

Maximize Your Mood/Minimize Your Waistline

How to Spring into the best YOU!

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Bonus Content Available at the End of the Class!

<http://www.dianginsbergmd.com/mood-bonuses>

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43 year old who complains of

- No menses in 2 months
- Hot flashes at night
- Weight gain
- No motivation
- Mood and Anxiety issues
- Brain fog
- Sleeplessness / Insomnia



Dr. Dian Ginsberg

Feels frustrated-

-Says she is going to the gym 3 days a week taking HIIT classes

-Walking 2 days a week 3 miles

- 1 Yoga class a week

-Eating better than 80 percent of the people she knows

WHY DOES SHE FEEL BAD AND WHAT CAN SHE DO?

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Divide and Conquer

What causes mood and anxiety issues?

Does that lead to stress eating?

What causes weight loss resistance?

How do I fix it all????

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What Causes Mood Issues?

Poor blood sugar dysregulation

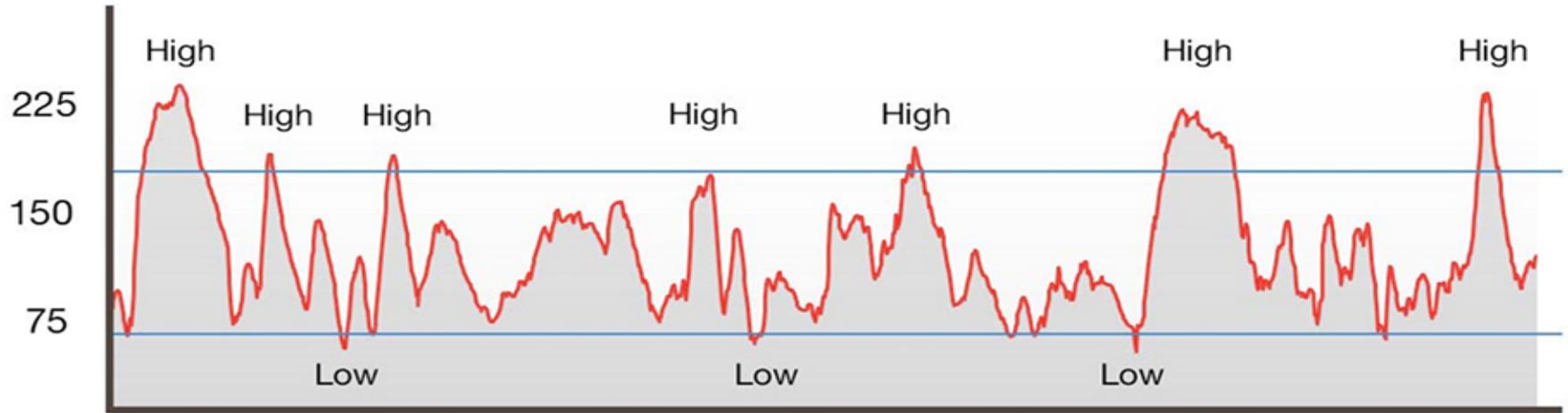
- Hunger and hypoglycemia (low blood sugar) are primitive signals known to set off the stress response
- In people who are predisposed, anxiety can result with chronic drops or swings in glucose
- In people who are very sensitive low mood can become chronic if food intake isn't consistent.

– Psychology Today

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A Typical Day on the Blood Sugar Rollercoaster

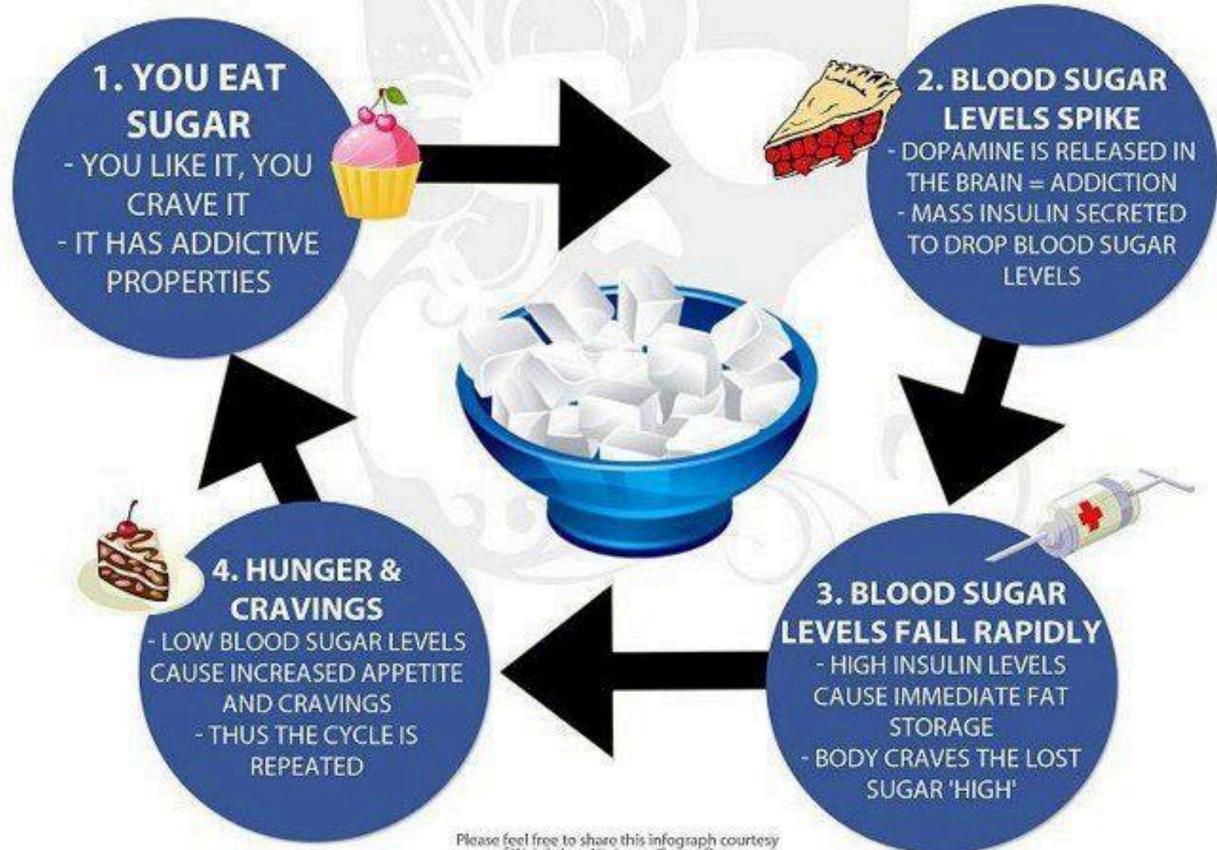


Glucose Roller Coaster

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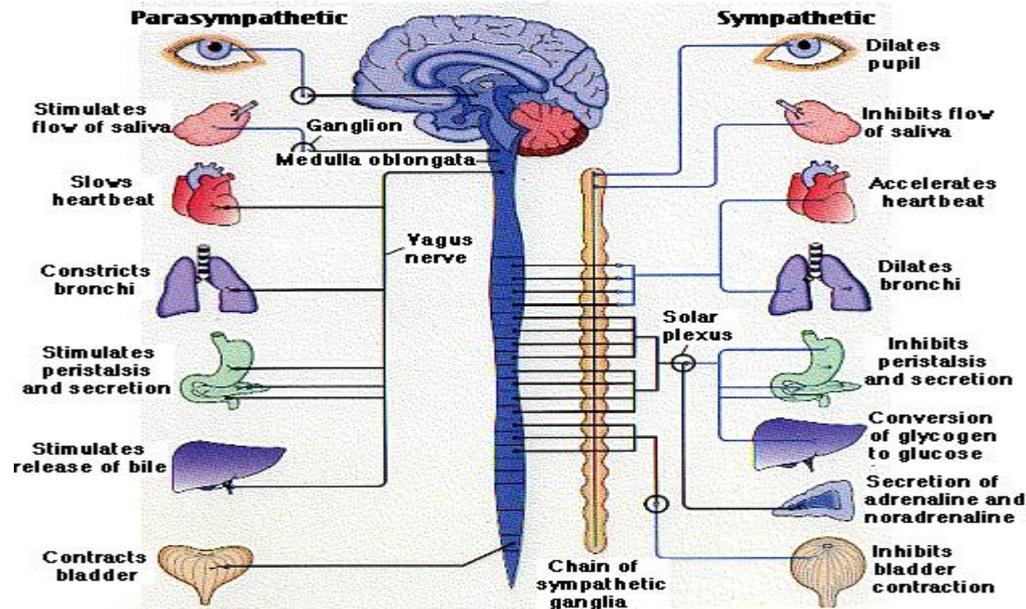
SUGAR ADDICTION: THE PERPETUAL CYCLE



You have Two Brains!

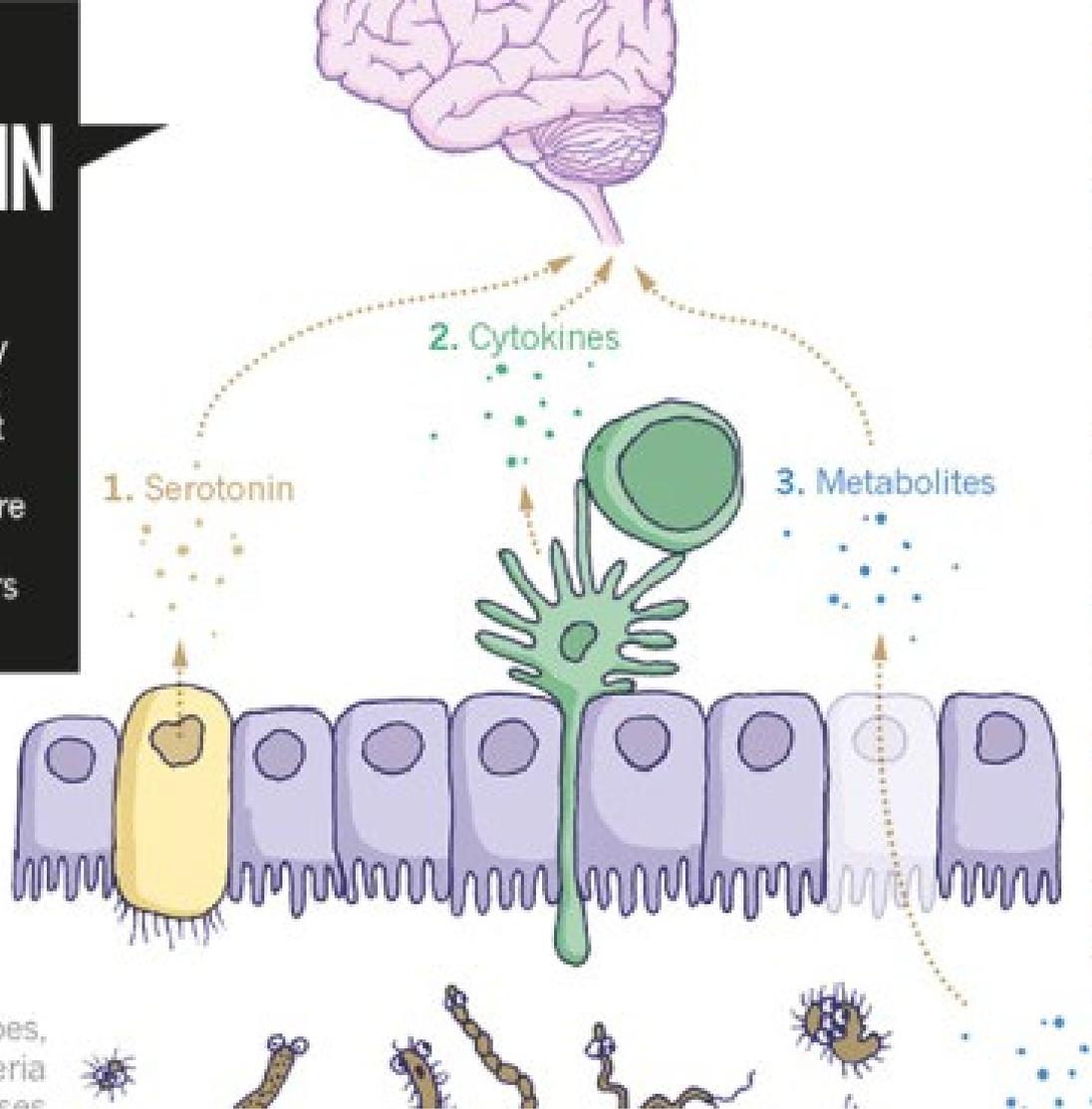
The Gut and the Brain:

- Created from the same tissue during fetal development
- Connected via vagus nerve – tenth cranial nerve that runs from brain stem to abdomen
- Your gut bacteria transmit *information* from gut to brain



THE GUT-BRAIN AXIS

The mechanisms by which gut microbes and the brain might communicate are unclear, but there are several tantalizing leads for researchers to follow.



1. PERIPHERAL SEROTONIN:
Cells in the gut produce large quantities of the neurotransmitter serotonin, which may have an effect on signalling in the brain.

2. IMMUNE SYSTEM:
The intestinal microbiome can prompt immune cells to produce cytokines that can influence neurophysiology.

3. BACTERIAL MOLECULES:
Microbes produce metabolites such as butyrate, which can alter the activity of cells in the blood-brain barrier.

Gut microbes,
including bacteria
and viruses

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The Health of the Gut Directly Influences the Brain

GMO (genetically modified organism) is a plant, animal, microorganism or other organism whose genetic makeup has been modified in a laboratory using genetic engineering or transgenic technology

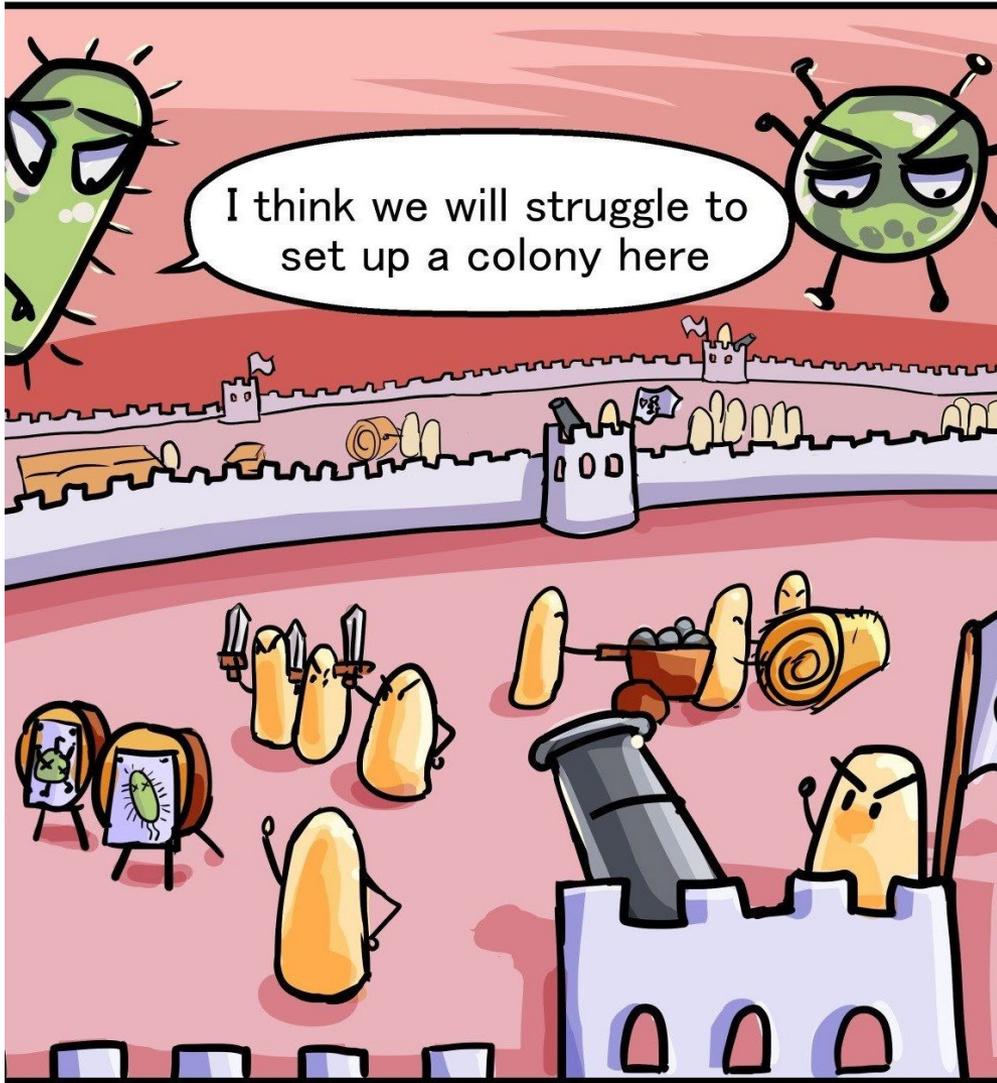
They significantly alter the gut flora(natural microbes)

High GMO Foods:

- wheat
- soy
- corn
- sugar

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Runaway!

High Fructose Diet

High fructose diets (fruit sugar) alter gut bacteria and allow the **bad guys** to flourish

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More Gut-Brain Connection

Sugar suppresses production of a key brain hormone (BDNF).

These levels are very low in depression and anxiety

Brain-derived neurotrophic factor (BDNF) is a neurotrophin that is vital to the survival, growth, and maintenance of neurons in key brain circuits involved in emotional and cognitive function. Convergent evidence indicates that neuroplastic mechanisms involving BDNF are deleteriously altered in major depressive disorder (MDD) and animal models of stress.

Brain-Derived Neurotrophic Factor, Depression, and Physical Activity:
Making the Neuroplastic Connection

<https://www.hindawi.com/journals/np/2017/7260130/>

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What are Neurotransmitters?

A neurotransmitter is defined as a chemical messenger that carries, boosts, and balances signals between nerve cells and other cells in the body.

Hormones and neurotransmitters are two separate chemical messengers but have some similarities.

Some of the molecules can act as both hormones and neurotransmitters as well.

Examples of NT are:

Dopamine

Serotonin

Norepinephrine/Epinephrine

GABA

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Where are they made?

90% of the body's serotonin is made in the gut.

Disruption of the gut microbiome will lead to a dysbalance of serotonin and dopamine

Low dopamine leads to low motivation

Low Dopamine explains where cravings come from!!!

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How many crave this????



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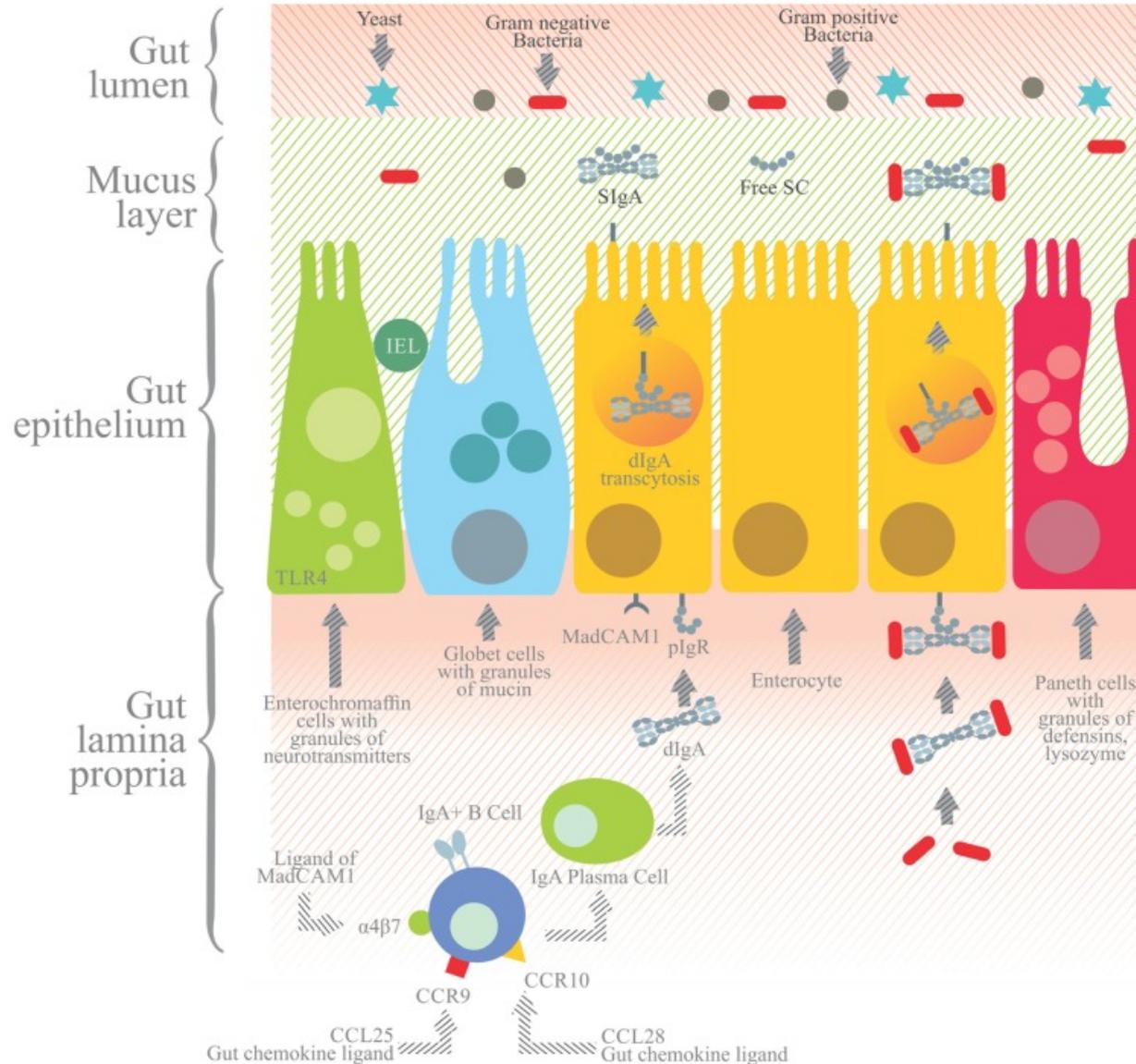


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What is a Normal Digestive System



What is the process in the gut that causes this to develop?

What causes
GUT DYSBIOSIS AND
LEAKY GUT?



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What is Glyphosate?

An herbicide. It is applied to the leaves of plants to kill both broadleaf plants and grasses. It is used to regulate plant growth and ripen fruit.

Glyphosate is transported from the leaves into the grains and fruit. During milling it is concentrated in wheat bran by a factor of four.

It cannot be removed by washing or cooking, and is passed into milk and eggs

http://www.foeeurope.org/sites/default/files/press_releases/foee_4_human_contamination_glyphosate.pdf

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GLYPHOSATE AND THE MICROBIOME

Glyphosate was designated as safe for use on food products because glyphosate did not show classical, systemic toxicology in mammalian, short-term, feeding studies. However, the toxicological study of glyphosate and its formulations (in particular dicarboxylic acid), were conducted prior to the discovery of the significance of the microbiome in health and the disease process.

Dr. Kiran Krishnan

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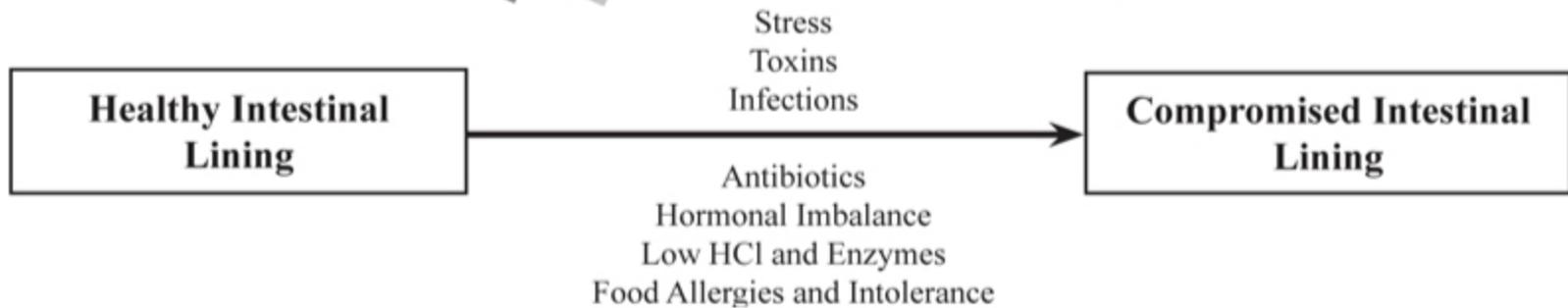
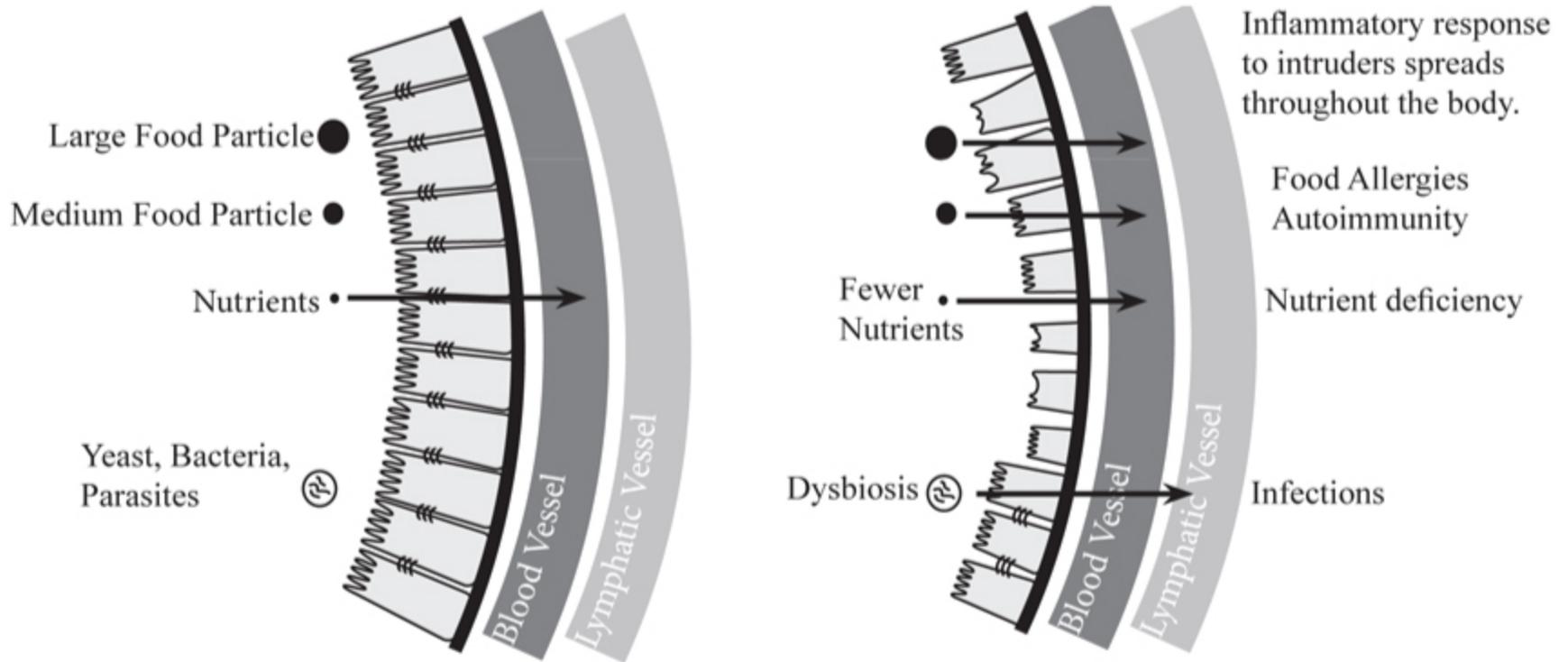
Glyphosate and the Microbiome

“Glyphosate suppresses 5-enolpyruvylshikimic acid-3-phosphate synthase (EPSP synthase), the rate-limiting step in the synthesis of the aromatic amino acids, tryptophan, tyrosine, and phenylalanine, in the shikimate pathway of bacteria, archaea and plants (de Maria *et al.*, 1996).”

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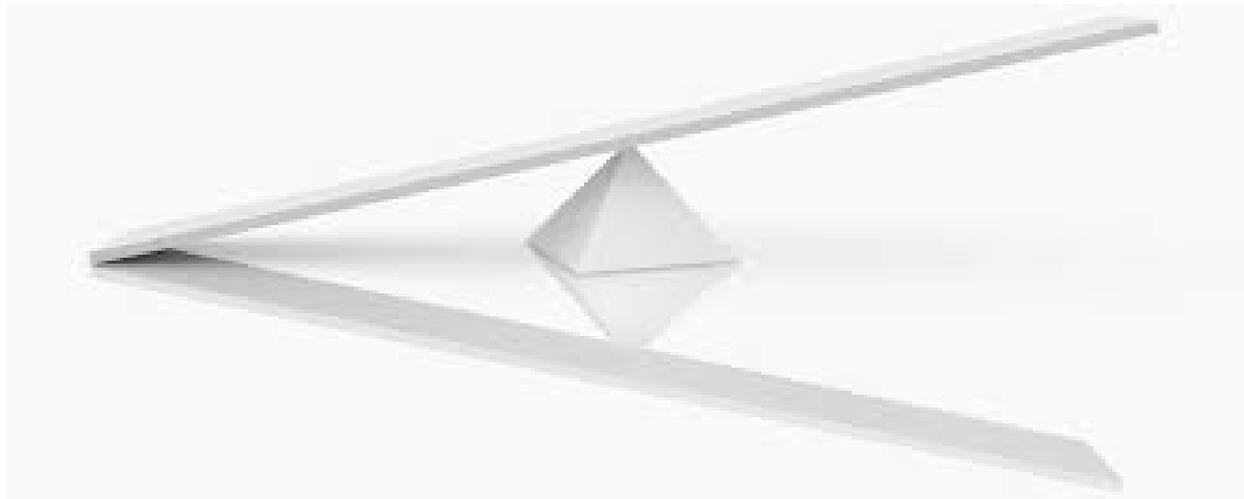


Leaky Gut – Gluten Sensitivity



Disrupted Neurotransmitters

Serotonin



Dopamine

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Low Dopamine Symptoms...

- Low motivation
- Muscle cramps, spasms, or tremors
- Aches and pains
- Loss of balance
- Constipation
- Difficulty eating and swallowing
- Depression
- Sleepy or sleeplessness
- Weight loss or weight gain

**Feel
uncomfortable
in your own
skin!**

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Remember this?



10/21/2011

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Or This Part of the Holiday?



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Weight Loss Resistance

You have to understand it to get better

What causes it to occur?

What is happening at the cellular level?

How do I reverse it?

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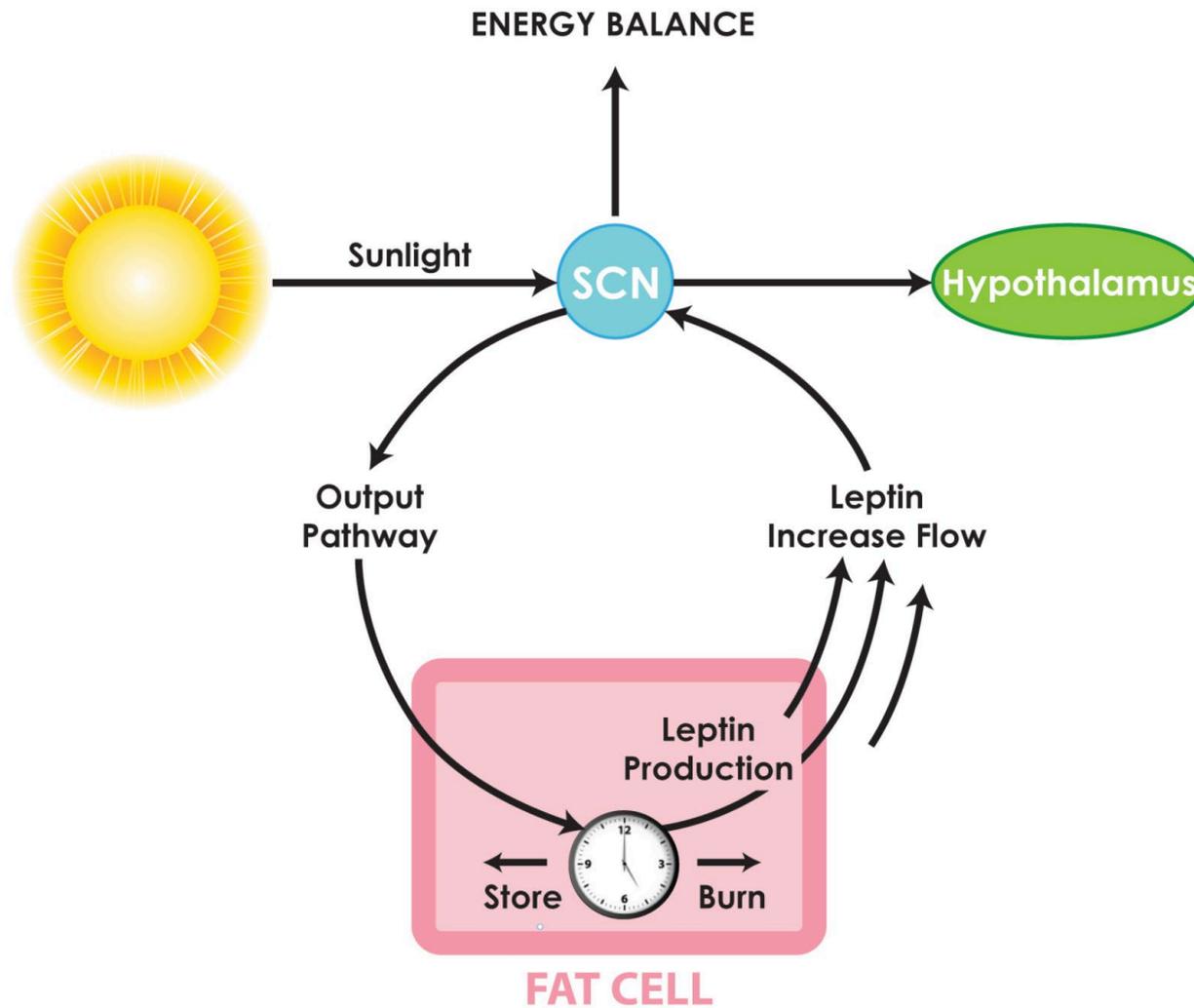
What are the Key Hormones that need to Balance for Optimal Weight?

Leptin- Leptin is a hormone that is produced by your body's fat cells. It is often referred to as the "satiety hormone" or "starvation hormone."

Leptin's primary target is in the brain — particularly an area called the hypothalamus.

Ghrelin- Ghrelin, the "hunger hormone", is a peptide hormone produced by ghrelinergic cells in the gastrointestinal tract. Besides regulating appetite, ghrelin also plays a significant role in regulating energy balance at the level of the Central Nervous system.

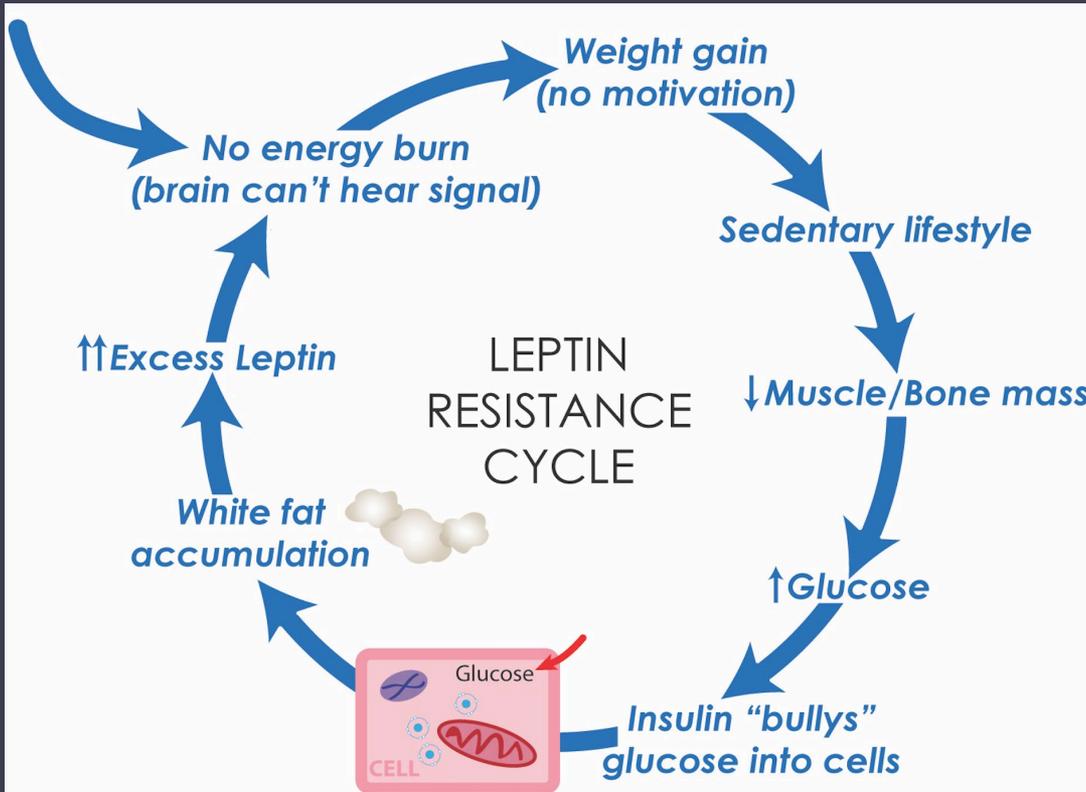
Insulin- **Insulin** is a hormone made by the pancreas that allows your body to use sugar (glucose) from carbohydrates in the food that you eat for energy or to store glucose for future use.



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What Is Leptin Resistance?



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This leads to:

More cravings.....

Which leads to more dysregulated dopamine...

Which leads to more MOOD ISSUES.....

Which leads to more poor choices.....

Which leads to more leptin resistance and central weight gain!!!



And the Cycle continues the Downward Spiral

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How do I stop and reverse this cycle?

Heal the gut

Reconnect/Re-sensitize the Brain

Elevate the Mood/Slim the Waist

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Heal the Gut



Remove food irritants, pathogenic bacteria, parasites and infection

Replace inflammatory foods with healing foods (bone broth, fermented foods, fiber, resistant starch)

Repair the gut lining with food and supplements (L-glutamine is paramount)

Repopulate with good bacteria

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The Nature and Stability of Bacteria in the Gut Influence Behavior

- When germ-free mice with a genetic background associated with passive behavior were colonized with bacteria from mice with higher exploratory behavior, they became more active and daring.
- Normally active mice became more passive after receiving bacteria from mice whose genetic background is associated with passive behavior.
- Conclusion: any disruption, from antibiotics or infection, might produce changes in behavior.

https://fhs.mcmaster.ca/main/news/news_2011/gut_anxiety_link_study.html

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- When mice were infected with *Campylobacter* or *Citrobacter* their behavior became more cautious and protective (constantly looking for and avoiding threats)
- This could serve a purpose – keep you away from predators when you are vulnerable and sick
- This creates a stress response which leads to inflammation and further infection

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1986672/>

Infections in the Gut Induce Anxiety in Mice

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- When given to patients with IBS their depression scores improved significantly compared to placebo after 6 weeks, even more so at 10 weeks
- Anxiety scores did not improve
- Conclusion: Taking bifidobacterium probiotics may ease symptoms of depression

[https://www.gastrojournal.org/article/S0016-5085\(17\)35557-9/fulltext](https://www.gastrojournal.org/article/S0016-5085(17)35557-9/fulltext)

The Probiotic Strain Bifidobacterium Improves Depression In IBS Patients

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Gluten Kills the Mood

Many people lack the proper enzymes to break down gluten.

The peptides from gluten can react with opiate receptors in the brain, mimicking the effects of opiate drugs like heroin and morphine. These compounds, called neuropeptides, have been shown to react with areas of the brain's temporal lobes that are involved in speech and auditory integration. Neuropeptides also decrease the ability to feel pain and effect cognitive function.

This is one reason why wheat seems to be extremely addicting to people.

Gluten and wheat dampen production of serotonin.

Wheat Germ lectin (WGA) has neurotoxic effects

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Gluten and the Bible

Wheat in the Bible is extinct today (check out “These Ain’t the Same Grains” video on undergroundwellness.com).

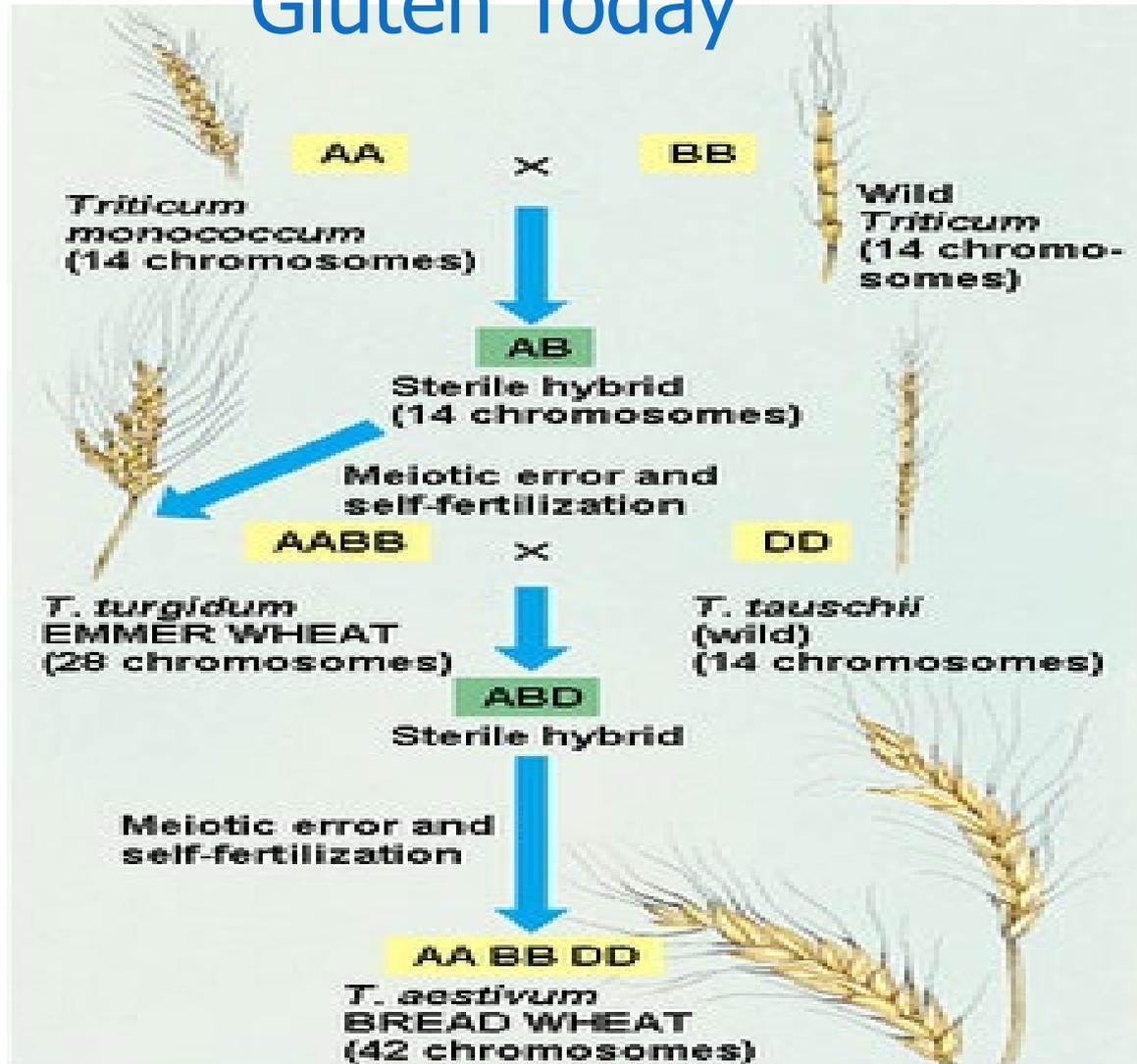
- Traditional diets also soaked grains to get rid of anti-nutrients and improve digestion.
- Emmer was hybrid of wheat in the Bible – had 28 chromosomes, very low gluten content. Spelt and Einkorn also descendants of modern wheat.

Now, wheat grain is brand new food – manmade hybridization has increased chromosomes and gluten content to make grain more heat and cold resistant, stretch food supply and increase baking capabilities.

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Gluten Today



Is a non-soluble peptide—it does not dissolve in water or stomach acid

Very inflammatory to the gut lining

If paired with glyphosate even worse!!!!!!!

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Gluten Free – Hype or Healthy?

Gluten's undigested peptides look similar to body's own protein structures. Bad news for people with autoimmune issues—especially Hashimoto's Thyroid!

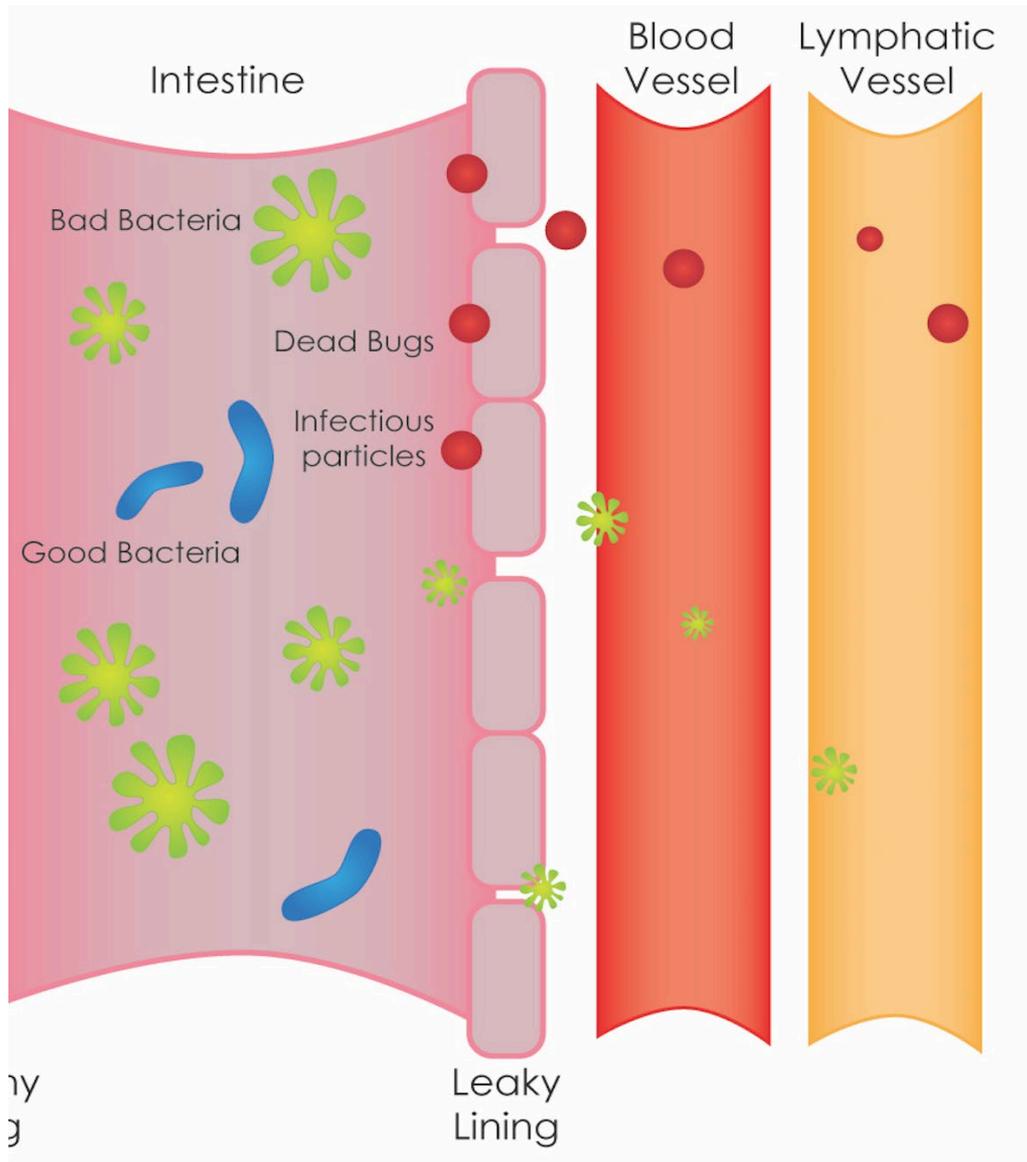
Strong link between gluten and psychiatric disorders (especially schizophrenia). Casein (protein in milk) may have similar effect.

Gluten also has been implicated in ADHD and autism, skin rashes/breakouts and aching joints.

And, of course, Celiac Disease!

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The Development
of Leaky Gut...

and Autoimmune
Disease

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Are Gluten Free Substitutes Better for You?

Healthy Life Original 100% Whole Wheat Whole Grain Bread

Nutrition Facts

Serving Size 2 Slices (41g)	
Servings Per Container 11	
Amount Per Serving %DV 2 Slice 1 Slice	
Calories 70	Calories from Fat 5
Calories 35	Calories from Fat 0
% Daily Value*	
Total Fat 0g,0g	0% 0%
Saturated Fat 0g,0g	0% 0%
Trans Fat 0g,0g	
Polyunsaturated Fat 0g,0g	
Monounsaturated Fat 0g,0g	
Cholesterol 0mg,0mg	0% 0%
Sodium 150mg,80mg	6% 3%
Total Carbohydrate 16g,8g	5% 3%
Dietary Fiber 5g,3g	20% 12%
Sugars 2g,1g	
Protein 5g,2g	
Vitamin A 0% 0%	Vitamin C 0% 0%
Calcium 10% 4%	Iron 4% 2%
Thiamin 6% 4%	Riboflavin 2% 2%
Niacin 6% 2%	Folic Acid 2% 0%
* Percent Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
Calories: 2,000 2,500	
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

NO Bromate
NO Hydrogenated Oil
0 Grams *Trans* Fats
NO Saturated Fats
NO Cholesterol

INGREDIENTS: WATER, 100% WHOLE GRAIN WHOLE WHEAT FLOUR, SOY FIBER AND/OR WHEAT FIBER AND/OR SUGAR CANE FIBER, WHEAT GLUTEN, YEAST, BROWN SUGAR, CONTAINS 2% OR LESS OF THE FOLLOWING: MOLASSES, SALT, DOUGH CONDITIONERS (MONO & DIGLYCERIDES, SODIUM STEAROYL LACTYLATE, ETHOXYLATED MONO- DIGLYCERIDES, ASCORBIC ACID, CALCIUM PEROXIDE, AZODICARBONAMIDE), CALCIUM PROPIONATE (TO PREVENT SPOILAGE), GUAR GUM, YEAST NUTRIENTS (CALCIUM SULFATE, CALCIUM CARBONATE, AMMONIUM SULFATE), FUMARIC ACID, WHEAT STARCH, PALM OIL, SOY LECITHIN.

CONTAINS: WHEAT, SOY.

LEWIS BAKERIES, INC.
 GENERAL OFFICES: EVANSVILLE, IN 47710

Allergy Advisory: Produced on the same bakery equipment as baked goods containing milk, eggs, or nuts. Therefore, this product may inadvertently contain milk, eggs, or nuts to which some people may be allergic.

While we make every effort to post the most current product nutrition facts and ingredients on this web site, your best source of product information is what is printed on the package you purchase.

Nutrition Facts

Serv. Size 7 g (0.2 oz)
 Serv. Per Cont. 64.8
Calories 15
 Fat Cal. 0

Amount/serving	%DV*	Amount/serving	%DV*
Total Fat 0g	0%	Total Carb. 3g	1%
Sat. Fat 0g	0%	Fiber 0g	0%
Trans Fat 0g		Sugars 0g	
Cholest. 0mg	0%	Protein 0g	
Sodium 10mg	0%		
*Percent Daily Values (DV) are based on a 2,000 calorie diet.			
Vitamin A 0%		Vitamin C 0% • Calcium 0% • Iron 0%	

INGREDIENTS: WATER, ARROWROOT, WHITE RICE FLOUR, WHOLE EGGS, TAPIOCA FLOUR, EVAPORATED CANE SUGAR, OIL, CANOLA, BROWN RICE FLOUR, POTATO STARCH, CARAWAY SEED, VINEGAR, CIDER, FLOUR, TEFF, CORN STARCH, COCONUT FLOUR, SORGHUM FLOUR, COCOA POWDER, ACTIVE DRY YEAST, SEEDS, FLAXSEED, FLOUR, AMARANTH, AMARANTH RESOURCES, SEA SALT, ORGANIC FLAXSEED MEAL, SEED, MILLET, GUAR GUM, SEED, AMARANTH, POTATO FLOUR, XANTHAN GUM, MOLASSES, COFFEE, INSTANT, REGULAR, POWDER, ROSEMARY, OREGANO, THYME, BASIL, MARJORAM
 CONTAINS: EGGS

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Avoid Artificial Sweeteners

Known side effects of aspartame – panic attacks and depression

Splenda (sucralose) disrupts estrogen levels creating a hormonal depression

Some people drink 3-4 diet drinks a day and don't realize it!



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The Real 'BAR' Story

What is in your typical bar on the run food

The 1-Hour Effects of Eating a Chocolate Chip Clif Bar

- <https://www.healthline.com/health/food-nutrition/1-hour-effects-clif-bar#2>

After 10 Minutes

When the first ingredient in a seemingly healthy granola bar is sugar, take notice. The moment you start eating a Clif Bar, your body begins to break the sugar down — all 5 1/2 teaspoons of it. The American Heart Association recommends eating no more than 6 teaspoons of added sugar per day for women and 9 teaspoons a day for men, so this Clif Bar almost reaches the daily max (sugar is mentioned five times on the nutrition label, in various forms).

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Top Mood Foods

Nourish your Neurotransmitters

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Prioritize Digestion

It starts in the brain when you see and smell your food – the cascade of proper digestive hormones begins!

Chewing your food and eating in a non-stressed state are key!

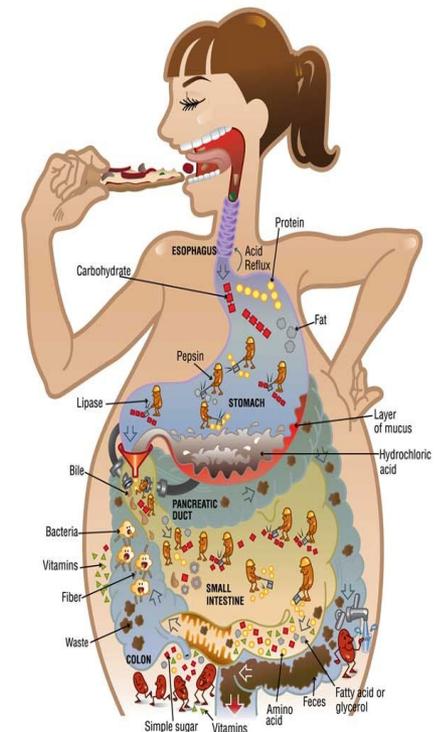
Fat digestion is of utmost importance-Don't Be a SUGAR BURNER!!!

May need digestive enzymes:

- bile
- pancreatic enzymes

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Food to Avoid

Food	Reason
Sugar	Disrupts microbiome, gut lining and leads to spikes and crashes
Gluten/Wheat	Irritates gut lining, glyphosphate disrupts microbiome
Artificial Sweeteners	Disrupts serotonin production
Caffeine	Tends to increase anxiety in certain populations
White flour	Raises blood sugar quickly leading to crashes
GMO's	Glyphosphate disrupts microbiome
High FODMAP foods for those with IBS	Link to depression in those with IBS (heal gut and then add some of these foods back)

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Tryptophan – The Mother of Serotonin

Essential Amino Acid – Have to eat it, body can't make it

Highest in eggs, meats and seafood

-grass fed, pasture raised, wild caught are important

Found in dark chocolate – 70% or more

Secondary sources - nuts, seeds, bananas and greens



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Carbs Needed for Tryptophan Availability

Need insulin to push tryptophan into the cell

Utilize Slow Burning Carbs – tubers and winter squash, grains and legumes

Grains and legumes are better digested if soaked or sprouted – mostly from oats, lentils, rice, quinoa

Any non starchy veggie

**Moderate fruit eaten in season -
some people may need to eliminate**

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Foods to Include

Food	Reason
Fermented Foods (unless have histamine issues)	Probiotics may reduce depression
Diverse veggies (high FODMAP veggies may need to avoided until gut is healed)	The fiber in veggies nourish the gut, feed the good bacteria and create a stable environment
Grassfed meats and fish	Provide tryptophan, EFA's which are important for the brain
Unrefined carbs	Push tryptophan into the cells

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So What is the Best Diet?

- Very Bioindividual!
- Low FODMAPs diet may help depression and anxiety IF IBS is present.
- SCD or GAPS diet may be best if gut infection is present.
- Start with a real food diet as laid out on previous slide. Avoid sugar, gluten, caffeine, artificial sweeteners for 60 days and see how you feel.
- If no change in mood or if weight loss is not achieved (and your goal is to lose weight)....

Try Keto!

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43 year old who complains of

- No menses in 2 months
- Hot flashes at night
- Weight gain
- No motivation
- Moody and Anxiety issues
- Brain fog
- Sleeplessness / Insomina



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Fix the Mood/Trim the Waist

Medications

- certain medications will add weight

Probiotics/ Spores

- Mega Prebiotic
- Mega Mucosa

Stress

Detoxification

Gut Lining Support-

- Microbiome Diversity

Sleep

- Additional Nootropics

Grounding

Additional Personalized Testing

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Medications

SSRI

-Prozac, Paxil, Zoloft etc.

Beta Blockers

atenolol (Tenormin)

metoprolol (Lopressor, Toprol-XL)

Steroid Hormones

- Inhaled Corticosteroids

- Contraception

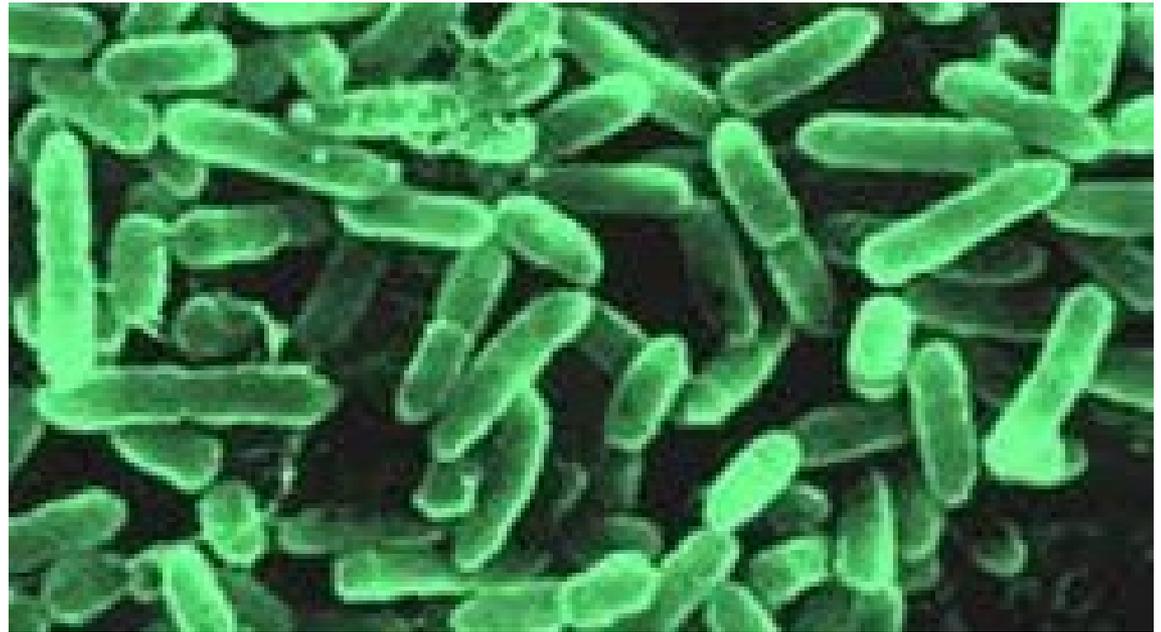
Higher dose pills

Depoprovera



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Probiotics? Spores? Prebiotics?

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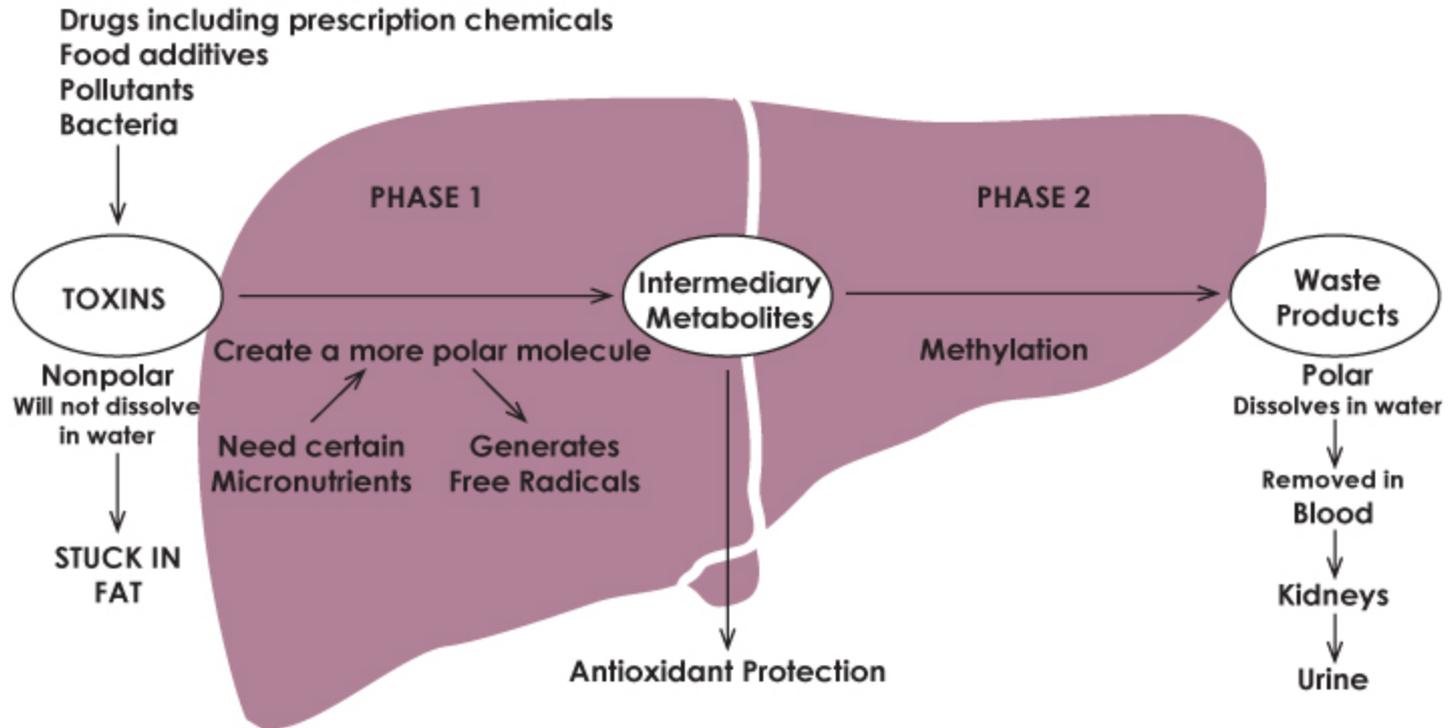
Stress

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Offloading through Liver Detox

Liver Detox



MTHFR

C677T _____ A1298C _____

COMT

VAL/MET _____

Butyrate

Host microbiota constantly control maturation and function of microglia in the CNS

“Specifically, short-chain fatty acids produced by gut bacteria can modulate microglia cells.”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5528863/>

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Support the Microbiome's Living Space

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Keep a plant rotation journal –Know Your Numbers



-hadza hunt for food using traditional bows and arrows. Here, they've killed several vervet monkeys © Getty

"The Hadza people of Tanzania have a gut microbiome diversity that is one of the richest on the planet and about 40 per cent higher than the average American and about 30 per cent higher than the average Brit. The average Hadza person eats around 600 species of plants and animals in a year and has huge seasonal variation. They have virtually none of the common Western diseases such as obesity, allergies, heart disease and cancer. In contrast, most Westerners have fewer than 50 species in their diet and are facing an epidemic of illness and obesity."

<https://www.sciencefocus.com/the-human-body/how-to-boost-your-microbiome/>

“Sleep is an essential process that supports learning and memory by acting on synapses through poorly understood molecular mechanisms.”



<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5382711/>

February 2017

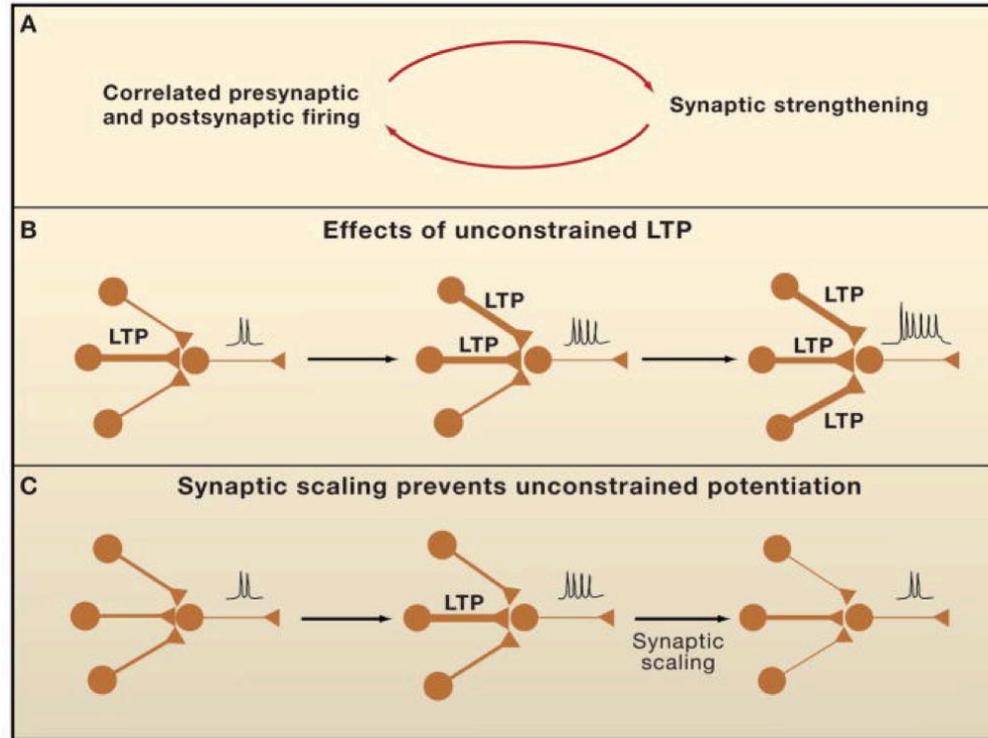
Sleep is:

- Restorative
- Memory solidifying
- Brain remodeling on the fly

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What Is Synaptic Scaling?



Neurons use homeostatic scaling to adjust overall synaptic weight and maintain neuronal firing rates while protecting information coding

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2834419/>

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Circadian Rhythms and Midbrain Dopaminergic Structures

... alterations of the activity of midbrain Dopamine structures contribute significantly to changes in mood and motor functions and to reported deficits in judgment and decision making following sleep loss.

Dysfunction of this system:

- deleterious and life-threatening behaviors
- emotional imbalance as exemplified by drug abuse and mood disorders

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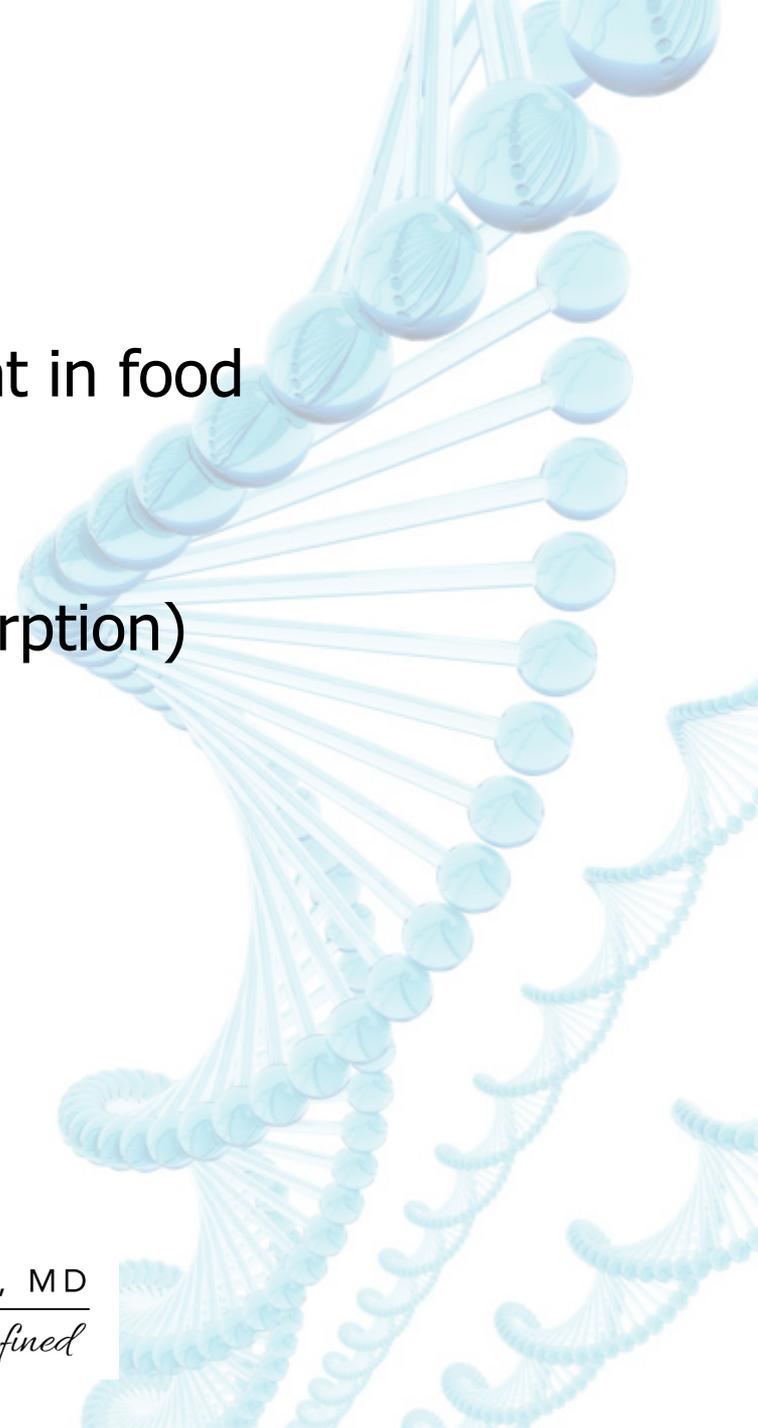


**Effects of Inadequate Sleep on Blood Pressure and Endothelial Inflammation in Women:
Findings From the American Heart Association
Go Red for Women Strategically Focused Research Network**

<http://jaha.ahajournals.org/content/7/12/e008590>

Nootropics for Sleep

- **Aniracetam**
750 mg in the am with a bit of fat in food
- **Bacopa Monnieri**
300mg also with fat (helps absorption)
- **DHA**
- **Melatonin 1-3 mg max**
- **Theanine**
200mg



Grounding- Help or Hype



The effects of grounding (earthing) on inflammation, the immune response, wound healing, and prevention and treatment of chronic inflammatory and autoimmune diseases
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4378297/>

Beyond Diet – What to do when you need to go deeper

Stool test – GI Map looks at DNA to rule out yeast, parasites, SIBO (all of these can contribute to mood disorders)

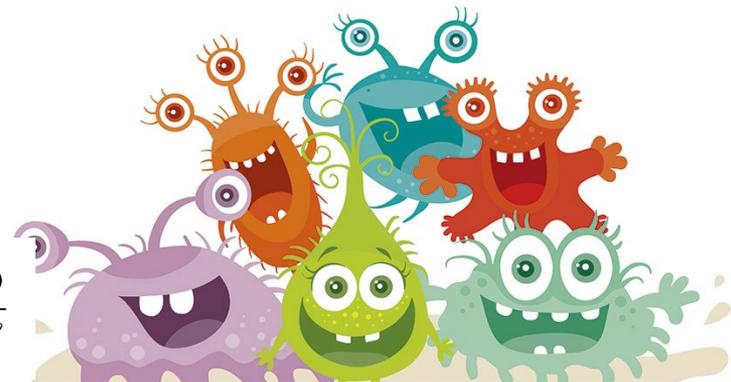
Genetic profile – certain SNPs create greater need for certain nutrients involved in making neurotransmitters

Advanced thyroid testing beyond TSH and T4 (include Free T3 and T4, antibodies, ferritin, Vitamin D)

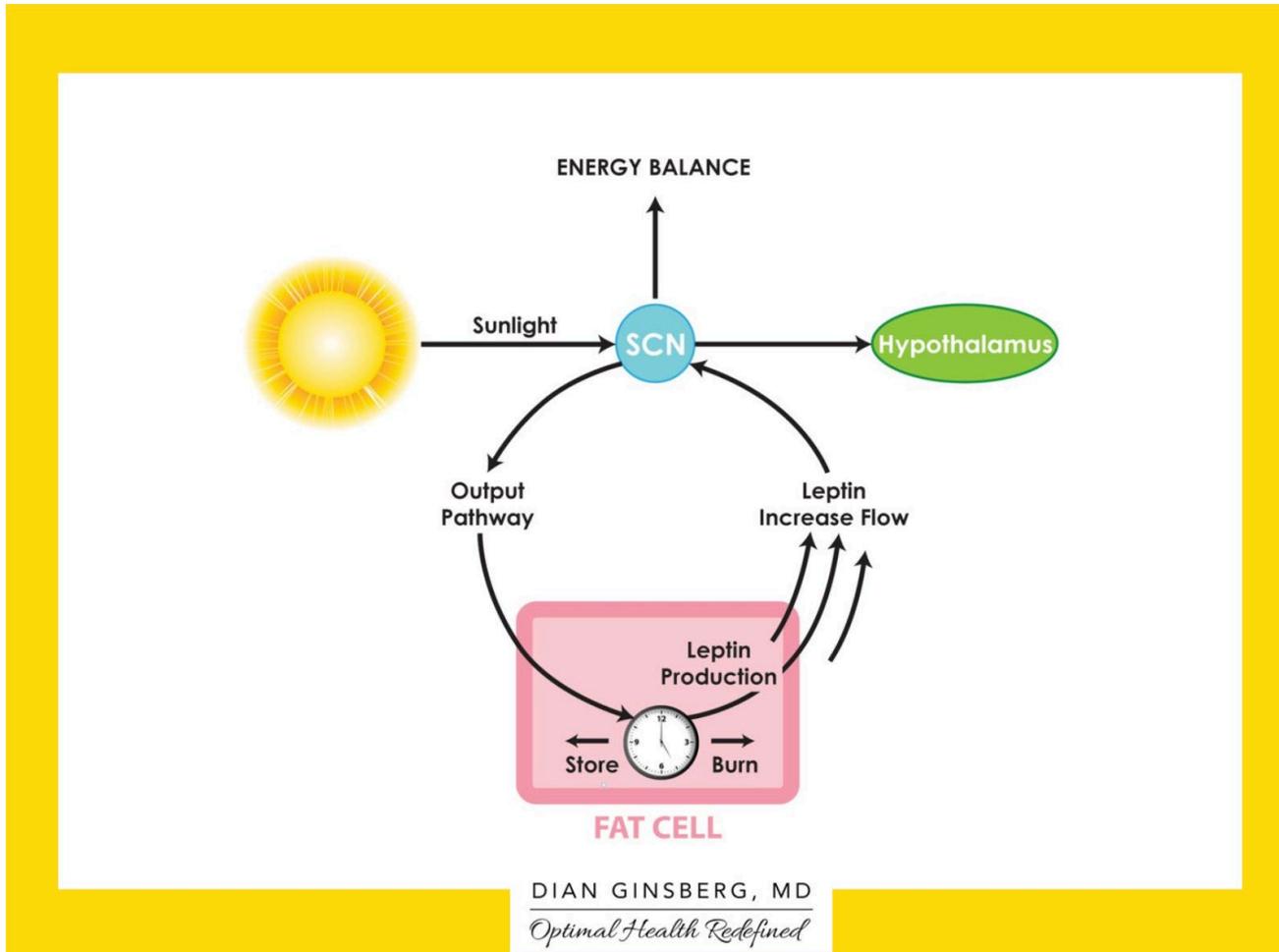
Are you Leptin Resistant?

What is your Leptin Level?

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How do I fix Leptin Resistance?



How do I fix Leptin Resistance?

Exercise

Types-

When-

Circadian Rhythm Reset

Exercise-

Sunlight

Mindfulness at bedtime

Sleep hygiene

Diet.....Keto seems to be the best choice

Other Therapies to Consider

Emotional Freedom Technique

Cognitive Behavioral Therapy

EDMR therapy

Neurofeedback

Yoga/Theater – lots of studies support this

Acupuncture

Journaling – Studies have shown it to work wonders for anxiety!

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Books To Dig Deeper

The Body Keeps The Score: Brain, Mind and Body in the Healing of Trauma by Bessel Van Der Kolk, MD

Panic Attacks Workbook: A Guided Program for Beating the Panic Trick by David Carbonell, PhD

A Mind of Your Own: The Truth About Depression by Kelly Brogan, MD

The Tapping Solution by Nick Ortner

Primal Body, Primal Mind by Nora Gedgudas

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Don't Forget to Download Your Bonus Content!

<http://www.dianginsbergmd.com/mood-bonuses>

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