



**KETO***adapted*

Maria Mind Body Health LLC



# Beyond Keto

Healing Your Mitochondria

# My Journey



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# Plan of Attack

- What is your Goal for the Summer?
- Most Common Questions and Mistakes
- How to Heal Your Mitochondria
  - Fasting
  - Light
  - Grounding
  - Water
  - Cold Therapy
- Other Mitochondria Killers
- Plan for Success

What is Your Goal for this Summer? ... write it down!





# Most Common Questions

Answers to the Most  
Common Questions  
about a Ketogenic  
Lifestyle



# True or False?

You Can't Eat Too Much Fat.

➡ **False**

➡ Calories do matter especially if trying to lose weight

➡ This lifestyle food is so nutrient dense that you need less calories

➡ Utilize Fat on your body to be KETO

# True or False?

I need to add fat even if not hungry to reach Fat percentage.

➤ **False**

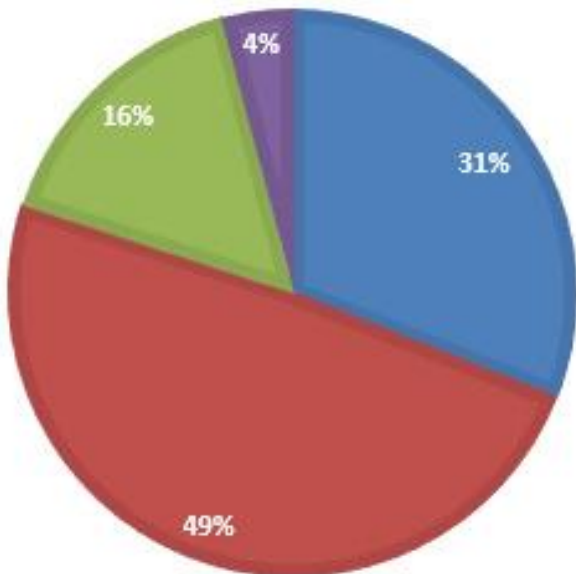
➤ As long as carbs are 20g or less and protein moderate (50-75g a day for most) you will be in ketosis.

➤ In ketosis your body can use dietary fat and body fat equally. So if dietary fat is below BMR need, it will use body fat to make up difference (= weight loss).

➤ Fats keep you full and staying on track.

➤ If your BMR (calories needed for maintenance) is 1600 calories and you eat 65g protein and 18g carbs and are full with 85g fat the % for the day will be 69% fat, 26% protein and 5% carbs. So your body uses body fat for extra fuel.

■ Body fat ■ Dietary Fat ■ Protein ■ Carbs



# True or False?

I don't need to watch total calories with this lifestyle.

- ➡ **False**
- ➡ Especially early on when leptin resistance hasn't healed
- ➡ This lifestyle keeps you full longer
- ➡ Food is very nutrient dense





# True or False?

You should Count Net Carbs.

➡ **False**

- ➡ We see many clients held back by too much fiber
- ➡ Kicked out of ketosis with too much fiber
- ➡ Too much fiber can actually elongate the intestines and cause problems. (book: The Fiber Menace)

# True or False?

I Need to get my Ketone Levels high.

➡ **False**

- ➡ Many people focus too much on what their ketone level is. Everyone is different. Some reach goals with 0.5, others with 2.0.
- ➡ As long as carbs are right and protein moderate, you will be in ketosis.

# True or False?

My Glucose Levels will instantly be perfect with this lifestyle.

➡ **False**

➡ Glucose levels, especially during the keto adaption phase, can be elevated a bit (physiological insulin resistance), and dawn phenomenon can raise fasting glucose

➡ Over time they will level out

➡ As long as A1C is low (5.4 or less, ideally 5.0 or less), not to worry about



# True or False?

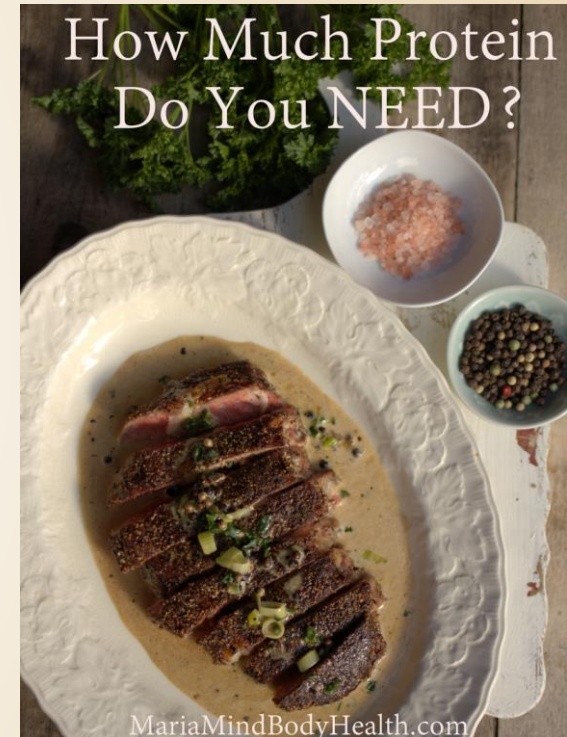
I don't need to watch my protein intake.

➤ **False**

➤ Dr. Rosedale, "Hepatic glucose was significantly increased with high protein intake. It makes sense. If you have a bunch of amino acids floating around, your liver breaks extra protein into glucose."

➤ This is gluconeogenesis. This is related to the mTOR pathway. mTOR senses the amount of amino acids available and also regulates aging similar to insulin but using amino acids as the key to energy stores.

➤ mTOR is activated by free amino acids and is a pathway that senses protein concentrations. More specifically, amino acid concentrations. mTOR is also linked to leptin. Amino acids stimulate mTOR which stimulates leptin.



# Protein Levels cont.

- Shoot for 0.7 to 0.75 times your lean body mass in grams of protein a day (0.5 to 0.6 if metabolic syndrome).
- For most people this is 50-90g a day depending on size (30-70g for those with metabolic issues).
- Example: 150 pounds with 30% body fat. That is 105 pounds lean mass.  $0.7 * 105 = 73\text{g}$  protein (52g for metabolic syndrome).



# True or False?

I am fasting if I consume only bulletproof coffee or bone broth.

➤ **False**

- Broth contains high levels of glutamine which can be easily turned into sugar in the blood.
- 1 cup of bone broth can have 1,000 mg glutamine.
- Client saw Big increase in ketones and decrease in blood sugar when stopped broth. He was getting a quart (4 cups) a day.
- I would say to keep broth to a cup or less for the day and no bullet proof coffee
- Keep total calories to 50 or less, water only is best.



# True or False?

Supplements can take you out of ketosis.

➡ **True**

- ➡ L-glutamine (can raise blood sugar in some people)
- ➡ Glucosamine (glucose = sugar)
- ➡ Liquid L-carnitine with sugar added (watch ingredients)



# True or False?

Soy formula = 5 birth control pills daily for an infant.

➤ **True**

➤ Some so-called “keto” foods are estrogenic:

- Soy/soy milk/soy protein (some diet program foods: Atkin's)
- Flax
- Chia
- Alcohol

**INGREDIENTS:** Glycerol, soy protein, bulking agent (polydextrose), hydrolysed gelatine, cocoa mass, sweeteners (maltitol, sucralose), milk protein, hazelnut meal 5%, sunflower oil, palm fat, acacia gum, cocoa butter, rice flour, milk fat, flavourings, emulsifier (soy lecithin), barley malt extract, salt.

# True or False?

Athletes Need to Fuel Before, During and After a Race.

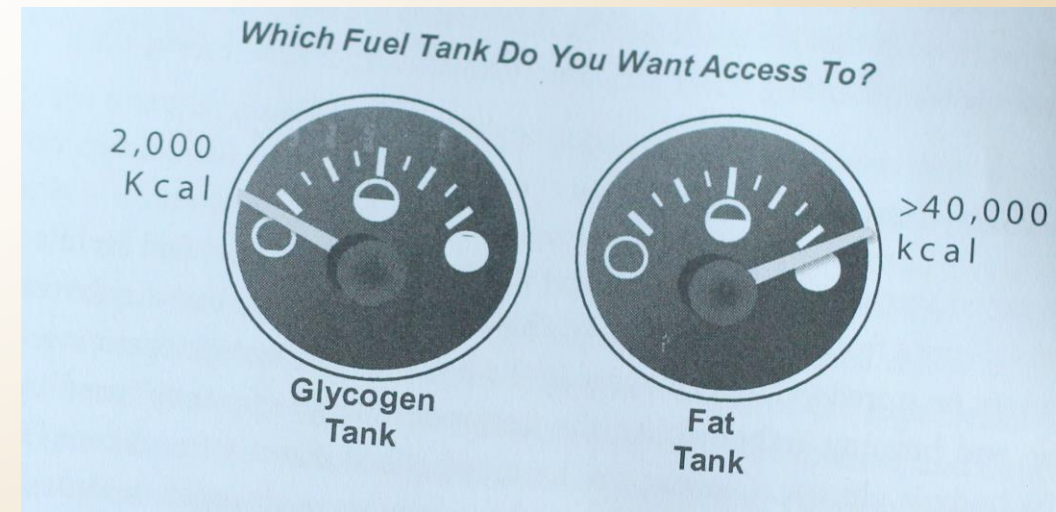
➤ **False**

➤ *"Rates of muscle glycogen synthesis in humans are highest when large amounts of carbohydrate are consumed immediately post-exercise (30), yet the LC athletes had similar rates of glycogen repletion compared to the HC athletes, despite receiving a negligible amount of carbohydrate after exercise (4 vs 43 g) and more fat (31 vs 14 g)."*

➤ [http://www.metabolismjournal.com/article/S0026-0495\(15\)00334-0/fulltext](http://www.metabolismjournal.com/article/S0026-0495(15)00334-0/fulltext)

# Stop “Hitting the Wall!”

- Our bodies store over 40,000 calories as fat, but we can only store 2,000 calories of carbs
  - “carb-burning” is why marathoners “hit-the-wall”
  - constantly need Gel Packs and Gatorade,
    - still low in performance at the end of races due to the depletion of carbs in their muscles/liver.



# True or False? Athletes Need to Fuel Before, During and After a Race cont.





# True or False?

You need super starch or fiber to feed gut flora.

➡ **False**

➡ The highest prebiotic is FOS (inluin)

- ➡ Vinegar (Apple Cider and Coconut)
- ➡ Herbs (chicory root)
- ➡ Veggies – onions, garlic, asparagus, leeks and Jerusalem artichokes

# True or False?

Calories in calories out equals weight loss/weight gain.

➤ **False**

➤ It is more about what you eat

➤ **Hormone manipulation**

➤ **Insulin vs Human Growth Hormone**

➤ **Exercise**

➤ **Food as well as WHEN you eat**

➤ And health of mitochondria which is where fat oxidation takes place

# True or False?

Increased Cholesterol levels indicates health issues.

- ➡ **False**
- ➡ Inflammation causes health issues
- ➡ CRP, A1C, Calcium score are much better indicators



# CAC and A1C

## ➡ Much Better Indicators of Risk

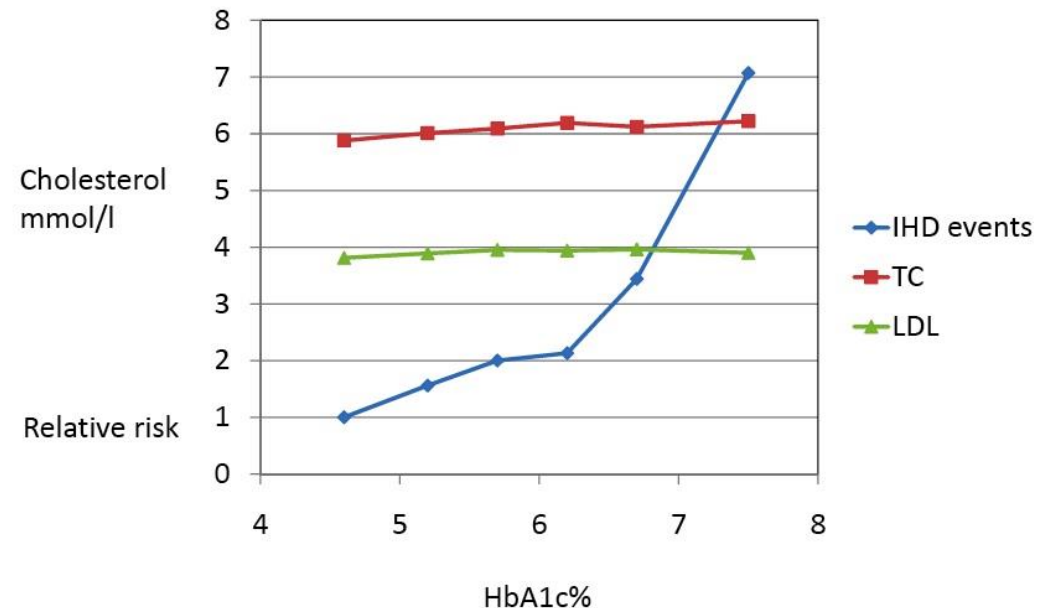
**TABLE 3. Hazard Ratios for Coronary Heart Disease (CHD) Events Across Age Groups Stratified by Coronary Artery Calcification (CAC) Group**

Age group	CAC score	Hazard Ratio (95% CI)				
		Model 1	Model 2	P value for Model 2	Hard CHD events only in Model 2	P value for hard CHD events in Model 2 only
45-54	0	1 [Referent]	1 [Referent]	...	1 [Referent]	...
	1-100	4.4 (1.9-10.5)	2.3 (0.9-5.8)	.08	2.3 (0.8-6.8)	.14
	>100	24.9 (11.5-54.0)	12.4 (5.1-30.0)	<.001	7.8 (2.5-24.0)	<.001
55-64	0	1 [Referent]	1 [Referent]	...	1 [Referent]	...
	1-100	2.9 (1.6-5.1)	1.7 (0.9-3.2)	.08	1.3 (0.6-2.9)	.49
	>100	9.0 (5.4-15.1)	5.3 (3.0-9.3)	<.001	3.8 (1.8-7.9)	<.001
65-74	0	1 [Referent]	1 [Referent]	...	1 [Referent]	...
	1-100	3.4 (1.9-6.0)	2.7 (1.5-4.9)	.002	1.8 (0.9-3.8)	.10
	>100	6.9 (4.1-11.7)	4.9 (2.8-8.8)	<.001	2.7 (1.4-5.4)	.005
75-84	0	1 [Referent]	1 [Referent]	...	1 [Referent]	...
	1-100	6.1 (1.4-26.1)	5.4 (1.2-23.8)	.02	11.6 (1.5-88.3)	.02
	>100	15.6 (3.8-63.5)	12.1 (2.9-50.2)	.001	20.3 (2.8-149.8)	.003

Model 1: unadjusted; Model 2: multivariable adjustment of model 1, including hypertension, diabetes mellitus, low-density lipoprotein cholesterol level, high-density lipoprotein cholesterol level, triglycerides level, smoking status, family history, body mass index, mean heart rate, hypertensive medications, lipid-lowering medications, and educational level.

### EPIC 2004:

#### Relative risk of CHD episodes vs. total and LDL cholesterol:







# Healing Your Mitochondria

Latest Science on Healing our Mitochondria and Quantum Biology

# Something to think about!

- Touch the Earth?
- Get sunlight into your eye?

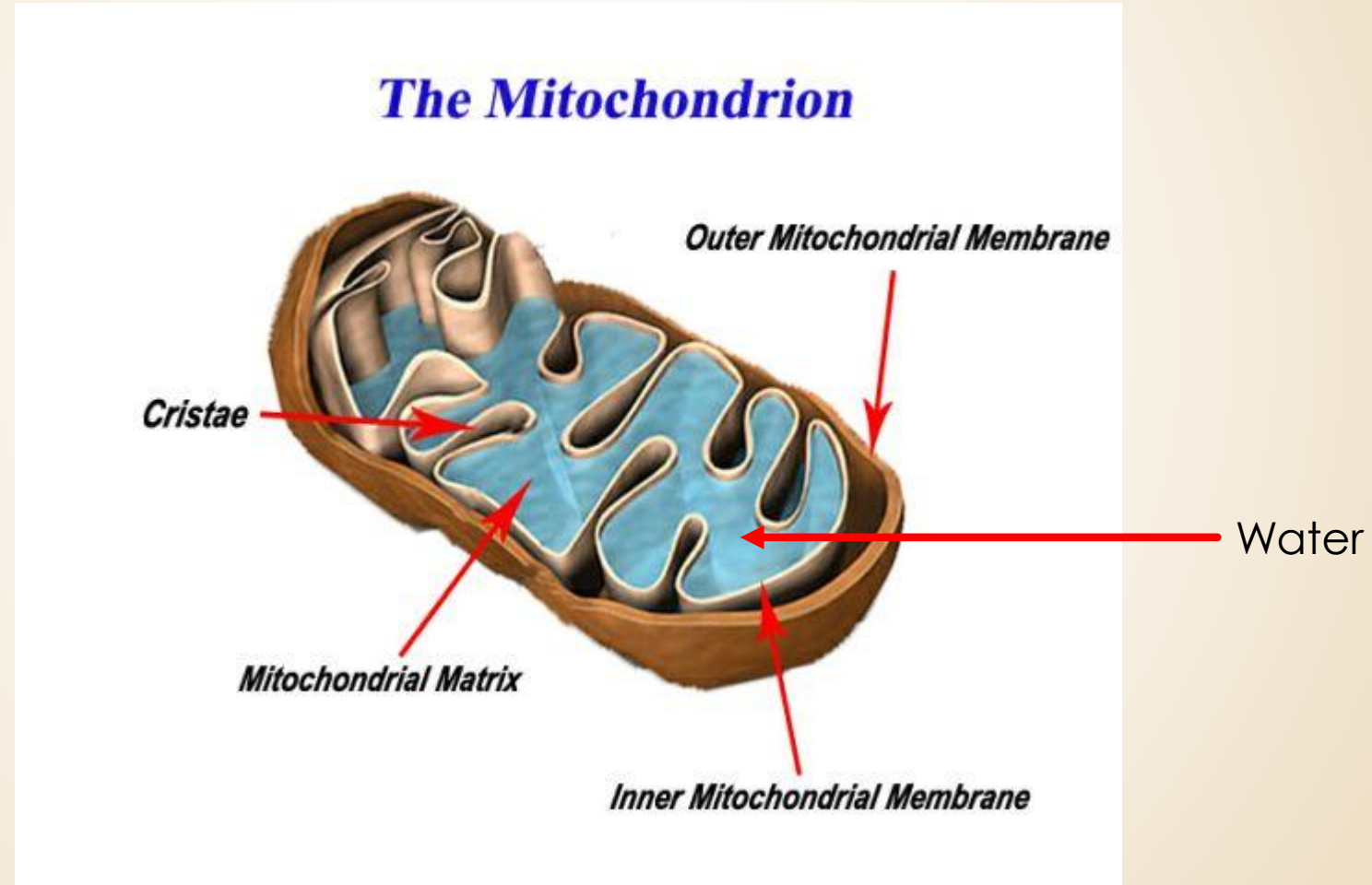


# What are Mitochondria



Mitochor

# What Fills the Mitochondria





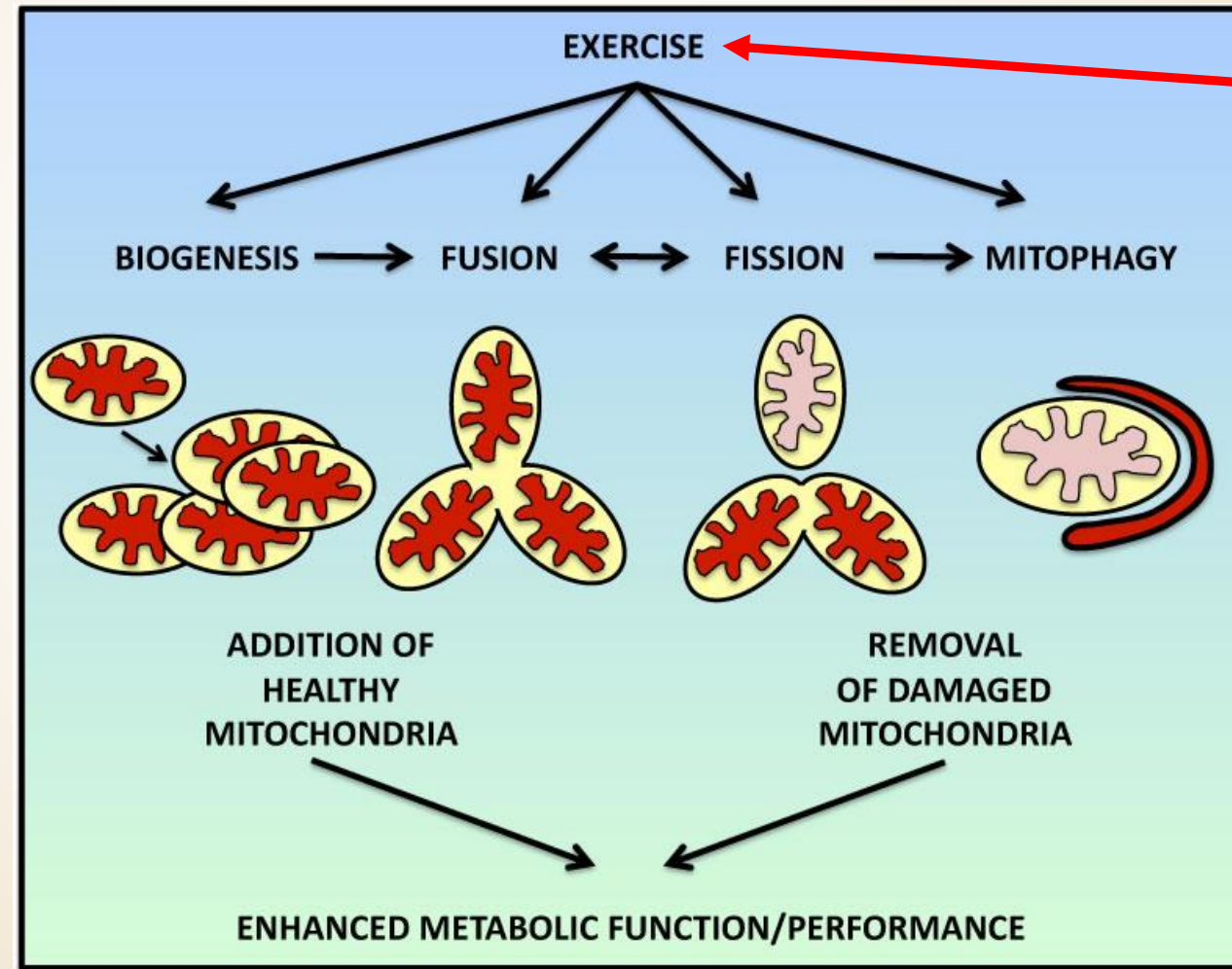
# What Damages the Mitochondria?

- Toxins
  - Dryer Sheets, lotions, shampoos, pesticides
  - Aspartame eats holes in cells
- Drugs
  - Statins are the worst offenders
- Sleep apnea and lack of sleep



# Mitochondrial Biogenesis

## Traditional View with Exercise



More than  
Just Exercise

# Mitochondrial Biogenesis

## ➡ Fasting:

- ➡ Your body stops focusing on digesting food
- ➡ Switches to focus on breaking down failing mitochondria while creating new healthy ones.
- ➡ I like to refer to this as your body's mechanism for reversing aging and curing damaged metabolisms.
- ➡ Also huge benefits for blood sugar control
- ➡ Dr. Fung book "[The Obesity Code](#)" and [The Complete Guide to Fasting](#)

# Intermittent fasting

- Daily, eat all food in 6 hour or less window, nothing but water outside that
- Body gets to ideal fasting state after about 12-14 hours
- You get 4 hours in ideal fasted state with 6 hour eating window



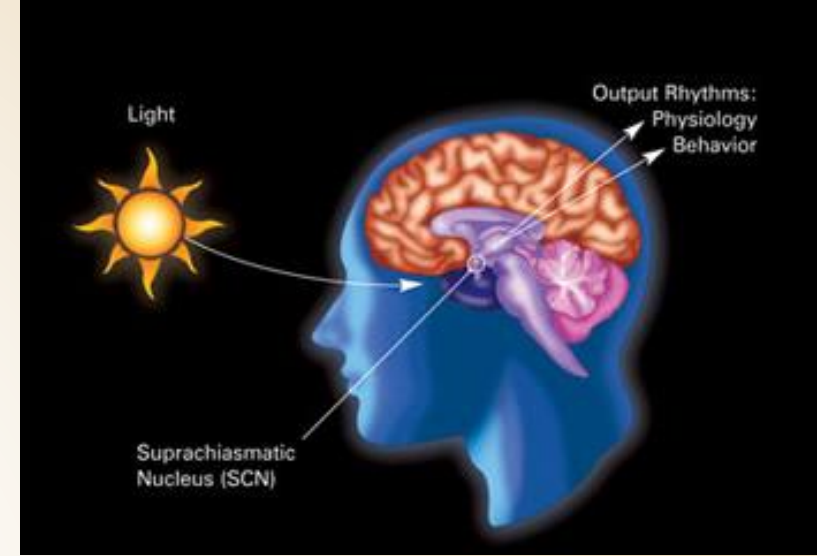
# Extended Fasting

- 24 hours or more
- First 24 hours can be tough but easy after
- Methods:
  - One day a week do 24 hour fast
  - One time a month do 2-7 day fast
  - Once or twice a year do 7 day fast

# Fasting History

- "Renew yourselves and fast, for I tell you truly that Satan and his plagues may only be cast out by fasting and by prayer. Go by yourself and fast alone, and show your fasting to no man." - Jesus
- "Fasting is better than prayer." - Saint Clement
- "The best of all medicines are rest and fasting." - Benjamin Franklin
- "The light of the world will illuminate within you when you fast and purify yourself." - Mahatma Gandhi
- "I fast for greater physical and mental efficiency." - Plato
- "More caution and perhaps more restraint are necessary in breaking a fast than in keeping it." - Mahatma Gandhi

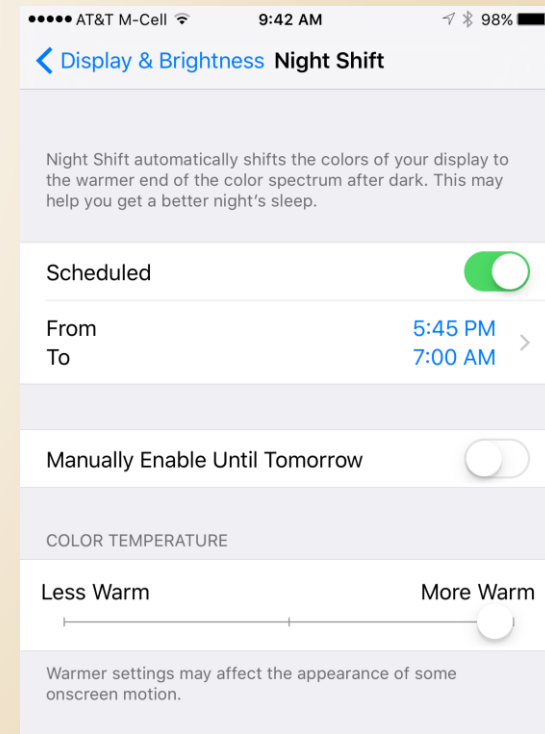
# Circadian Light



- Eye has receptors that communicate with the SCN in brain (suprachiasmatic nucleus)
- The SCN communicates with the pineal gland telling it to release melatonin or not
- Bright light (especially high energy blue light) tells it to stop making melatonin
- Low light tells it to produce melatonin

# Circadian Light and Sleep

- Enabling Deep Circadian Sleep
- Key to mitochondrial function and health
- Direct sun in morning
  - Best is direct sun (no glasses, etc.) for 20 minutes within first 2 hours of waking)
  - Alternative is a full spectrum light therapy light
- Limit blue light late in the evening
  - Limit devices and all un-natural light (florescent, etc.)
  - Blue blocking glasses, Night Shift on iOS
  - Blackout blinds in bedroom





# But Isn't UV Light Bad?

- Severe burns have correlation to skin cancer (3<sup>rd</sup> degree type burns)
- Other exposure doesn't
- Creates vital vitamin D
- Synchronizes circadian clock
- Creates Cholesterol Sulfate (transport without LDL)
- Ask any specialist "Over last couple decade people have used 30 fold increase in sun screen but skin cancer levels continue to increase?"

# Cold Thermogenesis

- Definition: Heat production stimulated by cold exposure
- A study in rats found that cold exposure revamped thyroid function and increased brown adipose tissue (BAT) oxygen consumption by 450%.
- One study in humans found that cold exposure can increase energy expenditure, and may assist in fat loss.
- Another study found that adult humans have more BAT than previously thought. BAT can significantly increase energy expenditure in response to cold.

# Cold Thermogenesis Benefits

- Lowering body fat
- Increasing hormone levels
- Improving sexual performance and fertility
- Lowering blood sugar
- Cutting food cravings
- Improving adrenal function
- Fixing thyroid issues
- Enhancing immune function
- Improving deep sleep quality
- Increasing pain tolerance
- Reducing inflammation

# Cold Thermogenesis and Mitochondria

- Many benefits of cold thermogenesis
  - Cold shrinks mitochondria
  - Smaller mitochondria are more efficient and better functioning
- Also makes water more apt to store energy (next slides)







# Water

The Fourth Phase of Water

# We Know Everything About Water, Right?

- Vapor, liquid, gas
- But there is more. Here are some examples



# Fourth Phase of Water

- Exclusion Zone Water or EZ Water
  - Water in an ordered state (almost like a crystal)
  - It is actually  $\text{H}_3\text{O}_2$
  - Occurs between liquid and a solid
  - Also occurs when in contact with a hydrophilic surface



# EZ Water Properties

- Negatively Charged
- Expands under light (IR light)





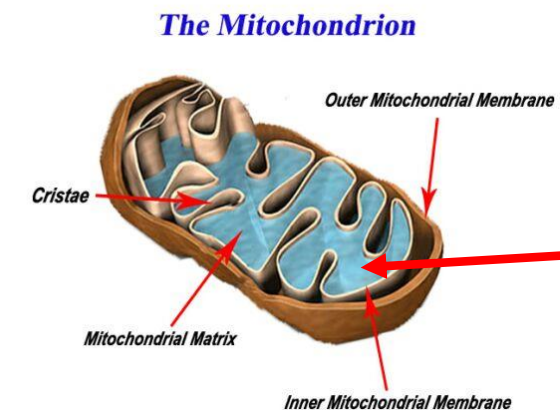
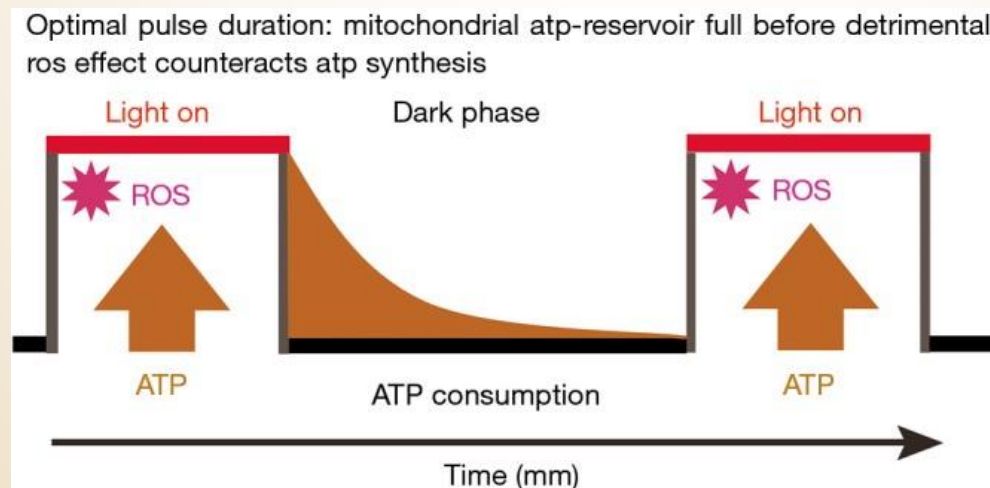
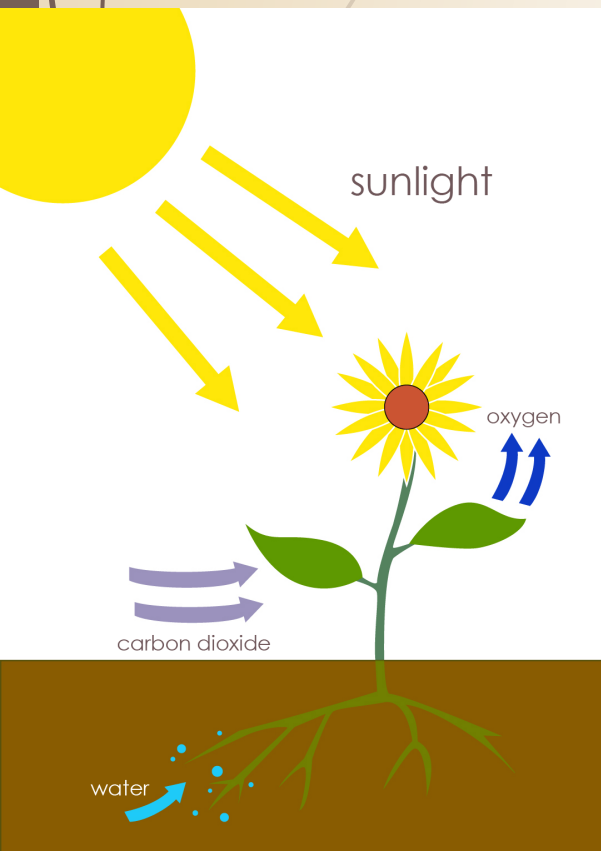
# So What Does This Have To Do With Our Bodies?

- Our bodies (if you count molecules) are 99% water
  - All of it is EZ water
- Our smallest capillaries (next slide)
- Energy production (enhance Mitochondria function)
- Mammalian battery

# Making ATP From Sunlight

- This article shows how 670nm light makes ATP with NO FOOD added. 670 nm light = Red light (infrared) = mammalian photosynthesis = when ketosis works best.

➤ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4701522/>



# Smallest Capillaries

- Red blood cells are larger than our smallest capillaries.
- Heart pumping action? (1,000,000 times greater than our heart can generate).
- Light and EZ Water (especially IR or red light)





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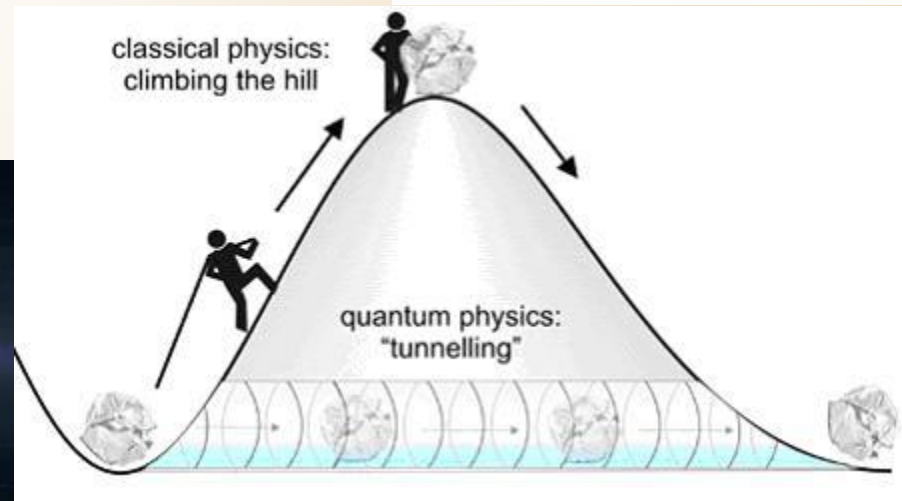
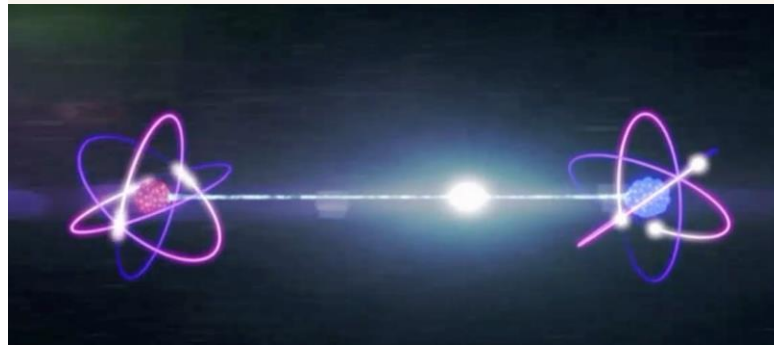
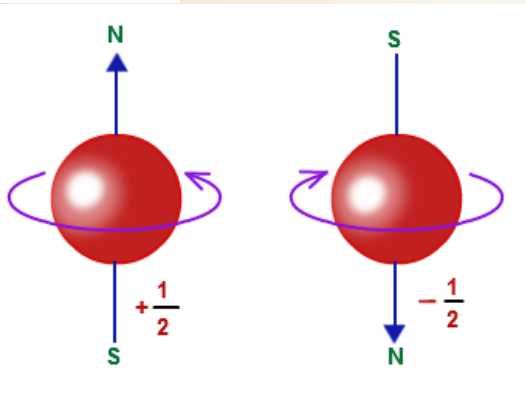
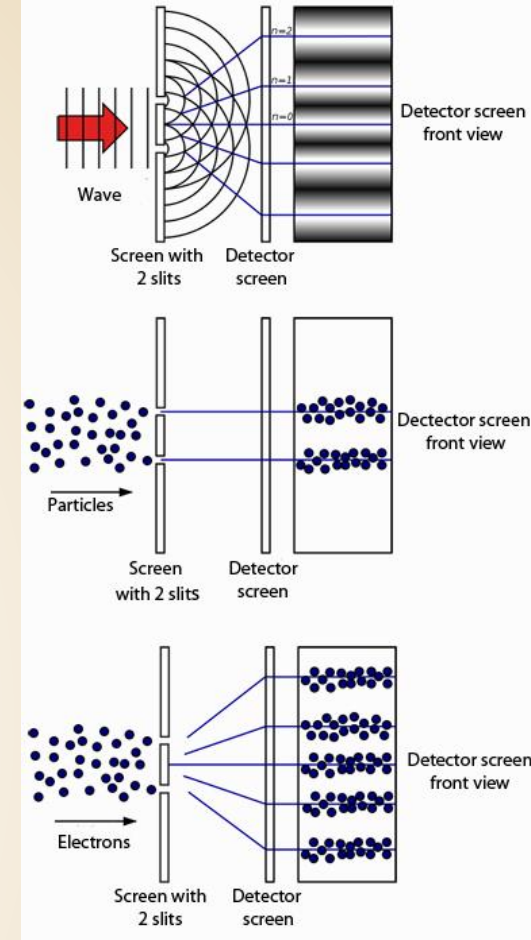
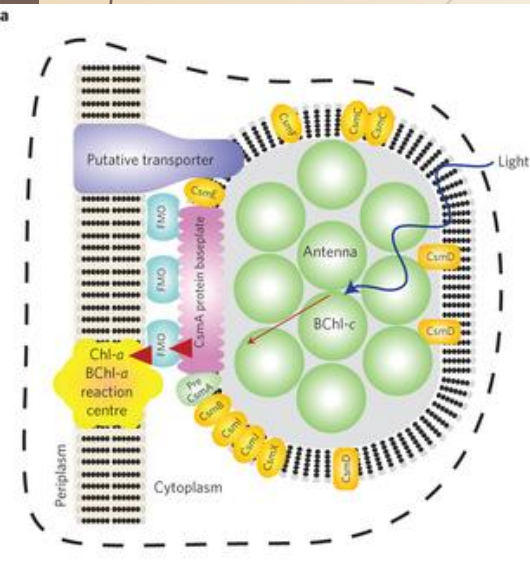
# Quantum Biology

The Coming Age of Knowledge about how our Bodies Work



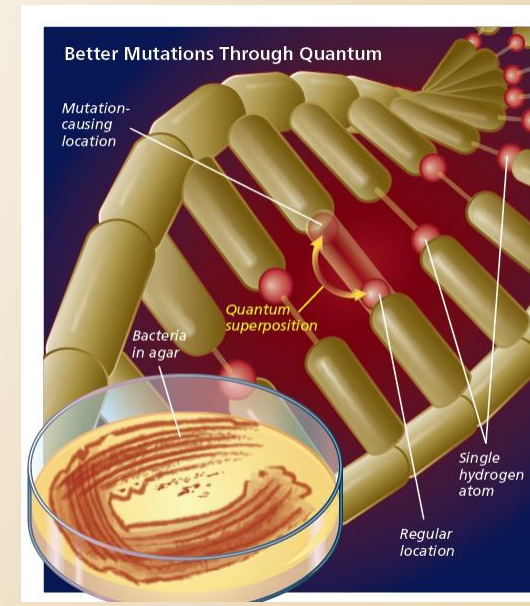
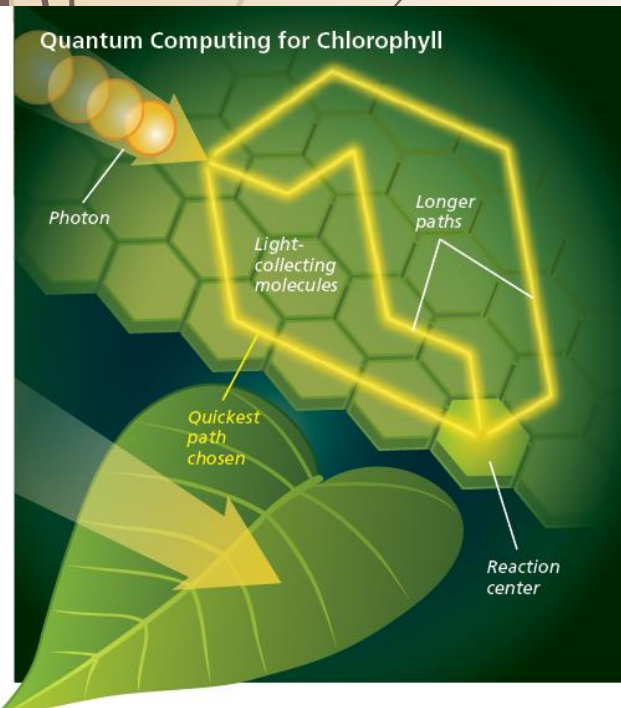
# Quantum Weirdness

- Wave Theory
- Tunneling
- Spin
- Entanglement
- Walk



# Real Life Examples

- Robin: Uses quantum entanglement to navigate
- Photosynthesis: Uses quantum walk to generate energy
- Tunneling: How DNA replication “errors” occur
- Much more including how smell works, etc.



# It's All Connected

- Inflammation = positive charge = lower PH
  - More Acidic
  - EZ water gets smaller
  - Leptin resistance, cancer, etc. from more acidic body
- More morning UV light = negative charge
  - More Alkaline
  - More EZ water in cells
  - Charges mammalian battery and create ATP
- Grounding = negative charge



# How New is This?

- Before 2007 no scientist believed quantum properties happened in the human body
- All their experiments only worked in extreme cold (-450 degrees)
- Most finding are in last 3-4 years
- Tons of new science coming in this area
- We will be keeping on top of it and bringing your all the latest



# Real Results with Grounding

- "Ok. I went and got an earthing mat. I know I was hesitant, but I trust you guys. I used it for a bit on Sunday but didn't notice an improvement or anything. I didn't have time to use it Monday or Tuesday during the day. So last night I just laid it on the bed and put my legs on it (calves/ankles) and slept like that all night. OH. MY. GOD. Best sleep I've had in years. Seriously! I woke up feeling amazing. AND in a good mood – normally I have to wait a few hours to change out of my grumpy pants. 😊 I was energized and ready to go and I got so much accomplished before I had to leave for work. It's like my brain was turned on again! I don't have cloudy thinking either. I let my son (13y/o) use it for about 5 minutes last night and he said he wanted one too. So I'm ordering it today for him – I want to save up and get a throw blanket too. Seriously – I'm jazzed about a mat! My husband laughed and said that it looked like I'm sleeping on a oversized mouse pad but I want him to try it later. I think it'll help him sleep better too. I love it!"



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# What Else Effects Mitochondria

# Toxic Liver

- Everything you put on your skin gets absorbed by the liver
  - Pharmaceutical Companies make millions off of topical products
- Think about:
  - Shampoos
  - Toothpaste
  - Lotions
  - Make-Up

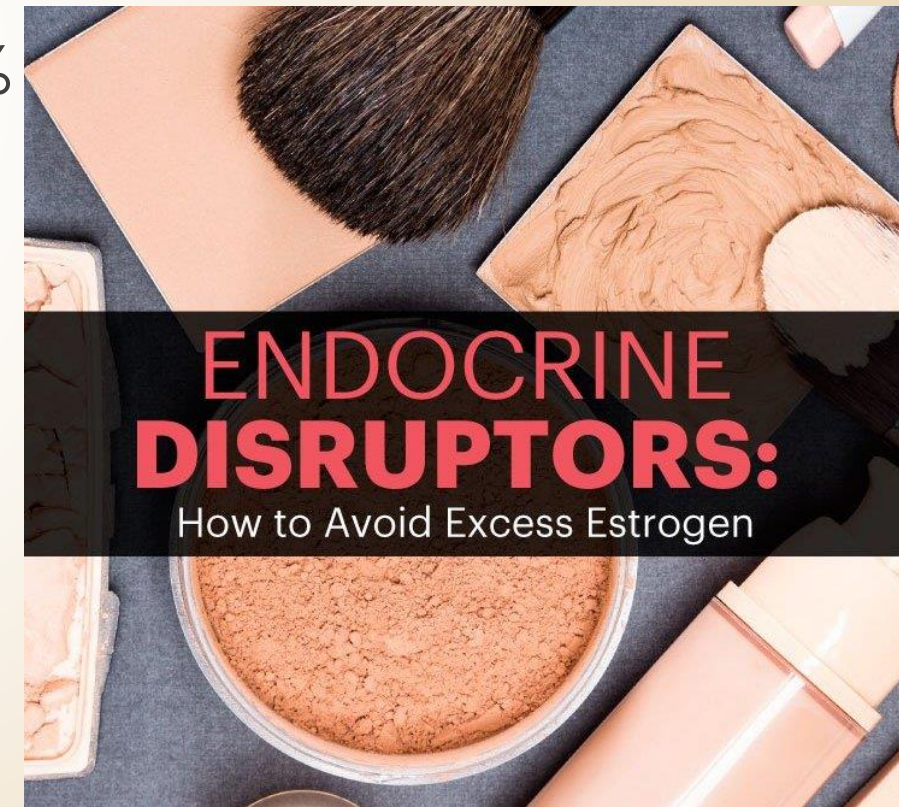
# What are Obeseogens?





# Make-Up Estrogenic!

- After only 3 days of changing the teenagers make-up
  - Reduction in estrogen by 45%
  - Hormonal migraines
  - PMS is not normal
  - Estrogen dominant cancers



# Fructose: The Fat Switch

- Fructose is a type of sugar that is the most damaging form of sugar to our brain and our cells.
- It causes metabolic syndrome and weight gain not because of the calories but because it turns on the fat switch.
- When you consume fructose, it activates a key enzyme, fructokinase, which activates another enzyme that causes cells to accumulate fat.
- The enzyme that makes you fat is turned on in obese people, and the enzyme that makes you lean is turned off.

# Fructose: The Fat Switch

- The same “switch” animals go through to fatten up in the fall and to burn fat during the winter.
- Fructose is the nutritional ingredient that flips on this “switch,” causing cells to accumulate fat.
- Metabolic Syndrome is a normal condition that many animals go through to store fat to survive the long winters and migration.
- Bears gorge on berries to fatten up for a long hibernation in the winter.







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# Action Plan

How to Improve your Mitochondria Health

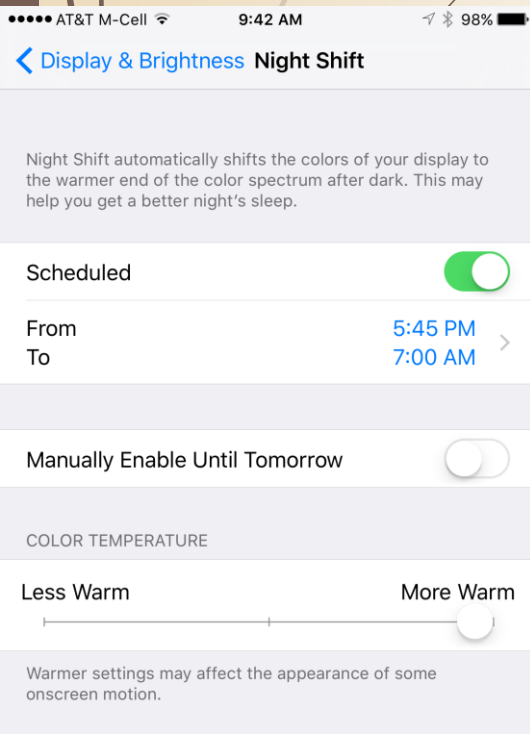


# Eat Ketogenic

- Improves Mitochondria Efficiency
- Reduces inflammation
- Keeps “Fat Switch” from activating
- Address Hunger and Cravings issue (key to long term weight loss and healing)

# Light

- Get 20 minutes of direct sunlight (UV light) in first 2 hours of waking up
- Use full spectrum light if you can't get outside
  - Tanning light with UV even better
- Limit blue light in evenings
  - Turn on Night Shift (Apple devices)
  - Limit devices (TV, phone, computer) in evening or wear blue blocking glasses when viewing ([CLICK HERE](#))



# Cold

- Drink Cold water
- Chew or suck on ice
- Try to introduce yourself to cold
- Keep bedroom cold at night (67 degrees or lower: ours is 54 degrees)

# Cold Thermogenesis Guide

- Step 1: Face Dunking (get cold adapted)
  - Water bath of 50-55 degrees (using [Skin Thermometer](#))
  - Dunk face for as long as you can and record time
  - Dunk again and record time
  - Repeat once a day for two weeks (Don't let skin get below 50-55 degrees)
  - Do this each night before bed to fall asleep faster and sleep deeper



# Cold Thermogenesis Guide



- Step 2: Ice Packs ([Click Here](#) for one we use)
  - Apply Ice packs to torso for as long as you can
  - Try extending time by 5 minutes until you get to 60 minutes
- Step 3: Cold Bath or Shower
  - When you can tolerate Step 2 for one hour with pink to cherry red skin you're now ready for the Cold Tub
  - Fill tub with cold tap water or put shower on cold
  - Soak in tub for 45 minutes 2-5 times a week
  - Don't let skin get below 50-55 degrees
- Step 4: Bath with ice

# Water

- Shoot for 1 gallon of water a day or more
- Remember, 99% of the molecules in your body are water!
- Spring water is best ([Click here](#) for sources)
  - Steer clear of chlorinated/fluoride water
- Cold water is better
- Create negatively charged EZ water with IR light

# Grounding and Magnetism

- Wear grounding shoes or walk barefoot
- Use a grounding mat
- Use grounding mat or grounding sheets at night
- Consider a Magnetico magnetic mattress pad



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# Need More Help?

We have the tools for you to realize this lifestyle change



# Meal Plans

- Complete meal plan packages
- Hours of instructional videos and tutorials
- 30 days or more of meal plans
- Easy to follow all the way down to weekly grocery lists
- [mariamindbodyhealth.com/my-services](https://mariamindbodyhealth.com/my-services)

# Support Groups and More

- Support groups, Questions and Answers and all your support needs
- Weekly Webinars with Maria and Craig
- Videos for instruction and exercise videos
- Over 200 recipes (most exclusive)
- Meal planning and grocery lists
  - Generate your own meal plans with automatic nutritional breakdowns for each day
- Much more at:
- [keto-adapted.com](https://keto-adapted.com)

# Books

- Quick and Easy Ketogenic Cooking
- 30 Day Keto Cleanse (coming soon)
- The Ketogenic Cookbook
- Other Cookbooks and Nutritional guides



Make your goal a reality!

