

Optimizing Your Health Without Medications: Gain Control of Your Microbiome and Epigenetics through Lifestyle Modifications



world-class
excellence
is an emotion
not an event



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Optimizing Your Health Via Lifestyle Changes – WHY?



- **Top 10 causes of death in the US are lifestyle-related conditions:**
 - heart disease
 - cancer
 - chronic lung disease
 - stroke
 - diabetes mellitus
- **80% of premature deaths are attributed to:**
 - tobacco use
 - poor diet
 - lack of physical activity

6.5 hrs of exercise a wk can decrease breast cancer risk by 30%

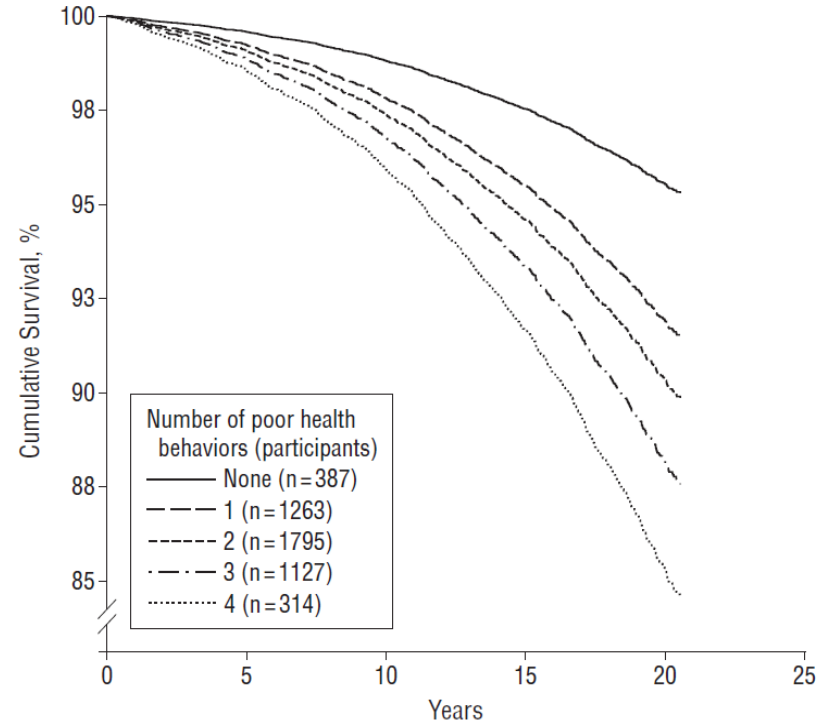


**Miami Cancer
Institute**

BAPTIST HEALTH SOUTH FLORIDA

Lifestyle Choices and Mortality

- 4886 individuals followed over 20 years
- 1 point for each:
 - smoking
 - fruits and vegetables <3 times daily
 - <2 hours physical activity per week
 - Excess alcohol weekly consumption
- 4 points vs 0 points → mortality equivalent to being 12 years older
- elimination of smoking, high BMI, and eating 5 fruits and vegetables and exercising regularly leads → 80% reduction in the risk of developing the most common and deadly chronic diseases



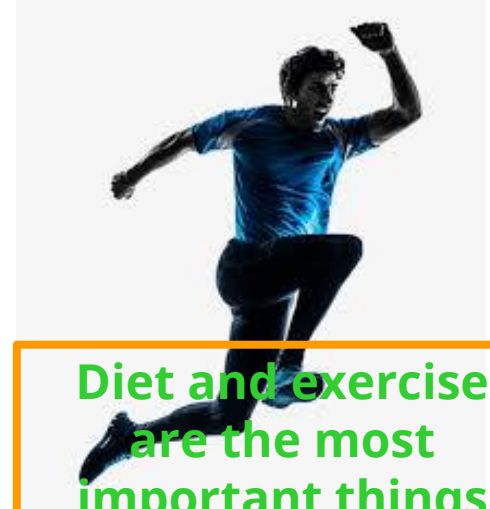
Lifestyle Modifiable Factors and Breast Cancer

- **Most common cancer in women, 1/8 chance**
- **Greater physical activity level at baseline is associated with longer SURVIVAL in advanced breast cancer**
- **Obese women with breast cancer have a worse disease-free and overall survival despite appropriate local and systemic therapies**
 - Increased risk of local recurrence
 - Increased surgical and radiation complications
 - Less effective systemic and endocrine therapy
 - Less likely to undergo breast reconstruction
- **6.5 hrs of exercise a wk can decrease Breast CA risk by 30%**



Lifestyle Modifiable Factors and Prostate Cancer

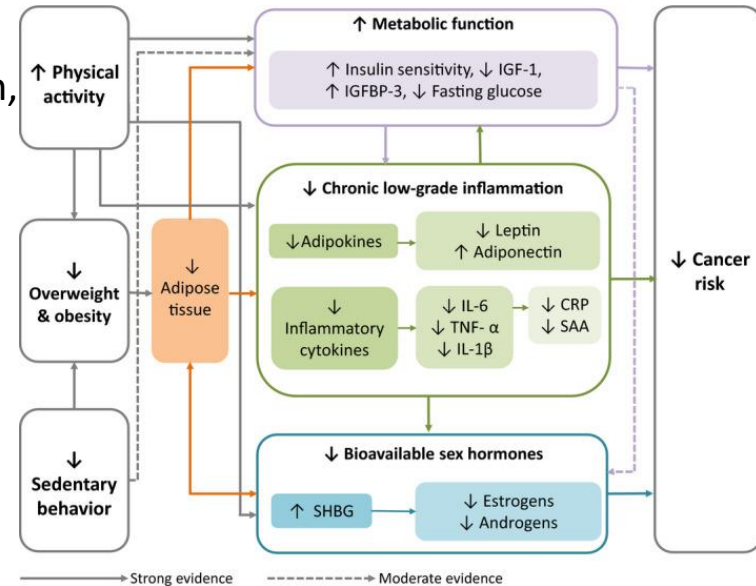
- Most common cancer in men
- **Physical activity:** improves survival, decreased prostate cancer progression, mortality (3 hrs/wk- 61% reduction), decrease in advanced prostate CA (77% less with vigorous exercise)
- **Obesity-** increased risk of recurrence, mortality, advanced stage
- **Ornish trial:** 93 men, early stage PSA 4-10 ng/mL
- low-fat, plant based diet, exercise and practice stress management, group support sessions vs regular lifestyle
- At 2 years of follow-up- 27% control patients vs 5% lifestyle intervention had treatment
- **Gene expression:** 48 up-regulated and 453 down-regulated genes



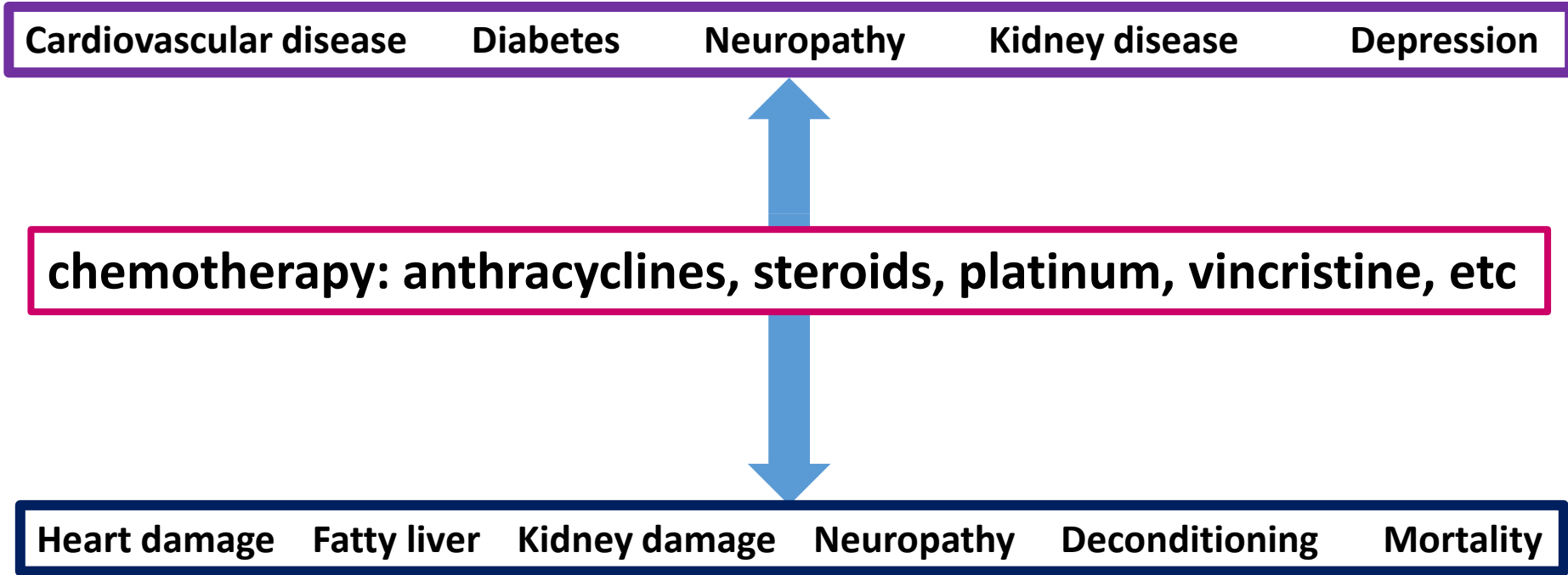
Diet and exercise are the most important things one can do to stay healthy after being diagnosed with prostate cancer

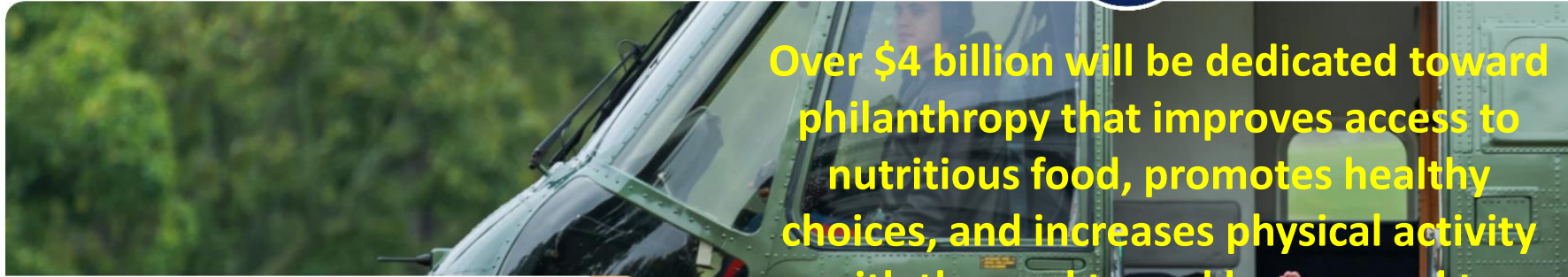
Why is your general health so important from cancer perspective?

- **30–40% of cancers can be prevented** through changes in modifiable lifestyle and environmental risk factors
- **Sedentary lifestyle is associated with increased risk** of colon, endometrial and lung cancer at 20-40%
- **High level of physical activity reduces the risk** of bladder, breast, colon, endometrial and esophageal cancer
- **Increased body fatness is associated with 13 different cancers (1.1-7 times):** endometrial, postmenopausal breast, colorectal, esophageal, renal/kidneys, meningioma, pancreatic, gastric cardia, liver, multiple myeloma, ovarian, gallbladder, and thyroid
- **Maintaining optimal BMI has preventive effect** on colon, esophageal, kidney, breast, uterine cancers



Lifestyle Modifiable Illnesses And Chemo Complications





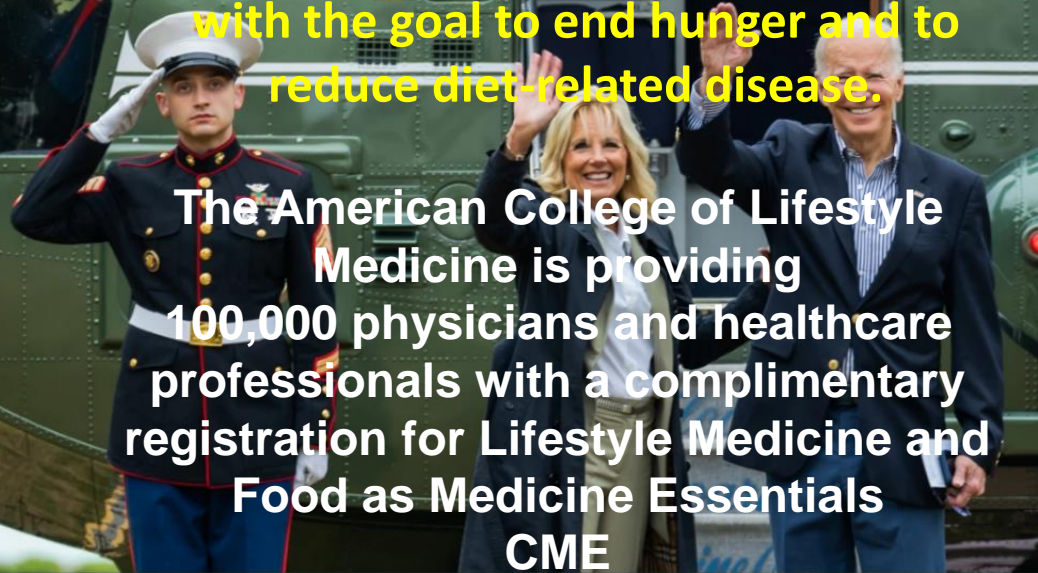
Over \$4 billion will be dedicated toward philanthropy that improves access to nutritious food, promotes healthy choices, and increases physical activity with the goal to end hunger and to reduce diet-related disease.

BUILDING BACK BETTER



WHITE HOUSE CONFERENCE ON **HUNGER, NUTRITION, & HEALTH**

WE'RE INVESTING IN THE AMERICAN PEOPLE



The American College of Lifestyle Medicine is providing 100,000 physicians and healthcare professionals with a complimentary registration for Lifestyle Medicine and Food as Medicine Essentials CME



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Be the Person You Have Always Wanted to Be!! It's in our power!

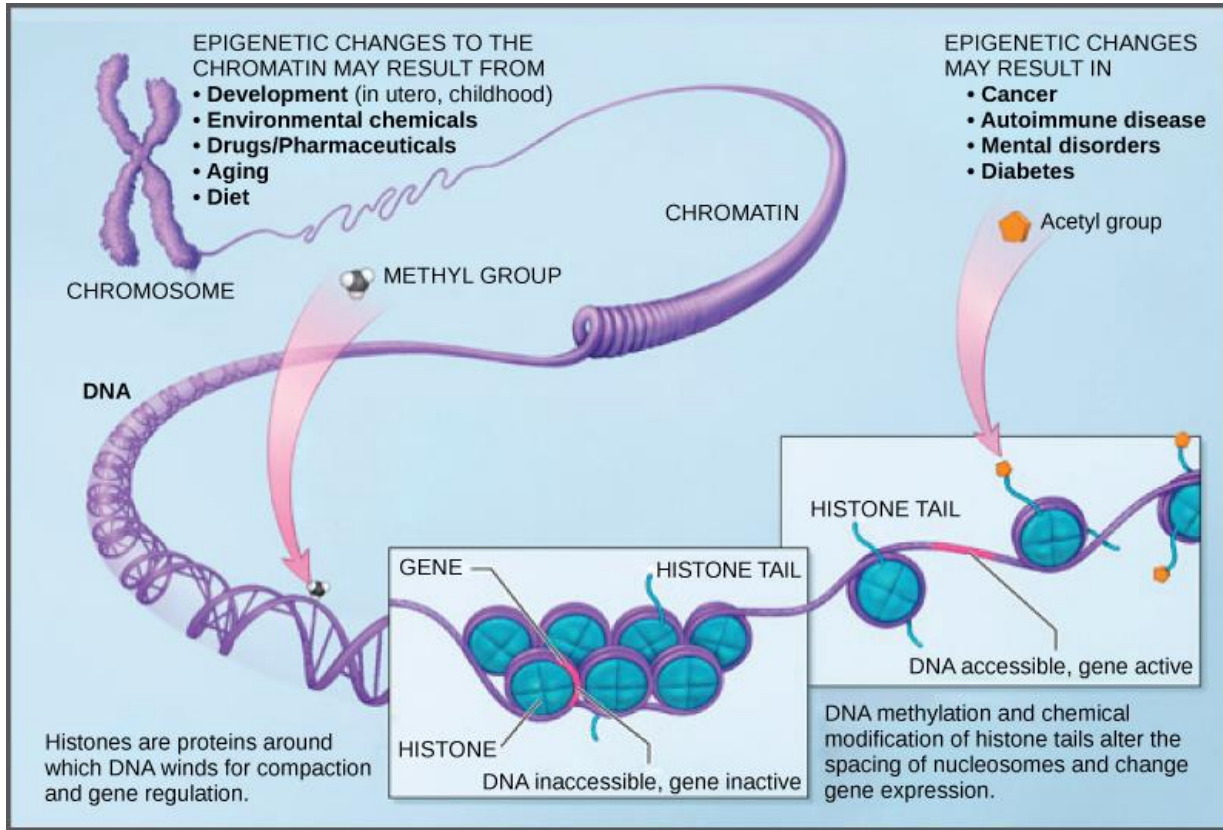
In 33 years: overweight and obesity up by 28% in adults, 47% children and adolescents. Our bodies changed but did we fundamentally change?

How Did He Do It?



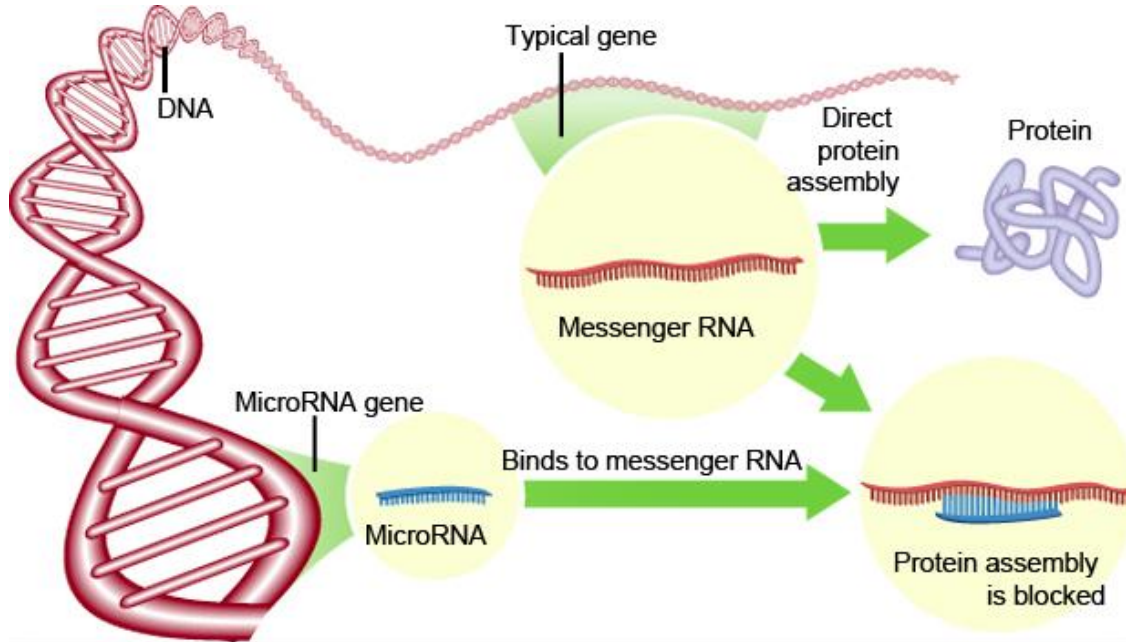
<https://www.medicaldaily.com/ohio-dads-40-pound-weight-loss-3-months-makes-him-50000-richer-282336>, Ng M Lancet 2014

Deep Dive into Our DNA



- Epigenetic modifications:**
- DNA methylation
 - Histone modifications (acetylation, methylation)

Incredible Micro RNAs



Epigenetic modifications:

- DNA methylation
- Histone modifications (acetylation, methylation)
- Micro RNA

Genetics vs Epigenetics!

● Methyl -CH₃

DNA is like a rope



YOU CAN CHOOSE WHICH ROPE YOU WANT TO BE!!!

He Changed His Epigenetics!!



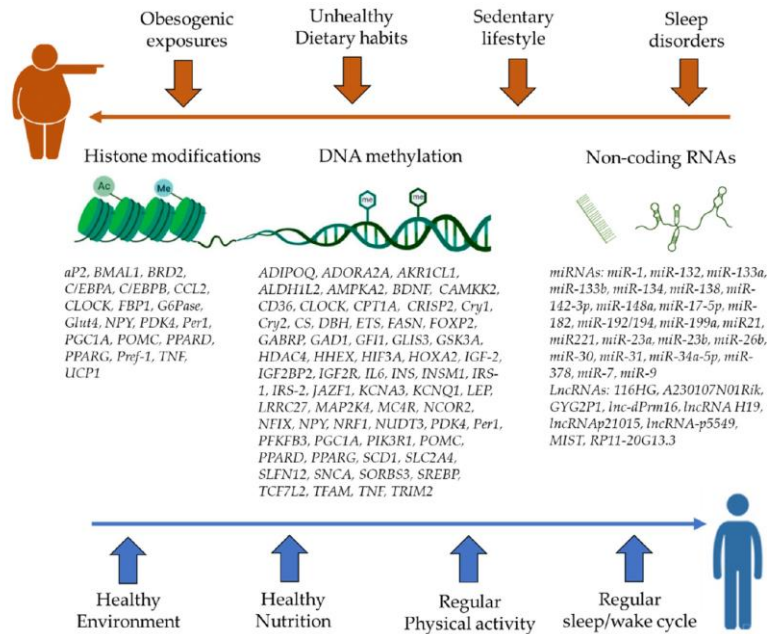
Abnormally Methylated Genes in Obesity

- insulin sensitivity
- energy metabolism
- lipid metabolism (PIK3R1, IRS1)
- obesity (leptin, adiponectin)
- hypoxia response (HIF3A)
- inflammation
- oxidative stress (TNF, IL6, TFAM)



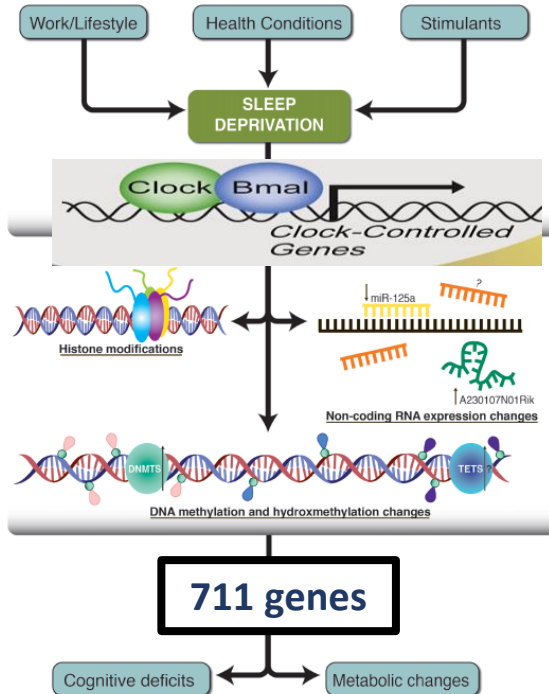
Obesity is now how one looks outside- it is a reflection of one's inner epigenetic state!

Gain Epigenetic Control!!! How???



Sleep

epigenetics and metabolism



Ambient or blue light at night



Increased heart rate
Glucose intolerance
Diabetes
Increased weight
High BP

1 night of sleep deprivation



Sleep

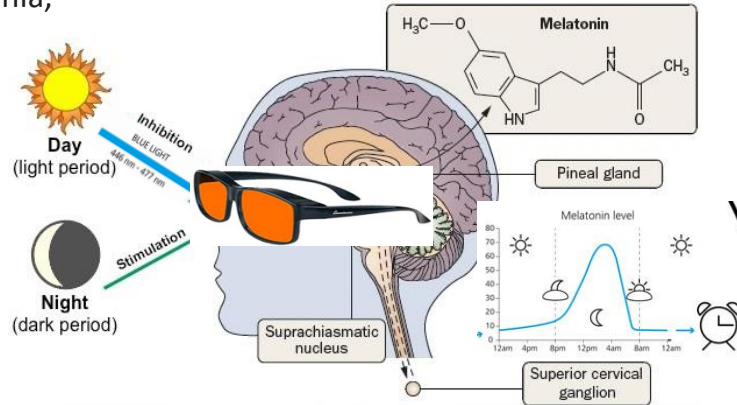
how do improve it with lifestyle interventions?



Blue blocking glasses → decrease LED-induced melatonin suppression and attention and alertness before bedtime
2 hr before sleep x 1 wk → improved insomnia, processing speed and working memory



Weighted blanket → 32% increase in melatonin in saliva



Tart Montmorency cherries → melatonin → sleep improvement



Valerian - sleep quality



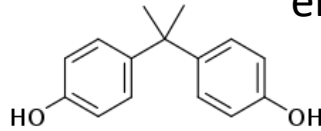
Toxins

- environmental obesogens are all around us

obesity epidemic <-> industrial revolution

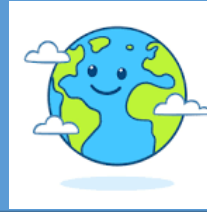
environmental obesogens = endocrine disruptors

Bisphenol A (BPA)

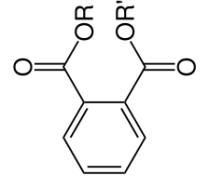


- most widespread
- Epigenetic modulator- insulin
- **metabolic syndrome, visceral obesity**
- higher BMI in children

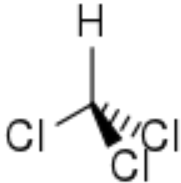
We all know what to do!!



Phthalates

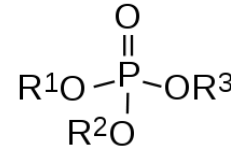


- Plastic softness
- Epigenetic modulator: metabolism (IGF2) and energy homeostasis (sirtuin-Sirt1) genes
- Estrogenic and antiandrogenic effect
- **Metabolic syndrome, obesity**
- ?carcinogen



Organochlorine and organophosphate pesticides

- accumulate in fat
- epigenetically affect metabolic and inflammatory pathways
- **lasting metabolic disruption from early-life exposure**
- **global rise in metabolic syndrome and obesity**

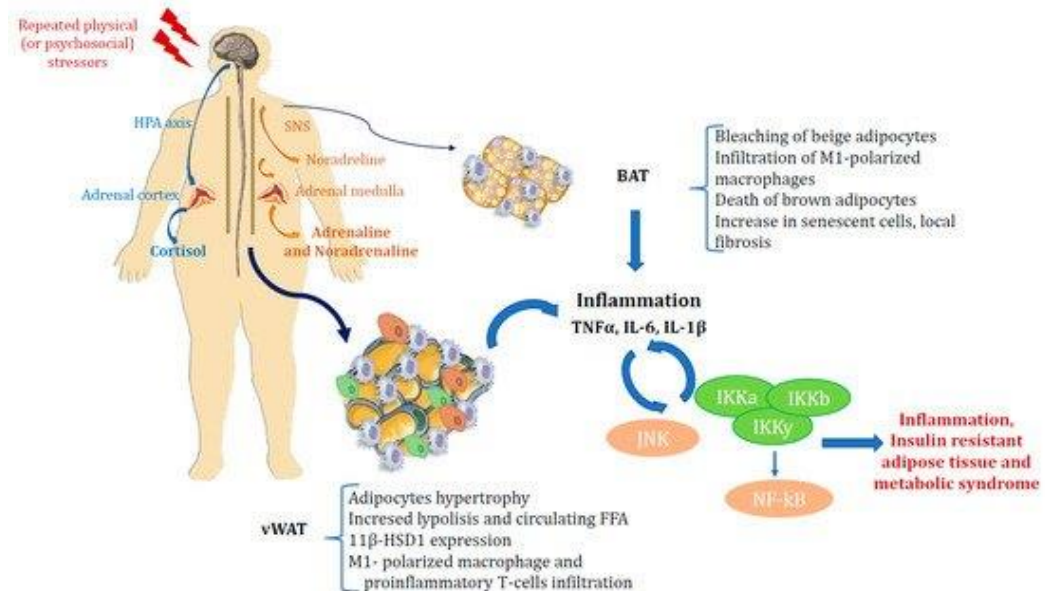
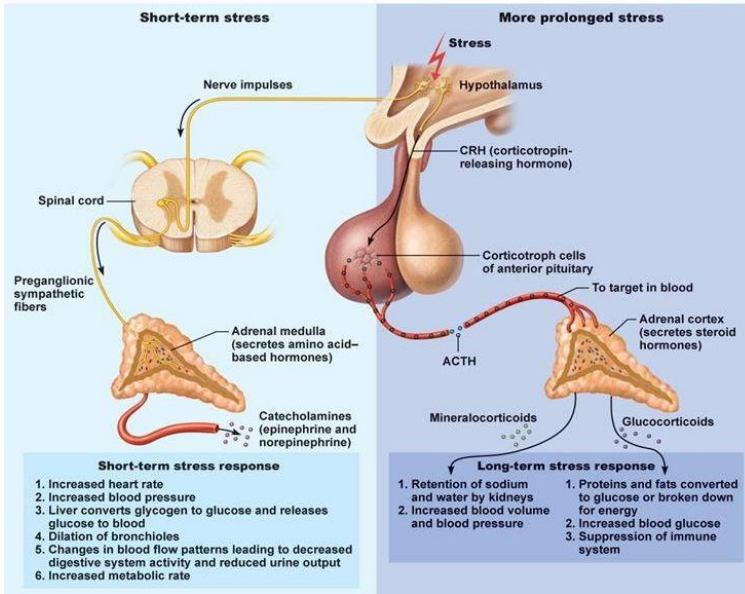


Stress

mediates metabolism

Acute and chronic stress → hypothalamic pituitary axis and sympathetic nervous system → epigenetic modifications in fatty tissues → **inflammatory state** →

insulin resistance and obesity



Stress

let's sit together and meditate !!

Technology:

- Turn off notifications
- Delete Apps
- Give it a break



Meditation:

- ↓ Cortisol- peacefulness
- ↓ Glucose- anti-inflammation
- ↓ Hgb A1C- metabolism
- ↓ Heart rate - calm



Social connectedness:
↓ cortisol- anti-stress

Technology use:

- ↑ cortisol level -stress
- ↑ IL6 - inflammation
- ↑ Dopamine -desire
- ↑ Perceived stress

Family meal

- ↑ self esteem
- ↑ family function
- ↓ depressive SSx

Physical Activity

Movement is life!



- ↓ insulin sensitivity
- ↓ energy metabolism
- ↓ mitochondrial function
- ↓ homeostasis



endurance /aerobic/resistance training

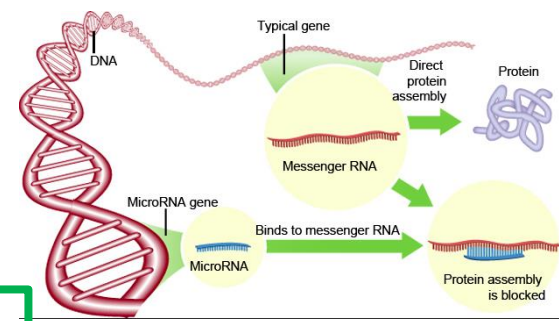
DNA methylation of **63 genes**

- ↑ **Energy expenditure** - PGC1a gene
- ↓ **Obesity and diabetes** - potassium channels, insulin growth factor
- ↑ **Fatty acid metabolism** (fatty acid synthase) ↓ circulating lipids

<https://fitpage.in/effects-of-sedentary-lifestyle/>; familydoctor.org, ; Mahmoud AM. An Overview of Epigenetics in Obesity: The Role of Lifestyle and Therapeutic Interventions. Int J Mol Sci. 2022

Physical Activity

Movement is life!



60 min of acute endurance training *or* 10 min of acute exercise

increased the expression of micro RNAs (R-1 and miR-133a/ miR-378)

Improvements in:

- mitochondrial function
- fatty acid oxidation
- insulin sensitivity
- muscle growth

Improved insulin sensitivity and lipid metabolism

Long term endurance training

Restoration of the DNA methylation profiles of multiple genes

- calcium signaling
- glucose transporter 4 (GLUT4)
- metabolism in skeletal muscle



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Diet

Type of calories
Calorie quantity

WHAT you eat changes WHO you are!

High fat diet



6,508 genes



- Mitochondrial function
- Inflammation
- Cancer
- Reproduction
- Skeletal muscle
- Appetite regulation (leptin, melanocortin 4 receptor)

High fat maternal diet in rodents

Inadequate maternal nutrition



Maternal and fetal genes



Offspring with:

- Obesity
- Dyslipidemia
- Fatty liver
- Insulin resistance
- Hyperleptinemia
- Inflammation



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Diet

Type of calories
Calorie quantity

EPIGENETIC DIET- DIET OF THE FUTURE?!



Phytochemicals

Tea catechins and polyphenols (green tea)



- + cardiovascular and metabolic functioning
- + improvement in fatty liver
- + blood glucose and insulin optimization
- + body weight
- + inflammation

Resveratrol (grapes)



Isoflavons: genistein and quercetin (soybean)



Diet

Type of calories
Calorie quantity

EPIGENETIC DIET- DIET OF THE FUTURE?!



Phytochemicals



Polyphenol curcumin (turmeric)

increases fatty acid oxidation
suppresses lipogenic and inflammatory gene expression

Organosulfur compounds:

sulforaphane (cruciferous vegetables)
diallyl disulfide (garlic)

ANTIOXIDANTS



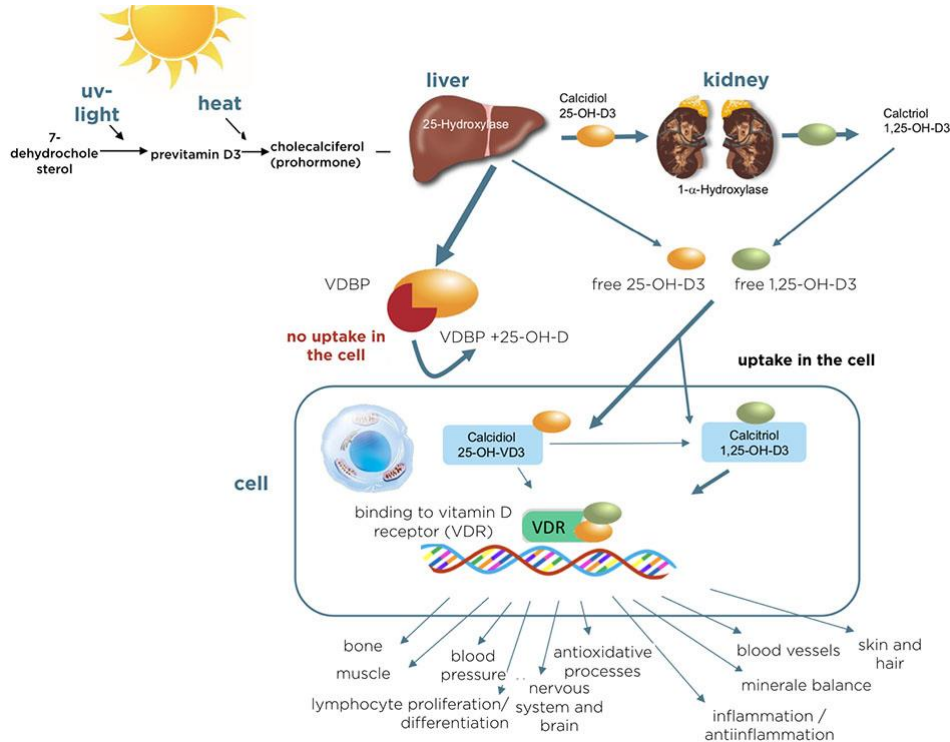
suppress adipogenesis (fat generation) and inflammation



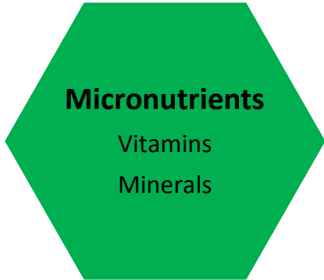
Micronutrients

Vitamins
Minerals

Vitamin D – not just good for your bones

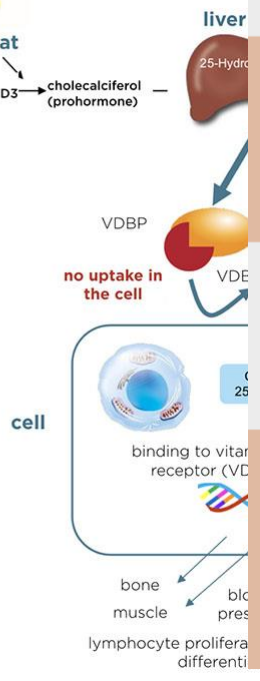
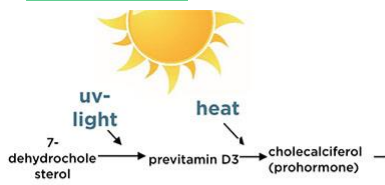


- **Vitamin D sufficiency:** 25(OH)D concentration greater than 20 ng/mL
- **28% Vit D deficient at MCI**
- **Low levels associates with colon, breast CA, leukemias**
- **Chemo efficacy in lymphoma lower in deficient patients**



Vita

for your bones



INSIGHT THERMOGRAPHY OF OKLAHOMA

HOW TO GET MORE VITAMIN D THIS WINTER

Go Outside

It only takes about 15 minutes a day in the sun to maintain vitamin D levels for most people. Because our bodies can store vitamin D, really 20-30 minutes of sun exposure about three times a week would also be sufficient!

Eat Fatty Fish

A small 4 ounce serving of salmon contains exponentially more vitamin D than the daily recommended allowance, so it doesn't take much! Two and a half servings of salmon a week would get you all the vitamin D you likely need.

Consider A Vitamin D Supplement

This isn't always necessary, and should be discussed with your healthcare provider beforehand. While it is nearly impossible to get too much vitamin D from foods or the sunshine, it is possible to take more vitamin D in the form of supplementation than your body needs.

D sufficiency:
D concentration
than 20 ng/mL

D deficient at MCI

Is associates with colon,
A, leukemias

fficacy in lymphoma
deficient patients

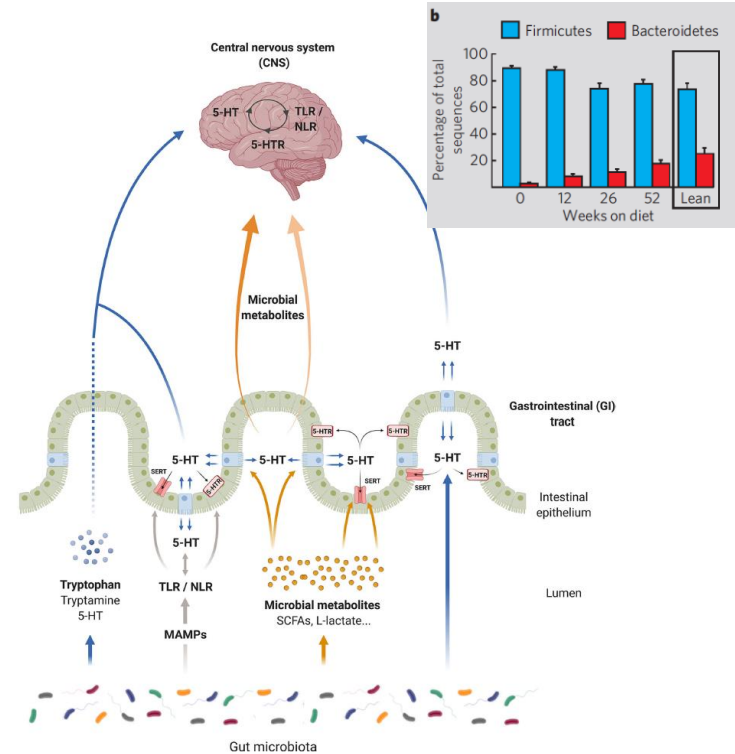
Gain Epigenetic Control!!! How?????





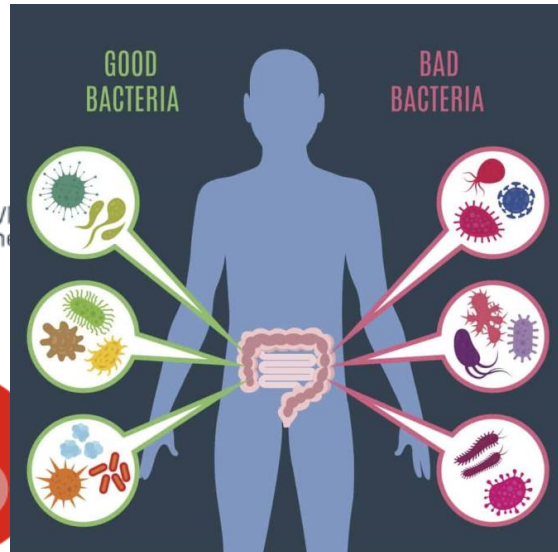
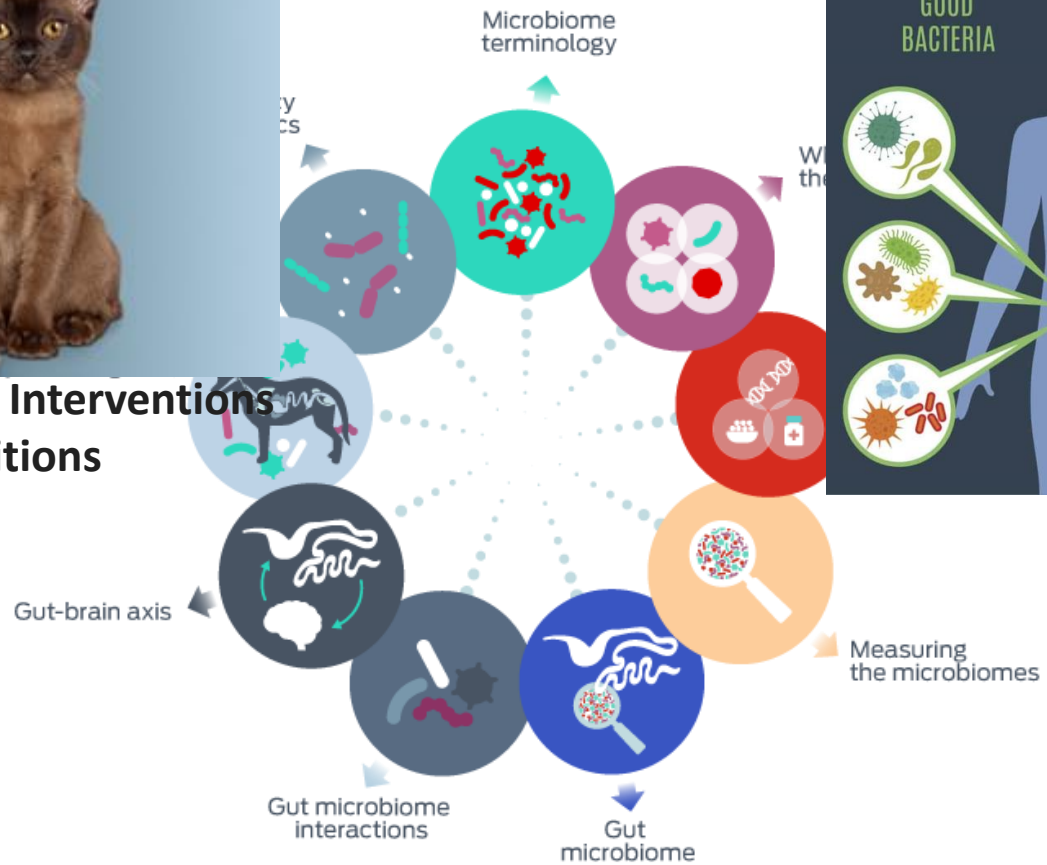
Microbiome is HEALTH!

- **Nature 2012: Functional interactions between the gut microbiota and host metabolism**
- **Nature 2006: Human gut microbes associated with obesity**
- **Cell Press 2021: Microbiota and sleep: awakening the gut feeling**
- **Frontiers in Endocrinology 2021: Crosstalk Between Intestinal Serotonergic System and Pattern Recognition Receptors on the Microbiota–Gut–Brain Axis**
- **Nature Rev 2021 Leveraging diet to engineer the gut microbiome**
- **Chemosphere 2021: Bisphenol A impairs cognitive function and 5-HT metabolism in adult male mice by modulating the microbiota-gut-brain axis**
- **Gut 2018: The microbiome of professional athletes differs from that of more sedentary subjects in composition and particularly at the functional metabolic level**
- **47,401 results for microbiome and health**





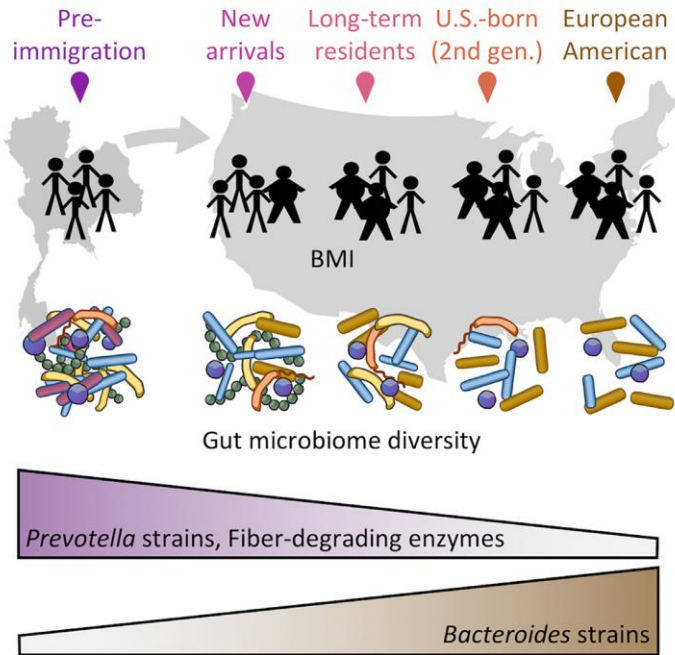
Microbiome-Centric Interventions for Pet Health Conditions



<https://www.purinainstitute.com/microbiome-forum/microbiome-fundamentals>; <https://www.antibioticresearch.org.uk/about-antibiotic-resistance/bacterial-infections/bacteria-in-the-human-body/>



Microbiome is Flexible!



- US immigration is associated with loss of gut microbiome diversity
- US immigrants lose bacterial enzymes associated with plant fiber degradation
- *Bacteroides* strains displace *Prevotella* strains according to time spent in the USA
- **Loss of diversity increases with obesity and is compounded across generations**



Microbiome is HEALTH!

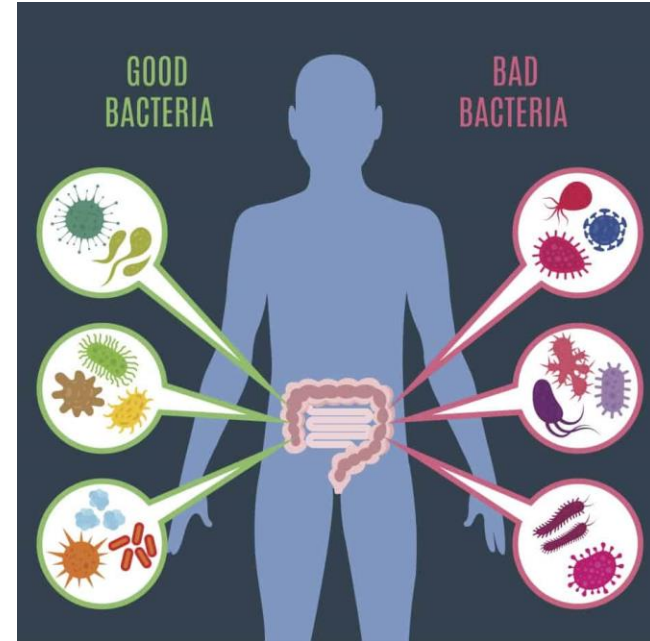


Short Chain Fatty Acids

- Butyrate
- Propionate
- Acetate



- Inflammation
- Immunity
- Metabolism
- CNS



Family	Bacteria	Beneficial Impact
<i>Christensenellaceae</i>	<i>Christensenella minuta</i>	SCFA producer and possible link with a lean phenotype.
<i>Eubacteriaceae</i>	<i>Eubacterium eligens</i>	SCFA producer and pectin utilizer.
<i>Eubacteriaceae</i>	<i>Eubacterium hallii</i>	Produces pseudovitamin B12 which can help ↑ SCFA production by surrounding bacteria e.g. <i>A. muciniphila</i> , lactate utilizer, butyrate producer
<i>Eubacteriaceae</i>	<i>Eubacterium rectale</i>	Acetate consumer, butyrate producer. Can be involved in cross-feeding interactions with other beneficial bacteria e.g. <i>Bifidobacterium longum</i> .
<i>Lachnospiraceae</i>	<i>Anaerostipes caccae</i> & <i>Anaerostipes hadrus</i>	Butyrate producers, lactate and acetate utilizers.
<i>Lachnospiraceae</i>	<i>Coprococcus</i> spp.	Butyrate and acetate producers closely related to <i>Ruminococcus</i> .
<i>Lachnospiraceae</i>	<i>Roseburia</i> spp.	Butyrate and propionate producers. Decreased levels seen in those with ulcerative colitis.
<i>Ruminococcaceae</i>	<i>Faecalibacterium prausnitzii</i>	Decreased levels observed in Crohn's disease and minulcerative colitis indicating anti-inflammatory properties. One of the main butyrate producers within the gut.
<i>Ruminococcaceae</i>	<i>Oscillospira</i> sp.	Enriched in those with a lean phenotype in comparison to obese subjects, decreased levels observed in those with inflammatory diseases.
<i>Ruminococcaceae</i>	<i>Ruminococcus bromii</i>	Keystone species for degrading resistant starch enabling other bacteria to utilize the breakdown products.
<i>Verrucomicrobiaceae</i>	<i>Akkermansia muciniphila</i>	Mucin-degrading bacterium inversely associated with obesity and other metabolic diseases. Liberates oligosaccharides from mucin making them available to other bacteria. Produces acetate and propionate which some butyrate-producers can utilize.

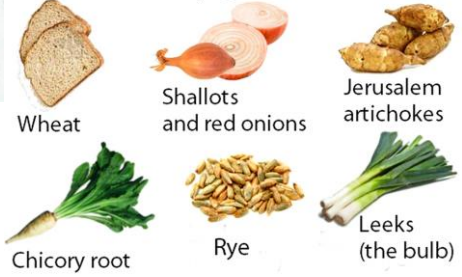




Feed your microbiome!!



Foods High in Inulin



Prebiotics- feed bacteria that confer health benefit:

Oligosaccharides – nondigestible fiber

- galactooligosaccharides (GOS)- lentils, chickpeas, beans
- inulin – chicory root, onions
- fructo-oligosaccharides (FOS)- garlic, asparagus, banana, artichoke
- arabinoxylan- cereal grains, including rye, wheat, barley, oats, rice, sorghum, maize, millet, psyllium, flax
- pectin and pectic oligosaccharides (POS)- apple, citrus, beet
- isomaltooligosaccharides (IMO)- honey, miso

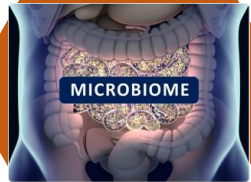
Polyphenols

- Proanthocyanidin- red grapes
- cocoa flavonols



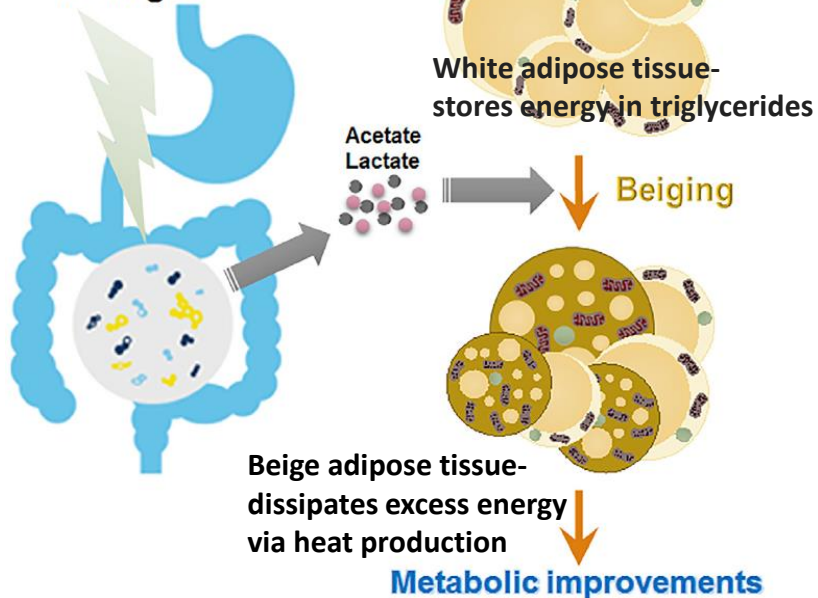
Seaweed and algae
fucoidan, laminarin
and alginate





Microbiome and Intermittent Fasting

Intermittent fasting

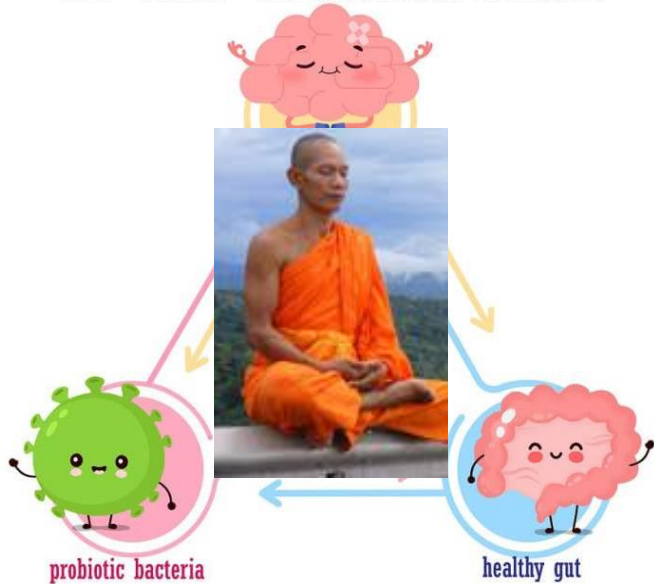


- adult humans do not have brown fat → conversion of white fat (WAT) to beige fat (BAT)
- fasting reshapes gut microbiota → WAT → BAT
Reversal of insulin resistance, obesity, fatty liver
- WAT → BAT foods:
 - **Curcumine**
 - **Capsaicine (hot pepper)**
 - **Green tea, coffee- caffeine and catechins**
 - **Resveratrol (grapes)**
- WAT → BAT **COLD/SHIVERING**

Microbiome and Meditation

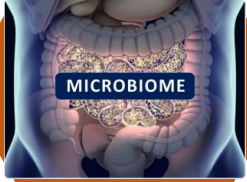


GUT - BRAIN - GUT MICROBIOME TRIANGLE

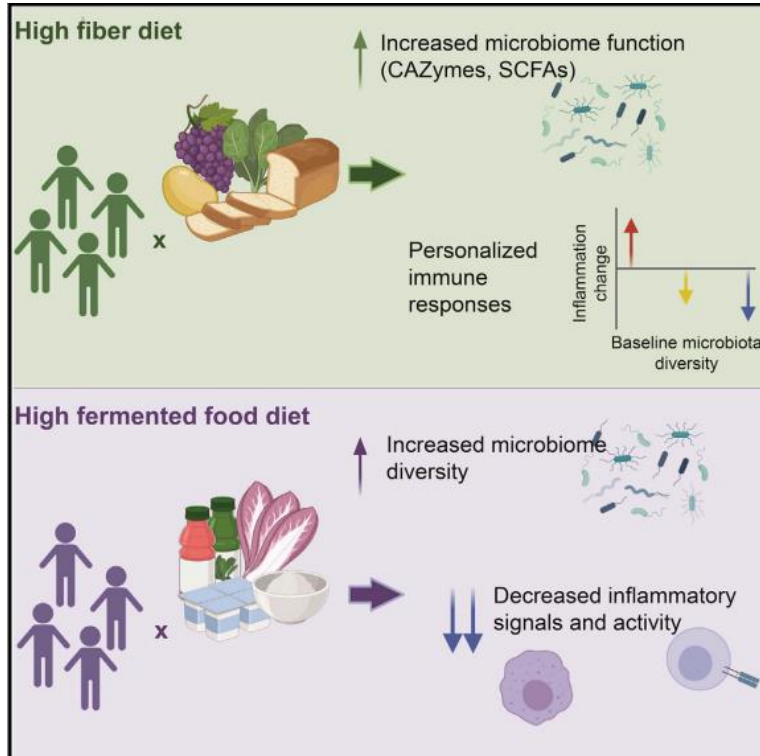


- 37 monks vs 19 matched controls
- Meditation 2 or more hrs/day 3-30 yrs
- *Megamonas* and *Faecalibacterium* → lower risk of anxiety, depression, heart disease
- Activation of anti-inflammatory, metabolic pathways
- Lower total cholesterol and apolipoprotein B





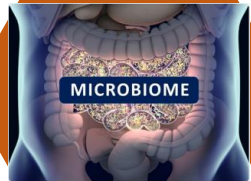
FIBER FIBER FIBER and EVEN BETTER FERMENTED FIBER!!!




































































































Females > 25 g (best >40g)
Men > 40g (best >45g)

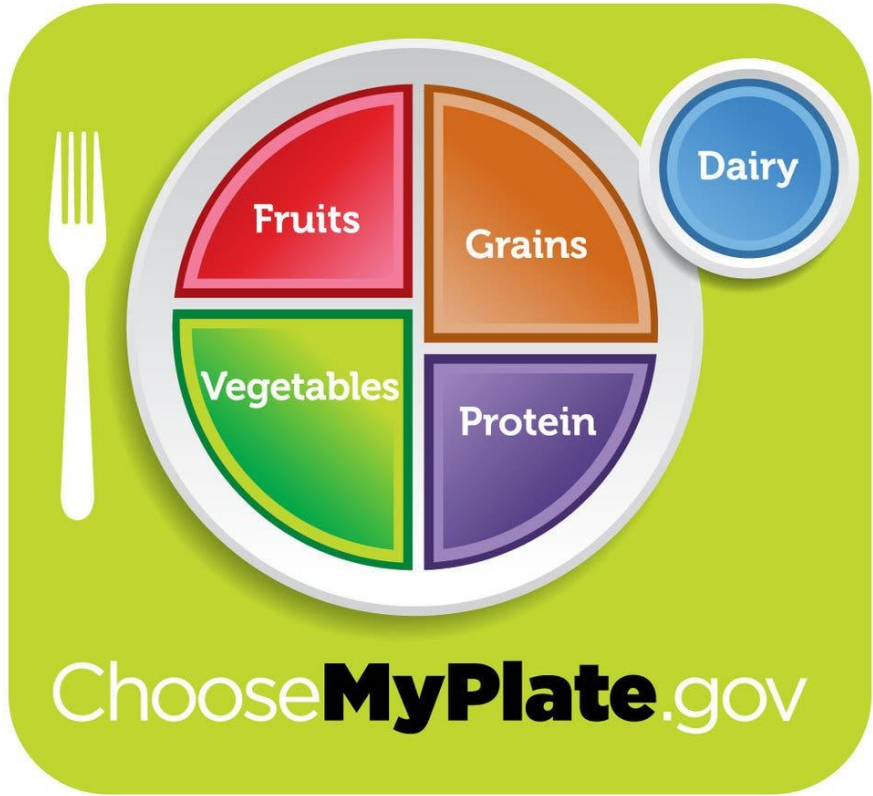
[Superfood-List.pdf \(lifestylemedicine.org\)](https://www.lifestylemedicine.org/Superfood-List.pdf)

Periodic Table of Microbiome-Friendly Foods



Ar 																Cg 															
K 	Dg 																Ag 	Bs 	Cr 	Bt 	Br 										
Av 	Sp 																M 	Pm 	Gu 	Rb 	Bb 	Sb 									
Bl 	Ap 	Ba 	Pr 	Fg 	Da 	Gb 	Gp 	Em 	Sw 	Co 	Pu 	Am 	Sc 	Au 	Cs 	Ln 	Sp 														
Bp 	Gb 	Kb 	Bn 	Lb 	Wb 	Pb 	Al 	Sf 	Ps 	Ss 	Fx 	Pe 	Pn 	Pa 	S 	As 	Bq 														
Pm 	Y 																Bg 	Nb 	Ok 	Tn 	Sm 	Bm 	P 	C 	Pc 	Fn 	Eg 	Cb 	Tm 	Po 	Cf 
Z 	Cl 																Ov 	Lk 	On 	G 	Sl 	Br 	Rd 	Jc 	Ja 	Bi 	Q 	Bw 	Oa 	By 	Bu 
Tp 	Ms 	Kc 	Sk 	Pk 	Yg 	Kf 	Km 																Bk 	Dt 							

Ar Artichoke	Sp Sweet Potato	Pr Pear	Sc Swiss Chard	Wb White Beans	S Spinach	Bm Button Mushroom	Z Zucchini	Ja Jerusalem Artichoke	Sk Sauerkraut
Cg Collard Greens	M Mango	Fg Fig	Au Arugula	Pb Pinto Beans	As Acorn Squash	P Portobello Mushroom	Cl Celery	Bi Brown Rice	Pk Pickles
K Kale	Pm Persimmon	Da Dates	Al Almonds	Ps Pumpkin Seeds	Bq Butternut Squash	C Corn	Ov Olive	Q Quinoa	Yg Yogurt
Dg Dandelion Greens	Gu Guava	Gb Green Banana	Cs Chia Seeds	Sf Sunflower Seeds	Pm Pumpkin	Pc Popcorn	Lk Leek	Bw Buckwheat	Kf Kefir
Ag Asparagus	Rb Raspberries	Gp Green Peas	Ln Lentils	Ps Pumpkin Seeds	Y Yam	Fn Fennel	On Onion	Oa Oats	Km Kombucha
Bs Brussels Sprouts	Bb Blackberries	Em Edamame	Sp Split Peas	Ss Sesame Seeds	Bg Beet Greens	Eg Eggplant	G Garlic	By Barley	Bk Breast Milk
Cr Carrot	Sb Strawberries	Sw Seaweed	Bp Black Eyed Peas	Gb Garbanzo Beans	Fx Flax Seeds	Cb Cabbage	Sl Shallot	Bu Bulgur	Dt Dirt
Bt Beet	Bl Blueberries	Co Coconut	Kb Kidney Beans	Pe Peanuts	Ok Okra	Tm Tomato	Br Bean Sprouts	Ms Miso	
Br Broccoli	Ap Apple	Pu Prunes	Bn Black Beans	Pn Pine Nuts	Tn Turnip	Po Potato	Rd Radish	Jc Jicama	
Av Avocado	Ba Banana	Am Amaranth	Lb Lima Beans	Pa Parsnip	Sm Shiitake Mushroom	Cf Cauliflower			



Canada's food guide

Eat well. Live well.

Eat a variety of healthy foods each day

Have plenty of vegetables and fruits

Eat protein foods

Make water your drink of choice

Choose whole grain foods

Healthy eating is more than the foods you eat

Be mindful of your eating habits

Cook more often

Enjoy your food

Eat meals with others

Use food labels

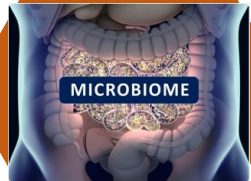
Limit foods high in sodium, sugars or saturated fat

Be aware of food marketing

Discover your food guide at
Canada.ca/FoodGuide

Health Canada Santé Canada

Canada

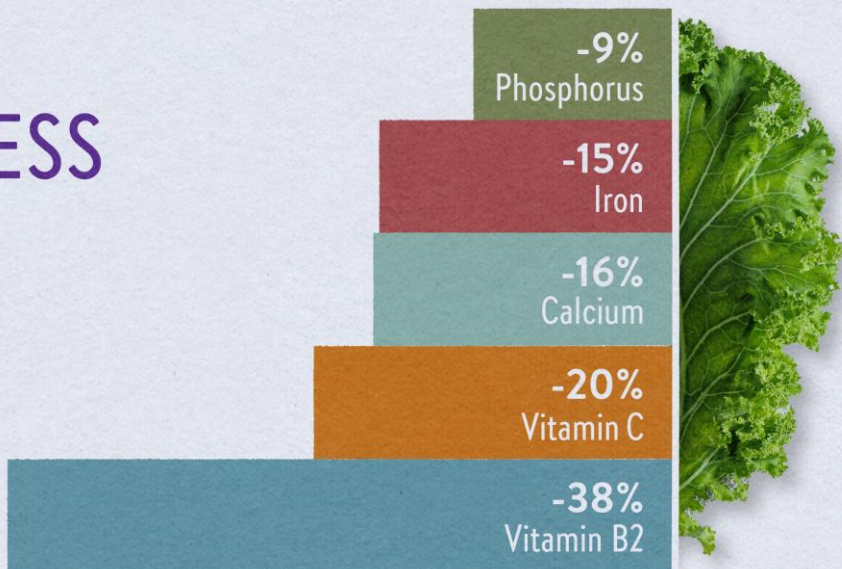


Nutrient Content- Before and Now

Are we really feeding the world with the GMO or causing hidden starvation???

OUR FOOD IS BECOMING LESS NUTRITIOUS.

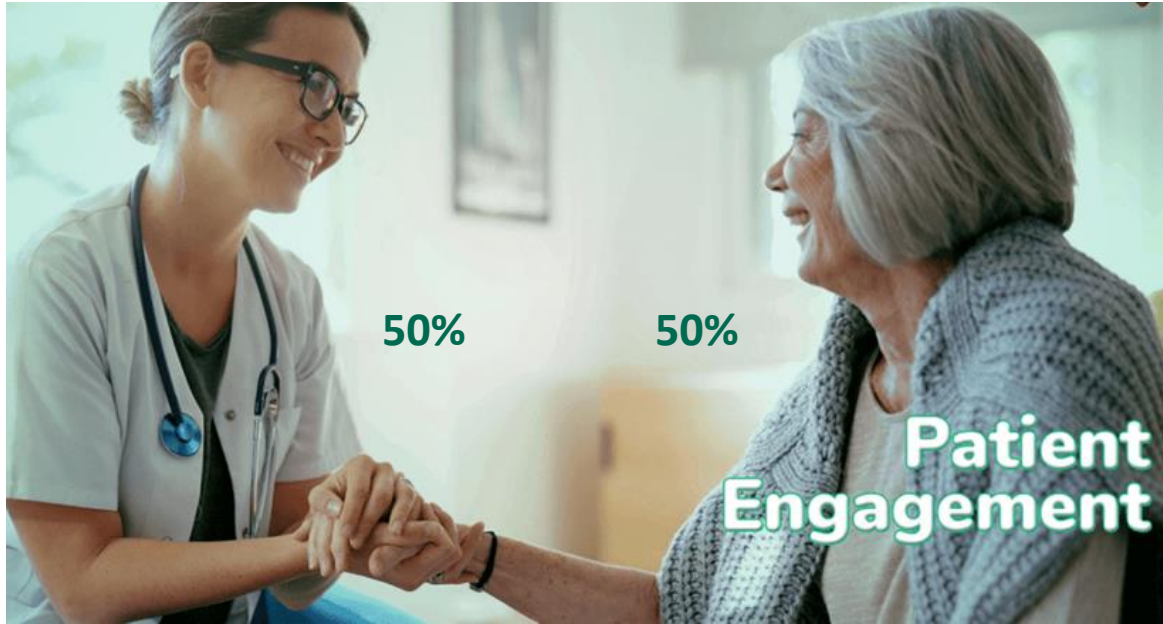
Changes in food composition for 43 garden crops (1950-1999[†])



[†] Davis, D.R., Epp, M.D. & Riordan, H.D. (2004). Changes in USDA food composition data for 43 garden crops, 1950-1999. *Journal of the American College of Nutrition*, 23(6), 669-682



LET'S WALK HAND IN HAND!



4 Pillars

- Nutrition
- Exercise
- Rest
- Social Connectivity

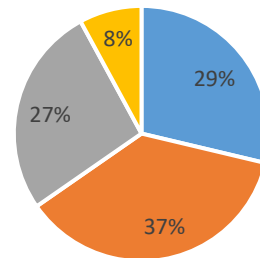


<https://lifestylemedicine.org>

Ahead of the Curve: Lifestyle Research at MCI

Prevalence of Medical Conditions Treatable and Preventable with Lifestyle Modifications in Miami Cancer Institute Malignant Hematology Clinic: A Pilot Retrospective Record Review with the Goal of Developing and Implementing an Interventional Multidisciplinary Lifestyle Modification Plan in Oncology Clinic 2022-RETRO-LIN-002

Patient Weight Distribution In MCI Hematology Clinic n=63



- 18.5-<25 healthy
- 25-<30 overweight
- 30-<35 class 1 obesity
- 35-<40 class 2 obesity

Abstract Title: Malignant Hematology Clinic as a Platform for LM Interventions



Rosen Shingle Creek, Orlando
November 13-16



ABSTRACT PREVIEW: MALIGNANT HEMATOLOGY CLINIC AS A PLATFORM FOR LM INTERVENTIONS



BAPTIST HEALTH SOUTH FLORIDA

Let's Make it Doable! Lifestyle Chart Prompts @ MCI

@lifestyle

Pt educated on making life style modifications and diet changes in order to improve is physical well being such as exclusion of sweetened drinks and juices from the diet, substitution of simple carbs and processed foods with complex carbs (such as quinoa instead of white rice), increase in fish in diet to substitute for red meat. Advised to walk 30 min a day -15 min in am and 15 min in pm to start with. Advised to attempt to obtain 8 hrs of seep a day and avoid screens, blue light and other types of neurologic stimulation for 1 hr before sleep and caffeinated drinks in the second half of the day. Patient can attempt earplugs and eyeshade as well as melatonin 5-10 mg at night if further trouble sleeping. Lavender oil capsules po can be used as a nutritional supplement to help with anxiety.

Yap WS, Dolzhenko AV, Jalal Z, Hadi MA, Khan TM. Efficacy and safety of lavender essential oil (Silexan) capsules among patients suffering from anxiety disorders: A network meta-analysis. Sci Rep. 2019;9(1):18042. Published 2019 Dec 2. doi:10.1038/s41598-019-54529-9

#Insomnia and anxiety- lifestyle modifications

- Macks silicone earplugs for swimmers
- eye shade when sleeping
- red eyeglasses 30 min before sleep
- avoid blue light prior to sleep
- rec to change lightbulb to the one that can change color to red at night
- melatonin 5 mg po 1 hr before sleep
- Hawaii Pharm Valerian (Valeriana Officinalis) Organic Dried Root Veterinary Natural Alcohol-Free Liquid Extract, Pet Herbal Supplement 2x2 oz
- lavender oil extract capsules Calm Aid Lavender Oil Pills - 500mg -60 Softgels - 100% Natural, Helps Reduce Stress, Calming for Body & Mind, Sleep Aid, Non-GMO, Certified Kosher
<https://pubmed.ncbi.nlm.nih.gov/17145239/>
Bent S, Padula A, Moore D, Patterson M, Mehling W. Valerian for sleep: a systematic review and meta-analysis. Am J Med. 2006;119(12):1005-1012. doi:10.1016/j.amjmed.2006.02.026
<https://pubmed.ncbi.nlm.nih.gov/26293583/>
Kasper S, Anghelescu I, Dienel A. Efficacy of orally administered Silexan in patients with anxiety-related restlessness and disturbed sleep--A randomized, placebo-controlled trial. Eur Neuropsychopharmacol. 2015;25(11):1960-1967. doi:10.1016/j.euroneuro.2015.07.024

#Foot and back pain

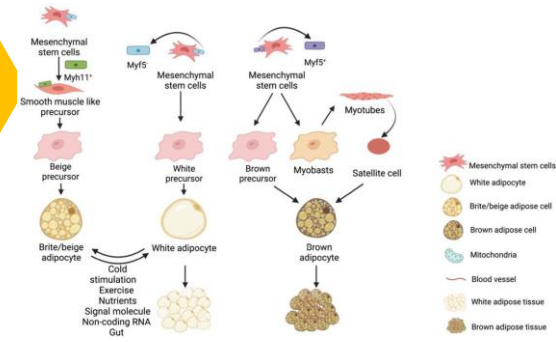
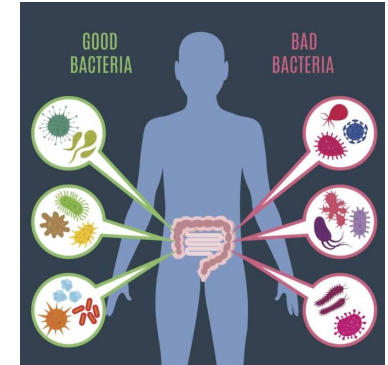
- rec hard mattress, compression stockings for runners PC
- **rec orthopedic insoles Kendall podiatry: 305-274-4242**
- **chiropractor Matthew Pollack: 786-408-4889 and 305-450-5587**
- Thai cotton mattress



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Miami Cancer Institute Multidisciplinary Care Team



THANK YOU!

Additional Resources

Resources- longevity calculator, references

Lifespan calculator- current and if you make certain dietary changes- great resource to design healthier diet for longevity:

[Food4healthylife \(shinyapps.io\)](https://shinyapps.io/food4healthylife/)

Food for healthy life is based on the following paper: Fadnes LT, Økland J-M, Haaland ØA, Johansson KA (2022) Estimating impact of food choices on life expectancy: A modeling study. PLoS Med 19(1): e1003889.

Dietary Reference Intake Recommendations:

[DRI Calculator Results | National Agricultural Library \(usda.gov\)](https://www.nal.usda.gov/fnic/food-info/dri-calculator-results)

Which nutrients are you missing and nutritional information:

[Nutrient Optimiser](https://www.nutrientoptimiser.com/)

[Nutrition facts for buckwheat, recommended daily values and analysis. \(nutrientoptimiser.com\)](https://www.nutrientoptimiser.com/)

Resources- plant-based diet

Excellent website to learn about healthy plant-based diet:

fullplateliving.org

[Full Plate Living](#)

Free “Food as Medicine” course:

[Food as Medicine - American College of Lifestyle Medicine](#)

https://lifestylemedicine.org/nutrition-as-medicine/?gad_source=1&gclid=EAlaIqObChMIpdOcipyphQMV0LZaBR1zpQOfEAAYASAAEgKQAPD_BwE

Superfood list from American Academy of Lifestyle Medicine-PDF:

[Superfood-List.pdf \(lifestylemedicine.org\)](#)

<https://lifestylemedicine.org/wp-content/uploads/2022/07/Superfood-List.pdf>

Food as medicine curriculum –PDF:

[ACLM-Food-As-Medicine-Jumpstart-8.5x11.pdf \(lifestylemedicine.org\)](#)

<https://lifestylemedicine.org/wp-content/uploads/2024/01/ACLM-Food-As-Medicine-Jumpstart-8.5x11.pdf>

Dr. Greger Books: incredible resources for everyone, highly recommend, buy on Amazon

How Not To Age How Not To Die How Not To Diet

Harvard Health Website- excellent resource for healthy living:

[Signup for More Free Email Newsletters - Harvard Health](#)

<https://www.health.harvard.edu/healthbeat/co-reg>



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Daily Protein Needs- How Can We Get it From Plant Sources?

The Recommended Dietary Allowance (RDA) for protein is a modest **0.8 grams of protein per kilogram of body weight, or 0.36 grams per pound.**

[How much protein do you need every day? - Harvard Health](#)



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Grain Nutrient Content Comparison- there is no reason to be eating white rice

In 100g	White rice	Black Rice (forbidden rice)	Pearl Barley	Buckwheat	Quinoa
Whole grain	No- no bran or endosperm	yes	No- bran is off but endosperm is preserved; Hulled barley is full grain	yes	yes
Calories per 100g	353	336	330	350	354
Fiber (g% daily requirement)	3g (10%)	4g	16g (55%)	10g/35%	7g/25%
Carbohydrates per 100 g (g/% daily requirement)	82g (28%)	71g	78g/26%	72g/24%	64g/22%
Protein	7g	10.5g	10g	13 g	14g
Essential amino acids				All 9 present	All 9
Iron	1.6 mg (8%)	1.5 mg	2.5 mg/13%	2.2 mg/12%	4.6mg/25%
Potassium	77 mg (2%)	0 mg	280mg/7%	460 mg/12%	563mg/14%
Special qualities	Incomplete protein	High in anthocyanins (antioxidants)	Rich in soluble fiber known as beta glucan, which is recognized for its cholesterol-lowering abilities	Complete protein	Complete protein

<https://nutrientoptimiser.com/>; table by Dr. Yuliya

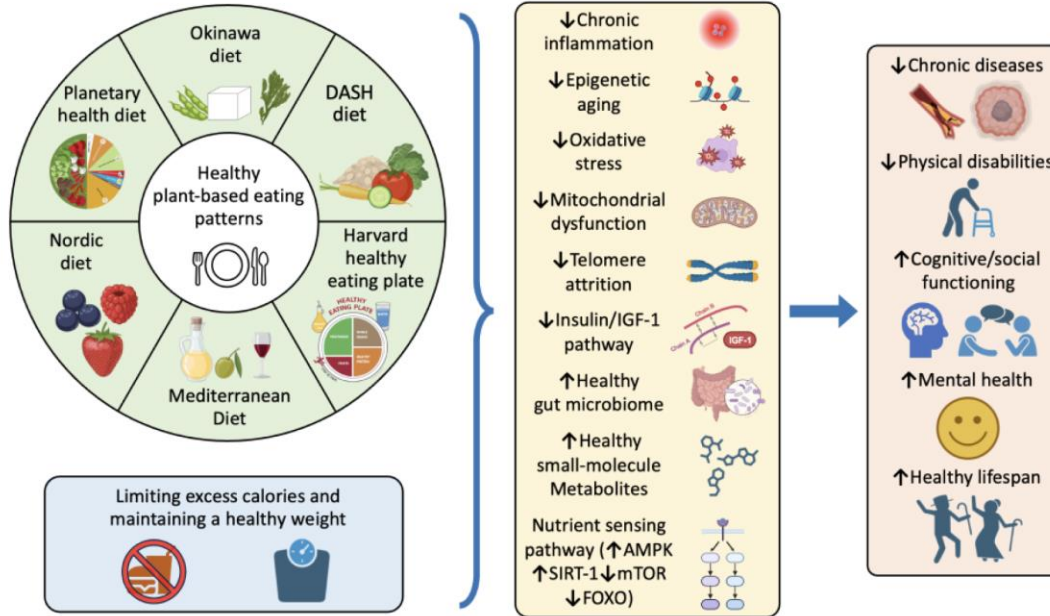
Linhares



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Diet strategies for promoting healthy aging and longevity



Hu FB J of Internal Medicine 2023

<https://onlinelibrary.wiley.com/doi/full/10.1111/joim.13728>