

Nutrition class 2

By Dr. Shirley Watson

Sequence of protocols

1. Sugar/insulin handling
2. Microbiome/digestion
Methylation
4. Thoughts and beliefs



In the United States today the leading cause of death are drugs, not street drugs but prescribed drugs!

Over 100,000 people in this country die from prescription drugs per year, double the loss we incurred in the Vietnam war.

Americans are 4% of the worlds population,

Yet we consume 56% of the worlds pharmaceuticals.

If you are on a pharmaceutical for a long period of time,
the Doctor has given up!

- In 1950 the US was 5th for life expectancy, we are now 50th
- In 1965 infant mortality in the US was 23rd today we are 35th.
- There is now a 44% chance of getting cancer.
- We currently spend more on health care than on food per year.

Male infertility has increased 70% in one generation!

American doctors prescribed HRT for 54 years, until the Women's Health Initiative determined that HRT increased cancer, heart disease and osteoporosis.

We do not want to practice Allopathic nutrition!

Each patient is unique.

Listen carefully and they can tell you where the problems lie.

Illness

Change the environment so the cancer can't grow.

O-Ring testing

Bi-Digital O-Ring Test for Imaging and Diagnosis of Internal Organs of a Patient

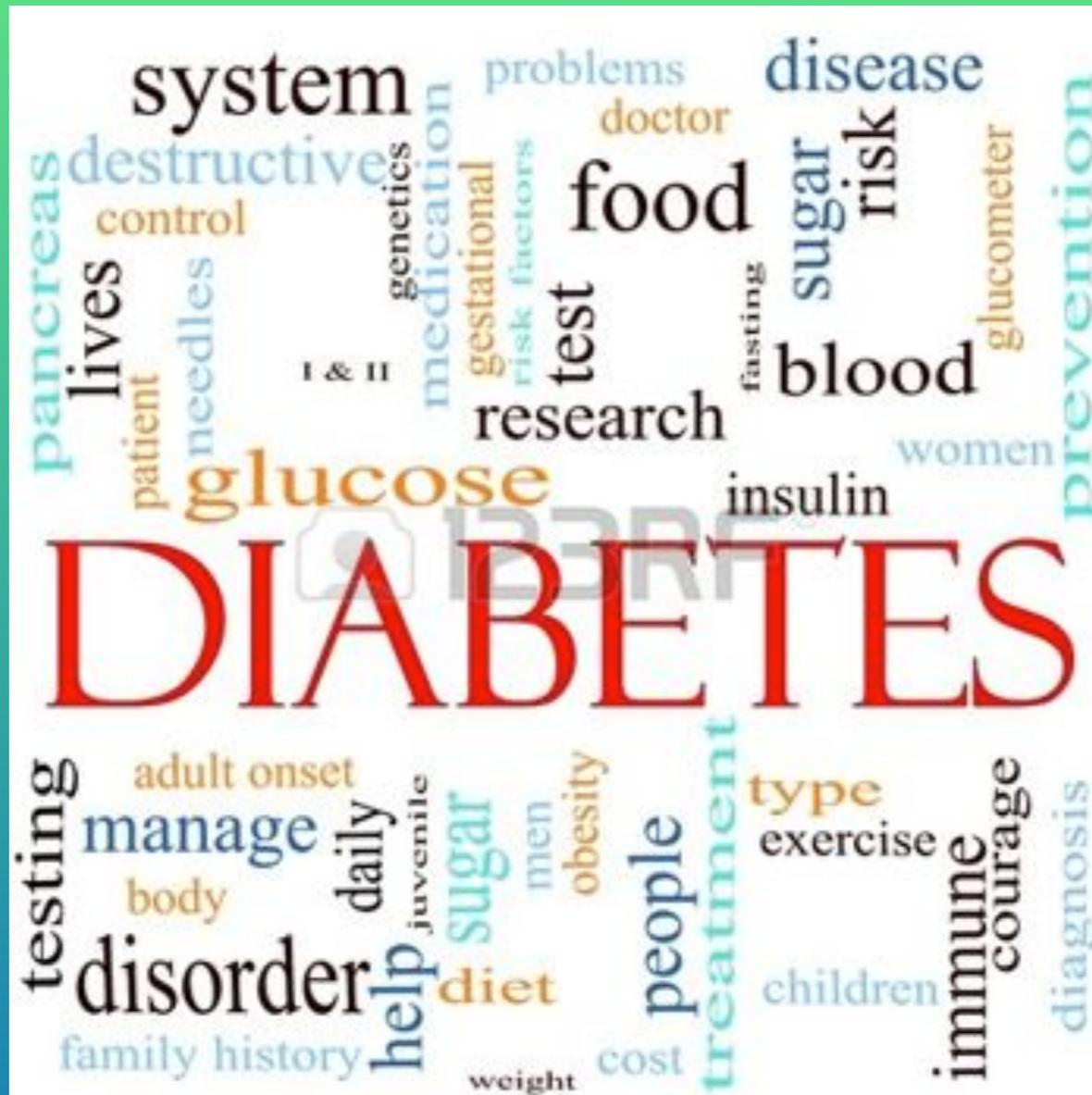
Patent No. 5,188,107 Inventor: Yoshiaki Omura, 800 Riverside
Dr., Apt. 8-1, New York, N.Y. 10032 Issued: February 23, 1993



The Sequence

I have found that when starting the process of facilitating patients to higher health there is a sequence of focus and processes that work best:

1. Deal with the sugar/insulin issues first.
2. Address the digestion/Microbiome.
3. Methylation pathway.
4. Ongoing deal with the thinking and beliefs of the patient.



One out of 2 kids 13 or less are pre-diabetic

High Insulin and blood sugar are the
real cause of all disease!!

Insulin is a hormone that is made in the Beta Cells of the Pancreas.

- Its primary job is to store glucose for future energy needs.
- Sugar is first stored as Glycogen in the liver and muscles.
- Once the muscles reach capacity it is then stored as fat.
- It takes 20 minutes of exercise to use up the stored Glycogen reserves, then fat is burned for energy.

Diabetes

- There are over 30 million diagnosed diabetics in the US.
- 86 million per-diabetics.
- Both are rising exponentially.
- The average american eats 200 pounds of sugar per year
- High blood sugar affects every organ in the body, pre-diabetes is just as destructive, all a matter of degree.

Insulin resistance

- Also known as Metabolic syndrome, syndrome X, or pre-diabetes.
- Insulin carries sugar into the cells to be made into ATP.
- Insulin Stores Magnesium for relaxation of the muscles and control of constriction of smooth muscle especially the blood-vessels. If this is interrupted it can cause High BP.
- Insulin also causes Na retention, that may cause high blood pressure.

- If there is too much sugar in the blood insulin becomes Unable to put more sugar into the cell and sugar then goes up in the blood. The cell becomes resistant.
- This process takes many years, by the time you have high blood sugar you have been well on your way for years.
- (Once fat cells become resistant to insulin Then blood glucose stays high).
- The signal for insulin to be released is glucose in the diet, the pancreas becomes exhausted with 200 pounds of sugar a year.

1. High insulin also stimulates the sympathetic nervous system

- This will increase Blood pressure
- Increase heart rate
- Constrict blood vessels
- Stops digestion.
- Insulin makes us gain weight.
- Moves blood away from the internal organs.
- Sweaty palms/perspiration.
- Irritability

Glucose works on many fronts

2. Because insulin is cell proliferating it also causes cancer.

3. It will cause the platelets to become sticky which increase heart disease.

4. Interferes with Thyroid function, especially the conversion in the liver of T4 to T3.

5. Build up of Plaque in the arteries from cell proliferation, which may lead to Heart disease.

- Alzheimers is often called Diabetes III
- It is basically the brain becoming insulin resistant.
- Statistics are 13% of people before age 65, 50% after age 85 will develop Alzheimers.
- The Primary brain is in the gut, gut inflammation causes brain inflammation and that's the long and the short of it.

Alzhiemers

In order to slow down this process and in some cases reverse the causes the following list of supplements are recommended;

1. DHA
2. CoQ10
3. Fish oil
4. MCFA/coconut oil
5. Digestive enzymes and HCL
6. Off all grains and sugars
7. Vit D

MCFA are unique in that they are easily absorbed and metabolised by the liver, and can be converted to ketones. Ketone bodies are an important alternative energy source in the brain, and may be beneficial to people developing or already with memory impairment, as in Alzheimer's disease (AD).

The journal Neurology published an article describing the results of a study that confirmed a strong association between low levels of vitamin D and increased risk of dementia and Alzheimer's disease in elderly people in the U.S.

Amber Waves of Grain Gone Awry

Norman Borelaug

1960 created
1980 everywhere



- Norman Borlaug an American biologist in the 1960's was looking for a way to feed the masses. He created a hybridized form of wheat that had a shorter stalk and denser seed production, up to 10 times denser than original wheat he was working with.
- He accomplished this in late 1960's and received the Nobel Prize for his work.
- This wheat was however not tested to determine the effects on the human body.

- How Does this wheat compare to the wheat that man has consumed for about 10,000 years?
- Einohorn wheat was the first wheat man harvested.
- Emmer wheat was a natural offshoot of the Einohorn wheat.
- Neither of these contained the protein gliadin in the form we find it today. Today's wheat is different by several proteins than even the wheat of the 60's.
- Today's gliadin can cross the blood brain barrier and attach itself to the opiate receptors in the brain causing changes in the brain.

Leaky Gut

- Lectins
 - Gliaden/Wheat
- The Lectins in the gliadin enter the gut and loosen the tight junctions between the cells allowing large undigested particles to enter the bloodstream; creating leaky gut syndrome
 - Vitamin D affects the tight junctions in the gut villi.

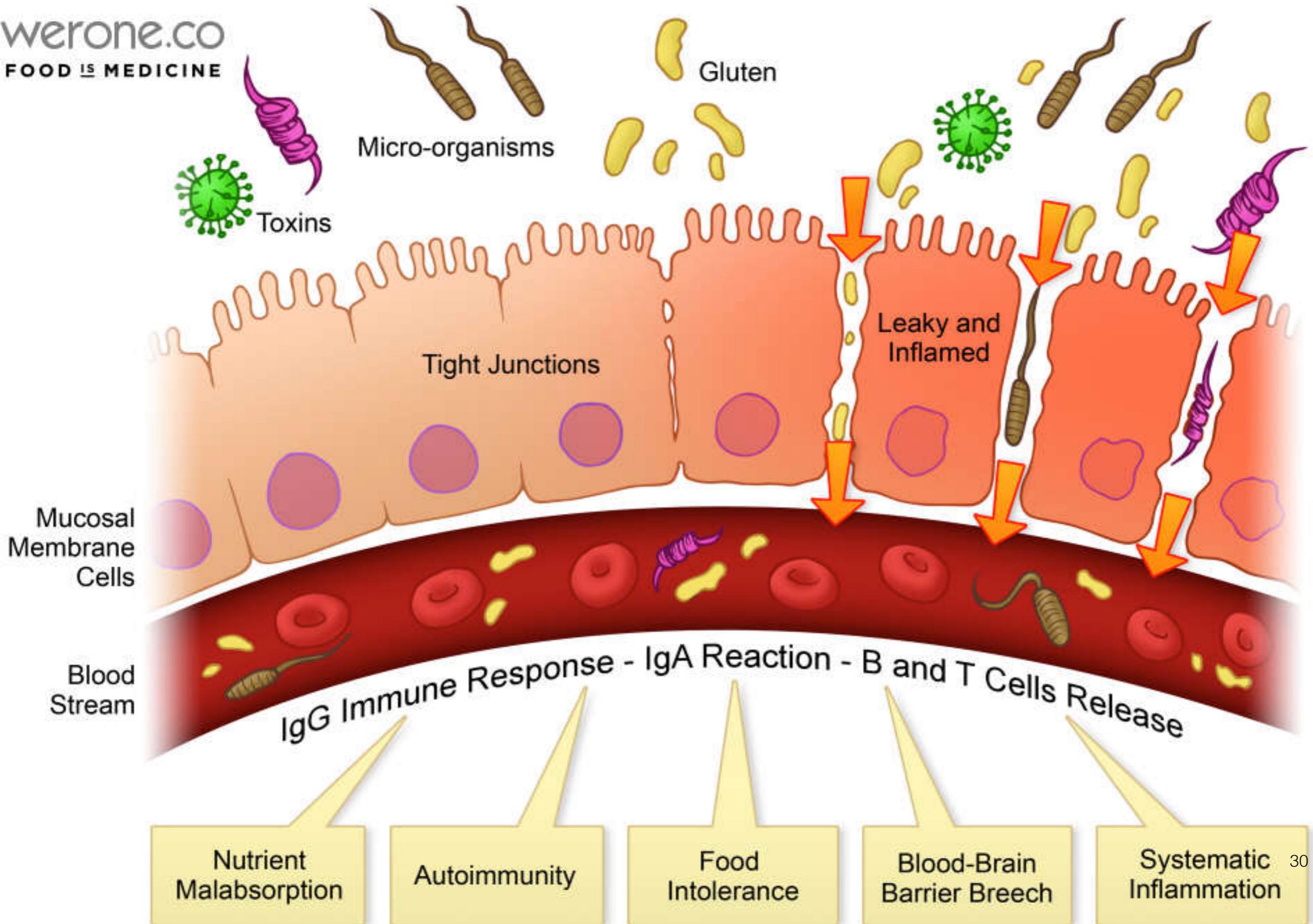
Lectins are a type of protein that can bind to cell membranes.

They are sugar-binding and become the “glyco” portion of glycoconjugates

on the membranes. They offer a way for molecules to stick together without getting the immune system involved, which can influence cell-cell interaction.

Leaky Gut is not a diagnosis, difficult to test for, more clinical.

werone.co
FOOD IS MEDICINE



Leaky Gut Syndrome

- Increases autoimmune disease
- Allergies
- Skin symptoms
- Ataxia
- ADHD
- Depression/brain diseases
- Candida and mold overgrowth
linked to cancer.
- and hundreds of others

- Researchers from The Bartholin Institute, Copenhagen, Denmark, explored the role of gliadin, a difficult to digest class of proteins within wheat in weight gain and insulin secretion in both animal and cell models. In these studies the findings that gliadin-treated mice gained 20% more weight (by day 100) than gliadin-free controls, and that gliadin fragments induce insulin secretion in pancreatic beta cells, the cells responsible for producing insulin, and which in type 1 diabetes are destroyed or rendered dysfunctional.

- The most destructive characteristic of this new wheat is the Glycemic index of 72, higher than white sugar at 54!

The Hybridized wheat:

- Increases the up side of bipolar disease.
- Increased ADHD.
- Causes Depression
- Increases appetite (most eat 400 calories more per day More.

Low Blood Sugar

Symptoms

- Shaky
- Anxious/anxiety
- Headaches
- Hunger
- Fatigue
- Sneezing
- Mood swings/crying/irritable
- Sweaty palms
- Loss of consciousness

- 70-90% of Serotonin is made in the gut.
- If you wait too long to eat serotonin is decreased.
- Decreased Serotonin will cause depression.
- Increased cortisol and adrenalin will also cause depression.
- Brain and Neurotrophic issues respond quickly to the removal of gluten from the diet.

DOPAMINE DEFICIT

SEROTONIN DEFICIT

PARKINSON-LIKE SYMPTOMS

- slow reaction time
- anergia

ANHEDONIA

- "pleasure center" dysfunction

DEPRESSION & CRAVING

OCD-LIKE SYMPTOMS

- obsessive thoughts
- compulsive behavior

IMPULSIVITY

- suicide
- aggression
- susceptibility to "cue triggers"

Testing

1. Most doctors test blood glucose. It takes years for this to stay high.
2. AbA1c, test the red blood cell. Glucose attaches to the red blood cell that lives about 120 days. An A1C is optimum at 5.4 or less.
3. Fasting Insulin is the most effective test, it will catch the process much faster than the other two.

The range is 5-25, but the best range is less than 10.

There is not an organ in the body that is spared from the ravages of high glucose and its counterpart high Insulin.

Adrenals

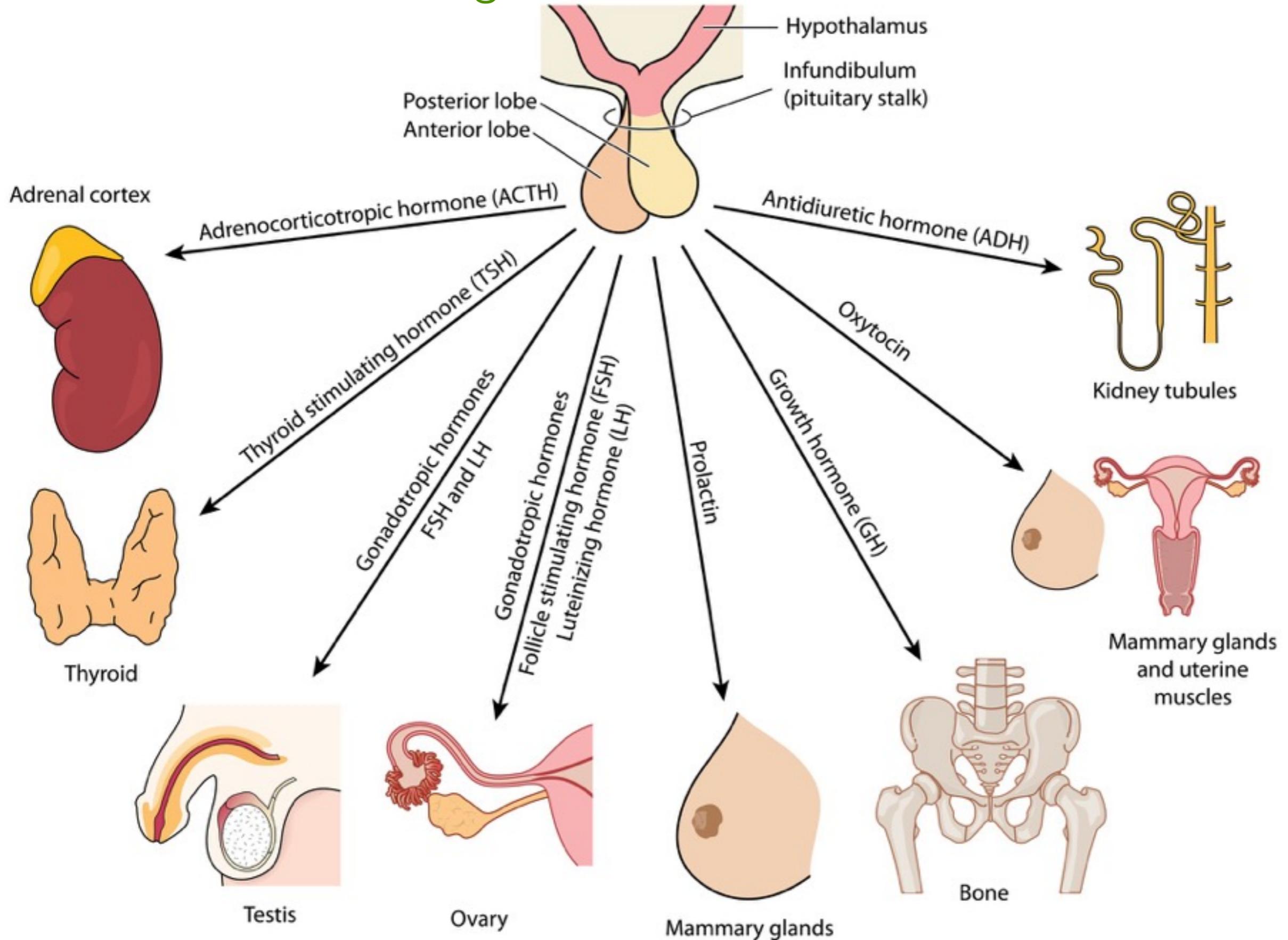
- The adrenals sit atop the kidneys and has two parts; The cortex and the medulla.



The Hypothalamus communicates
with the
pituitary that communicates with the
adrenals in a closed feedback loop.

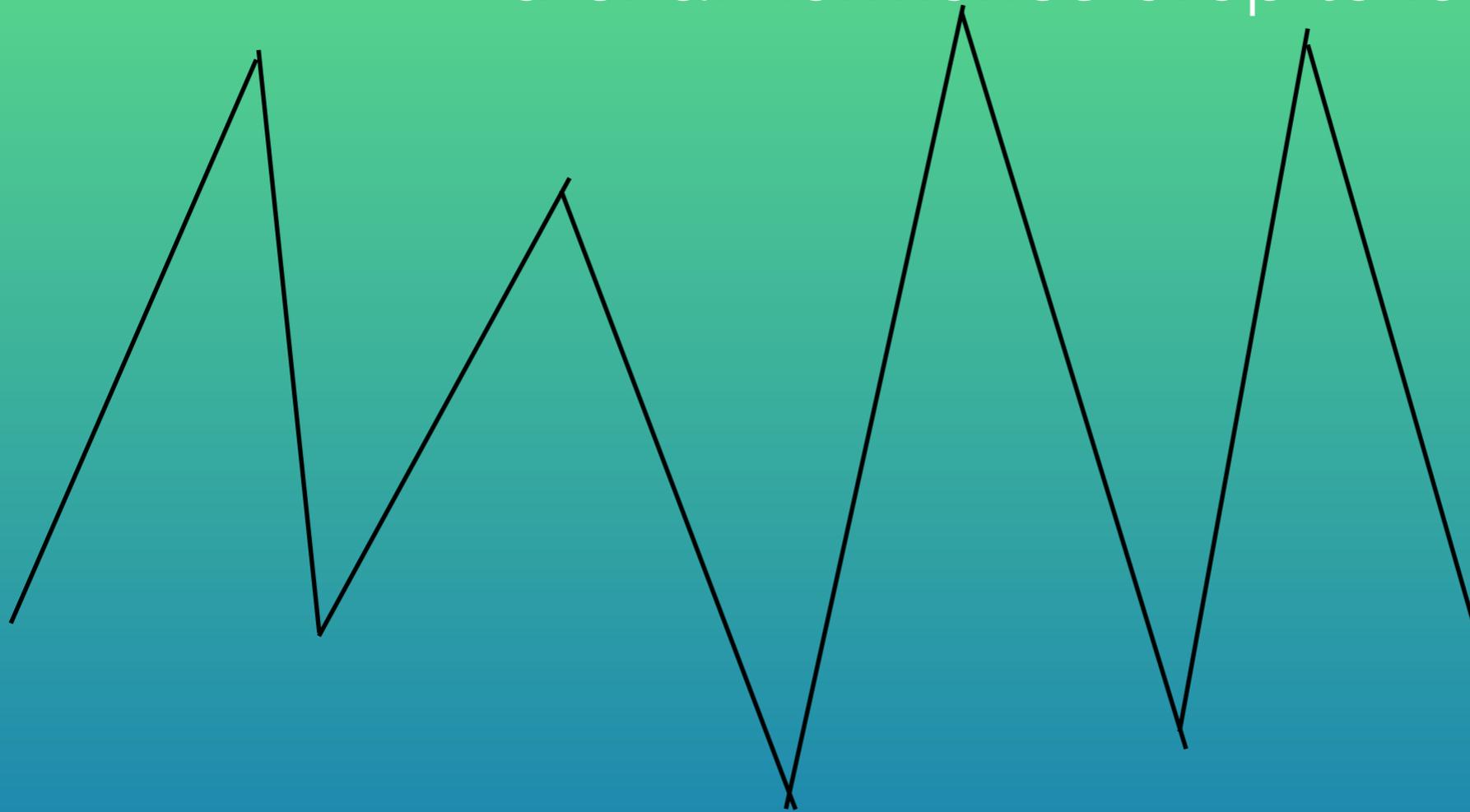
Everything is connected

Nothing works in isolation



The highs and lows of Blood Sugar

Adrenal hormones drop to lower sugar



Adrenal hormones go high to bring up sugar

The lows are very dangerous too.

The feedback loops in the body are all affected by diet, stress, sleep and thoughts.

- In today's world life is 24/7 and needs to happen now.

If you then add an accident, divorce or death to the mix as well as food allergies, toxic relationships, EMF's and events like Paris, your stress overflows the body's capacity to handle it.

Cortisol plays a part in:

- Digestion
- Blood Pressure
- Sleep/wake cycles
- Sugar handling
- Coping with Stress
- Energy levels
- Anti-inflammatory
- Hormones
- Thyroid

- Stress increases cortisol levels that can cause depression, Adrenal stress may be the main cause of depression.
- Cortisol controls sugar, and Alzheimer's is related to sugar handling, in fact it is in some circles being called Diabetes type III.
- By the time you get the first signs of memory loss it has been in process for 30 years.
- Sex hormones Decrease as cortisol goes up.
- FYI A women can not get pregnant with adrenal fatigue.

Increased Cortisol:

1. Increases belly fat.
2. Increases hunger due to sugar issues.
3. Causes insomnia, wake up between 2-3 AM because the Glucocorticoids cause the blood sugar to crash.
4. Bone loss.
5. PCOS (cysts on ovaries) (Insulin resistance in ovaries)
6. Interferes with the conversion of T4 to T3
7. High blood pressure.
8. Fatigue.

Temperature in the AM



Adrenal involvement

- Cortisol is excreted through the urine, high amounts can lead to prostatitis and chronic cystitis.

In order to lower high cortisol remove

- Caffeine
- Alcohol
- Sugar
- Late nights
- Drugs
- Mental stress
- Grains

Add:

- Magnesium
- Vitamin C
- Phosphatitylserin, performance and memory.

- Grapefruit juice,

(Contraindicated if using any drugs, i.e.. Statins
Antihistamines, CCB, Pain meds to name a few).

Grapefruit is an easy source of energy. It has B vitamins, potassium, iron and calcium. Mix lemon juice and grapefruit juice in equal quantity. Drink this daily. This helps in getting rid of chronic adrenal fatigue.

- Licorice (*Glycyrrhiza Glabra*),
(contraindicated if pregnant, have high blood pressure or heart disease).(can use de-glycerized)

Licorice improves immune system and boosts adrenal functions. Thus it helps in relieving the weaknesses of mind and body.

Vitamin B: Lack of pantothenic acid and vitamin B can lead to extreme fatigue. Deficiency of vitamin B results in exhaustion of adrenal glands. 30 mg of pantothenic acid is daily required for keeping the body energetic. B complex Vitamin group protects the nerves. They nourish and regulate glands. Rice wheat germ, liver and brewer's yeast are foods rich in vitamin B.

- Meditation
- 5 consecutive hours of sleep,
each hour before midnight is worth 2 after
- Exercise

Low Cortisol is an indication of Adrenal fatigue!

- Exposure to long term stress hormone will cause insulin resistance
- Feed me now means low Adrenals!
- Most joint pain is from adrenal fatigue.
- Low cortisol patient usually have low blood pressure.
- Orthostatic hypotension,
diagnose orthostatic hypotension
if you have a drop of 20 millimeters of mercury
(mm Hg) in your systolic blood pressure or a drop
of 10 mm Hg in your diastolic blood pressure within
two to five minutes sitting to standing up.

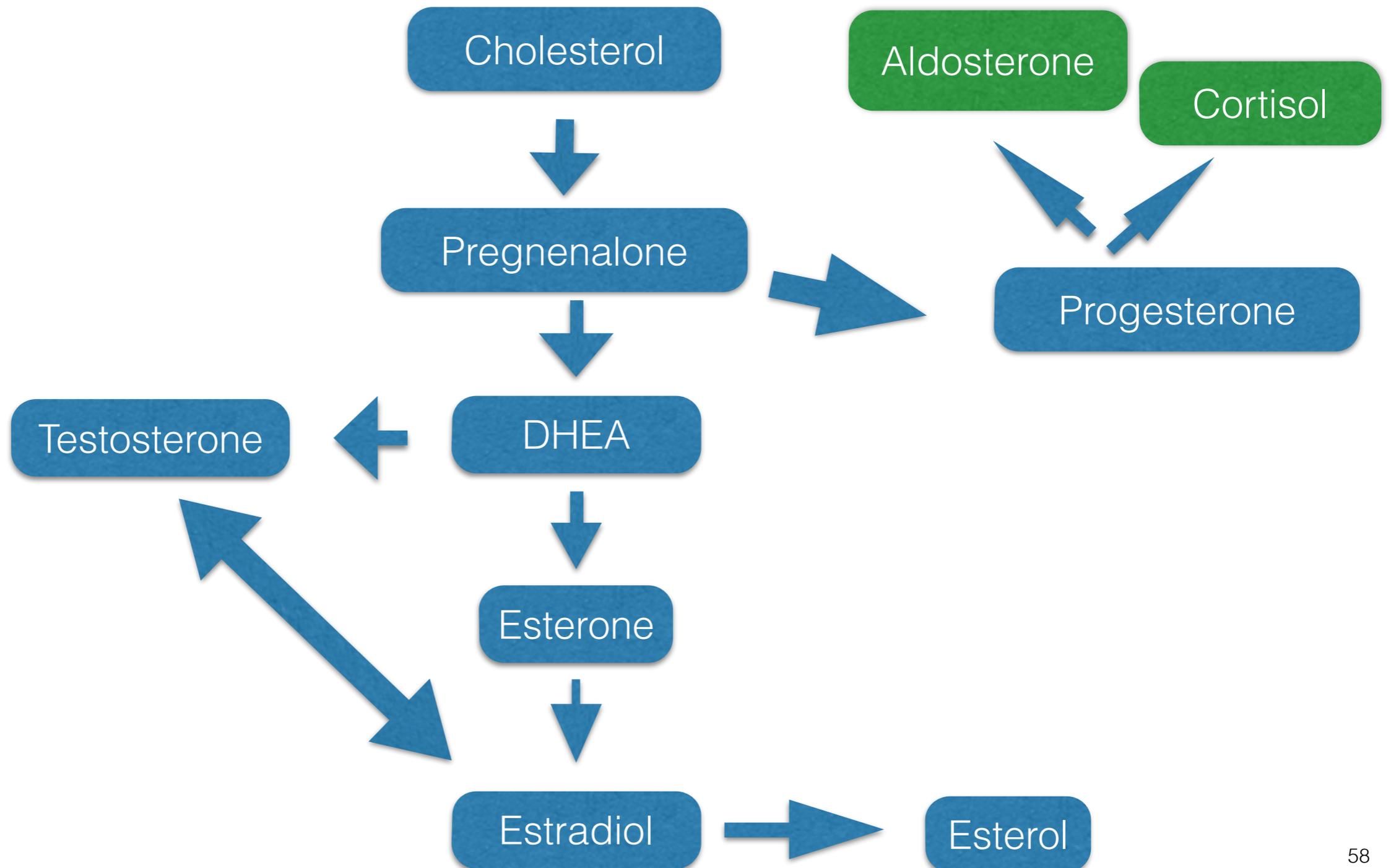
Low Cortisol

1. CFS
2. Bone loss
3. Fibromyalgia
4. Edema
5. Fatigue
6. Sleep issues
7. Skin rash

- 35 % of the sex hormone production are taken over by the adrenals after menopause.
- Fix the Adrenals first, bio-identical hormone supplementation should be the last resort.

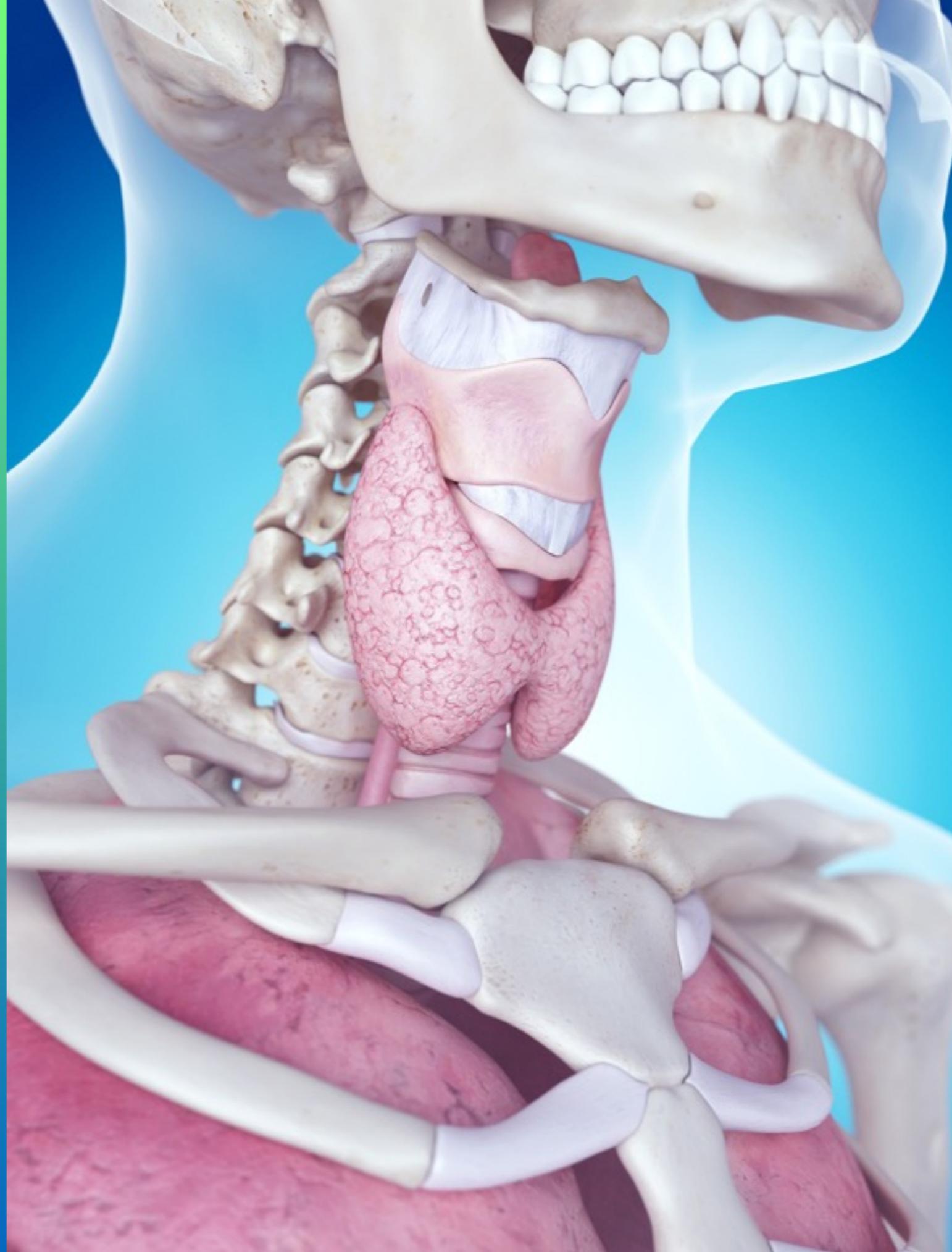
Sex Hormones and Cortisol

- Progesterone Steal Syndrome



Thyroid

Also affected by
sugar/insulin,
and adrenal
function



The Thyroid is very sensitive to corticoids and will inhibit TSH and the conversion of T4 to T3.

Blood Tests for thyroid include:

- TSH
- T3
- T4
- Free T3
- Free T4
- rT3
- Thyroid globulin
- Thyroid antibodies

The level of free T4 hormone illustrates how much is immediately available for uptake and use by cells, and measure of free T3 hormone in the body is considered a more accurate view of hormonal balance than a total T3 reading.

The thyroglobulin test is primarily used as a tumor marker to evaluate the effectiveness of treatment for thyroid cancer and to monitor for recurrence. Not every thyroid cancer will produce thyroglobulin, but the most common types, the well-differentiated papillary and follicular thyroid cancers, frequently do, resulting in increased levels of thyroglobulin in the blood.

Thyroid peroxidase antibody (TPO)—the most common test for autoimmune thyroid disease; it can be detected in Graves disease or Hashimoto thyroiditis. Thyroglobulin antibody (TGAAb)— this antibody targets thyroglobulin, the storage form of thyroid hormones.

The Thyroid needs:

- Iodine
- Selenium
- B vitamins
- Vit C

If Iodine is low in the body you will see;

- Fibrous cystic Breast disease.
- Iodine is needed in the breast, ovaries, uterus and Thyroid.
- Seaweed as a source of iodine.

The Thyroid is the only organ that stores its own hormone.

Foods that block thyroid

- Soy and Cruciferous veggies.

They cause **Trypsin Inhibition**. First among them are potent enzyme inhibitors that block the action of trypsin and other enzymes needed for **protein digestion**.

“These inhibitors are large, tightly folded proteins that are not completely deactivated during ordinary cooking. They can produce serious gastric distress, reduced protein digestion and chronic **deficiencies in amino acid uptake**. In test animals, diets high in trypsin inhibitors cause enlargement and pathological conditions of the pancreas, including cancer.”¹⁴

Mercola

Soybeans also contain haemagglutinin, a clot-promoting substance that causes red blood cells to clump together.

- Any stress that affects the adrenals will increase cortisol which will decrease active thyroid.

- Synthroid and Levothyroxin only affect TSH.

Every Person is individual

Don't shoot a shotgun at them!!

Neuroscience Comprehensive Testing

This is a saliva test that is taken throughout the day and night to test hormones, neurotransmitters, cortisol and steroid hormones.

Microbiome

100 trillion microbiota cells in the gut,
10 fold the number of cells found in the human body.



Microbiome = Digestion

According to Dr. Russel Jaffe :

“Good bugs crowd out bad bugs and not the other way around.”

Three things are needed to have a healthy Microbiome

1. Fiber/pre-biotics -40-100 grams per day
2. Probiotics-40-100 billion per day
3. Glutamine 1.5 grams 3-4 times per day. Too much at once can form Glutamate, causing inflammation. Glutamine is a very effective intestinal and immune system health compound, as these gut cells use glutamine as the preferred fuel source rather than glucose.

The Human Microbiome.

Microbes interact in communities, and they respond to their surroundings. Just like organisms in Earth's ecosystems, our microbial populations shift when their environment changes.

- The Microbiome can influence the food choices we make by causing craving for the foods they need.

What affects the Microbiome?

- Low HCL
- Drugs and chemicals
- Poor food choices/sugar
- Low intake of probiotics
- Stress

All of the above, especially drugs interfere with organ function.

- Greater than 50 % of all Autistic children have GI symptoms.
- But this can be said for all neurodegenerative disorders.

Some of the most intriguing work has been done on autism. For decades, doctors, parents, and researchers have noted that about three-quarters of people with autism also have some gastrointestinal abnormality, like digestive issues, food allergies, or gluten sensitivity.

This recognition led scientists to examine potential connections between gut microbes and autism; several recent studies have found that autistic people's microbiome differs significantly from control groups.

The California Institute of Technology microbiologist

Sarkis Mazmanian has focused on a common species called *Bacteroides fragilis*, which is seen in smaller quantities in some children with autism. In a paper published two years ago in the journal *Cell*, Mazmanian and several colleagues fed *B. fragilis* from humans to mice with symptoms similar to autism. The treatment altered the makeup of the animals' microbiome, and more importantly, improved their behavior:

They became less anxious, communicated more with other mice, and showed less repetitive behavior." When gut Bacteria change brain function also changes.

By David Kohn.

Exactly how the microbes interact with the illness—whether as a trigger or as a shield—remains mostly a mystery. But Mazmanian and his colleagues have identified one possible link: a chemical called 4-ethylphenylsulphate, or 4EPS, which seems to be produced by gut bacteria. They've found that mice with symptoms of autism have blood levels of 4EPS more than 40 times higher than other mice. The link between 4EPS levels and the brain isn't clear, but when the animals were injected with the compound, they developed autism-like symptoms.

So far, most microbiome-based brain research has been in mice. But there have already been a few studies involving humans. Last year, for example, Collins transferred gut bacteria from anxious humans into “germ-free” mice—animals that had been raised (very carefully) so their guts contained no bacteria at all. After the transplant, these animals also behaved more anxiously.

Research demonstrates, according to Dr. Joel Dore, that
“microbiome diversity is low in north -American...”

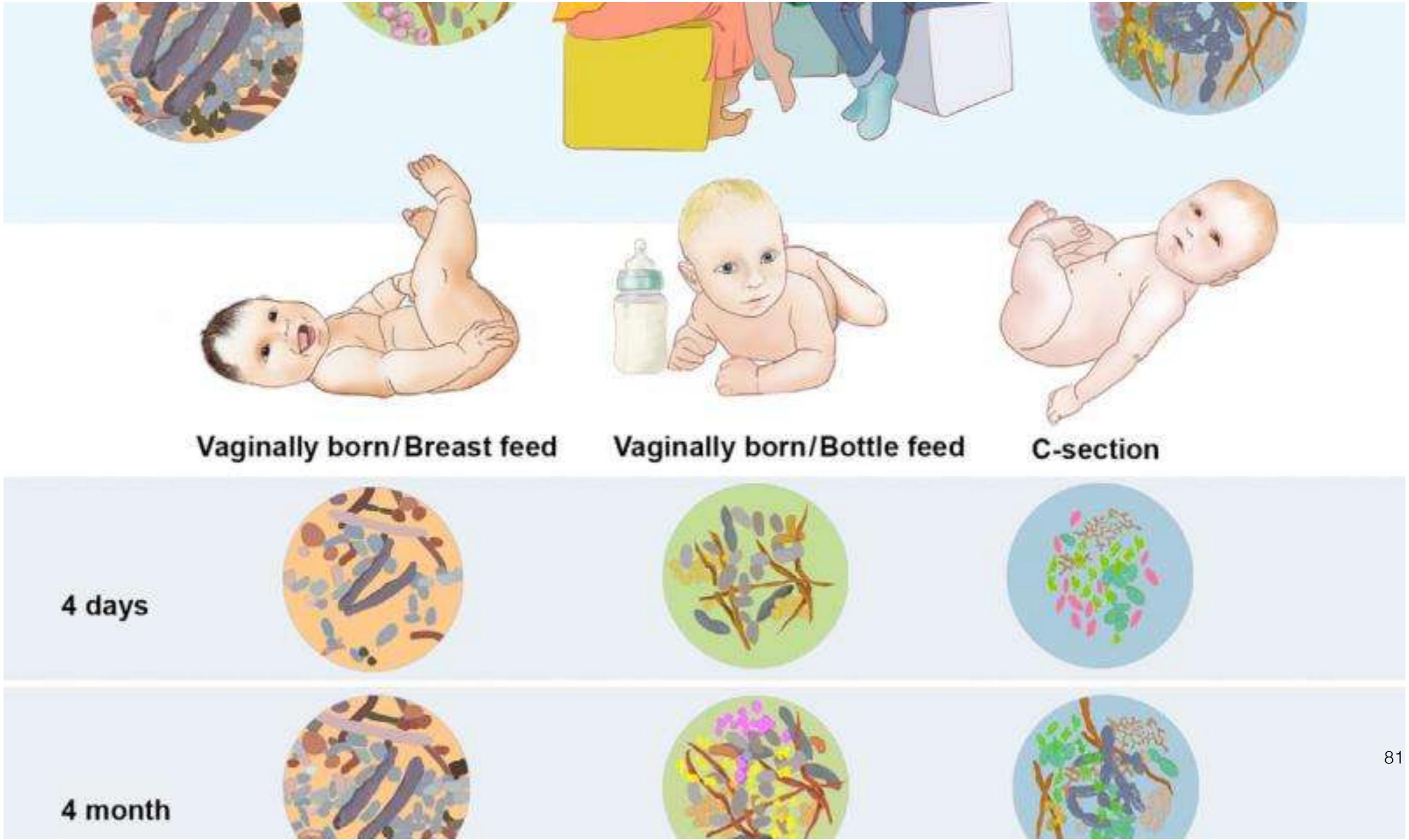
- This microbial “interacts with food and with human cells”, far beyond the gut.
- The Microbiota can be modulated by diet, fecal microbiota implants, (Clostridium Difficile) currently for immune disorders. , Dysbiosis in the gut is seen in IGD, Obesity, Chron’s disease, Insulin resistance, dyslipidaemia and inflammation.
- Obese patients have different gut bacterial gene counts and different species than those not obese, this is indicative of “poor response to nutritional intervention.”

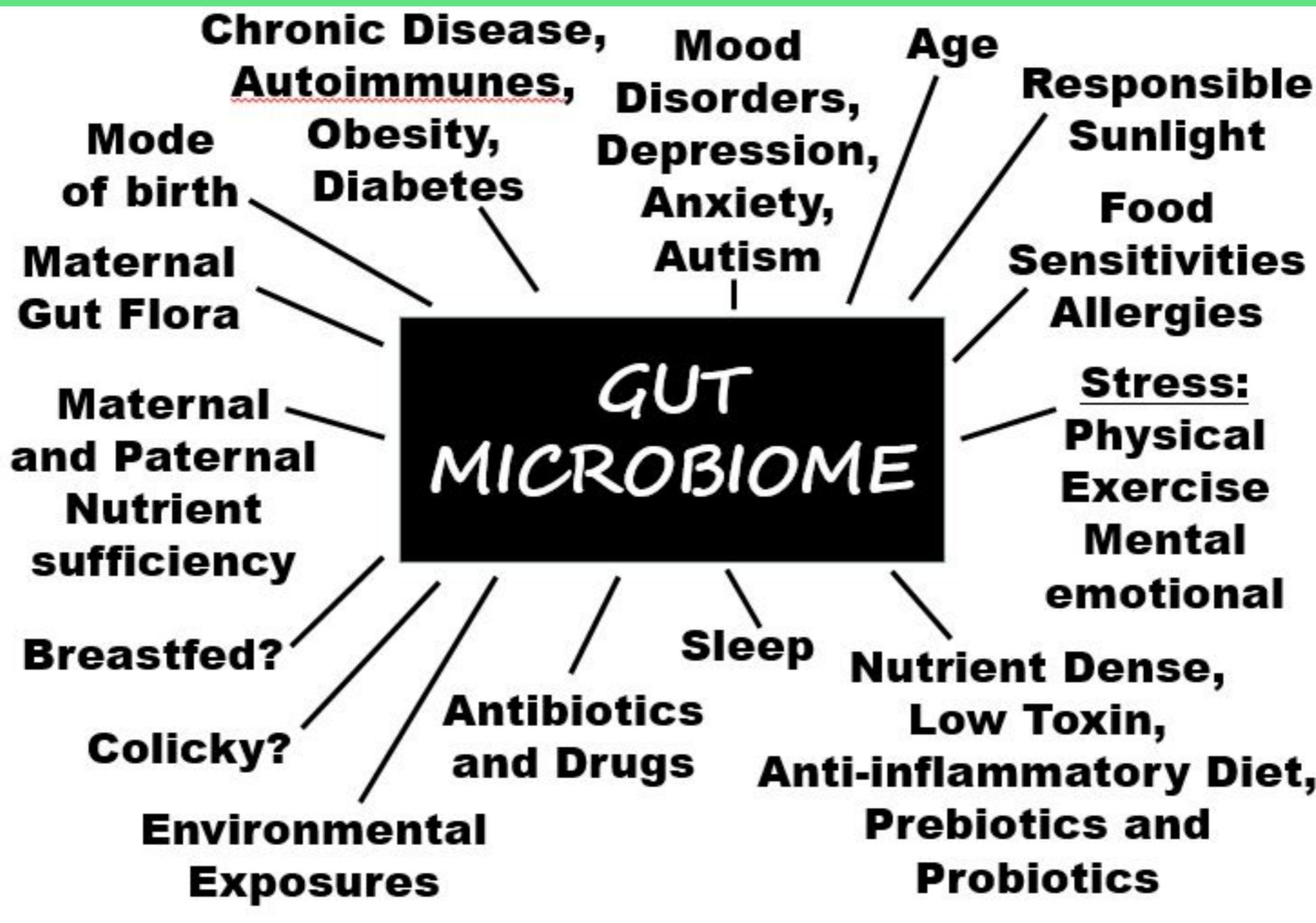
The colonization of the gut flora begins at birth and is determined by a number of factors.

- The length of gestation, premies have less colonization.
- Nutrition of both parents at conception.
- Mothers Microbiome quality.
- Breast or bottle fed, pick up flora from the mothers skin.
- Over hygienic parents.
- Low bacterial diversity delays maturation of the mucosal immune system predisposing kids to allergens and associated illnesses.

Microbiota is passed on to the baby during birth, through the birth canal, skin and feces.

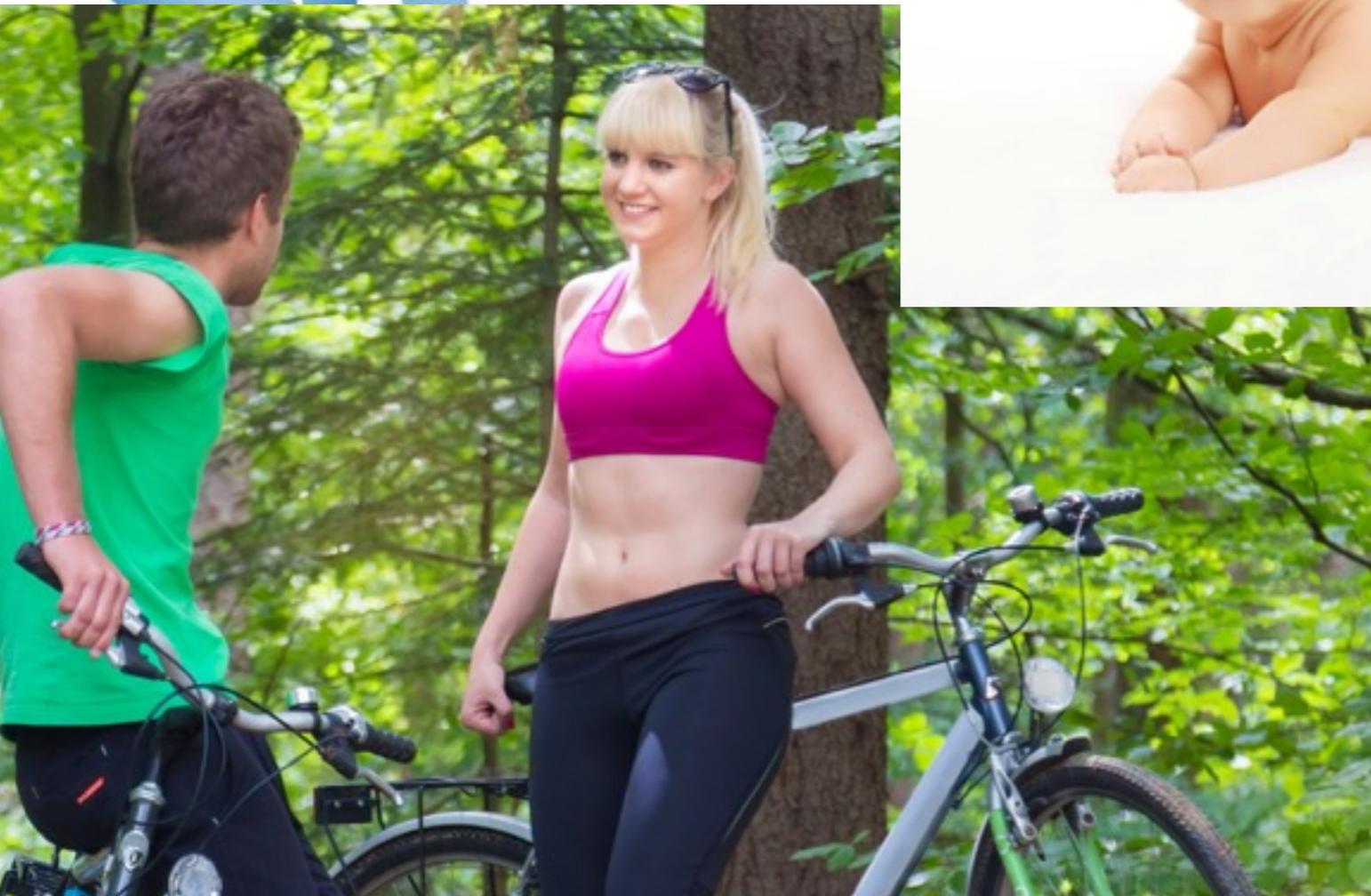
How the baby is delivered and fed after birth matters!





Slide property of Biome Onboard Awareness, LLC, <http://biomeonboardawareness.com/>

- Stress deprives the stomach and internal organs of O₂. With no O₂ you can not digest your food.
- Stress moves blood from the core to the extremities.
- Stress causes pathogenic bugs to grow 10,000 times faster creating a dysbiosis in the gut ie Candida overgrowth being fed by adrenaline as well as sugars.
- Need stress reduction techniques: Meditation, exercise/ movement. Balance in work and play. Faith and friends.



Telomere shortening

a compound structure at the end of a chromosome.

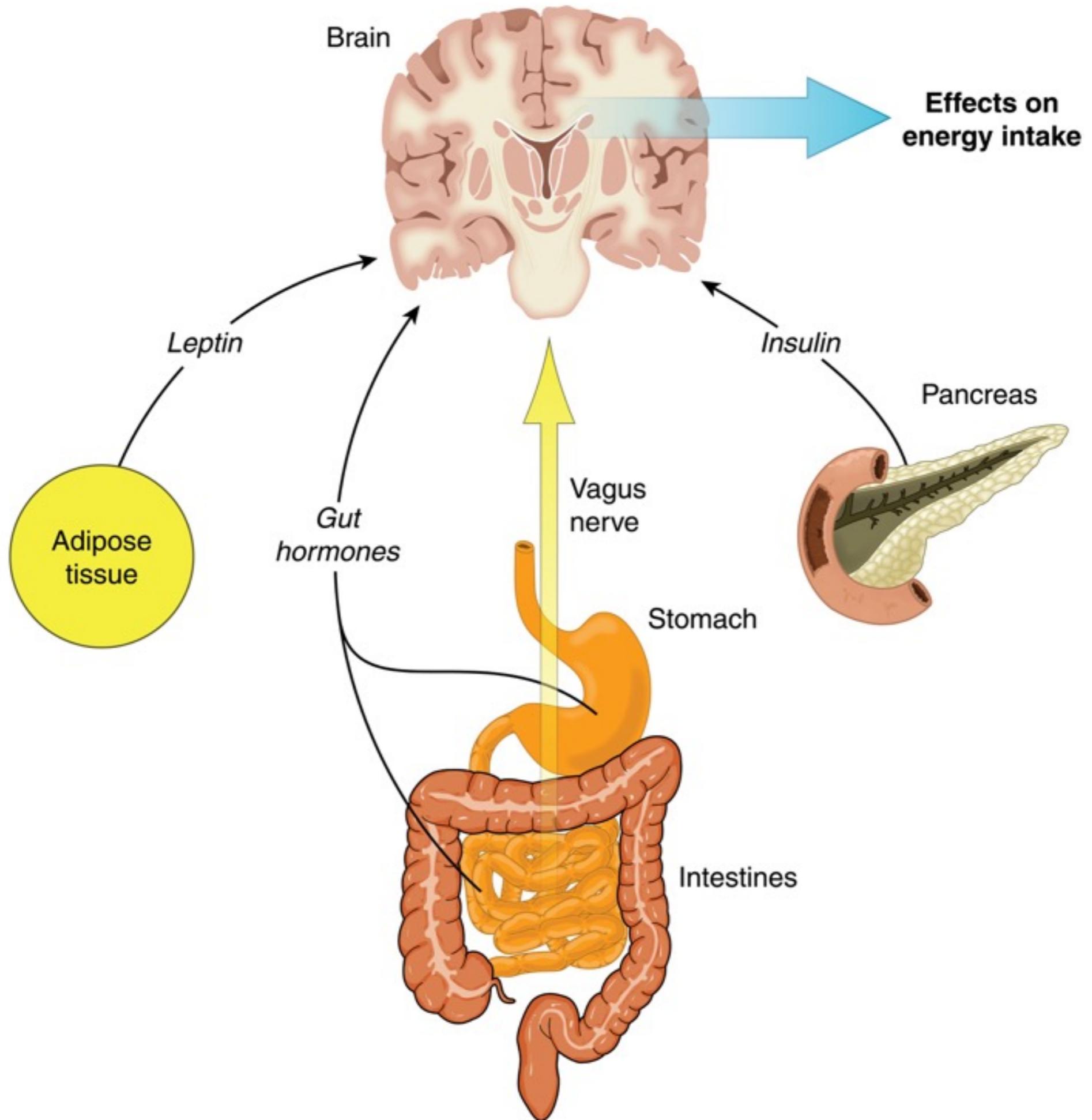
Aging of the brain can be measured.

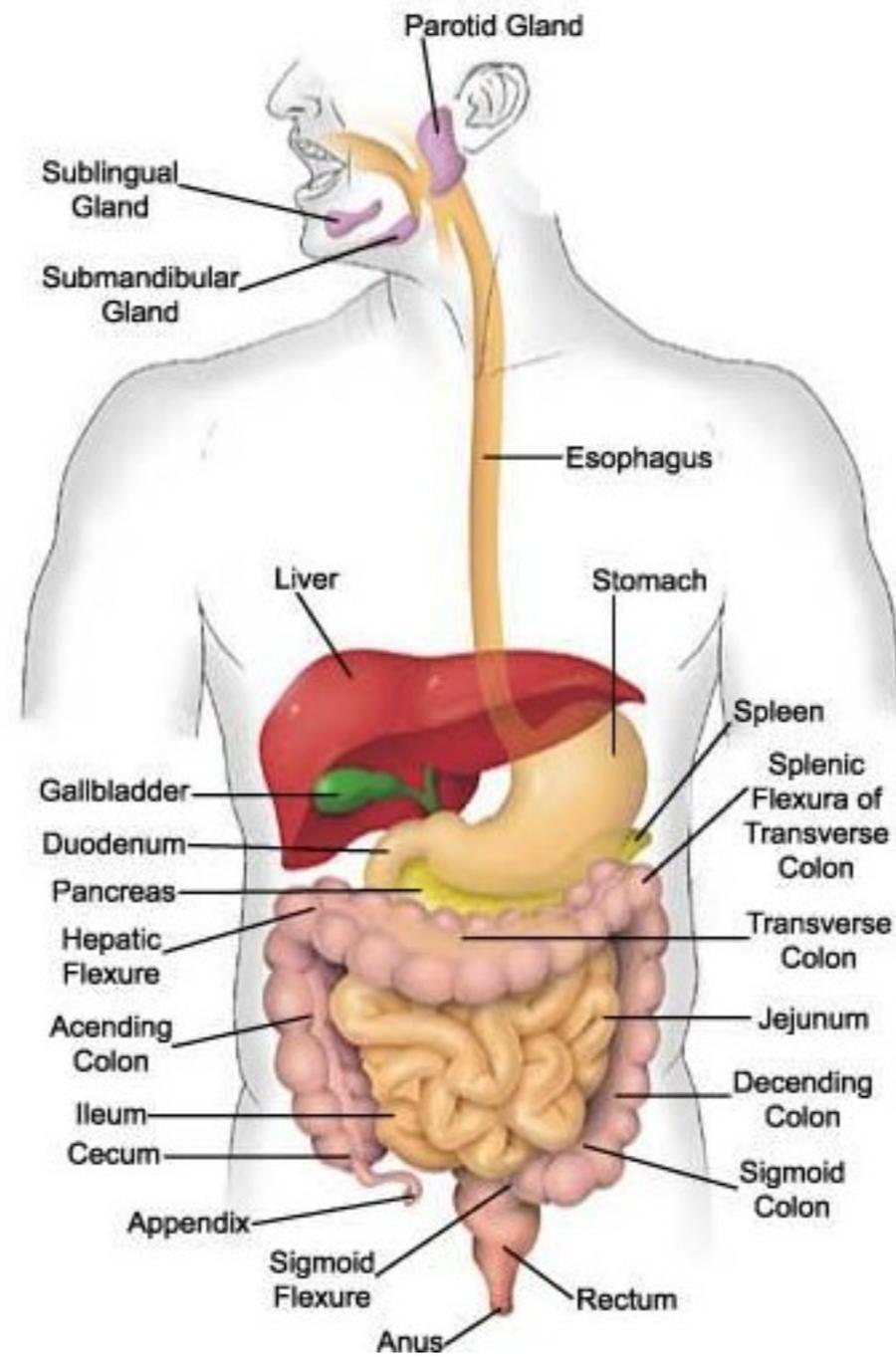
This process has been proven to be reversed by such deep relaxation techniques as Meditation, deep breathing and other relaxation techniques.

- Estrogen is converted in the liver and moved into the bile for elimination from the body. So these organs need to be healthy to do their job.
- Mental stress will stop the removal of estrogens from the body.
- This will increase estrogen sensitive cancers.
- Men are not excluded from this.
- GallBladder and Liver are dependent on Methylation to function properly.
- Making bile is methylation dependent.

- Increased estrogen is the main cause of Gallbladder disease.
- When estrogen goes up Methyl groups go down causing a thickening of the bile.
- Gallbladder removal is one of the top 10 surgeries in the US.
- The Gallbladder is almost always able to be saved!

- The micro biome correction may be associated with the resolution of insulin resistance.
- This is why above all else insulin issues are dealt with first.
- Remember the genes of the microbiome speak to the genes of the human, called **cross-talk**, when the communication is altered intestinal ecology may contribute to chronic health conditions.





All disease starts in the gut.

There are 10 times more bacteria in the gut than there are cells in the body.

Biofilms are communities of pathogenic bacteria living in the gut, hiding behind these films. Biofilms create a barrier/film between the gut wall and the food source. Basically starving the system of nutrients.

There are ways to eliminate these biofilms, laser, sulfur supplements and food, additionally adding probiotics to the gut will increase clarity, learning and neuroplasticity. The gut is actually the first brain.

“All disease begins in the gut”

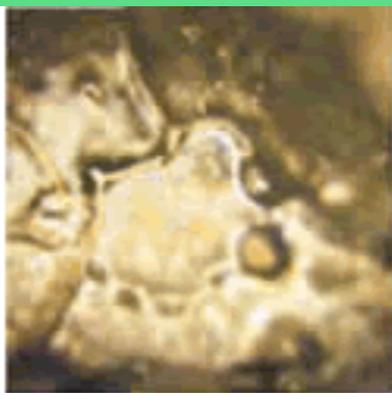
- A healthy relationship with the gut organ is important for health.
- Toxins are not produced by the gut bugs until they die, it is the rotting corpus and the toxins they release that create the problems.
- The gut is where the main pool of the immune system lives.
- The second largest pool of neuro-cells.

According to Dr. Joel Dore
Research director for INRA, France.

- There is a cross between microbiome and human genome that impact endocrine, neural and immune functions. (The DNA of the gut flora affect the DNA of the human cell).
- The Microbiome is a true organ that protects us through all life stages, and consumes us when we die.

Water-H₂O

- Because the body is an electrical system whose processes occur in the presence of water we need to hydrate, especially when taking supplements. Certain minerals create an electrical charge that is mediated in water.
- Drink water with your meals, our digestive juices were designed to work in water.
- Water carries information as demonstrated by Dr. Emoto's work with water.



Water Molecule,
Before Offering a Prayer



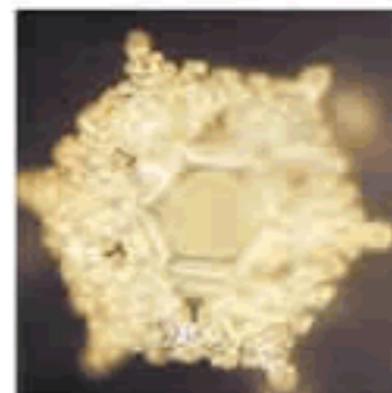
Water Molecule,
After Offering a Prayer



Thank You



You Make Me Sick,
I Will Kill You



Love and Appreciation

SIBO

Small Intestine Bacterial overgrowth

This occurs only when there is an hospitable host.

Causes:

1. Antibiotics kill the good guys
2. Stress hormones impair digestion
3. Diet/sugar/soda/grains
4. Drugs and chemicals

Breath test for SIBO

A breath test measures both hydrogen and methane production as the digestive process proceeds. Accurate analysis of these gases can be used to assist in the diagnosis of several conditions that can cause gastrointestinal symptoms.

- When dealing with digestive issues rule out blood sugar problems first.
- Low blood sugar will release Glutamate into the brain and will cause brain fog.
- Must eat every 3-4 hours to heal the adrenals and the brain.
- Sleep 5 consecutive hours, every hour before midnight is worth 2 after.
- When adrenalin is released it will cause the pancreas to release Glucagon which will eventually over stress the pancreas .
- When Glucagon is increased HCL is decreased with low blood sugar and will shut digestion down.

Glucagon is a peptide hormone, produced by alpha cells of the pancreas, that raises the concentration of glucose in the bloodstream. Its effect is opposite that of insulin, which lowers the glucose concentration.

Reece J, Campbell N (2002). Biology. San Francisco: Benjamin Cummings. ISBN 0-8053-6624-5.

Sources of Probiotics

1. Ferments

- Kiefer
- Yogurt
- Kimchi
- sauerkraut
- Supplements

Unprocessed Fiber Sources

All food that you need to chew.

- Veggies and fruits
- Nuts and seeds
- Real food/nothing from a
Box or can
- Beans

Cholesterol

75% of your cholesterol is made in your liver

If you decrease the amount of cholesterol in your diet your liver will increase its production!

We need cholesterol!!!

In 1961 a doctor by the name of Ansel Keys did a study called the Seven Country Study where he demonstrated that saturated fat consumption leads to heart disease.

In this study he purposely excluded countries where his hypothesis did not work, like France where lot's of saturated fat is consumed and there is no increase in heart disease.

Cholesterol is involved in:

- The immune system
- Nerve conduction
- Muscle contraction
- Hormone production
- Vitamin D
- 50% of the cell membrane (50% protein)
- Protects against oxidative stress
- 25% of the bodies cholesterol is in the brain.
- Memory

LDL's and HDL's are not cholesterol!

They both contain cholesterol. LDL carries fat soluble products into the cell then HDL comes along to carry the LDL back to the liver as a small lipoprotein.

When there is too much sugar in the blood it will attach to the LDL, called glycation, then HDL can not attach to the LDL so macrophage come in to help out. LDL then stores in the lining of the arteries creating atherosclerosis. HDL can not carry the LDL back to the liver.

- Over 50% of all people having heart attacks have a cholesterol level of 200 or less, cholesterol is not the problem.

If the LDL is plump they are doing the job, if they are small dense molecules they are not.

The best test to determine the size of the molecule is

The **VAP cholesterol test**, it is a type of cholesterol test that is a little more detailed than a typical cholesterol test.

Like the lipid profile, the **VAP** test works by spinning a blood sample to separate lipids by weight.

The VAP test categorizes LDL cholesterol by relative size, and also breaks HDL cholesterol down into subclasses. Current research indicates that certain patterns of LDL particle sizes may indicate a greater risk for the development of heart disease. Additionally, one subclass of HDL, HDL2, is considered to be particularly heart-protective.

The VAP test also measures some blood lipids that the current lipid profile ignores, such as very low density lipoprotein (VLDL); intermediate-density lipoprotein (IDL); and lipoprotein(a) [Lp(a)].

Low Cholesterol

- You can not make hormones if your cholesterol is too low.
- Indicates chronic stress.

Low Cholesterol

1. Lowers Pregnenolone
2. Lowers Progesterone
 - Increase period
 - PMS
 - Insomnia
 - Regulates heart rate (arrhythmia)
3. Increased Estrogen
 - Cancer
 - Weight gain
 - Increase blood clots
 - Increase gallstones

4. Increased androgens

- Increased hair growth (facial hair on women)
 - Ovarian cysts
 - Skin issues
 - DHEA should go up as Cortisol goes down
- DHEA supplementation must be monitored very closely, it can drive Estrogens and Testosterones and cause inflammation and cancer.

5. Decreased Testosterone

- Decreased energy
- Brain Fog
- Decreased sex drive.

Statins

Statins interfere with the enzymes in the liver that make cholesterol, these enzymes also make CoQ10.

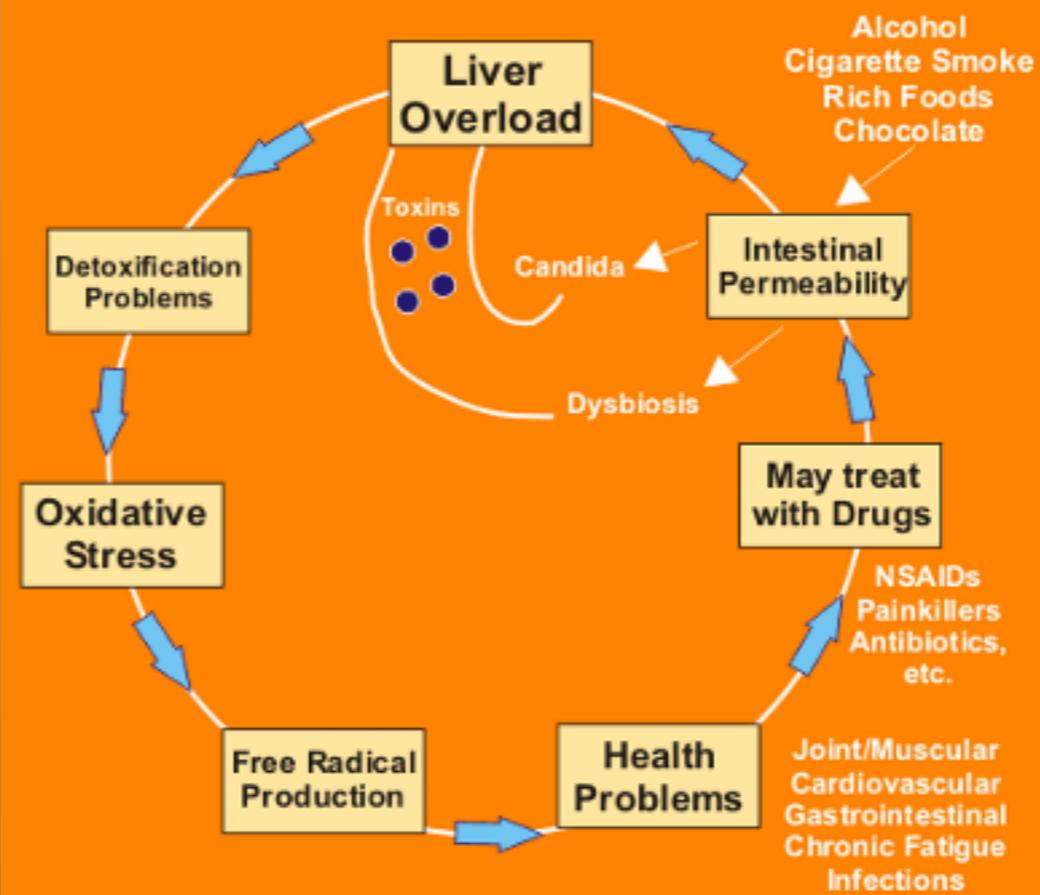
CoQ10 protects us against heart disease.

- Studies do not show that statins save lives
- The lowering of CoQ10 increases the risk of heart problems
 - Statins have increased memory problems.
- Statins also contribute to hormone imbalances because cholesterol is needed to produce all hormones.

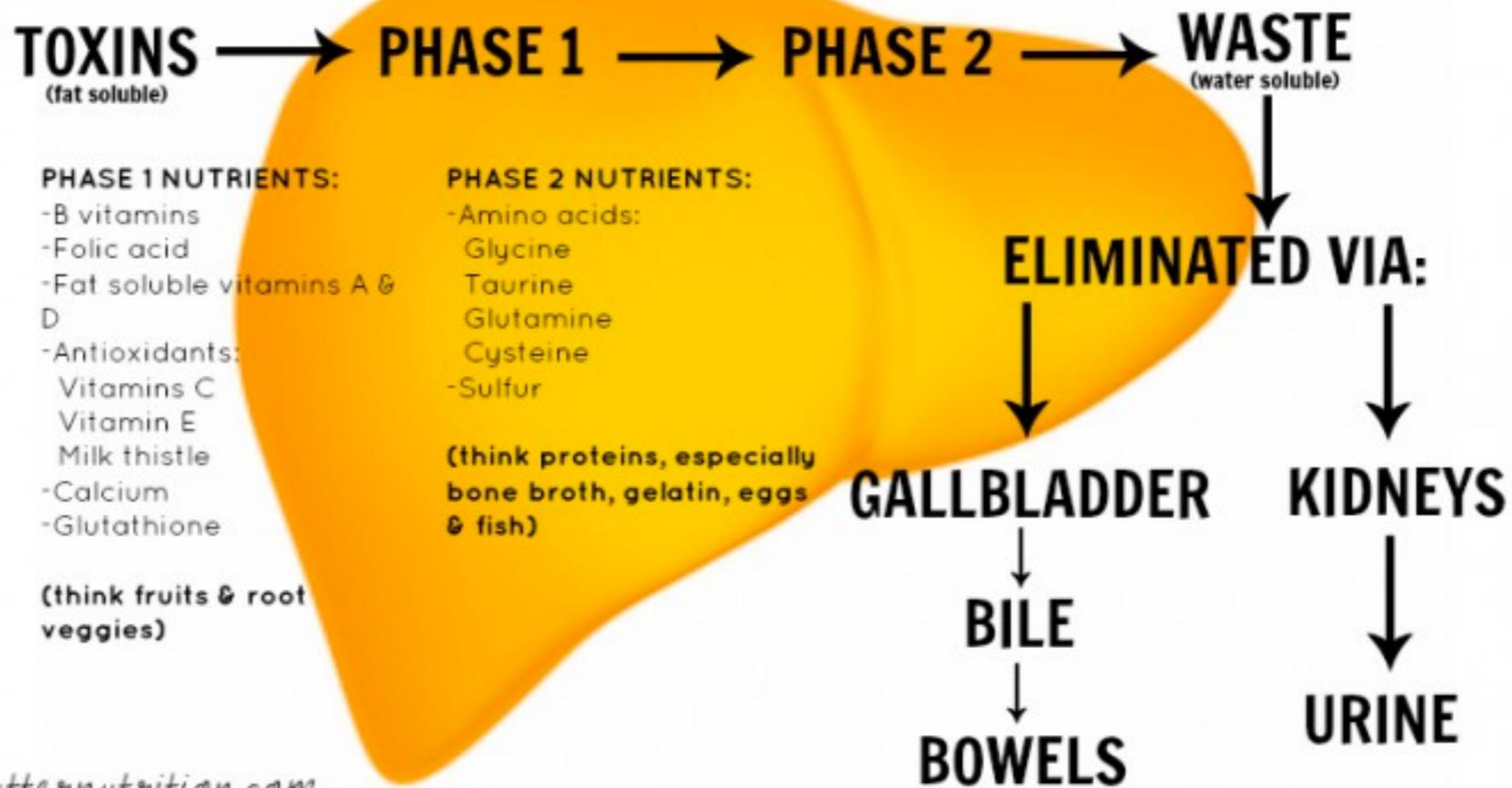
Liver



The vicious circle of chronic toxic overload



Detoxification Pathways



Butternutrition.com

Liver Detoxification Pathways

The liver is the primary director in the body, enabling the thousands of chemicals and toxins we are exposed to each day to be removed from the body.

However this process occurs other places, especially in the cell.

This is done in a three phase process:

Phase I

Fat soluble toxins enter the liver to be converted via Cytochrome p450 to water soluble metabolites to either be excreted from the body or stored in the fat cells to protect the body.

This process creates oxidative stress and requires antioxidants to help minimize the oxidative damage.

Beta-Carotene, also a player is Vitamin C, Vitamin E. B vitamins, A and D. B12, Folic Acid, and Glutathione.

- In Phase 1 the metabolites that are created from breaking down the fat soluble toxins may be more toxic, but less active than the original toxin. An OH is added making them water soluble.
- More important than the toxins we are exposed to, because we are all exposed to a myriad everyday, is our bodies ability to effectively conjugate and remove toxins from our bodies.
- The liver filters toxins from the blood and then dumps them into the small intestine, re-introducing toxins into the GI tract.

- If there is enough fiber in the diet these toxins will be caught in the fiber and passed into the bowel.
- Smaller toxins pass into the blood and are carried to the kidney for removal, or sweated out through the skin.

Phase II

- In the conjugation phase where the more toxic metabolites attach to Amino Acids and are conjugated via the Cytochrome P450 enzyme to water soluble toxins.
- If phase II is not effective the metabolites will be stored in the fat tissues. If the person is lean, the toxins will store in the connective tissue.

Conjugation pathways

- Methylation
- Sulfation
- Glutathione Conjugation
- Glucuronidation
- Acetylation

- In phase 2 we are attempting to rid the body of the Hydrolyated derivatives of phase 1, where an OH was added to turn fat soluble toxins into water soluble derivatives.
- This is done in a number of ways, determined by the toxin.

1. Glutathione pathway

Foods that stimulate:

- Spinach
- Onions
- Garlic
- Broccoli, especially sprouted.
- Celery
- Watercress
- Rosemary (high in iodine)
- Lemon grass

- The Glutathione pathway also needs Zinc and NAC(N-acytelcystine)
- NAC locks on to the toxin so it can be passed to the small intestine or the urine.
- NAC is not found in food, it is made in the body.

- NAC can be given in supplement form to help in the recovery of anesthesia, and other drug reactions.
- Warning, do not give before anesthesia, you will wake up during the surgery
- It is also a chelator of metals, especially mercury.
- Warning, do not take long term because it will also chelate zinc, iron and copper. 1-2 months
- Mucelitic agent as well, post viral cough.

2. Sulphation, rids the body of Acetone, DDT/DDE
Ethyleneglycol (antifreeze), Florine, Toluline and
TRIC (dry cleaning)

foods that support:

- Broccoli
- Asparagus
- Garlic
- Mustard
- Dill
- Horseradish
- Cabbage
- Sting nettle
- Parsnips

Sulfating also requires

- Alpha Lipoic Acid
- Vitamin C
- MSM
- Cystine
- Molybdenum

Glucuronidation, rids the body of hormones, neurotransmitters and benzoic acid.

Foods that support

- Cashews
- Artichokes
- Soy (non GMO)
- Licorice
- Flax
- Alfalfa

4. Acetylation, rids the body of petroleum products, newsprint and Hypochlorite (bleach).

Foods that support:

- Endive
- Watercress
- Cucumber
- Tomatoes
- Peas

One Substance that supports and stimulates both phase 1 and phase 2 of detoxification is Turmeric.

- Turmeric is an antioxidant so it protects against the toxic metabolites made in phase 1 and it stimulates the enzymes in phase 2.
- It stimulates Cytochrome P450.
- Turmeric is not easily absorbed in the body alone, but it is potentiated when black cumin seeds are taken with it.

The distinction between detoxification and Drainage

- Detoxification is “the release of toxins from their binding sites and are eliminated”.
- Drainage is the process of taking the toxin from the cell to its final elimination. If this is not accomplished the toxin is re-absorbed into the blood and the process begins again; this is know as the “Toxic Ping-pong effect”.

Some of the consequences of inadequate Liver clearing



- Skin conditions
- Bloating after eating
- Swelling
- Constipation/diarrhea
- Hormone aberrance's
- Weight gain or loss
- Sensitive to smells
- Sensitive to chemicals



Methylation

It is a metabolic process happening constantly in the cell.



Nutrients needed for optimum Methylation

- Choline (Low choline will damage the brain)
 - Taurine
 - HCL
 - MethylFolate (Low folate leads to choline deficiency.)
 - B12
 - Sam e
-
- HCL, Folate and B12 will donate Methyl groups to the cell, Sam e is needed for the methylation pathway.

Methyl groups make important substances in the body like CoQ10, Choline, Carnatine, Sulfur, Taurine, and ATP

They effect fundamental processes in the body:

- Brain/neurotransmitters
 - a. Depression
 - b. ADHA
 - c. Anxiety
- 70 % Of Serotonin is made in the gut.

Sources of Choline

- Fish
- Meat
- Nuts
- Cruciferous veggies
- Avocado
- Molasses
- Eggs
- Shrimp
- Lecithin

Estrogen is conjugated in phase 2 and then passed into the small intestine to be excreted in the stool.

If there is a problem with this process estrogen is reabsorbed into the body and is stored in the fat tissue.

- Increased estrogen is the main cause of Gallbladder disease.
- When estrogen goes up Methyl groups go down causing a thickening of the bile. (Estrogen uses up methyl groups).
- Gallbladder removal is among the top 10 surgeries in the US.
- The Gallbladder is almost always able to be saved.

Gallbladder

- The Gall Bladder needs acid.
- Gallbladder problems usually occur in women perimenopause, if estrogen is not conjugated in the liver and removed from the body it enters the gallbladder and thickens the bile, finally precipitating out as gallstones.
- If you see fat in the toilet that is a gallbladder problem.
- There are supplements to thin the bile are.

High Estrogen problems:

- Stroke
- Blood clots
- Thyroid issues T4 to T3
- Fibroids
- Endometriosis
- Gall Bladder
- Anemia
- PMS

Estrogen makes Choline

Especially as we age and estrogen lowers our need to add Choline through the diet and supplementation in some cases. Choline is one of the major players in the Methylation cycle.

Estrogen and Methylation

Low Estrogen Symptoms:

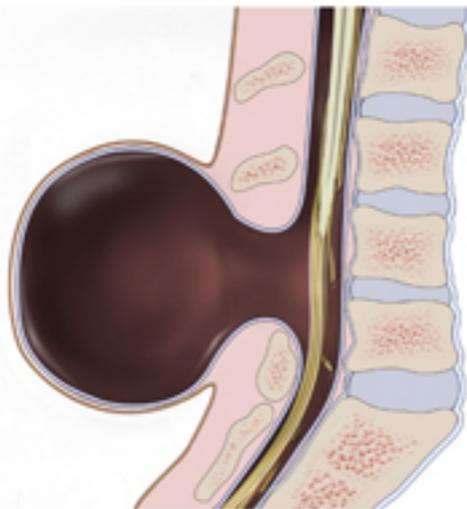
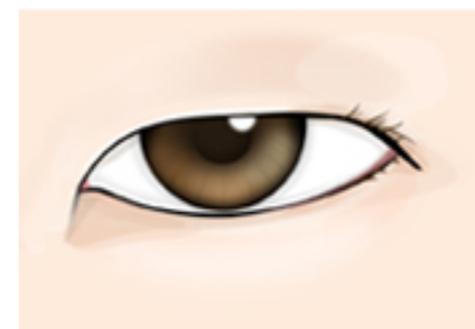
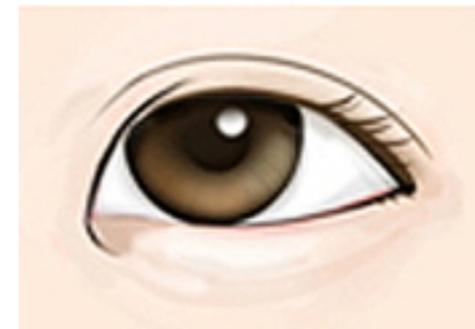
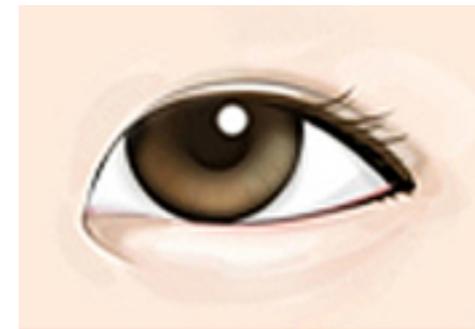
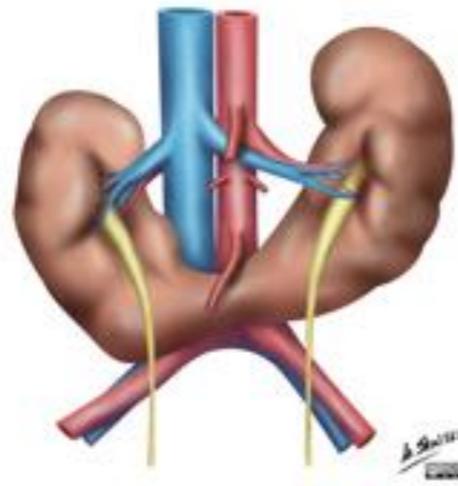
- Mood swings/ irritability/crying anger
- Heart issues
- Memory problems
- Hot flashes
- Dementia
- Stroke

- 90 % of fatty liver is from a Choline deficiency.
- 80-90 % of people in the US have some stage of Fatty liver.
- Low Estrogen = low Choline
- Methyl stress = stroke
- Food is a signal to the genes-Epigenetics.
- Mom had MS, food can light up non expression.

Majors signs of Methylation problems

Most symptoms occur in the middle of the body

1. Scoliosis
2. Downs syndrome
3. epicanthic folds
4. Cleft palate
5. Tied tongue
6. Central boney changes
7. Fetal alcohol syndrome
8. Eyes closer or further apart
9. Horse shoe kidney
10. Autism
11. Limb length variance
12. Cranium outside skull
13. Whole in heart
14. Immature heart



Spina bifida occulta

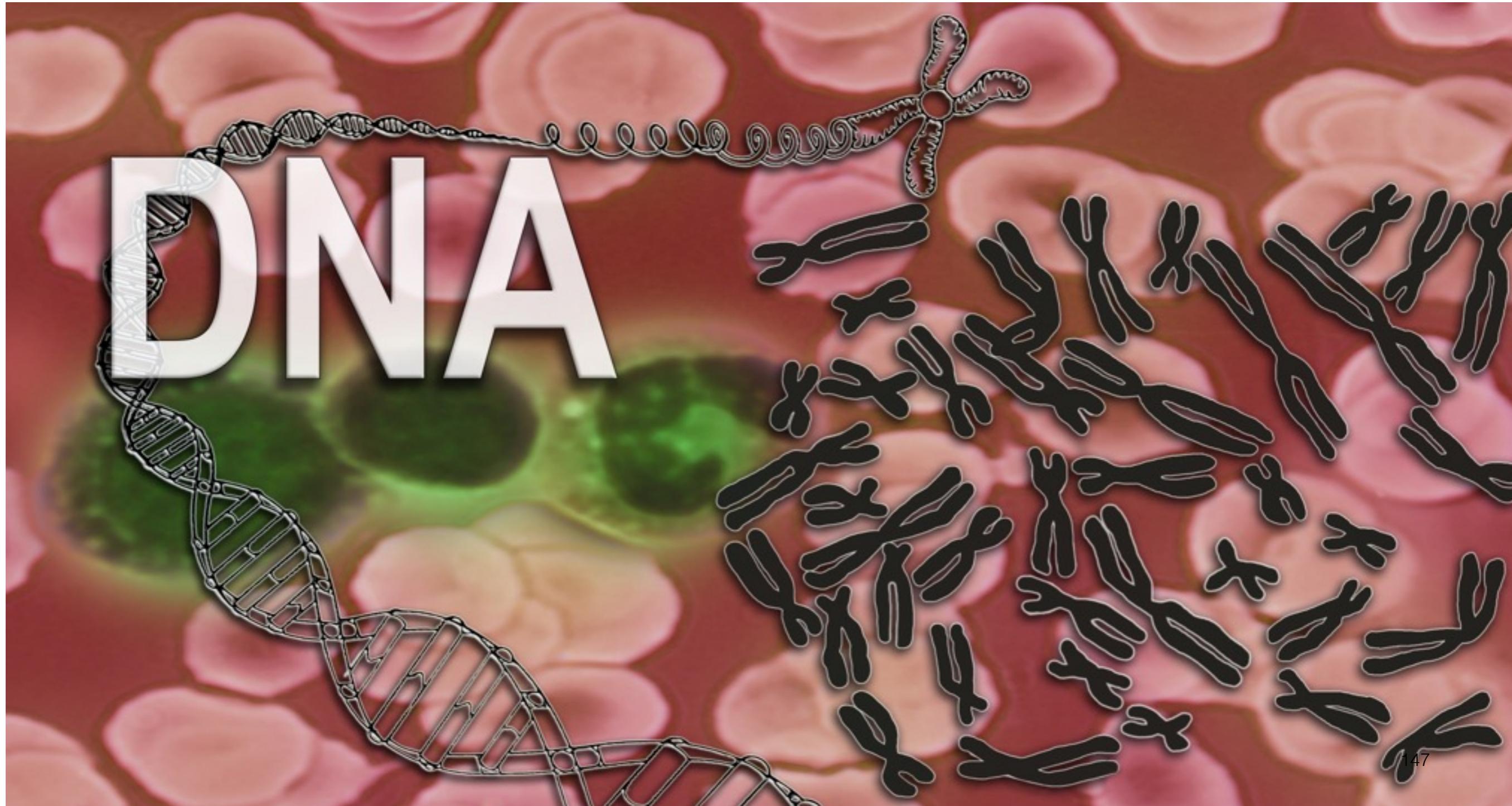
Meningocele

Myelomeningocele

Talking to your Genes via Methylation

Nutrition changes the genetic code

Epigenetics



HCL increases the methyl groups.

Heartburn

- Stomach reflux/Acid is from too little acid not too much.
- When there is too little acid the esophageal sphincter does not close properly, causing reflux.
- Taking the blue pill or antacids only increase the problem. If you block acid you will increase osteoporosis leading to increased hip fractures by blocking minerals and will
- decrease B12 which leads to dementia.
- Patients that wake during the night feeling like they are having a heart attack are suffering from low HCL. It stimulates the pericardium.

- Stress is also created by going more than 3-4 hours with no food.
- This causes the release of stress hormones to deal with the low blood sugar.
- Ulcers are created when blood is moved out of the stomach.
- Acid blockers increase acid production!!!
- Remember HCL is needed for the production of Methyl Groups.
- You have to fix the digestive/gut issues before you address methylations issues. But HCL supplementation addresses both. (But first you fix insulin issues.)

THOUGHTS
BECOME
THINGS



We create a resonance via our thoughts and the law of attraction will draw to us that which we think about.

Brighten Up
Your Day
With Smiles



What you focus on is what you will create!!!

Heart and consciousness first!!



- I am now willing to be outrageously Healthy
- I am now willing to do whatever it takes to be outrageously Healthy.
- I love myself.

Patients don't know what they don't know!!

Patient education is the best way to encourage compliance.

Care and healing take time; 1-3 years and than a continued life-time change.

Healing is not an event; it is a process!

Don't let the patient rush you!!!

Vitamin C is the big Kahuna!

Every process and cell in the body requires it.
We do not make it we need to ingest it every day!!

Nutrition

The Sequence of Protocols

- Sugar handling
- Digestion/Microbiome
- Methylation

6 hour credit

Dr. Shirley Watson

Test

1. Insulin is stored as Glycogen in the _____ ?
 - A. Liver and muscles
 - B. Panaceas
 - C. Gut mucosa
 - D. Brain.

2. It takes _____ Minutes for stored glycogen reserves to be used up before fats stores are used?
 - A. 20
 - B. 40
 - C. 60
 - D. 90

3. The Average American eats _____ pounds of sugar year?

- A. 200 lbs
- B. 250 lbs
- C. 300 lbs
- D. 50 lbs

4. In addition to sugar, insulin also carries _____ into the cell?

- A. K and CL
- B. Magnesium and NA
- C. Magnesium and K
- D. Na and K

5. When the sympathetic nervous system is stimulated by sugar _____?

- A. There is low blood pressure and calm.
- B. Blood is in the central nervous system
- C. Digestion is improved
- D. There is anxiety, sweaty palms and high blood pressure

6. Insulin:

- A. Is calming
- B. Cleans out the arteries
- C. Promotes conversion of T4 to T3.
- D. Is cell proliferating

7. The conversion of T4 to T3 occurs in_____?

- A. The heart
- B. pancreas
- C. Gut
- D. Liver

8. The wheat introduced in the 1960's has a glycemic Index of_____?

- A. 20
- B. 49
- C. 72
- D. 80

9. Serotonin is made primarily in the_____?

- A. Gut
- B. Brain
- C. Liver
- D. Pancreas

10. Low Serotonin levels may cause_____?

- A. Hyperactivity
- B. Depression
- C. Sense of well being
- D. Diarrhea

11. The best test for diabetes and sugar issues is?

- A. Blood glucose levels
- B. Blood insulin levels
- C. ABA1C
- D. Urine levels of glucose

12. The best range of insulin levels on a fasting insulin test is_?

- A. 25 or greater
- B. 10-12
- C. 5-6
- D. 0

13. The Adrenals are part of the_____system?

- A. Liver
- B. Hypothalamus
- C. Pituitary
- D. Endocrine

14. The Adrenals are in a closed loop system along with other endocrine organs with the_____?

- A. Medula
- B. Cerebellum
- C. Anterior Pituitary
- D. Posterior Pituitary

15. Adrenal hormone effect _____?

- A. NAC levels
- B. Melatonin
- C. Sugar handling
- D. Vitamin k levels

16. Increased Glucocorticoids can _____?

- A. Decrease bone loss
- B. Lower blood pressure
- C. Disrupt sleep
- D. Help convert T4 to T3

17. If AM body temperature is erratic over the course may indicate_____?

- A. Heart issues
- B. Adrenal issues
- C. Bladder issues
- D. Brain issues

18. Because cortisol is released in the urine, excess may cause_____?

- A. Gallstones
- B. Diarrhea
- C. Prostate and chronic cystitis
- D. Heart disease

19. In order to lower Cortisol some lifestyle changes may be_____?

- A. Get off caffeine, alcohol and grains.
- B. Become a vegan.
- C. Stop eating veggies.
- D. Fasting

20. Two supplements that support the adrenals are_____?

- A. Magnesium and Vitamin C.
- B. Vitamin K and NA
- C. Licorice and Tumeric
- D. Melatonin and Vitamin C.

21. Progesterone Steal Syndrome...?

- A. Steals progesterone to make cortisol.
- B. Steals Progesterone to make Testosterone.
- C. Steals Progesterone to make Estrogen.
- D. Steals Progesterone to make DHEA.

22. Thyroid tests should include _____?

- A. Glucose and insulin.
- B. TSH, T4, T3, rT3, Free T3, Free T4,
Thyroid antibodies, Thyroid Globulins.
- C. Urine.
- D. A1c

23. The Thyroid needs_____?

- A. Sugar
- B. Adrenalin
- C. Melatonin
- D. Iodine and Selenium

24. Iodine supports_____?

- A. Heart, liver and Gallbladder.
- B. Pancreas.
- C. Spleen.
- D. Breast, ovaries and Thyroid.

25. This organ is the only organ that stores its own hormone?

- A. Thymus
- B. Panaceas
- C. Liver
- D. Thyroid

26. Adrenal hormone_____?

- A. Decreases thyroid
- B. Increases Thyroid
- C. Decreases Thymus
- D. Increases Thymus

27. The three things the Microbiome need_____?

- A. Sugar, coffee and alcohol
- B. Pre-biotics/fiber, probiotics and Glutamine
- C. Rest, computer games and beer
- D. Choline, NA, Vitamin K

28. Colonization of the gut begins at...?

- A. When the baby is introduced to food.
- B. Birth
- C. After first poop
- D. After breast feeding

29. When Estrogen goes up Methyl groups go...?

- A. Up
- B. Down
- C. Remain neutral
- D. Fluctuate

30. The genes of the Biome speak with the genes _____?

- A. Human DNA
- B. your neighbor
- C. Don't speak with DNA
- D. Text each other

31. All disease begins in the _____?

- A. Brain
- B. Pancreas
- C. Gut
- D. Spleen

32. SIBO occurs with _____?

- A. A healthy diet
- B. When the host is healthy
- C. Antibiotic use
- D. When fasting

33. Good sources of probiotics are_____?

- A. Sugar
- B. Lemons
- C. Kiefer and fermented foods
- D. Meat

34. What % of cholesterol is made in the Liver?

- A. 100%
- B. 75%
- C. 50%
- D. 30%

35. What causes HDL to be unable to attach to LDL to take it back to the liver?

- A. Sugar
- B. Insulin
- C. Fiber
- D. Probiotics

36. The best Test for LDL and other fats is_____?

- A. VAP
- B. Blood cholesterol
- C. urine
- D. ABA1c

37. In Phase 1 of detoxification_____?

- A. An OH is attached
- B. An OH is removed
- C. Water soluble toxins become fat soluble
- D. Toxins become more dilute

38. Phase 2 of detoxification includes?

- A. Glycation
- B. Glucagon
- C. Glucuronidation
- D. Grapes

39. What spice supports both phase 1 and phase 2 detoxification?

- A. Salt
- B. Pepper
- C. Monosodium Glutamat
- D. Turmeric

40. Nutrients needed in Methylation?

- A. Ginger and Apple cider vinegar.
- B. Methionine and Melatonin
- C. Vitamin K
- D. B12, Folate, Choline, HCL

41. Estrogen is conjugated in_____?

- A. In the ovaries
- B. By the Adrenals
- C. In Phase 1 Detoxification
- D. In Phase 2 Detoxification

42. Estrogen Makes_____?

- A. Taurine
- B. B12
- C. Choline
- D. Na

43. Heartburn?

- A. Is caused by too little acid
- B. Is caused by too much acid
- C. Is caused from drinking beer
- D. Is caused by low B12

44. Thoughts _____?

- A. Don't matter
- B. Are real things
- C. Don't effect H₂O
- D. Can not be controlled

45. Telomeres measure?

- A. The life of a neurotransmitter
- B. The aging of the brain
- C. How smart you are
- D. How well you sleep

46. Each patient_____?

- A. Will always get it
- B. Is Unique
- C. Will never get it
- D. Likes you

47. Allopathic Nutrition means?

- A. One solution for all
- B. Individual treatment is necessary
- C. A&B always =C
- D. Don't listen to the patient ,
they don't know anything

48. Educating your patients_____?

- A. Is a waste of time
- B. Takes too long
- C. Is the best way to achieve compliance
- D. Doesn't work

49. Healing ?

- A. Is an event
- B. Occurs quickly
- C. Is a process
- D. Never occurs

50. Every process in the body requires____?

- A. Vitamin A
- B. Vitamin K
- C. Vitamin C
- D. Vitamin D

Nutrition

The sequence of protocols

- Sugar handling
- Digestion/Micro biome
- Methylation

6 hours credit

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