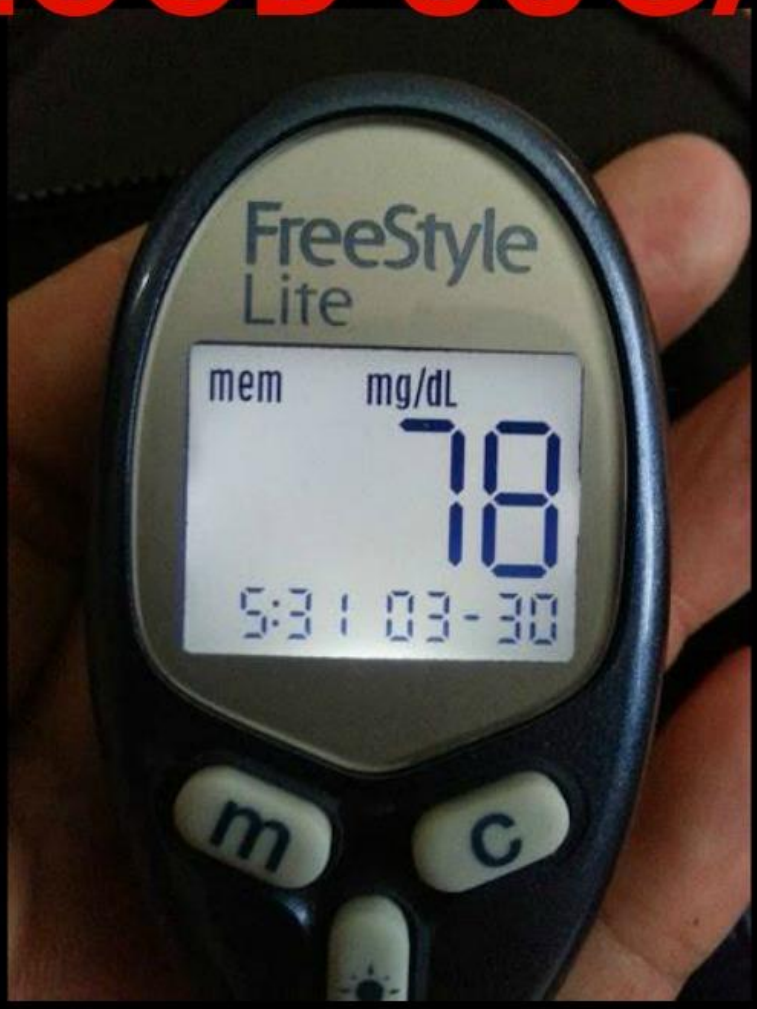
How To Reduce
BLOOD SUGAR



The Warrior Way

By Steve Cooksey

Diabetes-Warrior.net

Preface

Before I began my own warrior journey, my health was quickly spiraling downward.

I am a type 2 diabetic who was battling high triglycerides, cholesterol, severe migraines, high blood pressure, acid reflux and allergies. I thought this was how I'd be living the rest of my life until I met Steve Cooksey. He introduced me to a low carb Primal lifestyle that was life changing! Within 3 months, I quickly reduced prescription meds — 1.5 years later I was med free of all prescriptions. Diabetes goes back many generations in my family as well as the side effects of amputations and blindness. To be a diabetic and reduce medications was unheard of - I am the first in my family.

Not only do I experience normal blood sugars, but a high amount of energy as well. I incorporated exercise into my daily routine, starting with water aerobics and worked my way up to a cross fit boot camp. Over the 4.5 years, I've lost over 40 pounds, going from a size 14 to 6 in clothes. This would never have happened without taking control of my blood sugars.

I encourage you to read this book; it can change your life!

It's an excellent resource for reducing blood sugars as well as regaining control of your health. I only wish it had been available when I began my journey — a must read for all!

Two recent blood sugar readings are included as evidence.

Karen Gale

Introduction

Congratulations on taking the first step to better health! Let me say, “I am THRIVING! ...and not ‘just’ surviving” and I want you to thrive as well!

You will soon have the knowledge you need to help you to reduce your blood sugars. Your goal is to obtain and maintain truly normal blood sugars, not ‘diabetic normal’ blood sugars. That is an important distinction and it is a distinction you are NOT likely to hear from your Medical Industry professional.

In the last section of this book, I will tell you exactly what my blood sugar targets are and why I chose them. I will also provide a method to use should your blood sugar levels or your weight loss stall above your targets.

Notes:

- Medical Industry Professional can be a doctor, dietitian, nutritionist or diabetes educator.

- I will post recent blood sugar testing pictures throughout the book. Keep in mind that I am a formerly obese, formerly DRUG AND INSULIN dependent diabetic. Today, I am drug and insulin free, with normal blood sugars for non-diabetics.

- Above I used the word ‘truly’ when discussing normal blood sugars. I am compelled to say that because the Medical Industry provides so called ‘normal blood sugar ranges’ that are harmful. Normal blood sugar ranges should be therapeutic not cause us harm.

  From this point forward, when I say ‘normal blood sugars’, I am talking about TRULY normal blood sugars not ‘diabetic normal’ blood sugars the Medical Industry promotes (this includes the American Diabetes Association). I will discuss this in more detail in the Addendum section of this book.

You can realize better health and fitness if you will first obtain and then maintain truly normal blood sugars. Like me and many others, you too can add years to your life but more importantly add life to your years!

Diabetes is hyperglycemia (elevated blood sugars). Elevated blood sugars are toxic to every cell in the body; therefore elevated blood sugars are toxic to every organ in the

body. If you suffer from organ damage the very worst thing you can do is to continue to have elevated blood sugars.

The evidence I provide in this book should convince you that elevated blood sugars are causing you harm. You may or may not be aware of the damage but it is occurring. If you will normalize blood sugars the diabetes complications should stop worsening and will allow the body to try to heal itself.

Many, including myself have reversed all known diabetes complications. That may or may not be the case for you, depending on several factors including the amount of damage and the length of time blood sugars have been elevated. However by controlling your blood sugar, you will help stop further damage and allow your body to attempt to heal itself.

Normal Blood Sugars

As noted in the Introduction, normal blood sugars are the key to ending the downward health spirals the vast majority of diabetics endure. There is an estimated 30 million diabetics in the US and an estimated 300 million worldwide.

Even using the Medical Industry's criteria, roughly 10 million of the 30 million diabetics are undiagnosed. That is an astounding number and is likely much higher if 'truly' normal blood sugar levels were used.

Given the information above, If you have never personally tested your blood sugars either fasting or after meals, I urge you to spend approximately $25 and buy a blood glucose meter and test strips. An inexpensive yet reliable model I suggest is the Wal-Mart ReliOn Micro. For about $25 you can buy a meter and 20 test strips.

Test your blood sugars in the morning after waking as well as one and two hour post meals.

Medical Industry Standard Targets

Medical Industry standards vary but generally speaking these are the ranges promoted. Many sources will suggest even higher levels are still 'normal' blood sugars.

Overnight Fasting	above 125 mg/dl is diabetic.
One Hour Post Meal	140 md/dl one hour post meals
Two Hour Post Meal	120 mg/dl two hours post meals

My Blood Sugar Targets

Overnight Fasting Blood Sugar Goals = 60 - 90 mg/dl (or 3.3 - 5.0 mmol/L).

Sub 100 mg/dl (5.6 mmol/L) all the time except for occasional and brief visits into the 120 mg/dl range (6.7 mmol/L) post meals. (Not every meal, occasional meals)

I like to stay below 100 all the time but temporary, occasional trips to 120 mg/dl are ok in my opinion.

In the Addendum, I provide evidence as to why I set these specific targets.

Causes of Elevated Blood Sugars

The causes can be carbohydrates consumed, dehydration, lack of sleep, stress, illness, infections, injuries, intense exercise and for some, protein consumption. If you do not limit your carbohydrates you start the game already behind. I mention these so you will know there are factors other than just carbohydrates and need to be considered if blood sugars remain elevated after limiting carbohydrates.

Therefore you should…

- limit carbohydrates
- stay hydrated
- get enough good quality sleep
- reduce stress with exercise, deep breathing, yoga and meditation
- sickness, infections or injuries need to be addressed
- exercise intensely when blood sugars are not elevated
- protein is discussed later in the book

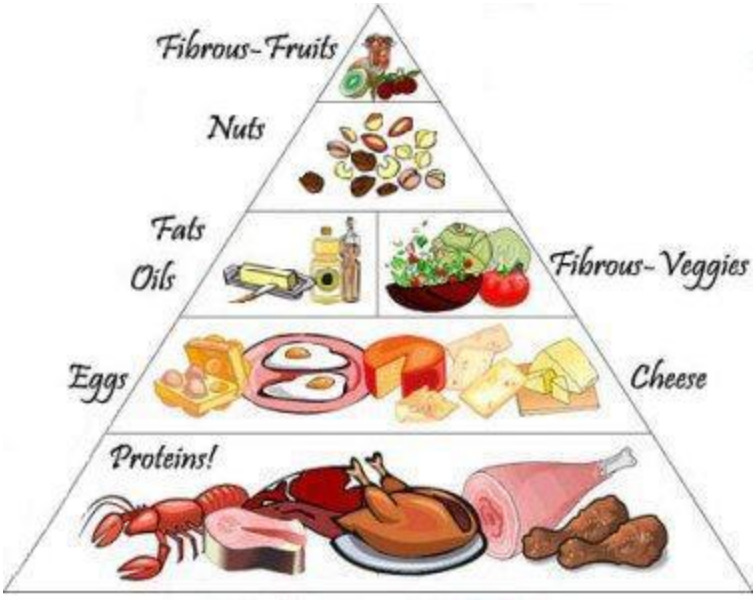
How to Eat to Reduce Blood Sugars

Note: You must question everything! If a doctor, nutritionist or diabetes educator tells you it is okay to eat something, you should question the advice and test, test and test. If I or anyone else tells you it is okay to eat something… you should question it and test, test and test.

Learn to question everything especially if someone is profiting from the advice

Nutritional Chart

Here is the nutritional chart that allowed me to go from an obese, drug and insulin dependent diabetic to a person of normal weight and normal blood sugar levels, all while weaning off drugs and insulin!



Meal Plan

Since August 2009, I have eaten less than 50 grams of carbs per day. I generally stay below 30 grams per day. **Over the last several years, I typically eat 10 - 15 grams of total carbohydrates per day and I exercise almost every day.** The reason I mention exercise is so you will know that I have plenty of energy to exercise daily.

This meal plan is not just for diabetics. It is a meal plan that I would encourage everyone to try, especially if they suffer from illness, take an over-the-counter or prescription drug.

What You Can EAT Every Day

Keep It Simple: Eat fatty meats, eggs, leafy green vegetables, butter, and coconut oil until your blood sugars normalize.

I see it all the time; people suffer from paralysis by analysis.

Do not use 'confusion' as an excuse.

If you would heed my advice, you would see amazing results. As you read the rest of this section just keep in mind, it all boils down to …

'eating fatty meats, eggs, leafy green veggies, butter and coconut oil'.

Eat these when hungry. When not hungry, do not eat. :)

- **Meats** – beef, pork, fish, poultry, etc. Organ Meats are particularly high in nutritional value. **Note: Beef Liver can raise blood sugar levels.** I would suggest only eating an ounce or two at a time and test your blood sugars. As with all new foods, test, test and test your blood sugars.

  I would suggest avoiding processed 'deli meats'. If you must, check the ingredients and nutritional labels. Many processed deli meats have carbohydrates added, I often see 2 - 5 grams of carbs per serving. I generally eat several servings of meat per meal so I generally avoid deli meat consumption.

- **Eggs** - Eggs are so versatile! I love and enjoy eating them in omelets and frittatas; I love them fried, scrambled, deviled, hard-boiled, soft-boiled, poached, sunny side up and over easy. It's a great thickener to broths and soups, just blend together with a little broth stock using a blender before adding to the main pot.

- **Veggies** – low carb veggies are best such as greens (collards, turnip, spinach, kale, etc), cauliflower, broccoli, green peppers, celery, and asparagus.

- **Dairy** - Is a special situation for many, butter or ghee is the only dairy that I recommend consuming daily at least until you achieve your weight and blood sugar goals.

  - **Butter** is an awesome daily fuel source for me. I eat or drink it daily in my coffee. I also cook with it as well.
  - **Ghee** is clarified butter. You can purchase or make your own by boiling and skimming off the protein.

- **Cream** is problematic for me and for many others. IF you can limit consumption to a few tablespoons in your coffee, go for it.
- **Milk** - **AVOID ALL MILK**. Raw, pasteurized, low fat, full fat… avoid it all. All milk is high carb and many are intolerant of it as well. Most milk is in the 11 - 14 grams of carbs per cup and those are just the unsweetened, non-flavored milks.
- **Cream Cheese** is okay as an occasional treat. I personally eat it very rarely, just make sure to check the ingredient list and the carb totals.
- **Fermented Dairy** - Yogurts, Kefirs, etc. YOU should only consume these if they are full fat, plain and have live active cultures. Plain means no flavoring and no added sugar. I love the unique taste of fermented dairy but the main benefit is the 'live active cultures', which means it contains live bacteria.

- **Real Fats from Natural Sources** – Coconut Oil, Olive Oil, Real Butter (with or without salt) and rendered fats such as beef, pork or poultry fats. Red Palm oils are awesome as well but there are better options from an ecological standpoint (destruction of Orangutan habitat).

  Note that hydrogenated oils such as canola oil, vegetable oil and corn oil are all highly inflammatory. They won't raise blood sugar levels immediately, but they should be avoided due to their inflammatory response in the body.

- **Drinks** – water, tea and coffee unsweetened. I do use coconut oil and butter in my coffee, occasionally real cream. No nondairy creamers, artificial creams or sweeteners.

- **Condiments/Spices** – Louisiana Hot Sauce, Crystals, Tabasco, Black and Red Pepper, Sea Salt or Himalayan Salt. (Table salt is okay but try to buy the salts mentioned). Apple Cider Vinegar on salads or greens with Extra Virgin Olive Oil (EVOO) is great. I would suggest not eating EVOO daily.

Occasionally You Can Consume

- **Bone Broths** - I try to consume these at least monthly, I think weekly would be better. Here are a couple of posts on bone broths. "Here and Here".

- **Wine –** however, you should avoid until you reach your weight loss target but if you must, always drink dry red wines such as a Merlot or Cabernet Sauvignon.

- **Liquors -** I would urge you to avoid until you reach your weight goals. Clear liquors are okay, the dangers are in the mixers.

  No sweet wines or mixers.

- **Cheese** – typically I will add cheese to my LC Cauliflower crust pizza or my LC Primal Chili, but I do try to limit. Cheese could be eaten daily, if you can limit it to an ounce or two per day. Some cannot.
- **Nuts** – walnuts, pecans, cashews, macadamia nuts, and almonds are okay in VERY small amounts, a handful or less a day. I would suggest avoiding them until you normalize blood sugars because so many people cannot limit themselves once they start eating them. Nuts have carbohydrates, and if you do eat them, make sure to include them in your totals.
- **Fruits** – Low Carb Fruits ONLY and even then, do not consume daily. Blueberries, raspberries, strawberries, blackberries are fine as an occasional reward. A handful or less when consumed is advised until blood sugar in under control, and only in small quantities.
- **Sweeteners** - I am against using sweeteners, I do not use them. However stevia and artificial sweeteners are okay during the transitional period, but not for long term usage. You need to begin to wean off of them from the beginning if you choose to use them.

  You want to break the addiction to carbohydrates including sugar, starch and grains and that is more difficult if you continue to eat sweeteners artificial or not. I recommend avoiding all sweeteners until the addiction is broken.

You can click on this link and it will take you to a listing of my diabetic recipes.

What to AVOID

- **sugar** – includes soft drinks, fruit juices, cookies, cakes, cakes, fruit roll ups, sweet tea. Avoid them all.
    - Check out this link – here for more information.
- **starch** – **potatoes, beans and rice are high in starches:** which means they are high in carbs. I urge you to follow my instruction and limit total carbohydrates to 30 grams or less. Do you really want to use up 30g of carbs on one (1) potato? or exceed 30g on 1 cup of rice? And make no mistake, eating 30g at once will cause your BG to spike, big time.
    - Successfully living with diabetes is all about "rationing" carbs. By limiting the carbs to 30 grams or less you make it easier to manage blood sugars.
- **grains** – especially wheat (gluten) in ANY form, flour, pasta, breads, crackers, cakes, cookies, cereals, corn and rice. - Avoid them. Not just because they are high in carbohydrates but also because of the gluten.
    - Links: Here, here and here. There is absolutely no reason to consume grains.
- **trans fats, hydrogenated oils** – including corn and vegetable oils
- **Milk - AVOID ALL MILK.** Raw, pasteurized, low fat, full fat… avoid it all. All milk is high carb and many are intolerant of it as well. Most milk is in the 11 - 14g of carbs per cup and those are just the unsweetened, non-flavored milks.
- **legumes** – including beans and peanuts. Peanuts are technically a legume and not a nut. These are high in carbs and can be inflammatory.
- **high carb fruits** – avoid grapes, bananas, pineapple, pears, apples and all other sweet, high carb fruits.
- **high carb vegetables** - avoid yams, sweet potatoes, white potatoes, beans and parsnips.
- **"reduced fat"** – why? Typically they are reducing natural fats AND they usually add sugar to compensate. This are also typically chemical laden and inflammatory.

Note: The above list may appear daunting. Do not try to memorize this listing. Make it simple, especially in the beginning. Just eat fatty meats, leafy green vegetables, eggs, butter and coconut oil until you …

- Break the grain, sugar, carbohydrate addictions
- Obtain and maintain normal blood sugar levels.

  At that point you can begin to add highER carb 'real foods' and see how your body handles them.

This meal plan WORKS! It has helped every single person who has tried it.

Work the plan and it will work for you!

Macronutrient Ratios

Many are concerned about macronutrient ratios; I was too early in the journey. I would urge you not to be concerned with ratios but this instead.

- **Carbohydrates**: directly fuel blood sugar, keep these low. Sub 30 total grams or less per day. I am typically 15-20 grams per day… so I know it can be done.

- **Protein**: Consume enough to maintain muscle mass. For most people that is .7 to 1 gram of protein per lean mass. I estimate my body fat percentage to be about 15%. To determine your protein needs, determine your approximate lean body mass by subtracting the fat.

For me that is 160 lbs x .15 (%) = 24 lbs of fat. Subtract 24 from 160 = 136 lbs

136 x .7 = 95.2 , 136 * 1 = 136. Therefore I want to eat between 95 and 136 grams of protein per day.

Here are several body fat calculators for estimating purposes here, here or here.

Note: If your blood sugars remain elevated, excess protein may be the culprit. Experiment with reducing protein consumption.

- **Fat**: I do not count fat, I just eat enough to keep me sated.

The last several times I have maintained a food journal I have been in the 75-85% of my calories from fat. Protein has been in the 13 to 23% range with about 2% of calories from carbohydrates.

I do urge people to maintain a food journal periodically, especially if their blood sugars are elevated to make sure their macronutrient totals are in line with what they should be. The two that most use are Fitday.com and MyFitnessPal.com.

Fitday.com and MyFitnessPal.com are two free online food diaries.

Nutritiondata.com is a great site to find information on macronutrient amounts (protein, fats and carbohydrates).

Exercise

If you are reading this book I am assuming you or someone you know has elevated blood sugars. The single best exercise for reducing blood sugars immediately is walking.

I would urge you to start walking as much as you can walk comfortably today. Tomorrow walk a little bit further. Try to do a little more each day. Once you can comfortably walk a mile you can begin to alternate jogging and walking. Each day try to add a little more jogging in your routine. Check blood sugars to make sure this is not elevating your sugar levels.

General rule is to do as much as you can comfortably today and do a little more the next day.

Once you have normal blood sugars you can begin to exercise intensely with intense cardio and intense weight resistance.

My Typical Primal Play (Exercise) Routine

One day a week I sprint usually on a soccer or football field.

Three days a week I perform weight resistance alternating chest (push ups), legs (squats), with a biceps and back workout (pull ups, rows and curls).

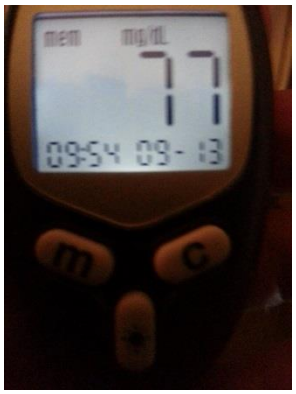
The exercises in parenthesis are my typical workouts but I do mix them up quite a bit.

One to two days a week I will perform kettlebell swings or burpees which hit a lot of different areas. I will also throw in ‘core days’ doing planks and sit ups.

Most days I try to walk the dog or ride my bicycle.

Note: Check with your doctor before starting any exercise routine. The key with any workout or exercise program is … HAVE FUN! Do things you enjoy!

Fasting / Intermittent Fasting



I am a fan of fasting or intermittent fasting. For me, fasting is a term used when you do not consume nutrients for a 24 hour period. Intermittent fasting is when you skip a meal or two.

Most days a week I will eat one to two meals a day. Remember, I also eat less than 30 grams of total carbohydrates a day. This combination benefits me as a diabetic in many ways. The typical person and unfortunately the typical diabetic eats a high carb meal plan which includes three meals and two to three snacks per day.

He or she is overworking their pancreas 24 hours a day. Diabetics with elevated blood sugars will typically have elevated blood sugars overnight, which causes the pancreas to work 24 hours a day, 365 days a year… for as long as it can.

With my meal plan and skipping a meal or two a day, my pancreas only works a few hours a day and I do not overload it with blood sugar spikes. Which makes more sense to you? I know which plan makes more sense to me. :)

If your blood sugar or weight loss stalls, give intermittent fasting a try. Here's how I slowly implemented the strategy. Each day I delayed breakfast an hour… and I pushed lunch back an hour. In a week I was eating twice a day.

Plateaus and Stalls: Fat Fasts

Okay, everything was going great. Your blood sugars were decreasing, your weight was decreasing and then suddenly, a stall. Stalls or plateaus for a few days up to a week are not only normal but are to be expected. If they persist for more than a week then I suggest corrective action.

Here is what I would do if I had a weight loss or blood sugar level stall.

I would go on a 'true' fat fast. In other words I would eat nothing but coconut oil and butter for an entire day or 24 hours.

- Carbohydrates directly increase blood sugar so you want to completely avoid them for twenty four hours.

- Protein will indirectly increase blood sugar through glucoenogenesis and the liver.

- Fats will cause minimal blood sugar increase (if any) and will provide energy for your body to function.

Therefore, only eat fats for a 24 hour period and only coconut oil and butter. If you must use cream, do so sparingly as there is a small amount of protein in the cream.

That's it! You should eat or drink the coconut oil and butter whenever hungry.

Note: When I originally did my 'fat fasts' I ate coconut oil with a spoon, or just stirred into my coffee. Today however you are fortunate to have another option.

BP-ish Coffee

You can take a cup of coffee and add to it 1 TBS of coconut oil and 1 TBS of butter. Blend for several seconds and you have just made a "BP-ish" coffee. Adjust your coconut or butter to your tastes. Many prefer unsalted butter but I prefer salted.

BP stands for Bullet Proof coffee. I add the 'ish' because I do not follow the recipe, I just blend together the coconut oil and butter. :)

I wrote posts on two high fat experiments. Here is the first, **"Coconut Oil Fast"** and the 2nd, **"Fat Fast II"**.

Notes:

- I would suggest starting out doing only one day at a time. Alternating fat fast days with a day of eating 30 grams of total carbs or less.
- While eating a lower carb meal plan — monitor your blood glucose carefully and reduce medications appropriately to prevent lows. If you are unsure, contact your physician.
- I stopped all diabetes drugs and insulin when my Fasting Blood Sugars were consistently in the sub 90 mg/dl (5.0 mmol/L) ranges.
- I am NOT a doctor, dietitian or nutritionist.

Nutritional Supplements

When I first started back in 2009 I thought I needed to take a lot nutritional supplements including multivitamins, calcium, omega 3, etc. I was wrong.

The only supplements I take on a regular basis are Vitamin D3 and Magnesium. I do believe that as we age people need to supplement vitamin D3. This is especially true in the late fall to early spring time periods. Magnesium is so important to so many areas of our bodies I supplement that regularly as well.

Currently I take 15,000 IU of D3 and 800 mg of magnesium 2-3 times a week.

I do believe that my meal plan including a variety of meats (pork, beef, poultry, fish), organ meats (beef and chicken livers primarily) and bone broth soup provide me with all of the nutrients I need.

Do you require more? Only you and your medical industry professional can answer that. I do suggest having your D3 blood levels being tested. Optimum levels are generally said to be between 50-80 ng/ml.

Supplements for Blood Sugar Control

I will not get into dosing levels but I will list supplements that people have used and improved their blood sugars. These are people that I know and trust. :)

These are in the order that I would suggest trying them if I were you. :)

Potato Starch - I personally tested this with positive results. I did a 30 day test of fasting blood sugars before potato starch and after taking potato starch for 30 days.

Note: I maintain normal blood sugars. Therefore any effect on my blood sugar levels will likely be muted when compared to someone who maintains blood sugars in the mid 100's.

My fasting blood sugar levels were 81 mg/dl on average before Potato Starch and 77 mg/dl after taking it, here is the post.

Bottom line: If I had elevated blood sugars, I would definitely test potato starch for a month. At the very least it can be a beneficial pre-biotic and many have experienced exciting results. Here are additional links. **"Why?"** and **"My personal experiment"**.

Iodine - I actually tested this, with no effect. However, I know people who did receive a benefit and who continue to take it.

R-ALA & Biotin or Insulow - Recommended by Dr. Bernstein.

Chromium and Cinnamon - also have reported blood glucose management benefits.

Diabetes Drugs or Insulin

You need to obtain normal blood sugars. If diet, supplementation and exercise is not enough there is no shame in taking a diabetic drug or insulin. The key to a path toward better health and fitness is to achieve normal blood sugars, by any means necessary.

When I was first diagnosed I was on Actos AND two insulins (four shots a day). It's my opinion that insulin was especially important for my recovery. I had been horrendously over-working my pancreas and it needed a rest. Injecting insulin allowed it to do so. Then my 'low carb primal' approach kicked in and the rest is history! ;)

Bottom line: Do NOT be ashamed to take insulin. If you take a diabetes drug, just do your research and avoid those with harmful side effects. Metformin is one that several of my friends use and continue to use with success.

Summary

- I have shown you a better way to eat to help control your blood sugars.
- I have shown you a way to break stall or plateaus.
- I have given you my blood sugar targets with the evidence I used to justify them.
- I have given you suggestions on supplements to help control your blood sugars should diet and exercise not be enough.

The rest is up to you.

What next?

1. Go Grocery Shopping for meats, leafy green vegetables, eggs, butter, extra virgin olive oil and coconut oil.

2. Go home and throw everything away that is not meats, leafy green vegetables, eggs, butter, extra virgin olive oil and coconut oil. I am serious. :)

3. Cook fatty meats, leafy green vegetables and eggs in large batches using broiler pans, crock pots or even grills. Freeze leftovers. You are on your way! Google your favorite food and 'low carb' or 'paleo' for great substitute meals. Just stay very low carb, less than 30 grams per day.

4. Take a hike! :) Relax, take deep breaths and go for a walk. Your journey to improved health and fitness has begun.

   Soon you will be adding years to your life and adding life to your years.

You can purchase a support package by clicking on this link, "Warrior Support".

Additional Food Links

Diabetic Friendly Recipes
A Meal Plan You Can "Live With"
Sample Diabetes Meal Plan
Diabetic Nutritional Chart

Addendum: My Blood Sugar Targets - Why

Just to restate my personal goals …

Overnight Fasting Blood Sugar Goals = 60 - 90 mg/dl (or 3.3 - 5.0 mmol/L).

Sub 100 mg/dl (5.6 mmol/L) all the time except for occasional and brief visits into the 120 mg/dl range (6.7 mmol/L) post meals. (Not every meal, occasional meals)

I like to stay below 100 all the time but temporary, occasional trips to 120 mg/dl are ok in my opinion.

Notes:

1. I really do not want to exceed 100 mg/dl (5.5 mmol/L) but I know that I will occasionally and I am okay with that as long as it's occasional and the time above 100 (5.5) is brief.

2. Most medical industry professionals will differ from these targets. Their ranges will be anywhere from 70-125 mg/dl fasting and 140 to 180 mg/dl one hour post meal.

Why and how did I decide on these levels? Read and heed.

Blood Sugar Levels and Dementia

According to this American Academy of Neurology 2013 study **lower blood sugars are better for the brain**. Keep in mind the study subjects were NOT diabetic nor were they pre-diabetic. The study also excluded people who were overweight or who drank more than 3.5 servings of alcohol per day.

"People with lower blood sugar levels were more likely to have better scores on the memory tests."

Therefore ...

*"These results suggest that **even for people within the normal range** of blood sugar, lowering their blood sugar levels could be a promising strategy for preventing memory problems and cognitive decline as they age," said study author Agnes Flöel, MD, of Charité University Medicine in Berlin, Germany.*

Did you get this? EVEN people in the upper ranges of normal blood ranges have cognitive decline.

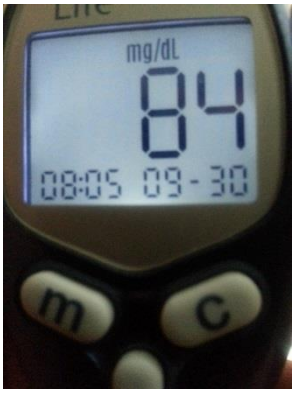
Higher Blood Sugars and Brain Shrinkage

In this study from 2012 also from the American Academy of Neurology looks at the effect of blood sugars that were on the high end of normal ranges.

The study involved 249 people age 60 to 64 who had blood sugar in the normal range as defined by the World Health Organization. The participants had brain scans at the start of the study and again an average of four years later.

The World Health Organization's 'normal' range is below 110 mg/dl.

"After controlling for age, high blood pressure, smoking, alcohol use and other factors, the researchers found that blood sugar on the high end of normal accounted for six to 10 percent of the brain shrinkage."



Still MORE evidence linking elevated 'normal' blood sugars with increased risk of dementia.

Next, in this Article, "Dementia risk tied to blood sugar level, even with no diabetes"

*"A Joint Group Health-University of Washington (UW) study in the New England Journal of Medicine has found that higher blood sugar levels are associated with higher dementia risk, **even among people who do not have diabetes**."*

Translation: Even non-diabetics with 'higher' blood sugar have a higher risk of dementia.

If high blood sugar damages the brain causing dementia in non-diabetics, why in the hell would anyone else promote 'targets' that are above non-diabetic normal ranges?

Yet people in the medical industry do promote 'above normal' goals and ranges for diabetics.

" … in people without diabetes, risk for dementia was 18 percent higher for people with an average glucose level of 115 milligrams per deciliter compared to those with an average glucose level of 100 mg/dl."

In people with blood sugar averaging 115 mg/dl the risk for dementia was 18% higher than for those who averaged 100 mg/dl!!

Just so you know, that is pre-diabetic blood sugar ranges.

I want to stay **BELOW** 100 mg/dl as much as I can, obviously above 100 mg/dl is not advantageous to brain cells.

Blood Sugar Levels and Organ Damage

On this page Jenny Ruhl wrote:

"The studies you will read below, some of which are not cited in the AACE guidelines, make a cogent case that post-meal blood sugars of 140 mg/dl (7.8 mmol/L) and higher and fasting blood sugars over 100 mg/dl (5.6 mmol/L) cause permanent organ damage and cause diabetes to progress."

Note: You damn sure want to stay below 140 mg/dl post meals .and fasting below 100 mg/dl.

In one study, the prevalence of neuropathy was 11.3% in those with Impaired Fasting Glucose, fasting blood sugar over 100 mg/dl

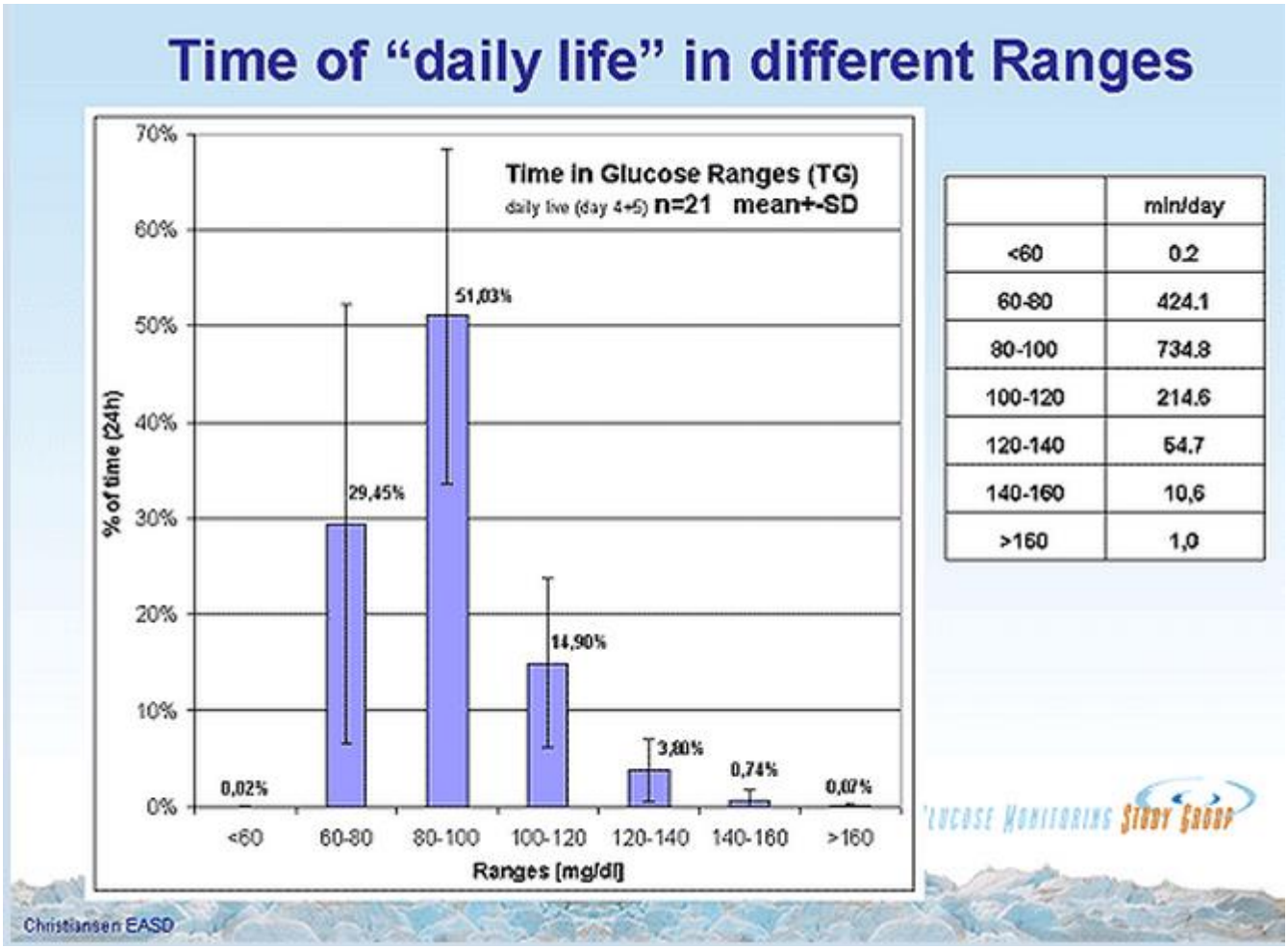
So with fasting blood sugar as 'low' as 100+ mg/dl there was an 11.3% increase in the prevalence of neuropathy.

Note: There is that number again, 100 mg/dl. Even that level increases neuropathy risk.

Normal Blood Sugar?

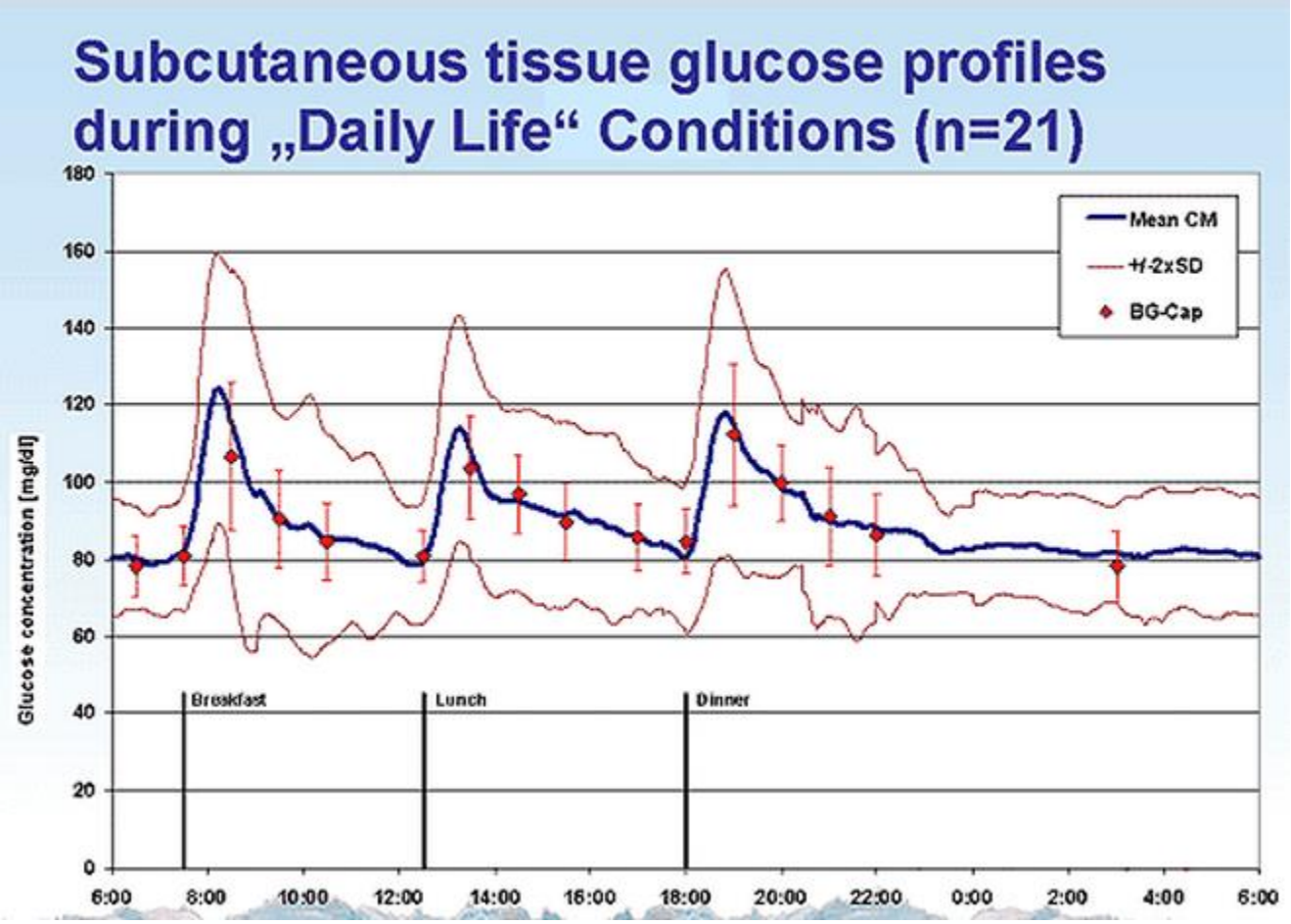
Also from Jenny's site, she posted this study that is FASCINATING, I urge you all to watch this presentation. The study concerns non-diabetics and the effect of high carb meals on their blood sugars. They do not state what the high carb meals were, only that they were high carb. One of the points from the study, the average non-diabetic person spends

approximately 80% of their time below 100 mg/dl and spends approximately 95% of their time below 120 mg/dl. (see pic below)



Lastly, looking at the next graph (below), it shows the same information in a different way. Non-diabetics even eating a high carb meal spend very little time above 100 mg/dl.

In this study, they typically start around 80 mg/dl, spike during the high carb meal but quickly come back into the sub 100 mg/dl. From the chart we can see that non-diabetics are typically below 100 mg/dl two hours after a meal.



Summary

Study after study points in the same general direction.

1. The blood sugar ranges of the medical industry are wrong. How do I know that? In the studies above ‘normal’ blood sugars were associated with dementia, reduced brain function and cell damage.

   Truly normal blood sugar ranges are therapeutic or at least neutral and would allow the body to attempt to heal itself and not to continue to cause more health problems.

2. Fasting blood sugars over 100 mg/dl (5.55 mmol/L) are associated with increased risk for dementia, reduced brain function and cell damage.

3. Healthy non-diabetics spend very little time above 100 mg/dl, even after a high carb meal.

   Given all of the information I set my targets at 60-90 mg/dl. (3.3 to 5.0 mmol/L). That way, if I 'miss the mark' a little I'll still be below 100 mg/dl (5.55 mmol/L) where are the damage apparently begins.

   When it comes to maintaining proper health, especially when it has to do with diabetes and diabetic complications, I prefer a better safe than sorry approach. The Medical Industry's approach causes more cell and organ damage, requiring more drugs and more medical industry services. Coincidence?

   I am in the best health of my adult life and I take no drugs and need no medical industry services. I am THRIVING and not just surviving. I wish you would do the same. We need more Diabetes Warriors!

Go back to the "What Next" section but in brief…

1. Throw away the high carb, processed foods.

2. Go Grocery Shopping and buy fatty meats, leafy green vegetables, eggs, coconut oil and butter.

3. Start cooking in large batches!

4. Take a Hike! (go for a walk)

What are you waiting for … GET BUSY!

PS: My friend Lily Pink suggested that I add this picture, so here it is.

A picture of me Halloween 2012. :)