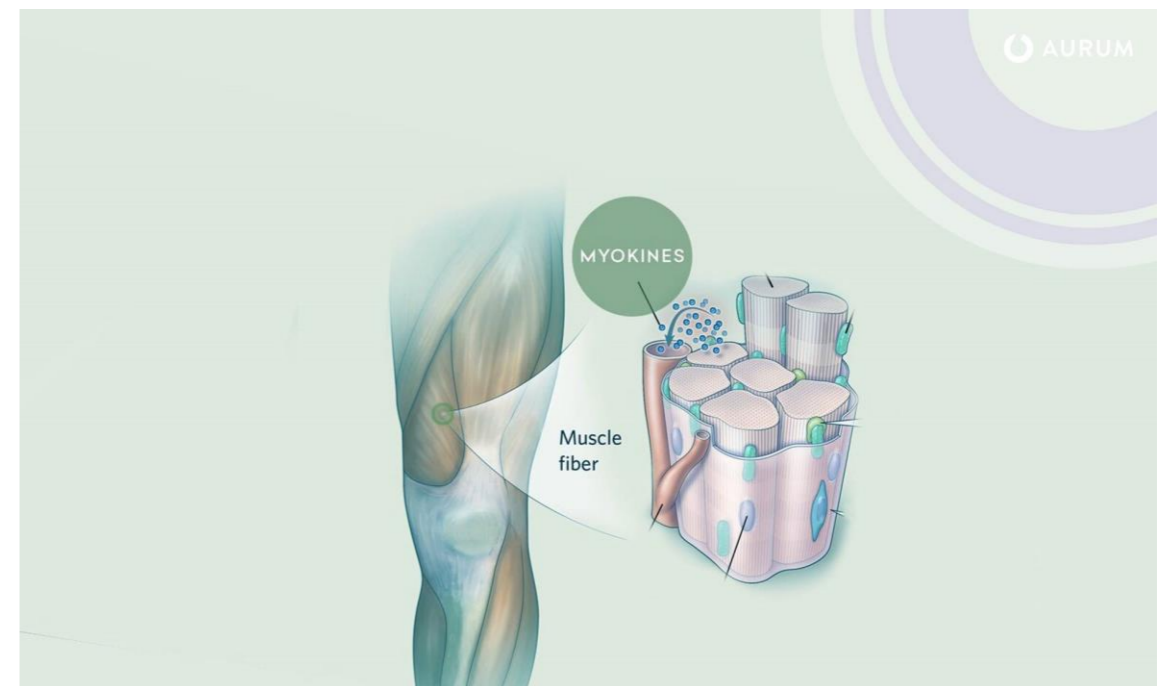
Movement



- integral to our happiness & humanity
- powerful antidote to depression, anxiety & loneliness
- any movement where you are engaging with life through your body
- will build resilience & help you thrive

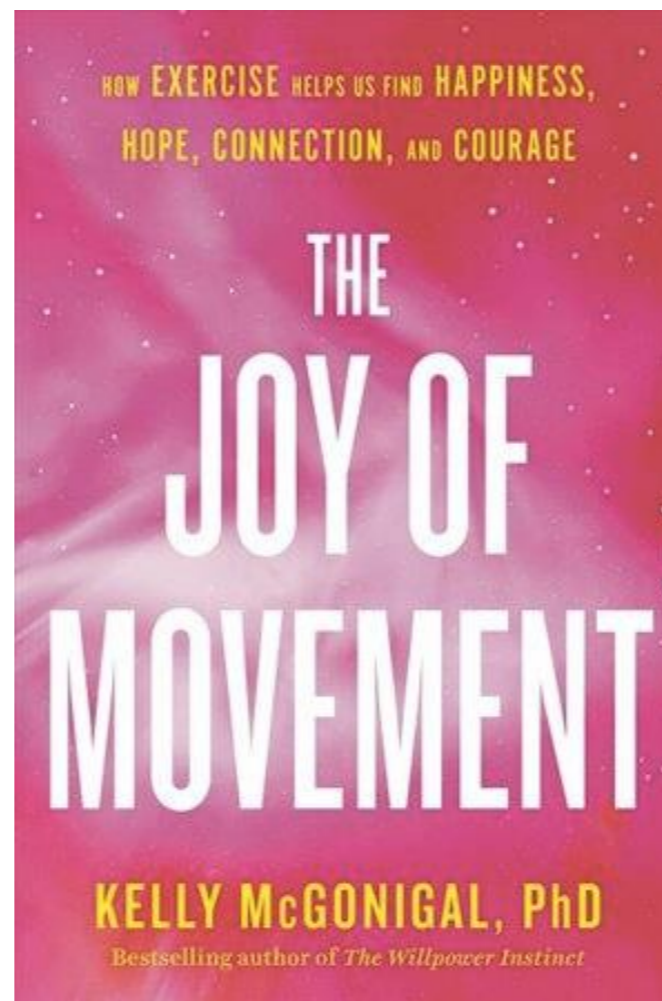
Hope Molecules (Myokines)

- Muscles - endocrine organ - manufacture and secrete chemicals into bloodstream
- Molecules secreted
 - boost immune system
 - support cardiovascular health
 - regulate blood sugar
 - kill cancer cells
 - boost mood & metabolism
 - change structure of brain to make you more resilient to stress, even future stress
 - make brain more sensitive to joy



“So every time you exercise, every time you move your body and use your muscles, you are giving yourself an intravenous dose of hope!”

– Kelly McGonigal, Ph.D., *The Joy of Movement*






SUBSCRIBE FOR \$0.50 (CDN)/WEEK

2-Minute Bursts of Movement Can Have Big Health Benefits

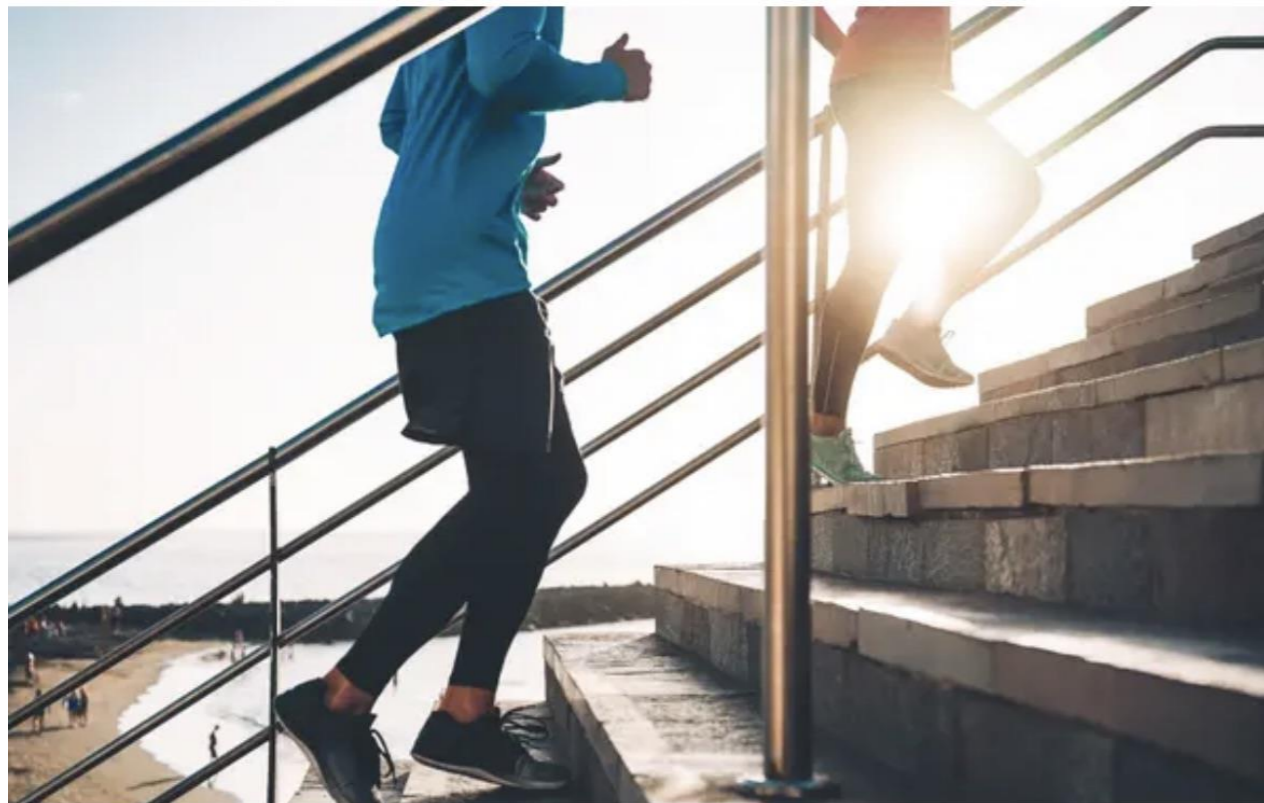
A new study confirms that you don't have to do a hard workout to reap the longevity rewards of exercise.

 Give this article



Read in app

“Those who engaged in one or two-minute bursts of exercise roughly three times a day, like speed-walking while commuting to work or rapidly climbing stairs, showed a nearly **50 percent reduction in cardiovascular mortality risk and a roughly 40 percent reduction in the risk of dying from cancer** as well as all causes of mortality, compared with those who did no vigorous spurts of fitness.”



Crucial Importance of Skeletal Muscle

- skeletal muscle is undervalued
- quality of our lives is directly related to the health of our skeletal muscles
- after age 30, unless we counteract it, we lose muscle mass and strength continually
- skeletal muscle - an organ system
- under direct voluntary control



Benefits of Improving Skeletal Muscle

- improve metabolism - burn more fat
- reverse insulin resistance as more glucose can be absorbed in muscle
- metabolic health has a direct effect on brain function
- improve body composition
- increase energy level
- decrease risk of disease
- protect your skeleton
- improve mobility & balance



Exercise To Get Better at Living

- activities of daily living require us to maintain our muscle strength
- things we take for granted (until we can no longer do them)
- strength training makes you more physically capable & more confident in yourself
- exercise builds physical & mental resilience
- "The only way to exercise incorrectly is by not doing it."

It Is Never Too Late

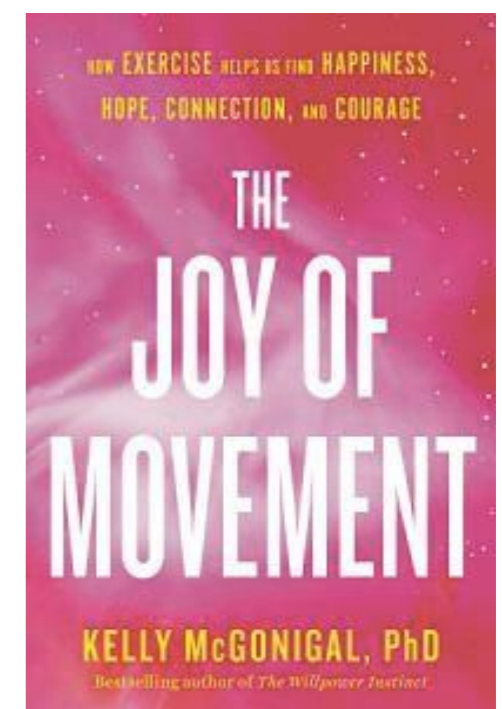
- Nursing home residents, aged 87 to 96, did eight weeks of light weights, three times per week and improved their muscle strength 180%! - walk farther, climb stairs more easily, better balance & energy.



“There is no one path or prescription except to follow your own joy.

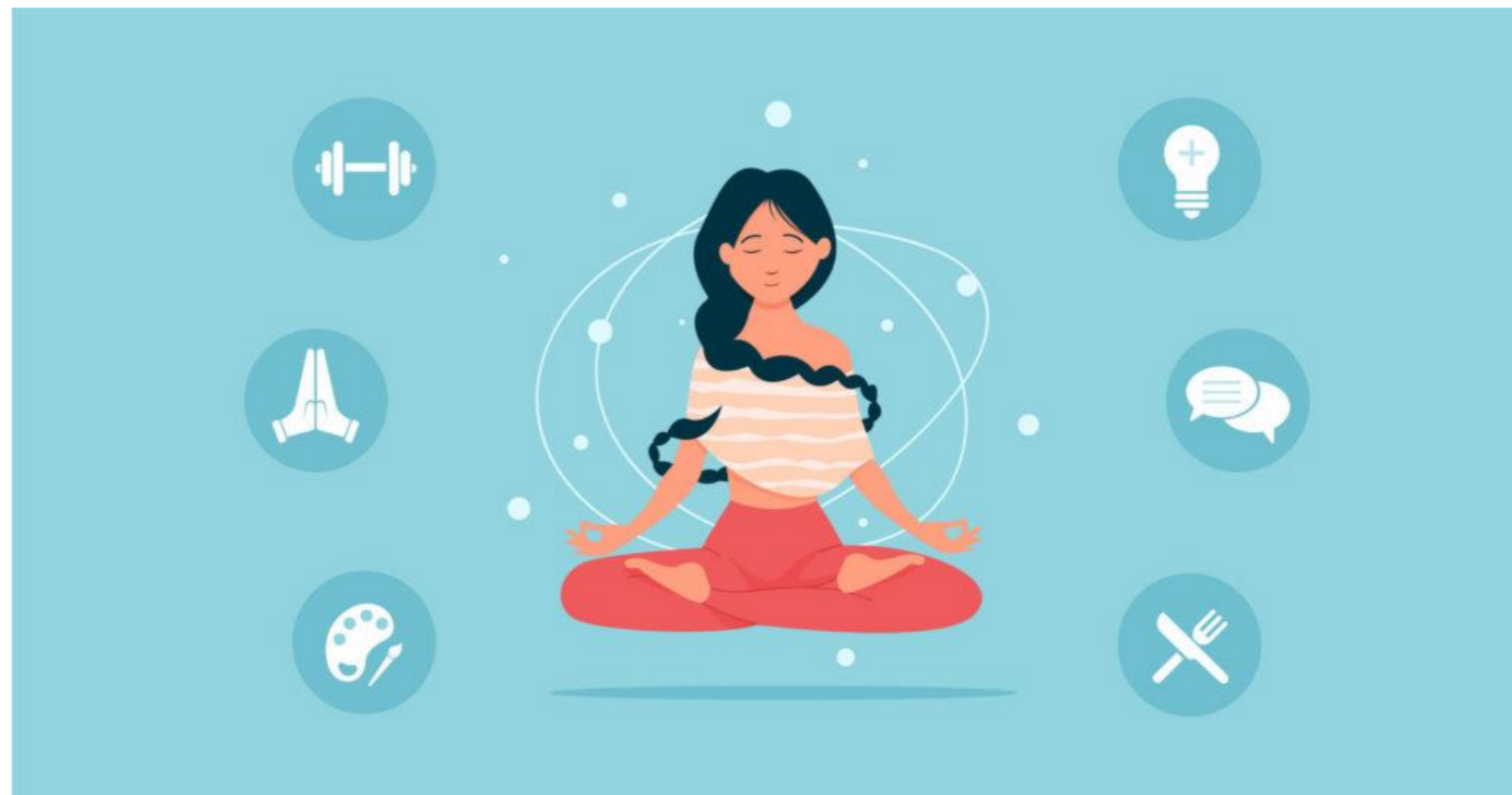
If you are looking for a guideline it’s this: **Move. Any kind, any amount, and any way that makes you happy. Move whatever parts of your body still move, with gratitude.** Move by yourself and in community. Move in your home. Move outdoors. Move to music or in silence. Set goals that are personally meaningful. Take baby steps, then conquer a big stretch. Seek out new experiences and explore new identities. Pay attention to how activities make you feel and how they change you. Listen to your body. Give yourself permission to do what feels good.... Keep following the thread of joy as long as you can.”

–Kelly McGonigal - The Joy of Movement





Stress Management



What is Stress

- External, Biological, Internal
- Physiological response to a threat
- Emotional part of the brain (amygdala) on high alert
- Dose response - Harmful when activated in daily life
- Chronic stress kills nerve cells in the Hippocampus



Stress



- Historically - most time was spent relaxing (parasympathetic) with brief periods of stress
- Modern day is the opposite - constant stress with brief periods of relaxation
- JAMA - 60-80% of disease in some ways related to stress
 - gut health
 - libido

Micro-stress Doses

- Micro-stress Doses
- Personal Threshold
- Take action to reduce micro-stress spikes in AM
- Technology - no time to disconnect from stress
 - Phones - distraction, designed to be irresistible
- Blurring of boundaries - work life and home life
- Pay attention to recovery - switching off



1. Breath Work



- Understand the power of your breath - free, accessible
- 80% of office workers breath differently in response to emails
—> stress signal to brain —>feed forward cycle
- Slow down breath —> calm signals to brain
- 3,4,5, Box Breathing (12 seconds x 5 = 1 min), sigh,
- Out breath > In breath —> activates parasympathetic system
- Food Reactions - ? stressed state when eating foods. Digest food better if you do breath work before meal.

2. Movement



- During stress your body is primed to move but we don't move
- Body needs regular movement
- Exercise = more resilient to stress, burns off stress
- Mice who exercise regularly —> More GABA calming neurotransmitter
- Make it easy and attached to existing habit (i.e. 5 mins of exercise while waiting for coffee to brew)

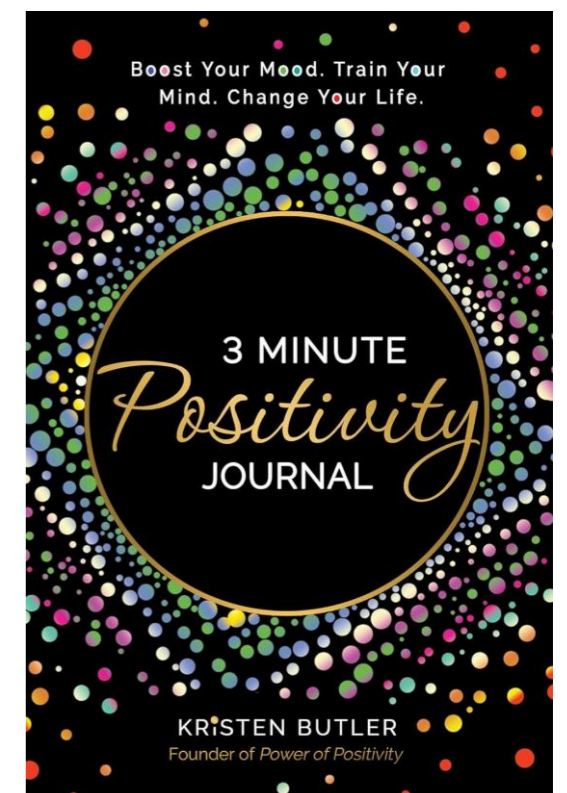
3. Human Touch



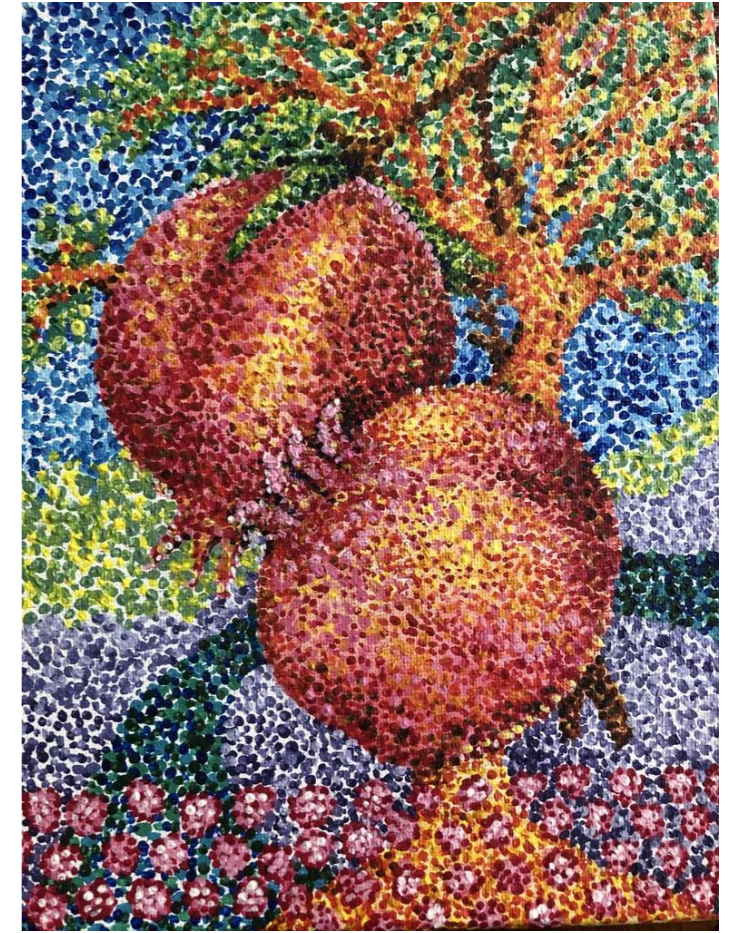
- CT afferent nerve fibers - when stimulated the brain lowers cortisol levels
- Optimally stimulated at 5cm/second (automatic with parents to children)
- Touch - when safe, affectionate, consensual - lowers HR, BP, increases natural killer cells
- When touch is lacking out internal reward system looks for reward elsewhere (sugar, social media etc)
- Can you increase touch in your life? (pets, massage, reflexology)

4. Journalling

- Writing down your thoughts - free and accessible
- Reduces anxiety, rumination, improves sleep, lowers stress
- In freeform - things you are worrying about surface
- Q's
 - 1. What do you deeply appreciate about your life?
 - 2. What is the most important thing i can do today?
 - 3. What did I do well today?
 - 4. What can I do better tomorrow?



5. Nature



- Get out in Nature
- Chronic stress changes the way you see the world - you zoom in, you dont take in the big picture

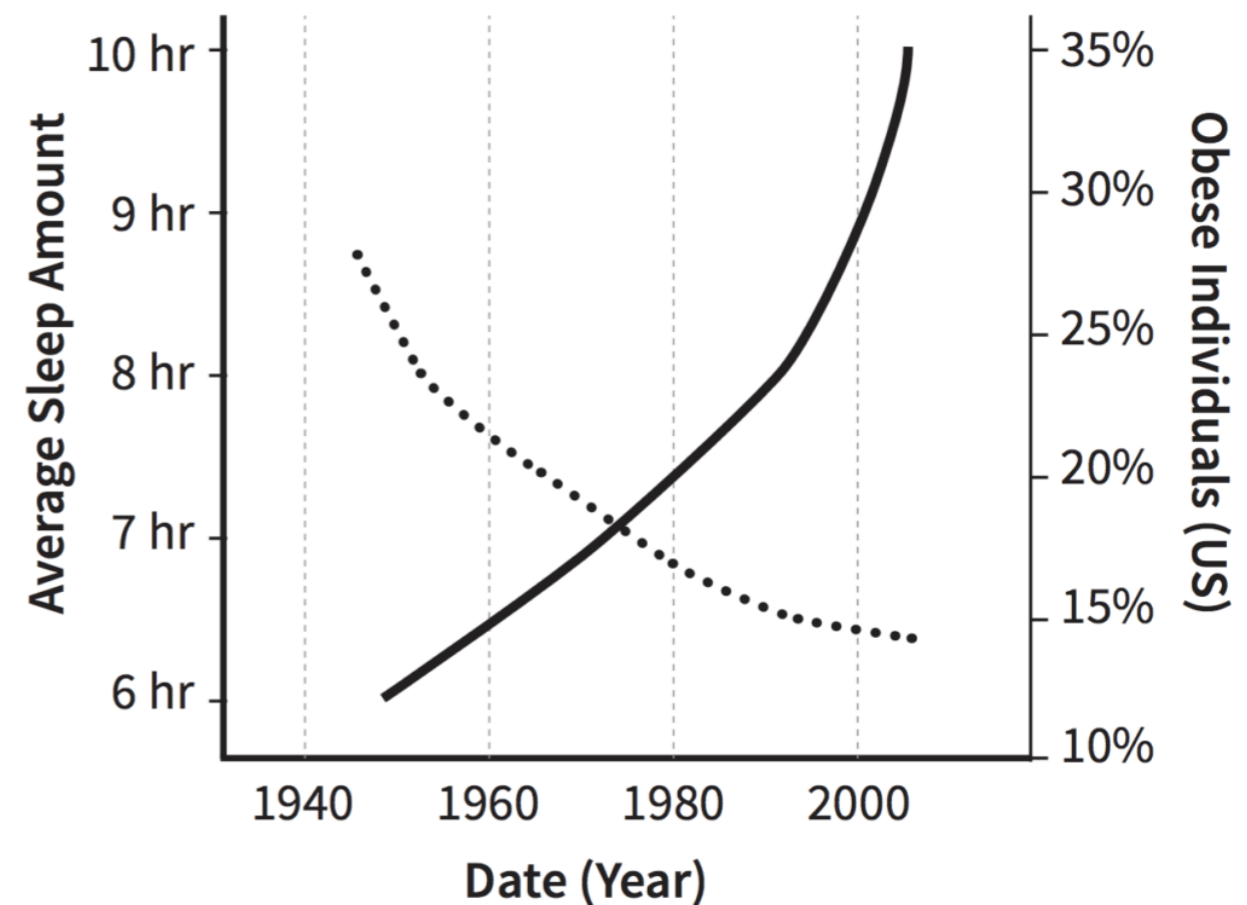


Improving Sleep



Sleep Loss and Obesity

- * Inverse correlation.
- * A correlation, not necessarily causative.
- * Obesity epidemic - rise in processed food, portion sizes, sedentary lifestyle
- * Lack of sleep is a contributing factor.
- * No surprise that after a bad night of sleep we make poorer choices.



Appetite



- * Humans are the only species that will deliberately deprive themselves of sleep for no reason.
- * When you are sleep deprived the brain receives a signal that is similar to starvation.
- * **“Fake starvation signal”** which increases ghrelin (which makes you want to eat more) and it suppresses leptin (which gives you a feeling of fullness).
- * Sleeplessness raises the level of natural endocannabinoids = munchies.
- * On average an extra 300 cal / day.

Dieting While Sleep Deprived

Insufficient sleep undermines dietary efforts to reduce adiposity

Arlet V. Nedeltcheva, MD¹, Jennifer M. Kilkus, MS², Jacqueline Imperial, RN², Dale A. Schoeller, PhD³, and Plamen D. Penev, MD, PhD¹

¹Department of Medicine, University of Chicago, Chicago, IL 60637, USA

²General Clinical Resource Center, University of Chicago, Chicago, IL 60637, USA

³Nutritional Sciences, University of Wisconsin, Madison, WI 53706, USA



- * Study showed that dieting when underslept (6 hrs or less) was much less effective in terms of fat loss.
- * If underslept, 70% of what you lose is from lean muscle mass (the body holds onto fat).
- * A big reason for this above is the high levels of cortisol (stress hormone) and insulin.

Willpower – Impaired by Sleep Deprivation

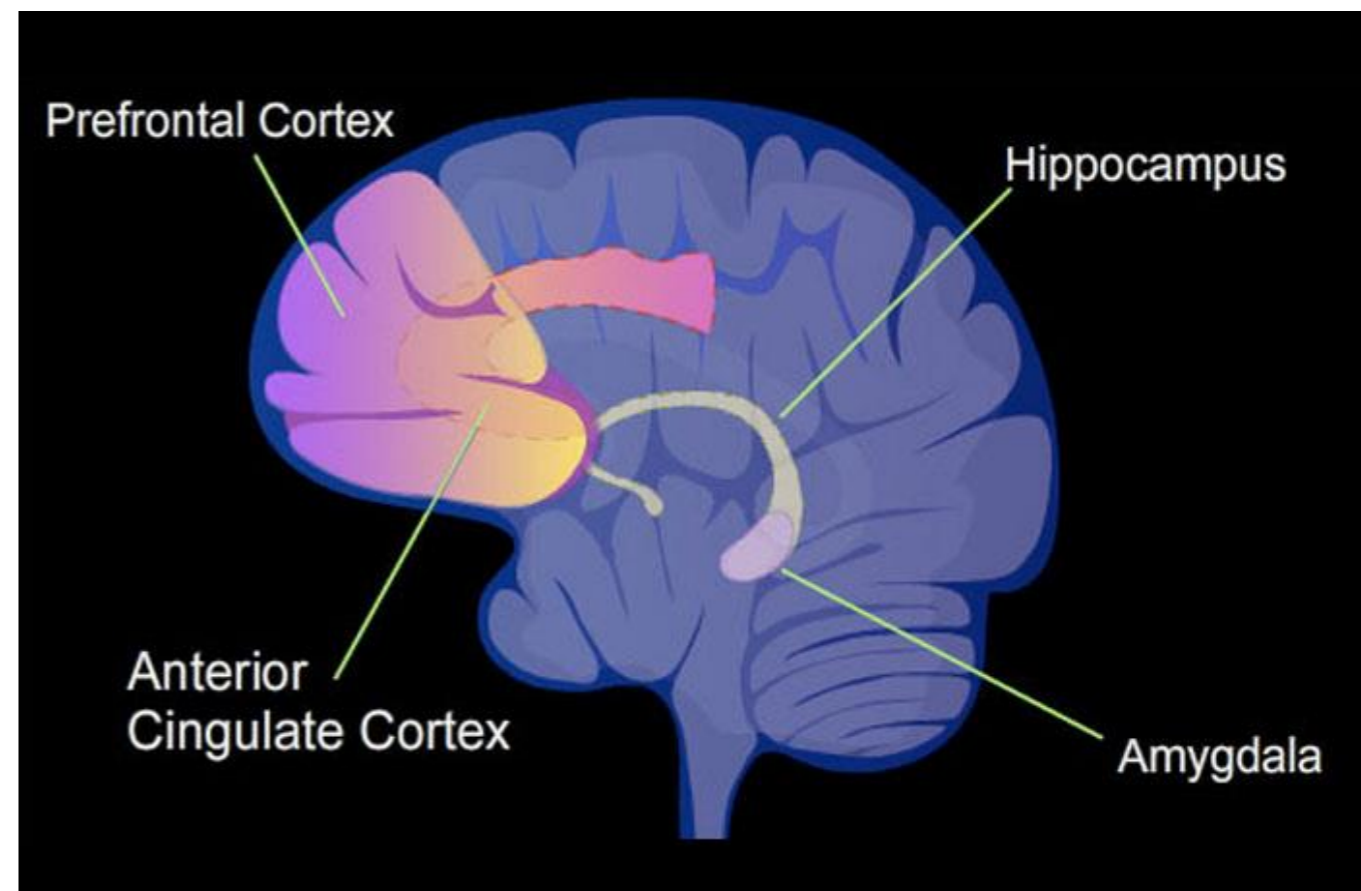
- * Subjects with restricted sleep were shown pictures of different food while in a brain scanner.
- * The prefrontal cortex of the brain, which keeps hedonic desires in check, is impaired by sleep deprivation.
- * And the more primitive areas of the brain like the amygdala lit up in response to desirable foods.
- * More likely to succumb to temptation when sleep deprived.

Behavioral/Systems/Cognitive

Sleep Deprivation Amplifies Reactivity of Brain Reward Networks, Biasing the Appraisal of Positive Emotional Experiences

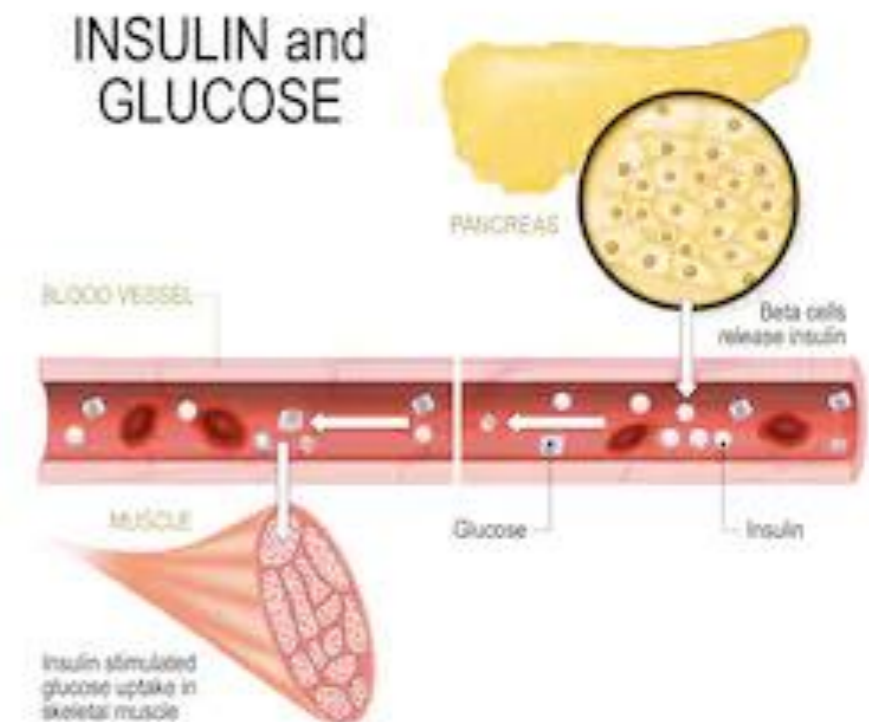
Ninad Gujar,¹ Seung-Schik Yoo,² Peter Hu,¹ and Matthew P. Walker¹

¹Sleep and Neuroimaging Laboratory, Department of Psychology and Helen Wills Neuroscience Institute, University of California, Berkeley, Berkeley, California 94720-1650, and ²Department of Radiology, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts 02115

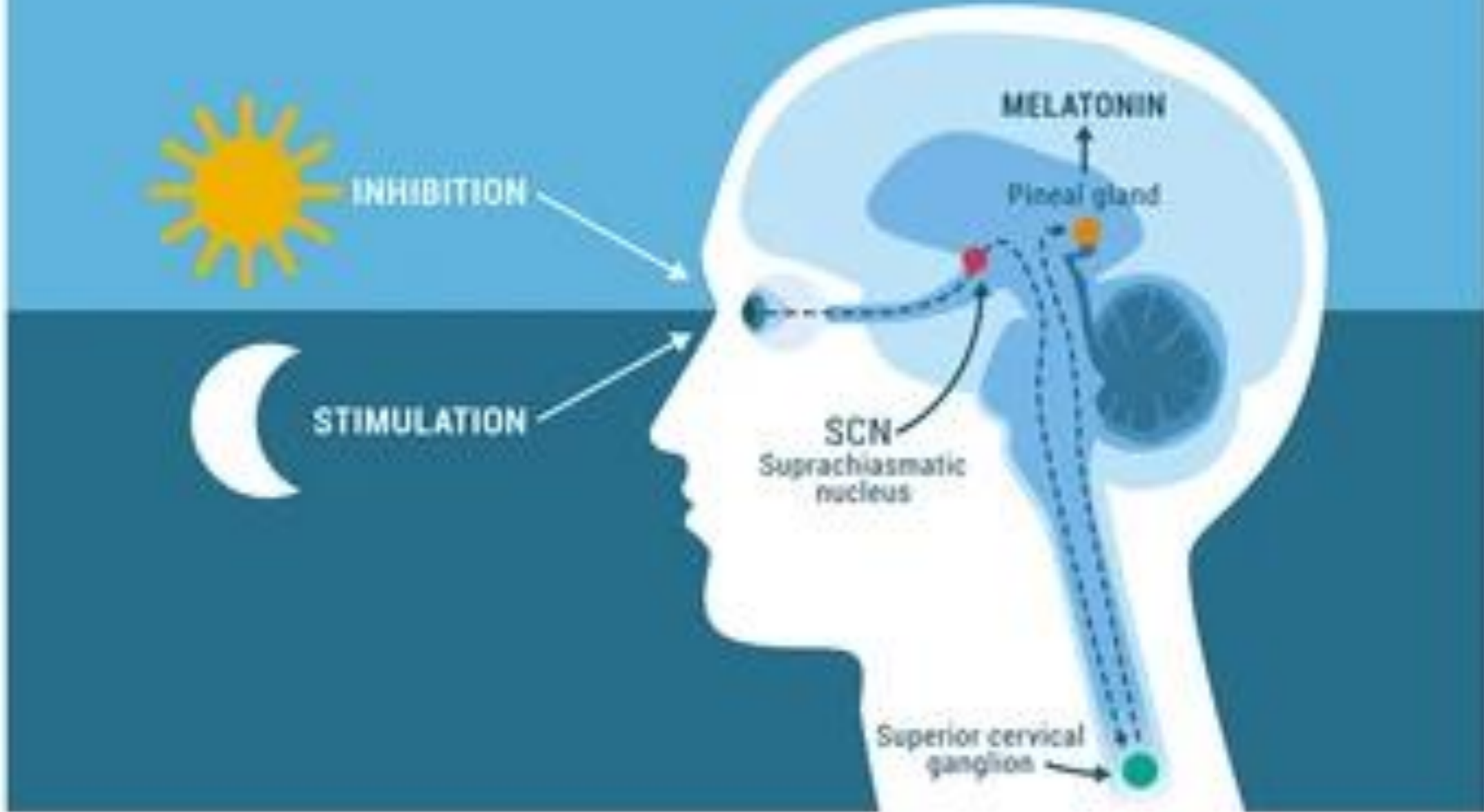


Blood Glucose

- * After one week of sleep deprivation, previously healthy people can become pre-diabetic.
- * Subjects got 4 hours of sleep per night for 2 weeks.
- * **50% reduction in ability to put glucose into their muscle**
- * 5 mmol/L is normal in blood stream, trivial compared to amount in muscles and liver.
- * B cells in the pancreas can become insensitive to spike in glucose AND cells can become insensitive to signal of insulin.



CIRCADIAN RHYTHM





Sleep Hygiene



Consistency



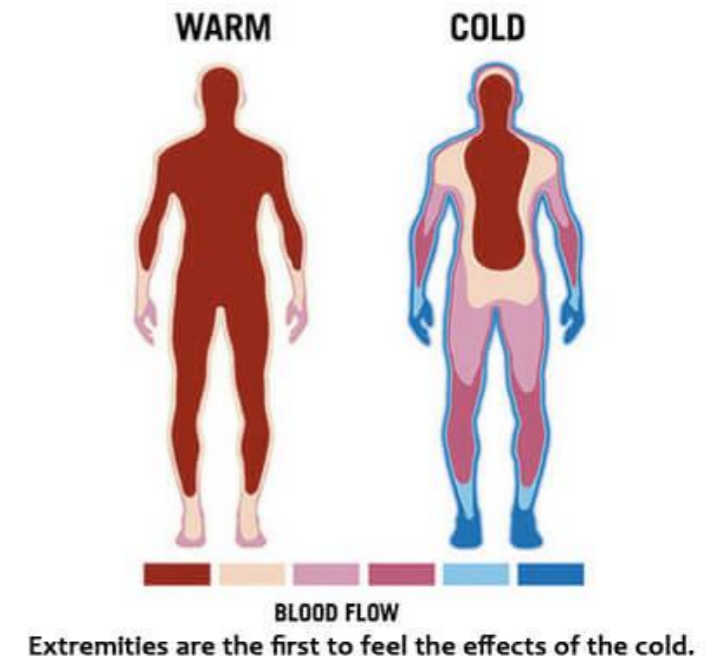
- * A consistent wake up time is the single most important factor.
- * Wake up at the same time every day, weekdays and weekends. Even if you went to bed late!
- * Get outside in the sunlight for at least 30 minutes a day.
- * Set an alarm for bedtime.
- * Our bodies love consistent rhythm.

Light



- * “Light is probably one of the most under-appreciated factors that is contributing to poor sleep.” ~ Dr. Mathew Walker
- * “Blue light” - iPhone, iPad, LED lights - inhibits melatonin release more so than the warmer coloured lights.
- * Switch off most of the lights starting 90 min before bed.
- * Nitehood

Temperature



- * Most people keep their bedrooms too warm at night.
 - * Ideally temp should be 65-68 F (18 - 20 C).
- * Ensure extremities are warm - to be able to release heat and cool core body temp down
 - * Consider wearing socks or putting a hot water bottle by your feet.
 - * Hot bath or sauna before bed.

Eating before bed



- * Ideally stop eating 2-3 hours before bed.

- * Why?

- * 1) When you lie down, you're more likely to get acid reflux.

- * 2) It can raise your core body temperature.

- * You need to drop your core body temperature by about 2-3 degrees Fahrenheit to initiate sleep and then to stay asleep.

- * Avoid simple carbs because those get translated more quickly into energy and heat.

Exercising before bed

- * Ideally do not exercise within 2 hours of your bedtime.
- * 1) Increases core body temperature and keeps it elevated for a while.
- * 2) Changes your hormones - epinephrine, norepinephrine, adrenaline, and cortisol.



Wind Down Routine

- * AVOID things that cause stress/anxiety before bed (email / social media) - ruminating over negative thoughts + increases stress hormone (cortisol) which promotes wakefulness.
- * Relaxing body movements (light stretching, yoga etc).
- * Meditation - Decreases the time it takes to fall asleep and improves the continuity of sleep.
- * Journaling



Journalling



- * Writing/journaling before bed can decrease the time it takes to fall asleep.
- * Write down all the concerns you're having and finish with three things you are grateful for or something you are looking forward to. End with a positive frame of mind.
- * Decreases the time it takes for insomniacs to fall asleep by about 50%.

Clocks

- * Remove clocks from the bedroom.
- * If you wake up do not check the time.



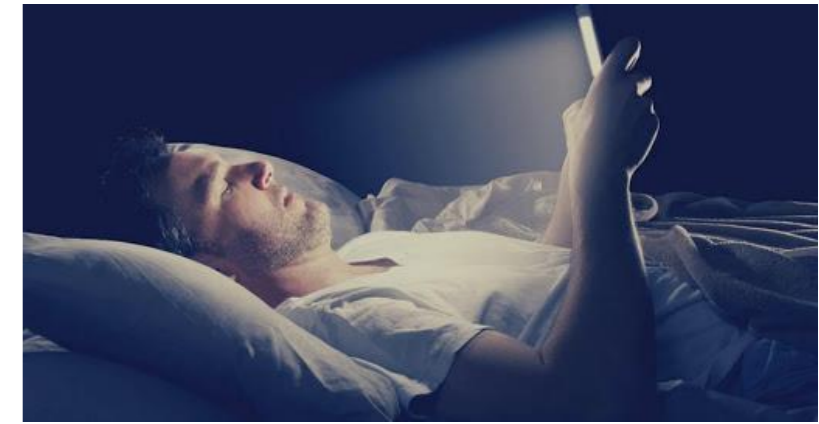


Sounds



- * Avoid falling asleep with the TV/radio on.
- * Your brain usually continues to process sound that is cognitively activating even while sleeping.
- * Consider white noise to drown out disturbing sounds.
- * Ear plugs

Electronics



- * Avoid electronics before bed. Blue light inhibits melatonin.
- * Study suggests using an iPad before bed \Rightarrow 50% drop in melatonin, and melatonin peak is 3 hours delayed.
- * No TV in the bedroom - you want the brain to associate the bedroom with sleep not watching TV.
- * Devices can cause sleep procrastination.

Stimulus Control

- * 1. Go to bed only when sleepy.
- * 2. Do not watch television, read, eat, or worry while in bed. Use bed only for sleep.
- * 3. Get out of bed if unable to fall asleep within 20 minutes and go to another room. Return to bed only when sleepy. Repeat this step as many times as necessary throughout the night.
- * 4. Set an alarm clock to wake up at a fixed time each morning, including weekends.
- * 5. Do not take a nap during the day. If you must do so before 3pm.

Action Plan

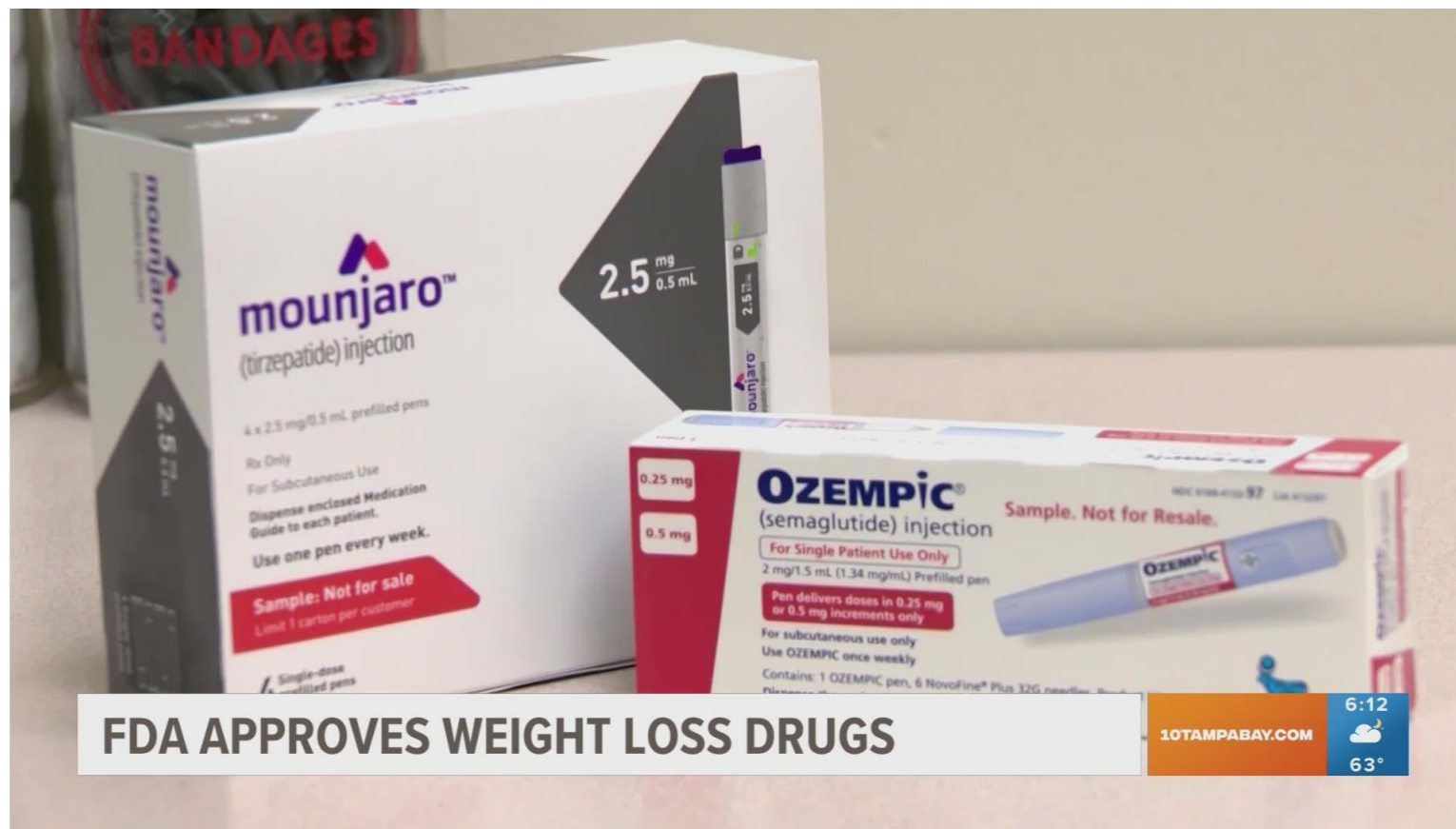


- * 1. Stick to a sleep schedule. (avoid naps after 3pm)
- * 2. Avoid caffeine, nicotine, and alcohol.
- * 3. Get outside in natural sunlight.
- * 4. Relax before bed. Take time to unwind.
- * 5. Hot bath before bed.
- * 6. Create a comfortable sleep environment.

Action Plan

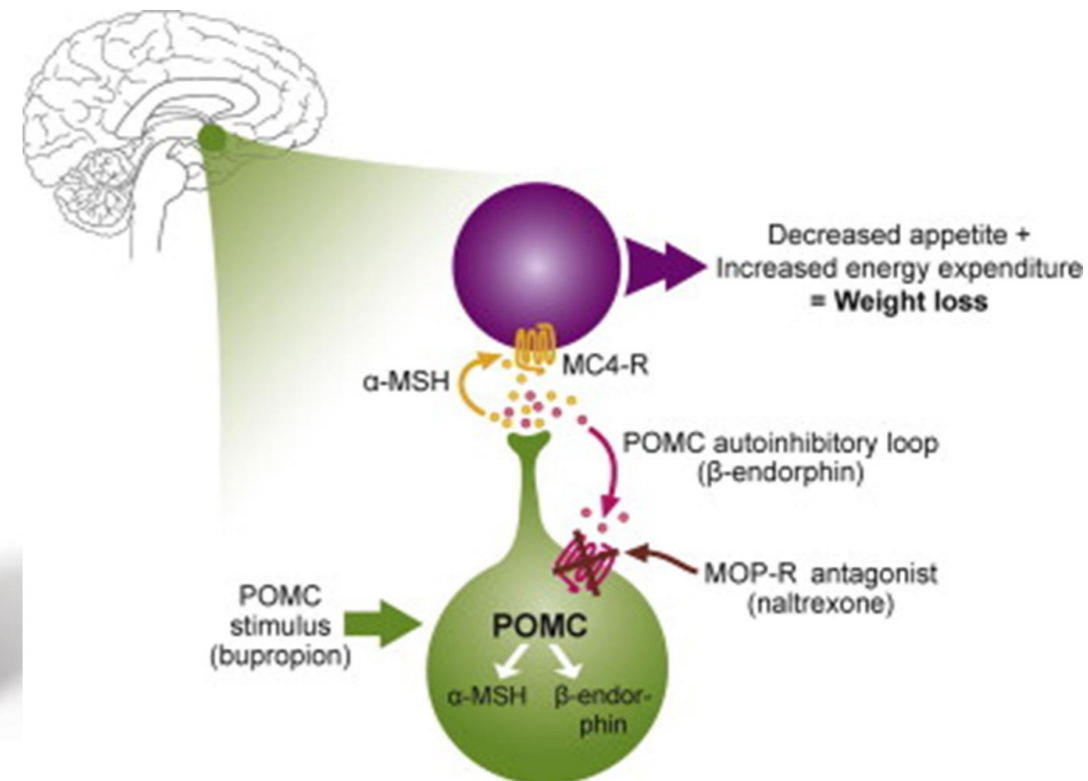
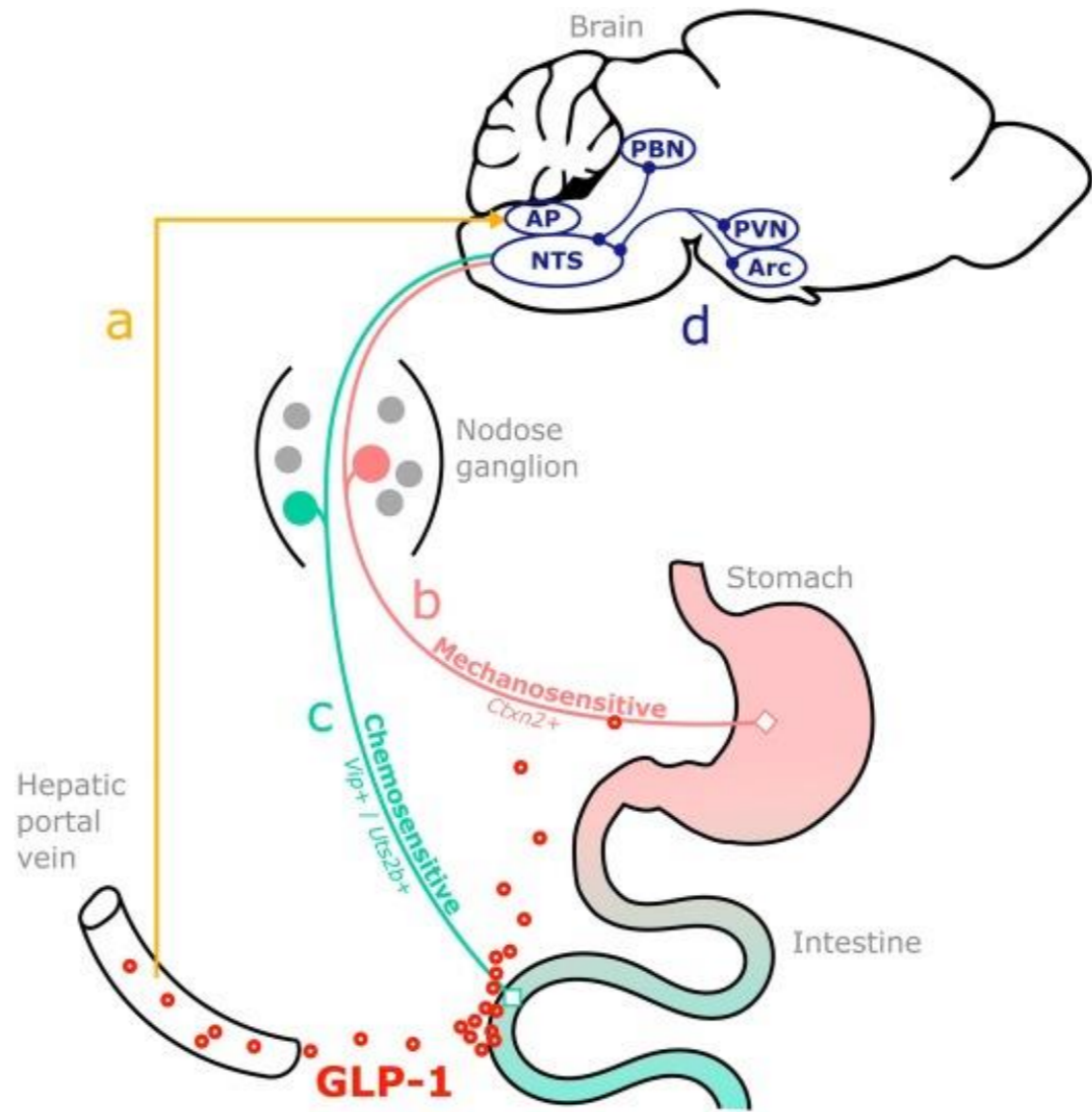


- * 7. Dark, cool, quiet, gadget-free bedroom. Turn the clocks face out.
- * 8. Don't lie in bed awake.
- * 9. Avoid eating before bed.
- * 10. Get tested for OSA - Obstructive Sleep Apnea.
- * 11. Consider CBT-I
- * 12. Talk to your doctor. Referral to UBC sleep clinic.



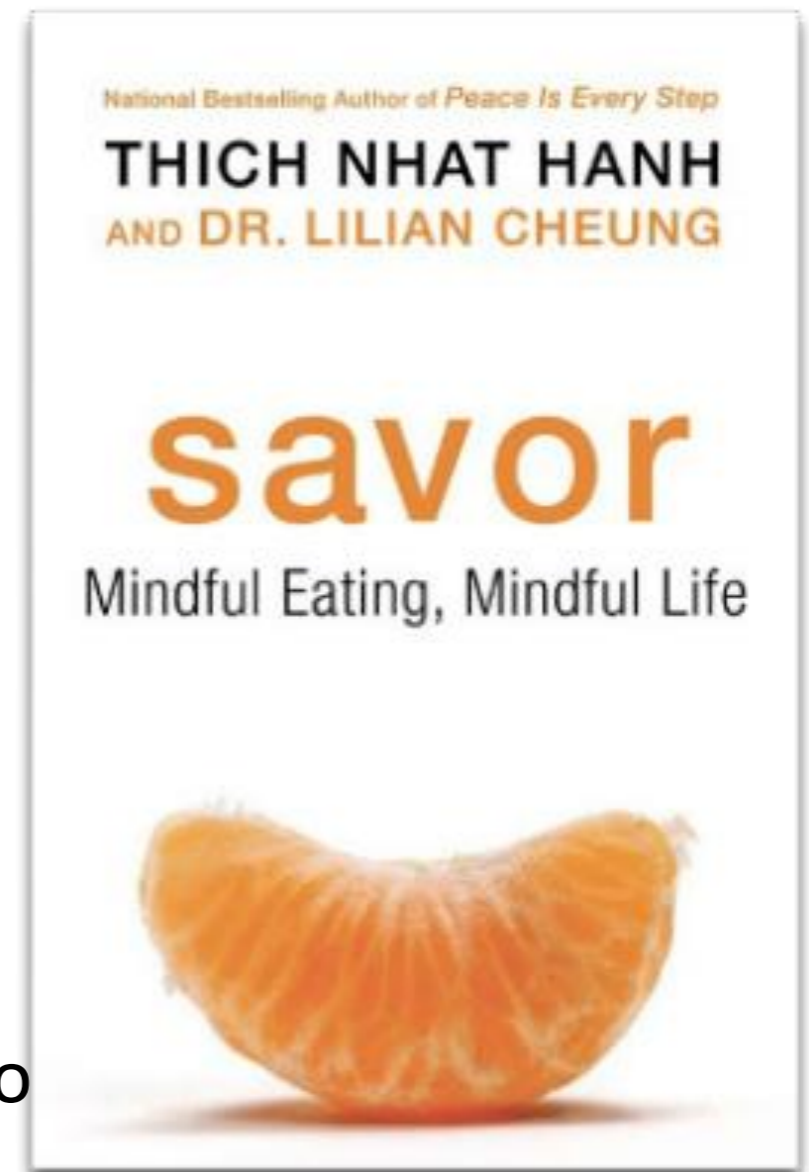
Medications





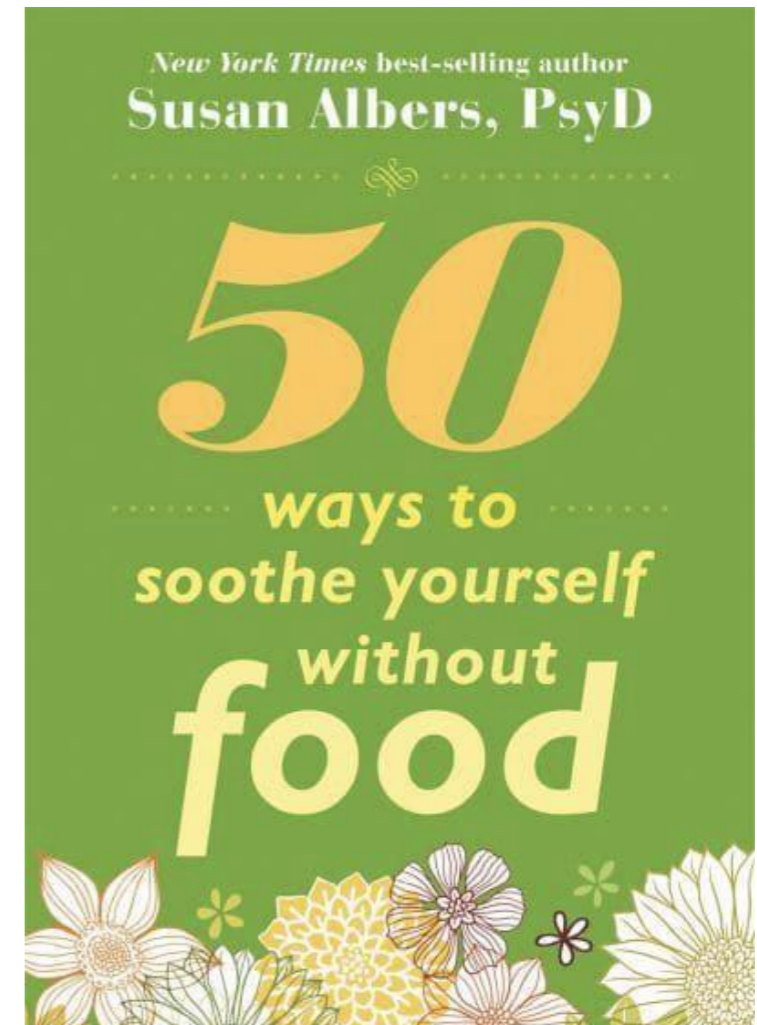
Mindful Eating - 7 Practices

- 1. Honour the food
- 2. Engage all senses
- 3. Serve in modest portions
- 4. Savour small bites, and chew thoroughly
- 5. Eat slowly to avoid overeating
- 6. Don't skip meals
- 7. Eat a plant-based diet, for your health and fo



Managing Cravings

- - scientifically cravings last about 20 minutes
- - strategies to break the cycle of giving in to cravings
- - TIPS - T - Temperature, I - Intense Exercise, P - Pace Breathing, P – Progressive Muscle Relaxation
- - get outside
- - get grounded
- - use a scent
- - distractions
- - be creative





Self Compassion



Mindfulness

Being aware of the physical, emotional, or mental pain of the moment.



Self-kindness

Treating ourselves with kindness, considering our own needs.

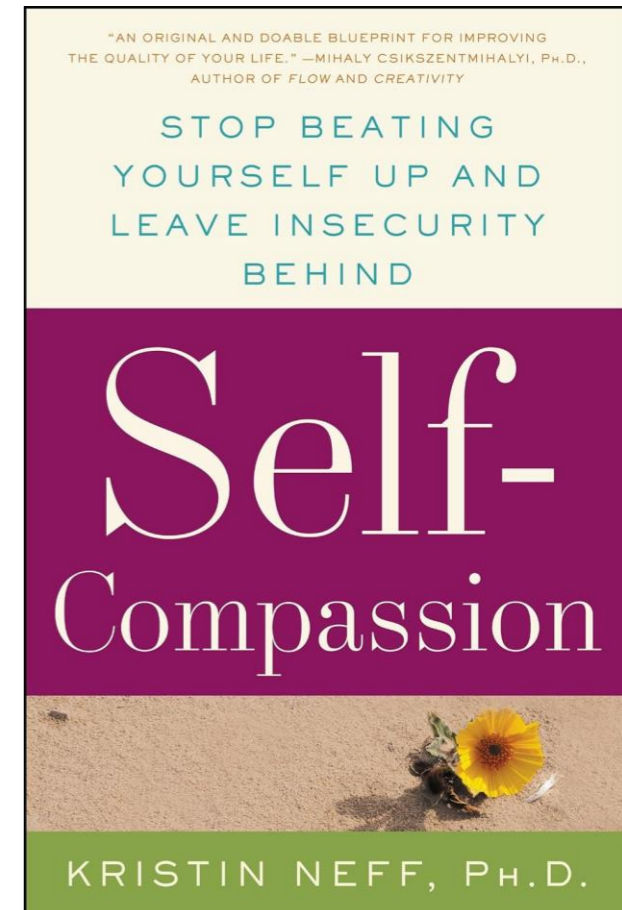


Common Humanity

Recognizing that these experiences are a normal part of being human.

Self Compassion

- “Instead of mercilessly judging and criticizing yourself for various inadequacies or shortcomings, self-compassion means you are kind and understanding when confronted with personal failings - after all, who ever said you were supposed to be perfect?”
- "With self-compassion, we give ourselves the same kindness & care we'd give to a good friend."
- ~ Dr. Kristin Neff, PhD, self-compassion.org



Self Compassion

- forgiveness increases our accountability & strengthens our willpower
- self-compassion is essential to breaking the cycle of the "What the Hell Effect" of indulgence, regret or shame and more indulgence and binge eating



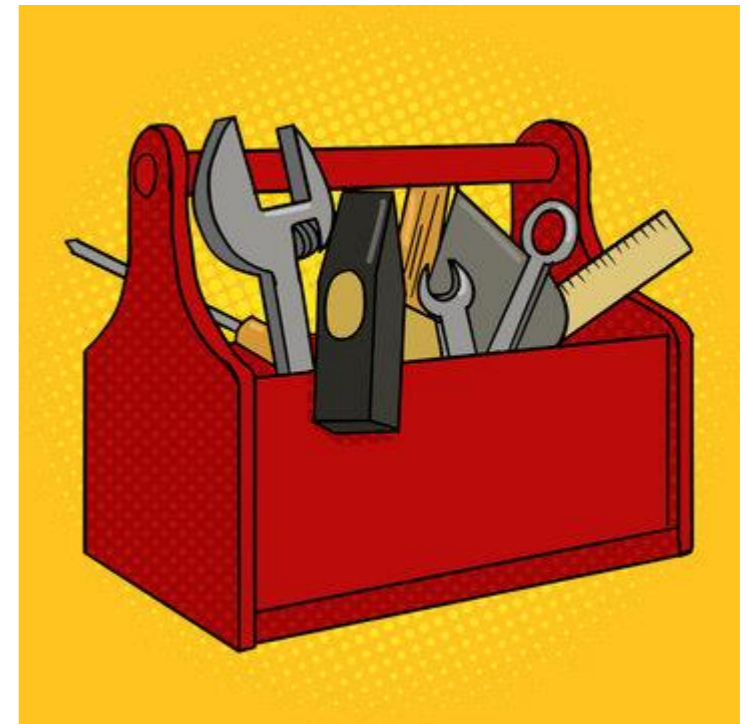
May you have the courage this week to
begin breaking patterns in your life
that no longer serve you.

Give yourself permission to pause
and reflect today. And remember,
taking care of yourself doesn't mean
"me first;" it means "me too."



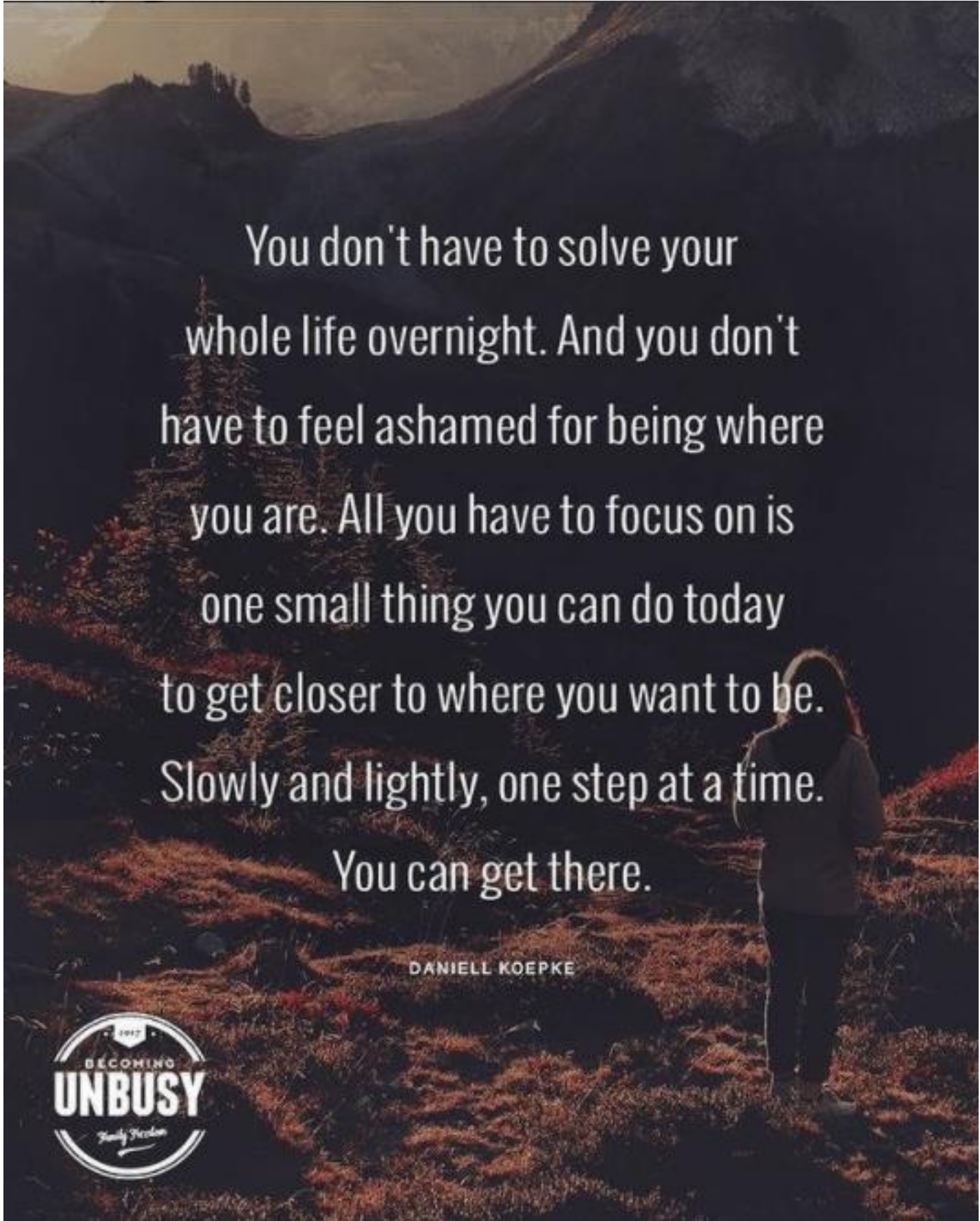
The Need For a Diverse and Evolving Tool Box

- personalize our approach
- don't just focus on one strategy
- choose small simple steps that work for your life
- evaluate and adjust depending on new information & your experience



"If you can find some of these changes... you can't feel your blood cholesterol...your blood glucose at any given moment. But if you have less of a foggy brain, if you have more energy, you're feeling more alert...you see that this modest change led to you being clear headed, more articulate. That's empowering! ”

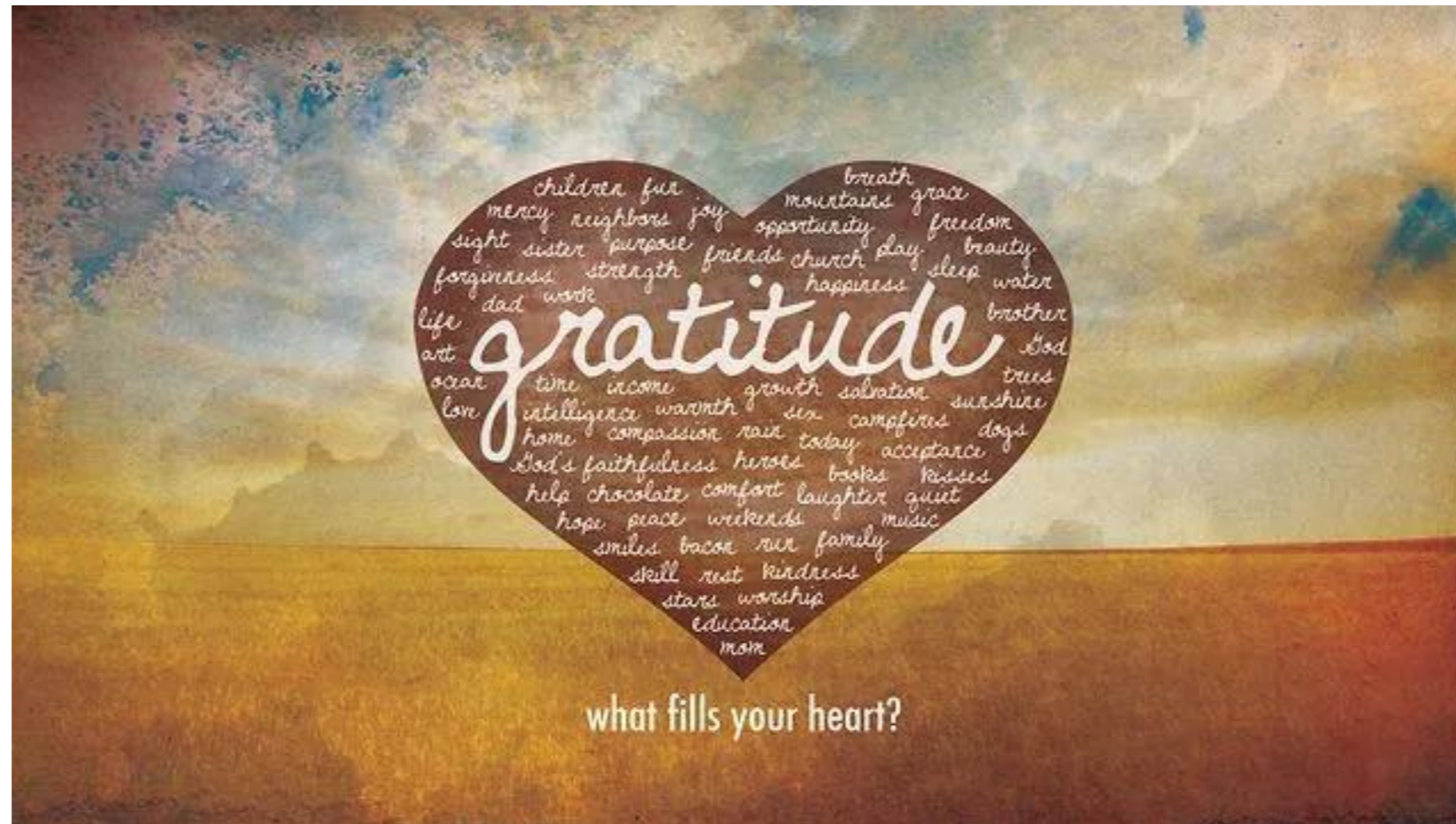
Dr. Christopher D. Gardner
Director Nutrition Studies, Stanford University



You don't have to solve your
whole life overnight. And you don't
have to feel ashamed for being where
you are. All you have to focus on is
one small thing you can do today
to get closer to where you want to be.
Slowly and lightly, one step at a time.
You can get there.

DANIELL KOEPKE





Thank you
Lynda.montis@gmail.com