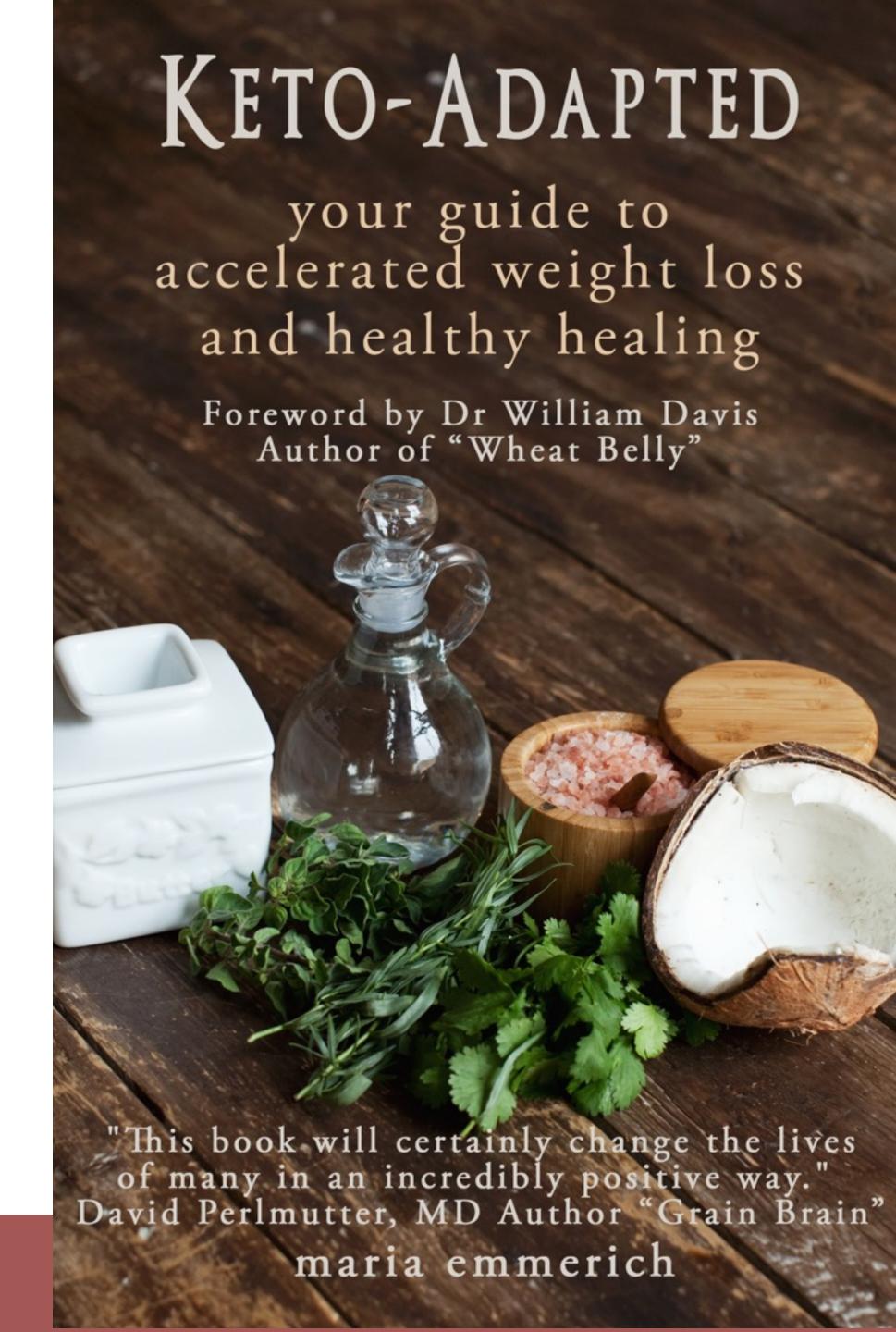
..."TO EAT IS A NECESSITY, BUT TO EAT INTELLIGENTLY 15 AN ART."

-LA ROCHEFOUCAULD



Agenda

- What is Ketosis
 - Aren't Ketones Dangerous?
 - What about long term health? (Cholesterol, etc.)
- What does a Ketogenic Lifestyle Look Like?
- Common Mistakes
- If You Get Stuck
 - How to test for Keto-Adaption
- But How Do I Get My Nutrients?
- Supplements
- Q&A Please ask any questions as we go

What is Ketosis?

What is Ketosis

3 macronutrients

- 1. Carbohydrates: complex carbs are just glucose molecules hooked together in long chain. Digestive tract breaks it down into glucose (sugar).
- 2. Protein: you can't store excess protein. Excess turns into sugar just like a carbohydrate (through process called gluconeogenesis).
- **3.Fat!** Only macronutrient that can supply fuel to the body without causing inflammation.

What is Ketosis cont.

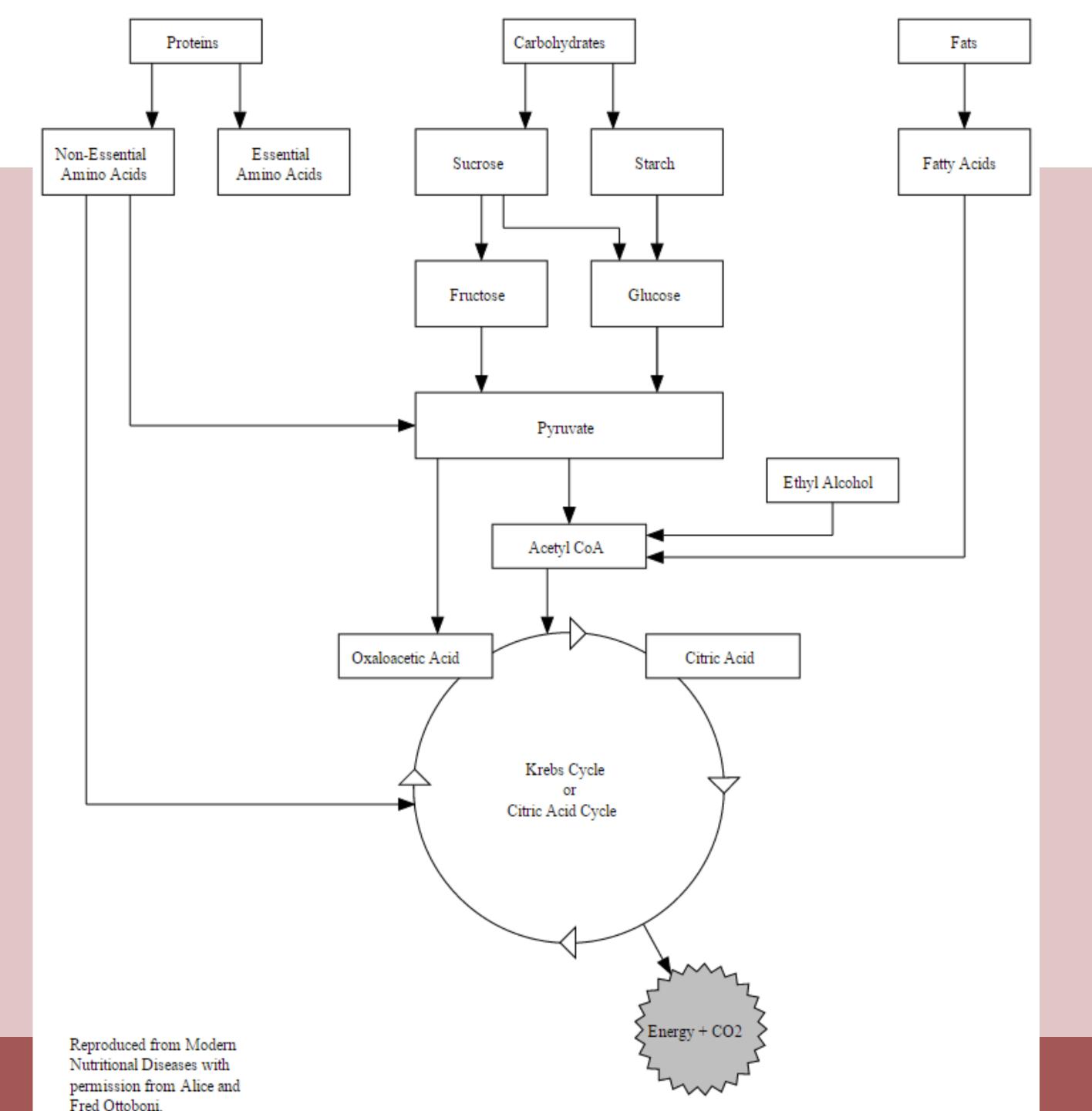
- Every cell in our body can run on two fuel sources
 - Glucose (Sugar)
 - Ketones (Fat)
- If you restrict the sugar and starch enough (and Moderate protein), after an adaption period (2-4 weeks) your body starts using fat for fuel!
 - This has huge benefits: weight loss, heals gut, lowers A1c, heals PCOS...

Keto Diet Fats

- Healthy Fats:
 - MCT oil
 - Coconut oil
 - Leaf lard
 - Duck fat
 - Beef tallow
 - Egg yolks
 - Coconut milk

- Avocados
- Quality olive oil (Don't heat)
- If not dairy Sensitive:
 - Butter
 - Sour cream
 - Cream cheese
 - Cheese
 - Heavy cream

Getting Energy to Cells



What does a Ketogenic Lifestyle Look Like?

Macros

- General rules
 - 70-80+% of calories from fat
 - 1 gram of fat is 9 calories
 - 15-20% of calories from protein
 - 1 gram of protein is 4 calories
 - 5% or less of calories from total carbs
 - 1 gram of carbs is 4 calories

Example

- Daily totals
 - 110g fat
 - 65g protein
 - 10g carbs
 - 1290 Calories
- 76.7% Fat, 20.2% protein, 3.1% Carbs





- Philly Cheese steak stuffed portobellos
- 6 hours after"Break"fast



Nutritional Comparison (per serving):

 Item
 Calories
 Fat
 Protein
 Carbs

 "Healthified" Philly
 651
 57g (78%)
 32g (20%)
 8g (5%)

Maria Mind Body Mealth

Day Totals

1332 Calories

121.5g fat

53.5g protein

14.8g carbs

81% Fat, 15% protein, 4% carbs

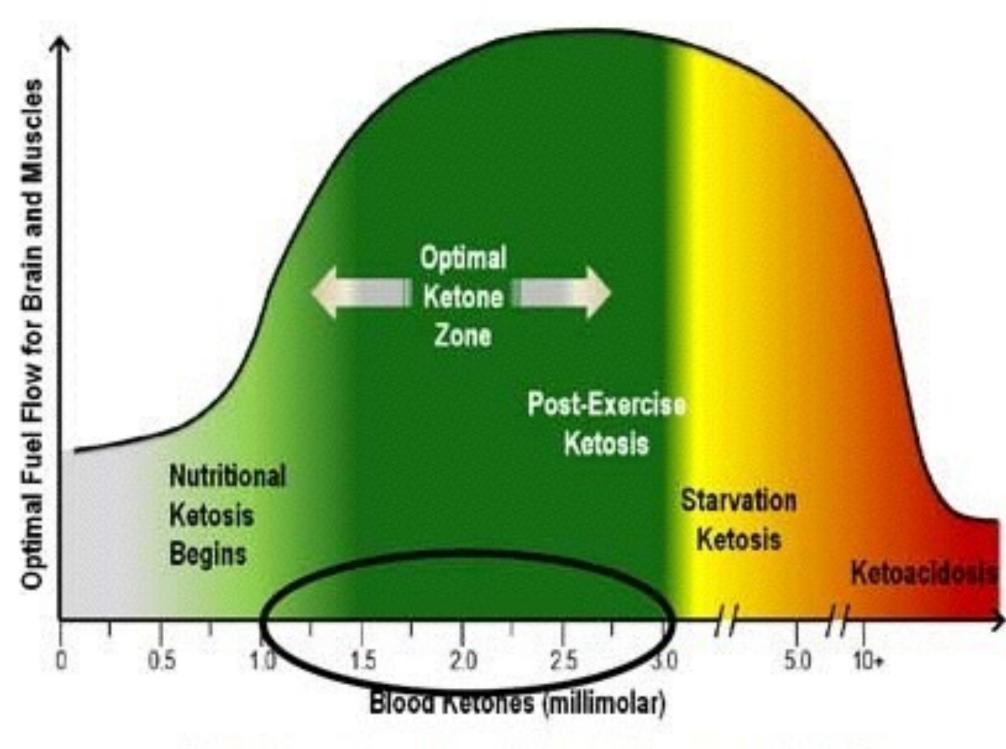
Starvation Mode?

- If NOT in ketosis your body would start using muscle protein into glucose.
- Body can use dietary fat and body fat equally when keto adapted.
- So if your calories are reduced while in ketosis then your body switches and starts to use body fat for fuel while preserving BCAAs (muscles).

Aren't Ketones Dangerous?

- Diabetic Keto-Acidosis (DKA)
 - Ketone levels of 10 or higher
 - Dangerous, but only really happens to Type 1 diabetics that don't manage it properly.
- Dietary Ketosis
 - Ketones of 1-5
- Just like water gives you life but too much can kill you.

What level of Ketosis is optimal?



Page 91: The Art and Science of Low Carbohydrate Performance

Jeff S. Volek and Stephen D. Phinney

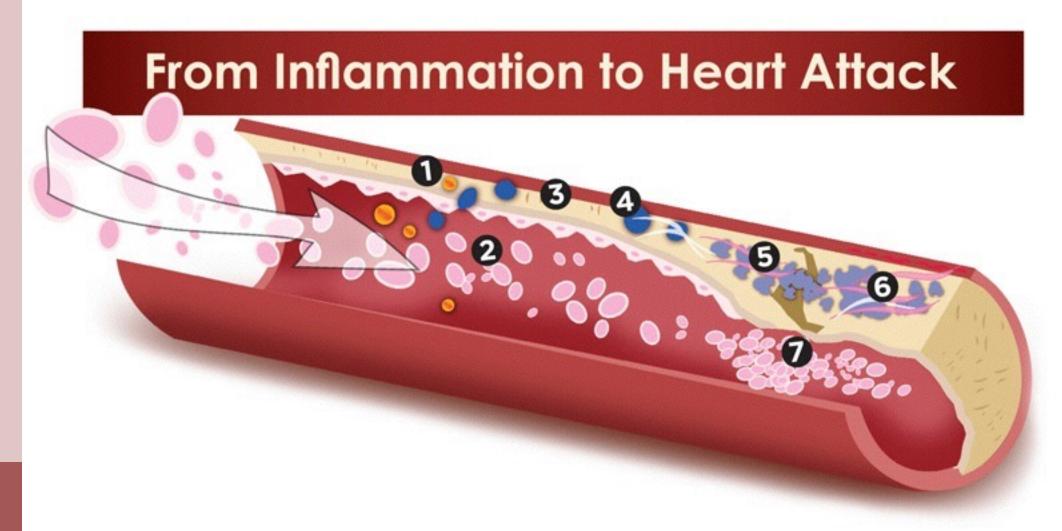
Ketoacidosis

- Only happens with type 1 diabetics (and occasionally late stage type 2)
- Both high glucose and high ketones are present in the blood.
- But with no insulin being produced, the body still needs fuel so it starts producing ketones in excess.
 - But since not in ketosis, you can't use ketosis for fuel.
 - So the body keeps producing ketones until levels reach 15-25 mM resulting in a dangerous pH imbalance.

Long Term Health

- Cholesterol, What really Causes
 Coronary Artery Disease (CAD)?
- Process
 - Inflammation and oxidative stress create lesion
 - Cholesterol gets stuck in lesion and releases
 - Plaque begins to form to fix lesion
 - Plague continues to grow over time creating blockage





Cholesterol

- Cholesterol Makes Hormones
 - Thyroid
 - Adrenal
 - Testosterone
 - Progesterone
 - Helps with fertility and women suffering from low progesterone:
 Wake up too early in AM

Colesterol cont.

- The Japanese Lipid Panel Study
 - over 47,000 people with the HIGHEST death rates had total cholesterol of 160 or LESS.
 - Those with the LOWEST death rates had total cholesterol of 200-259.
- All our Hormones are made from Cholesterol
 - Low thyroid, low progesterone all would cause increase in Cholesterol
- Cholesterol can be elevated while losing weight
 - Wait at least 6 months after weight has stabilized
- Look for inflammation markers instead
 - A1C (less than 5.5, ideally less than 5)
 - Triglyceride to HDL ratio (less than 2, ideally less than 1)

Long Term Health cont.

- Diseases linked to Chronic Inflammation/ Autoimmune reaction
 - Allergies, Alzheimer's, Asthma, Autism, Arthritis, Cancer, Crohn's, Fribromyalgia, GERD, Hashimoto's, Kidney Failure, Lupus, Metabolic Syndrome (Diabetes, etc), MS, Pancreatitis, Psoriasis, Stroke, etc.
 - Gall Bladder disease: it is a muscle, no fat = atrophy of gall bladder... just like a Bicep!

Common Mistakes

Common Mistakes

- Subtracting Fiber from Carb totals
 - Too much fiber can kick you out of ketosis and stall your weight loss especially those with metabolic syndrome or diabetes (Quest bars, nuts)
 - Too much fiber also elongates intestines causing other issues
 - Example: "Do you know any reason this bread would spike my blood sugar? I ate a sandwich last night with this bread. Before I ate, I took my blood sugar and it was 140. Then I ate my sandwich and an hour later tested again and my blood sugar was 180. I ate another sandwich today for lunch and just tested (2-1/2 hours later) and it was 203. I'm eating low carb, so not eating anything else that would raise my glucose."

Almond Flour Sub (per bun) = 209 calories, 14.2g fat, 8.2g protein, 15g carb, 9.8g fiber

Common Mistakes cont.

- Exercising at the wrong time of day
 - Too late in the day stimulates cortisol
 - Exercise in fasted state burn 300% more calories
 - Increases Human Growth Hormone
- Not enough Sleep!
 - Need at least 8 hours (see next slide)
- Eating every 2-3 hours
- Not Supplementing
 - Salt, potassium, magnesium. Water!

Common Mistakes cont.

- Not Counting Liquid Calories
 - Bulletproof coffee, etc. Can be over 500 calories
 - Prefer to chew calories, registers leptin better
- Coffee can also increase insulin
 - Caffeine overstimulates adrenal glands which produces too much cortisol and adrenalin
 - This causes blood sugar spike and corresponding insulin response which can pull some out of ketosis
- Forcing yourself to eat when you aren't hungry
- Xylitol

Importance of Sleep

- Average woman sleeps 2 hours less per night than in 1960
 - Lowers serotonin and increases appetite for sweets
- Human Growth Hormone: fat-burning hormone!
 - Don't eat 3 hours before bed
- Hormone Ghrelin (hunger)
 - Controls Appetite
- Thyroid and Cortisol hormones
- Lose 4 lbs. just by getting 8 hours of sleep!
 - Who GAINS weight in the SUMMER???

If You Get Stuck

Breaking a plateau or when you get stuck

If you get stuck

- Things that commonly kick sensitive clients out of ketosis:
 - Lemon in water
 - Glucosamine supplements
 - Low carb fruits (berries, etc)
 - Low carb Veggies (Overdoing cauliflower, Spaghetti squash, etc.)
 - Dairy sensitivity (remove to let gut heal and re-introduce)
 - Nuts
 - Not enough fat (egg whites, chicken breasts, steamed broccoli)

If you get stuck cont.

Make sure to keep TOTAL carbs at 20g or less per day

Blood Sugars 8	Blood Sugars 10:30 AM (Just before Eating Quest Bar)	Blood Sugars 11:30 AM	Blood Sugars 12:30 PM	1-HOUR CHANGE
		20120		
111	124	176	107	52
91	108	150	112	42
	98	148	108	50
	190	203	186	13
84	73	107	98	34
103	151	128	120	-23
80	ype 2 Dia	abetic	90	13

Response to Quest Bar





Nutrition

Serving Size 1 package
Calories 210
Fat Cal. 90

*Percent Daily Values (DV) are based on a 2,000 calorie diet.

Amount/serving	%DV*	Amount/serving	%DV*
Total Fat 11 g	17%	Total Carb. 27g	9%
Sat. Fat 7 g	35%	Dietary Fiber< 1 g	3%
Trans Fat 0 g		Sugars 21 g	
Cholest. < 5 mg	2%	Protein 3 g	
Sodium 30 mg	1%		
Vitamin A 0% • Vit	amin C (0% • Calcium 6% • I	ron 2%

A DELICIOUS BLEND OF APPLE

Protein Blend (Whey Protein Isolate, Milk Protein Isolate), Isomalto-Oligosaccharides* (Preboitic Fiber), Almonds, Water, Apples. Contains less than 2% of the following: Cinnamon, Sea Salt, Lo Han Guo, Sucralose, Natural Flavors.

Nutrition Facts

Serving Size 1 (60g) Calories 180

Calories from Fat 50

*Percent Dally Values are based on a 2.000 calorle dlet

Amount/Serving	%Dally Value*	Amount/Serving	%Dally	Value*
Total Fat 5g	8%	Potassium 115m	9	3%
Saturated Fat 0g	0%	Total Carbohydra	te 25g	8%
Trans Fat 0g		Dietary Fiber 18g)	72%
Cholesterol 5mg	2%	Sugars 4g		
Sodium 320mg	13%	Protein 20g		
Vitamin A 0% • 1	Vitamin C 0%	Calcium 10% •	In	on 4%
Magnesium 8% • Pho	sphorus 10%			

If you get stuck cont.2

- Make sure to keep Protein at no more than 80-90g a day
 - Metabolic syndrome or other issues, 50-60g protein
- Add more fat! MCT oil is fastest energy source when keto adapted. Coconut oil is 60% MCT.
- Intermittent Fast

Intermittent Fasting

- Reduces blood pressure
 - Insulin stores magnesium = relaxes muscles.
- Reduces triglycerides
 - Insulin up-regulates LPL on fat tissue and inhibits activation on muscle cells.
 - On the other hand, Glucagon up-regulates LPL on muscle and cardiac tissue, while inhibiting activation of fat.
- Weight Loss
- Reduces Cancer: repair specific tissues that would not otherwise be repaired in times of surplus.
- Longer Life: Fasting allows certain cells to live longer (as repaired cells) during famine since it saves energy to repair cells rather than make new ones.

Intermittent Fast

- The Morning Fast
 - Still take amino acids
- Combination Fast (which is what I do)
- The Evening Fast

 Being Keto-Adapted makes this VERY easy

INTERMITTENT FASTING



INCREASES

DECREASES

- Grehlin levels to reduce overeating
- Insulin and leptin sensitivity, lowering risk of diabetes, heart disease and cancer
- Ability to become Keto-Adapted turning your body into a fat burner!

- Triglycerides, lowering heart disease risk
- Inflammation and free radical damage
- Weight gain and metabolic disease risk

EXAMPLESHEDULE

Fast (7AM - 8AM) Workout (1 hour)

Eating Window (9AM - 3PM) Fast (3PM-10PM) Sleep at least 8 hours

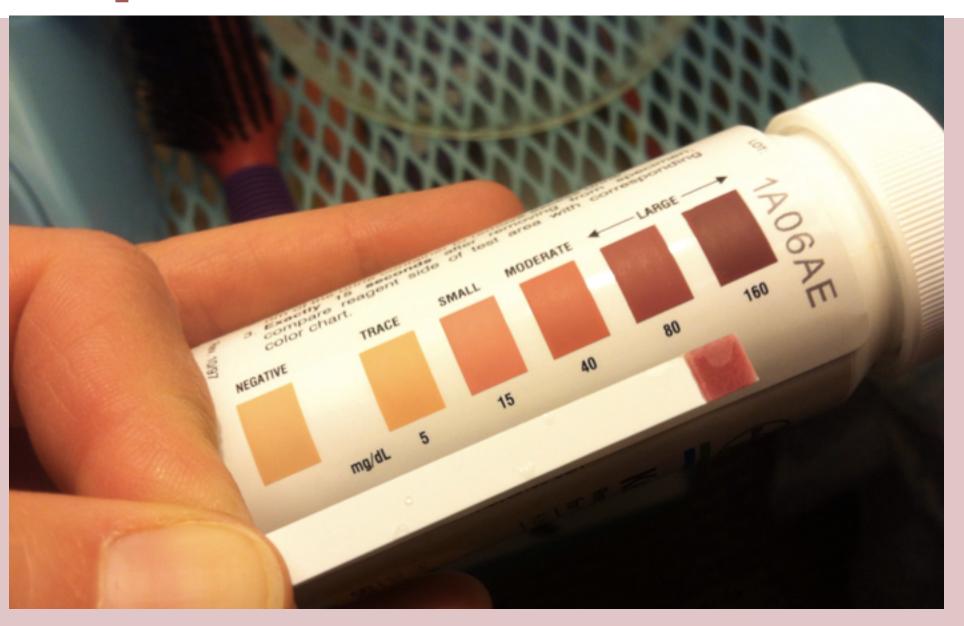
If pregnant, nursing or if you have metabolic syndrome, don't fast until you have fixed your insulin issues or are no longer breastfeeding.

3 Types of Ketones

- There are 3 types of ketone bodies
 - Acetone, Acetoacetate and Beta-Hydroxybutryate (BHB)
 - If your body has been in ketosis for a while, you will see a reduction in acetoacetate
 - Muscles begin to use acetoacetate and turn it into Beta-Hydroxybutryate for fuel, so less is present in urine
- Urine strips only test acetoacetate
- Ketonix only tests acetone in breath
- Blood Strips test for Beta-Hydroxybutryate (BHB), what your body uses for fuel

Urine Test Strips

- Pros:
 - Cheap
- •Cons:
 - Very inaccurate
 - Typically only tell you if you are dehydrated or not
 - Will decrease the longer you are keto adapted as they only test acetoacetate



Blood Ketone Testing

- Blood Testing
- Pros
 - Very Accurate
 - Tells you how much ketone bodies are available in the blood for fuel
 - Optimal range is 1-5 (2-5 great for weight loss)
- Cons:
 - Expensive \$2 a strip
 - Finger prick for blood

CLICK HERE for the one I like best



Breath Ketone Testing

- Ketonix Breath analyzer
- Pros:
 - Low long term cost (\$99)
 - Accurate
 - Not always directly correlated to BHB in blood, but usually pretty accurate
- Cons:
 - Doesn't always directly correlate to Blood Ketones
 - Alcohol consumption can show false positive
 - Drinking lots of water can effect results

CLICK HERE for the one I like best



Ketonix vs. Blood meter

- Blood meters show amount of energy (BHB) in the blood that is available for the body to use as fuel
 - Higher number, the more the body can use and is using ketones for fuel
- Blood ketones tell you how much energy is in your tank (when in ketosis)

- Breath ketones (acetone)
 is a good indicator of
 ketosis
- Ketonix measures the process of fat being turned into ketones (not necessarily how much ketones are in blood)

When to Test Ketones

- In the Morning in fasted state
 - Will be the lowest of the day
 - If decent ketone levels are present (1.0), indicates a state of ketosis is being held through the day
 - Ketones go up during the day if eating a good keto diet
 - Also go up after exercise
 - MCT oils increase ketones (Coconut oil, etc)
- In the evening
 - Will show higher (maybe highest) level for the day (2.0-3.0 is great)

BACtrack

E! Breathalyzer



If All Else Fails

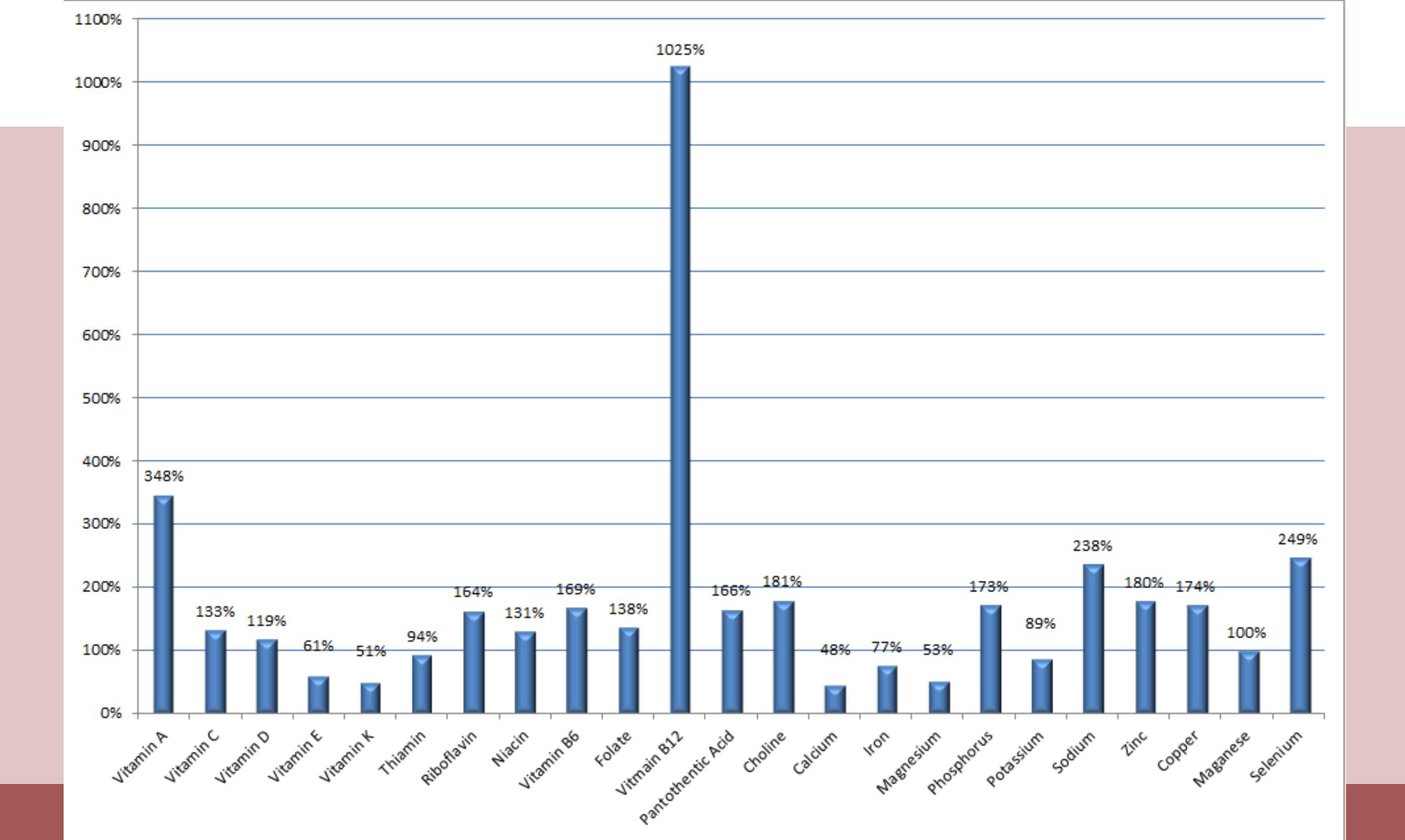
If you don't feel great on the diet and supplements, personally would have your doctor run these tests:

- 1. Full panel thyroid test with antibodies
- 2. A progesterone test (cause high cholesterol, anxiety, waking up too early in AM, hair loss)
- 3. Ferritin test (anxiety, restless leg, sleep issues, hair loss, dark circles under eyes, and poor ability to oxidize fat)
- 4. Vitamin d (low moods, high BP, insulin resistance, many issues: If too HIGH = bad sleep)
- 5. Cortisol test (morning and night)
- 6. Liver enzymes test (can cause issues with losing weight and/or poor moods and high cholesterol numbers)
- 7. DHEA hormones (youth hormone)
- 8. lodine deficiency (cause thyroid issues like poor sleep/weight gain and is easy to fix)
- 9. Excess Bromide (excess is a huge cause of thyroid issues)

But how do I get my Nutrients?

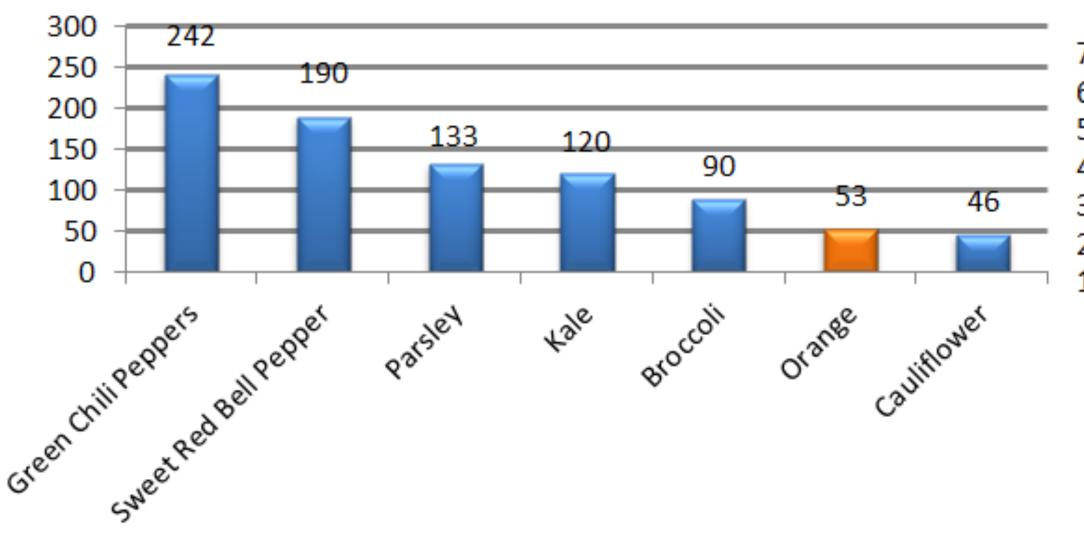
Nutrients

- If I'm not eating fruit and lots of veggies, how do I get my nutrients?
- Example:
 - "Break"fast of Eggs Benedict
 - Last meal of Chili and smoked salmon
 - Snack of keto fudge.
- Note: Doesn't include water (minerals), etc. Add bone broth for even more (calcium, etc).

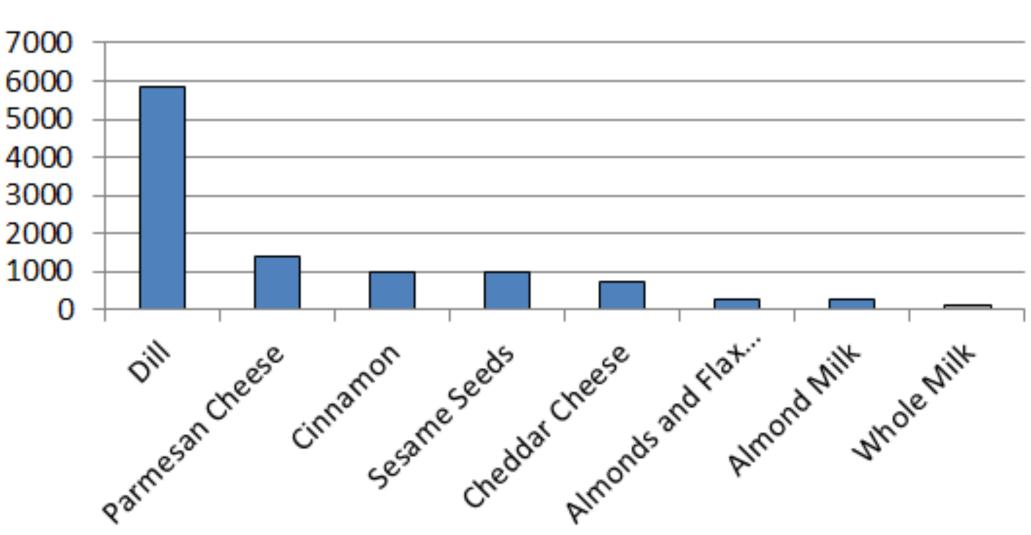


Herbs

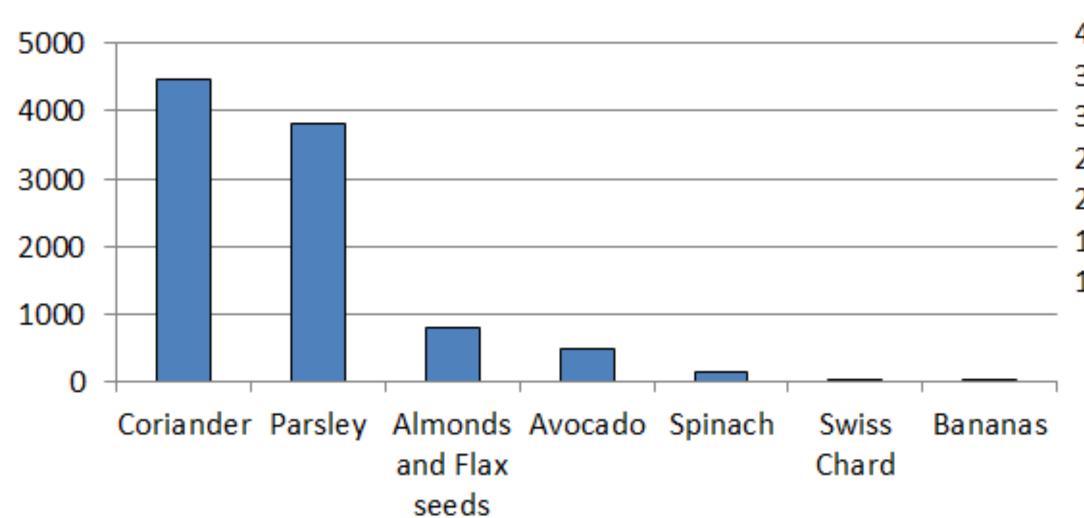




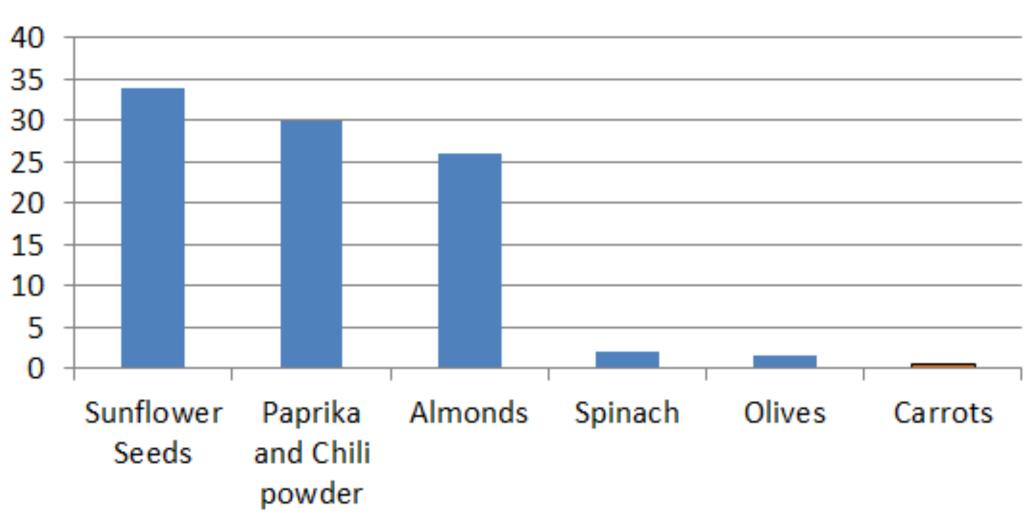
Calcium Amount (mg/100g)



Potassium Amount (mg/100g)



Vitamin E Amount (mg/100g)



Nutrient Density

http:// www.oracvalues.com/ sort/orac-value/

Antioxidant Values of Foods Sorted by ORAC Value

Sort by ORAC Value Sort Alphabetically

Page 123456> Last>

Item	ORAC Value
Sumac, bran, raw	■ 312,400
Spices, cloves, ground	290,283
Sorghum, bran, hi-tannin	240,000
Spices, oregano, dried	175,295
Spices, rosemary, dried	165,280
Spices, thyme, dried	157,380
Spices, cinnamon, ground	131,420
Spices, turmeric, ground	127,068
Spices, vanilla beans, dried	122,400
Spices, sage, ground	119,929
Spices, szechuan pepper, dried	118,400
Acai, fruit pulp/skin, powder	102,700
Sorghum, bran, black	100,800
Rosehip	96,150
Sumac, grain, raw	86,800
Spices, parsley, dried	73,670
Sorghum, bran, red	71,000
Spices, nutmeg, ground	69,640
Spices, basil, dried	■ 61,063
Cocoa, dry powder, unsweetened	55,653

Maria Mind Body Health

Supplements

GUT HEALTH: Absorption!

- Do you know anyone on Acid Blockers???
- Do you know anyone with thyroid disorder???
- A healthy thyroid produces stomach acid. If you are deficient in hydrochloric acid you can't absorb the nutrients for bone health and thyroid function.
- Become deficient in iron and B-12: low energy and slow fat-oxidation
- You could be taking a "magic pill" and if you don't have enough hydrochloric acid, you wouldn't benefit from the "magic".
- Focusing on your digestion is step one. Click HERE for Supplements

Thyroid

- Important to know what is causing thyroid issues first (Autoimmune response?)
 - WHY: If take too much medication and TSH falls below 1.5 cause bone loss, anxiety, poor sleep, diarrhea.
- Proper supplementation heals T3 conversion issues
 - Selenium needed for conversion of T4 to T3, which is the active form of thyroid hormone. Click HERE to find.
 - Zinc converts T4 to the activated T3. I suggest 30-50mg zinc at breakfast (but note that as you increase zinc, it can cause nausea... slowly increase this). Click HERE to find.
 - GLA is an activated fatty acid that supports thyroid health. I prefer women to take 1,300mg of Evening Primrose Oil three times a day to help with hormone balance. Click HERE to find.
 - Ashwaganda and Guggal also help with Adrenal Fatigue. Click HERE to find.

Weight Loss

- L-carnitine (Click Here)
 - 3g (3,000 mg) before exercise right away in the AM
 - Transports fat to the part of the cell that burns it off: the mitochondria.
- 7-keto (100mg twice a day) (Click Here)
 - Increases DHEA: I also use 7-keto cream
- CoQ10 (400mg at breakfast): increase the amount of mitochondria (where you burn fat). (Click Here)

Cravings

- Bifido bacteria (and increase immune system) (Click Here)
- L-Glutamine: L-glutamine acts like a second level of blood sugar to stop cravings (Click Here)
- Magnesium Glycinate (Click Here)
- •5-HTP: precursor to serotonin, which drops before menstrual cycle because it is closely linked to estrogen. Serotonin brings contentment and eliminates cravings. (Click Here)
 - Zinc: salty cravings or wanting something sweet after meal (<u>Click Here</u>)
 - Zinc TEST: Are you deficient?

Sleep

- Make an alarm to take 1 hour before bed to start a good sleep pattern:
 - Magnesium Glycinate (Click Here)
 - 5-htp or I-tryptophan (Click Here)
 - GABA (<u>Click Here</u>): GABA supplements decrease anxiety, emotional eating/ increase mood, ...it shuts off "brain chatter" at night, It is nature's natural "valium". GABA is very helpful in stimulating the pituitary glands that releases the Human Growth Hormone.
- 1-10mg of Melatonin if needed: patches absorb best (Click Here)
- If you are waking up too early in the am, sign of low progesterone.
 - 1/4 tsp Progest Cream (Click Here): increase sleep, decrease depression and anxiety (rotate with your cycle follow directions on the bottle) Waking up too early is common sign of low progesterone.

Estrogen Dominance

- If you suffer mood swings, anxiety, painful cramps, wake up too early in the AM?
 - Hormonal shifts are not "normal!"
 - If you do not go #2 daily estrogens get re-absorbed!!! (FUN FACT: Nuts are constipating!)
 - Detox with green tea, no caffeine, Estrofactors, Evening Primrose oil and Progesterone cream.
 - Caffeine and sugar = high androgens (facial hair, PCOS)
 - Reassess what you are putting ON your skin!
 - Think about organic foods:
 - Meat laced with hormones = aggravate PCOS
 - Pesticides on veggies = hormonal disruptors for thyroid too!

What you put on your Skin

- Everything you put on your skin gets into your blood stream just like when you eat it.
 - Cosmetics, lotions, shampoos, sun screen have thousands of chemicals.
- BeautyCounter products are all free of these harmful chemicals.
- Click HERE to see the products.
- mariamindbodyhealth.beautycounter.com

What do I take?

- Upon arising:
 - L carnitine
 - L tyrosine
 - Green tea
 - Bifido Bacteria (my whole family takes)
- Around Working Out
 - L-glutamine (before and after)
- First meal and second meal:
 - Potassium, magnesium (it is energizing for me), and zinc (zinc first meal only)
 - Resveratrol and curcumin
 - Ashwaganda and guggal
 - 7-Keto for DHEA
 - Vitamin D as well as Vitamin K2 and a quality Multi-Mineral for good insurance.
- Bedtime:
 - L tryptophan
 - Gaba

My Cookbooks and Books

Get them all here: http://mariamindbodyhealth.com/my-books/



Consultation Services

- 30 day meal plans
- Phone Consultation
 - Email support
 - 90 days of meal plans
 - Health Assessment
 - Individualize supplements plans
 - Much more
- Your 15% discount code (valid for 1 week on all services) will be in the video email.

http://mariamindbodyhealth.com/my-services/

Q&A