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Taking Back Your Health

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INTRODUCTION

I am not sure when or where you grew up but if you are like me you might remember a little show called 'School House Rock'.

If I learned nothing else from that show it is the tagline from their intro that "Knowledge is Power!". I have tried to apply that to everything I have done my whole life especially in my work in fitness and nutrition. Working for years as a personal trainer and studying nutrition does not give you all the answers but allows you keep learning and recognizing that it will always be a lifelong pursuit.

It is not that fitness and nutrition necessarily change but our understanding and insights into them do. Once again the more knowledge you gain the better set up you are for making great decisions and that ultimately sets you up for success.

And that is the main purpose behind Taking Back Your Health. This book is here to provide as much information as I can with science to back it up but also include jokes about how useless Kim Kardashian is.

So it's time to gain that knowledge and start taking back your health. It's time to take back your health from bad science and outdated dogma. It's time to start taking back your health from giant organizations that only have their best interests at heart at the expense of your health. It's time to start taking back your health from soulless corporations that push processed garbage on you and your family.

I've had enough of all that, and I hope you have too.

And Kim, if you're reading this, I'm sorry...

CHAPTER 1: THE PALEO DIET

The word '[paleo](#)' comes from the Greek adjective palaios meaning very old. And that's what the paleo diet is; a very, very old diet.

The paleo diet or ancestral eating is simply eating a diet that our paleolithic ancestors would have eaten from 2.5 million years ago up until roughly 10-12000 years ago or before the agricultural age began, roughly around the time Larry King started high school.

That means essentially **no grains, rice or dairy**.

Archeologists will report that at the introduction of grains into the diet the human species started to decline. Our foods have changed but our bodies have remained genetically the same.

The fossil record reveals the changes between the paleolithic population and the agricultural populations: Height changed, Bone density changed, tooth enamel started to break down, even a rapid decrease in average brain size and loss of brain volume. Also along with this is the fact that agriculture led to developed communities allowing for easier spreading of [disease](#)

Simply put people were no longer eating what was part of their natural ecosystem.

The paleo movement has sprung up rather recently with a lot of the attention coming from [Loren Cordain](#) and his book The Paleo diet. But an earlier book from 1984 called "Paleopathology at the origins of agriculture" by [George Armelagos](#) and [M.N Cohen](#) got the ball rolling.

More controversial at the time, the book looked at more than 20 studies to describe an increase in declining health and nutritional diseases as societies shifted from foraging to agriculture.

According to this research no matter where it is was in the world, and regardless of the type of crop, around 10,000 years ago when populations started turning to agriculture their height and health began to [decline](#)

MODERN FOOD

This age of agriculture has lasted up until only 100-200 years ago or so to the industrial revolution. The advent of machinery and processing has introduced us to foods and products that have never existed before. But these "new" products of say your grandparents era, would almost be considered superfoods compared to what we have today.

Populations of 7000 years ago would not have had the foods of our grandparents and great grand parents such as canned foods, crisco or refined sugars. And our grandparents were not exposed to things like high fructose corn syrup, aspartame or trans fats like you and I are today.

You can see how there has been a slow decline over time as the quality of our nutrition deteriorates. It takes a rapid nosedive down coming into the late 1800s and early 1900's then plummets like a rock into the mid late 20th century.

We are clearly eating foods today that your great grand parents let alone our ancient ancestors would never have been exposed to. We are no longer eating the foods we find in our ecosystem, mainly because we have totally converted our ecosystems.

When we put an animal into a zoo like a zebra, we don't fill its cage with pop tarts, twinkies or oreos. We include the same things it would find in its natural habitat.

This is what has happened to us, we are no longer eating the things that our ancestors would have found themselves surrounded with. This would be primarily animal proteins, vegetables and fruits and things like nuts and seeds

TOXINS IN OUR LIVES (NOT JUST THE KARDASHIANS...)

As I mentioned before our paleolithic ancestors would not even know what to think of the things we are exposed to today let alone people of the early 1900's. Just in the last 50-60 years look at some of the things you and I are being exposed to:

- Pesticides
- MSG
- Excitotoxins
- Gluten
- Artificial sweeteners
- depleted soils
- pollutants
- Toxic halogens
- Heavy metal toxicity
- microwaved food
- Irradiated food
- 24 hour "daylight"
- Chronic 24/7 stress

This is only just scratching the surface. The point is how in the world can we expect to be healthy with all these toxins bombarding us on a daily basis?

The one thing we can do is take control of our diet and not eat modern, processed, packaged foods. At the same time when we start incorporating in fresh, organic vegetables we help equip our body to begin to eliminate toxins. The fresh natural food allows organs like the liver and kidneys to function more efficiently so it can begin to deal with the mess of pollutants we are all exposed to.

Based on your location and circumstances there might not be a lot you can do as far as environmental concerns. A lot of us live in major cities so things like pollution and car exhausts etc are a part of daily life. Where we can take back control is choosing to eat those things that benefit us rather than just dumping more toxins into a potentially toxic body.

This is what the paleo movement is. It is centering your diet around meats, vegetables, fruits, nuts and seeds. These are the foods our ancestors would have found themselves surrounded by and not Cheetos, Oreos and Dr. Pepper.

ARE WE STILL AROUND THESE TRUE PALEO FOODS?

All niche communities can have their holier than thou types: vegetarians, meat eaters, Apple vs Android, even the macrame community...They tend to look down on others who might not follow exactly what they are following..

Here's where the paleo movement gets a bit muddled..

A majority of the fresh, natural foods we have today simply didn't exist in paleolithic times.

Take for example bananas.

Bananas are technically giant herbs rather than trees. All modern edible bananas are hybridized from the varieties *Musa acuminata* and *M. balbisiana*. And they have been hybridized many times over several thousand years.

Their [origins](#) come from Southeast Asia and early wild forms have been noted from almost 14,000 years ago. These early forms of bananas were smaller, more fibrous and so full of seeds most people today would find them inedible compared to our large, bright yellow, sweet and virtually seedless types.

Natural hybridization has occurred for thousands of years as humans have enhanced the traits they want in certain foods while eliminating the ones they don't to favor sweeter and fattier versions..

The point is the bananas we are eating today are nothing like what our ancestors would have consumed.

The same way we have bred a variety of dogs out of a single species so it happens with food. An example being Brassica Oleracea : From this one variety we have cultivated:

- Kale
- cabbage
- broccoli
- cauliflower
- brussel sprouts

None of these plants had ever existed and in eating all of them thinking we are getting a variety we are essentially eating the same species.

Some other examples:

- Tomatoes used to be small berries
- corn was a ratty, straggly grass called [teosinte](#)
- paleolithic fruit would be smaller, harder, quite tart and bitter
- ancient apples would have been more similar to crabapples
- root plants such as carrots or potatoes were dense, thick and starchy compounds almost inedible

These are just a few examples. The point is there are a wide variety of plants that have only existed in our modern era.

WHERE'S THE BEEF??

As of 2010 the world's most consumed meat was [goat](#).

70% of the world consumes it and its is eaten by all cultures and religions. I had the chance to eat it for 3 days when I spent time on a cattle ranch in the Australian outback and have to say it was a lot better than I had anticipated. (the gun had blanks and was used to scare off dingos that would try to attack the goats. Yes REAL dingos!)



But for most people the average consumed meat is probably beef. And tends to be the cornerstone of the paleo diet.

All forms are embraced; ground beef, steaks, roasts you name it.

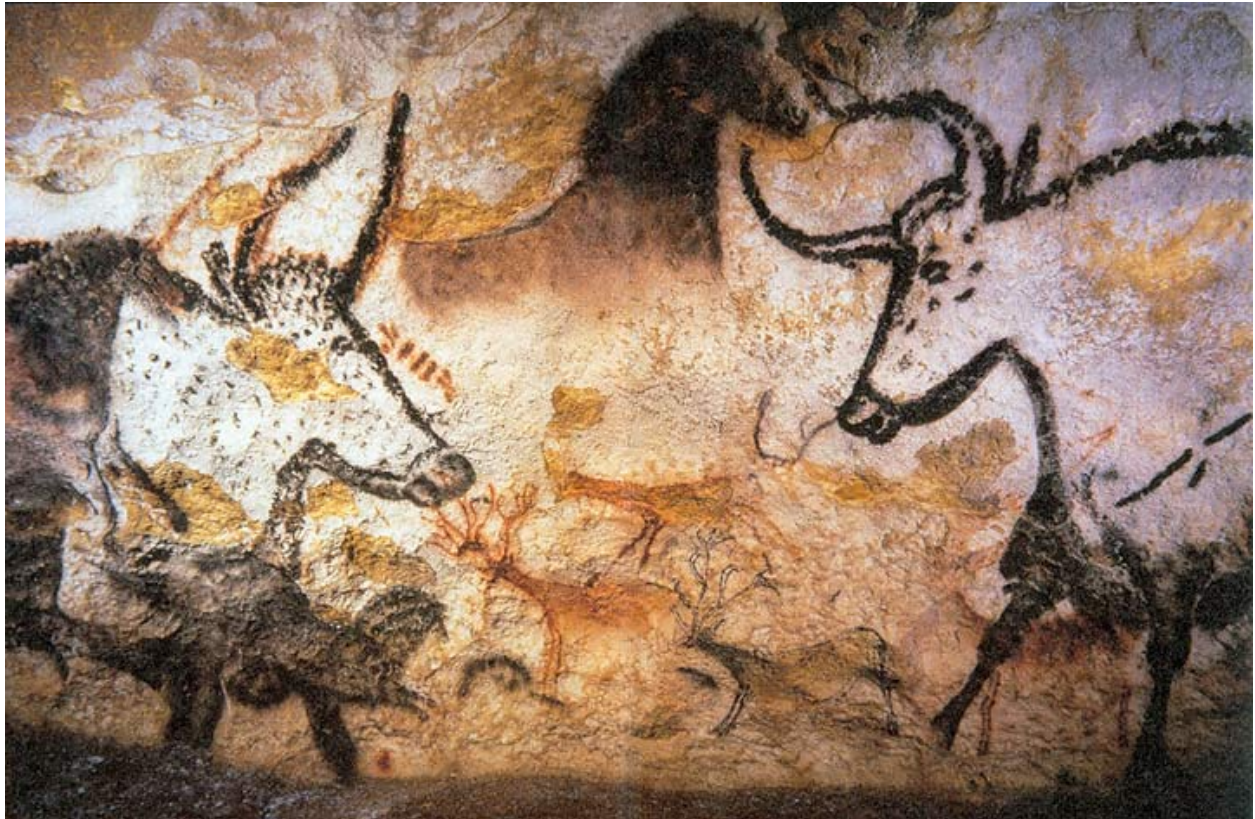
The problem is the modern cow is an animal that never existed in paleo times. The ancient ancestor of the cow is the [Auroch](#) descended from the *Bos acutifrons*.



More bull like with longer, outward facing horns, the Auroch dates back to around 2 million years ago and survived to quite recently when they went extinct in the early 17th century.

Compared to modern cows the Auroch was vastly different with longer legs, a bigger head and a much leaner and almost athletic type body.

Another staple of the paleolithic diet would be the Gnu or Wildebeest, which you would observe in the ancient cave paintings.



WASTE NOT WANT NOT

The issue with eating the modern cow or other sources of meat is that paleo dieters are not taking the same approach that their ancestors did. Paleolithic people would have been eating nose to tail. Today our consumption of meat is limited to the muscle meats such as steaks, roasts, ribs, ground beef etc.

There is a whole lot more to animals that is not being made use of such as organ meats, cartilage, brain and so on. Organ meats would have been a valuable nutrition source to paleolithic societies as they contain high amounts of vitamins specifically the liver which has an abundance of vitamin A, B vitamins, Folic acid and iron. It is also the number 1 food source for copper and contains Coenzyme Q10.

Our ancestors would have also made use of the kidneys, heart, tongue, brains, intestines and stomach lining (also known as tripe).

Even the indigenous populations of North America are known to not waste any part of the buffalo that they hunted. Clearly very few people today are taking advantage of all that animals have to offer.

Organ meat will always outshine muscle meat for nutrient content.

One whole other issue is that of grass fed animals. Our modern hormone treated, feedlot confinement animals are producing beef that is hard to even classify as beef. Especially with ground beef, it is more like fat disguised as beef.

If you're not consuming grass fed and finished meats you are really not consuming the purest form of that animal.

GEOGRAPHICAL ISSUES

A typical paleo meal might contain a variety of ingredients that have origins in all corners of the globe.

A hunter/gatherer in Western Europe would not have had access to avocados from Mexico and Central America, pineapple from South America, almonds from the Middle East or blueberries from North America. These foods can all be a part of a paleo friendly diet but are only available today due to modern industry and transportation. Each region of the world would clearly only be able to eat their local foods. Consuming these wide ranges of worldwide products can not be a true paleo diet.

ICE ICE BABY

The last glacial period or ice age finished up around 12,000 years ago. During this time there would have been little vegetation available and the majority of the diet would have had to center around animal protein. This is all relative to where you lived in the world as the majority of the last ice age covered North America and Eurasia. If you were a person living in that location during this time period your diet was going to be drastically different than areas in the Southern Hemisphere.

This ice age diet is still being undertaken today by modern Inuits who live in climates pretty much devoid of fauna and rely on animal protein and fat for the majority of their nutrition. Inuit people are known for their incredible bouts of marathon like endurance while eating a diet pretty much devoid of carbohydrates and upwards of 85% fat.

WHAT REALLY MAKES THE PALEO DIET BENEFICIAL

I am not wanting at all to dismiss the paleo diet but just want to point out what people are really undertaking is more appropriately called “**Modern Paleo**” or even “**New Age Paleo**” if you want to go that far.

It’s not entirely what this diet does contain but what it DOES NOT contain.

The paleo diet focuses on eliminating all modern foods. Foods that have caused a great downfall in our modern society leading to modern diseases.

In the paleo diet there are no refined flours, breads or cakes. There is no potentially hormone and antibiotic filled dairy. No trans fats, chemical sweeteners or high fructose corn syrup.

It introduces foods more familiar to our body and eliminates those that our body does not recognize and I am all in favor of that. This is the way I choose to eat as I have found it to improve energy as well as things like focus and concentration. I will add in a little dairy from time to time and will include a little more starchy carbohydrates in the form of sweet potatoes and wild rice depending on how active I will be.

So you might choose to take on a modern paleo diet, or even go all the way to eat food found only in your direct local area that you find at farmers markets etc.

The truth is whichever way you go with it you are looking at introducing some great changes into your lifestyle by cutting out all the detrimental modern food that has caused us literal heartache and strife.

Keep feeding your body the food it was designed to eat and cut out the food that had to be designed.

CHAPTER 2: GLUTEN

Do you find yourself with things like bad skin? Joint pain? Brain fog? Digestion problems, cramps and bloating? So what makes up a majority of your diet?

If you are like me mine used to be some form of cereal at breakfast, sandwiches at lunch and more often than not pasta at dinner. I would add in a lot of things to these meals that would cater to my sporting or fitness goals but there was one constant that ran through all of them: **Wheat**

And more specifically **Gluten**.

Ah Gluten, we seem to hear more about this than (enter current celebrity train wreck here) at the moment 50% of the calories consumed worldwide now come from grains and today basically 17 plants provide 90% of [mankind's food supply](#). And according to The United Nations wheat itself makes up [20% of the calories](#) consumed by humans. So lets look at why you should be informed on gluten.

What actually is gluten?

What food is it in? Should you be avoiding it? What makes it so detrimental?

Gluten as we know it today is an entirely different thing than what it used to be, kind of like Miley Cyrus.

So What is Gluten?

Put simply gluten is a protein found in the seeds of grass. We call these seeds grains. And there are many types of grains, **wheat barley and rye** are the big three. But we are going to look mostly at wheat as it dominates the consumed grain categories and might be responsible for an onslaught of issues that we are facing today.

Gluten is a sticky protein that is found in these grains and comes from a latin word that means [glue](#). It gives **elasticity and a chewiness** to things like bread and dough. This is helpful for baking or for dough for pizza etc

THE ORIGINS OF WHEAT

The [origins](#) of wheat go back a good 10-12000 years or roughly around the time Larry King started university.

The end of the ice age left behind grasses that were able to spread and multiply. This grass was called [einkorn](#). Einkorn was a simple form of wheat that contained 14 chromosomes.

Einkorn would evolve into emmer which is the wheat of the bible. Wheat and bread have strong ties to early Christianity as bread was known as the staff of life, the practice of “breaking bread” and its use in communion representing the body of Christ.

[Emer](#), a 28 chromosome species, would last quite awhile to the middle ages where triticum became the dominate form of wheat.

fast forward to the 1960s where the earth started to experience a huge boom in population. Concerns around the amount of food available began to become a pressing issue. A solution emerged from the growing field of genetics.

[Dr Norman Borlaug](#) an American biologist was an individual who was able to create a high yield version of wheat called the **semi dwarf variant**. This improved wheat yield over 10 fold.

So today virtually all the wheat available to us is this **high yield**, semi dwarf version of wheat. And this was done out of noble intentions.

Gone are the days of the tall, amber waves of grain. This semi dwarf wheat stand 2-2.5 feet high. In fact the stalks of the plant had to be engineered thicker than natural to be able to hold up the heavy stalk head on top of it.

It understandable as this high yield plant took off that all farmers wanted a piece of it. Regular farmers who grew 8 bushels an acre were now looking across and seeing neighbouring farms growing **80 bushels per acre**.

In such a sink or swim business like farming the ability to compete and produce was paramount, and again no research was done into if this new form was safe for human consumption

THE NEW WHEAT

But what is this new form of wheat and what changed it from the wheat of our ancestors and even our grandparents?

In developing this new form of wheat new scientific techniques had been used such as **repeated selective hybridizations**, [backcrosses](#) and [induced mutations](#). This new frankenstein of a plant was unable to survive without chemical support and was genetically stitched together with parts from various sources. Genetically modified foods or GMOs as they are known are a growing concern and rightfully so but they are vastly superior compared to these earlier techniques due to the fact **they could not control all the mutations that would occur in the plant**.

IS THIS SAFE FOR HUMAN CONSUMPTION?

As stated before the development of this modern wheat was done out of noble intentions but it has seemed during the process the question never came up if this was safe for human consumption.

I think because what was produced still resembled something in nature it was just assumed that this was going to be treated by the human body as such when in fact what had been engineered was virtually unrecognizable by the body.

SO what does this all have to do with gluten?

Since it was now observed that we could control what traits wheat could have, this modern wheat now contained 42 chromosomes and contained the [d genome](#). This allowed for higher concentrations of gluten within wheat which lent itself well to baking at high temperatures and providing a [Viscoelasticity](#) that is key for pizza dough. (fun fact: Americans consume [100 acres](#) of pizza a day, NOT just Dr. Phil by himself)

This higher concentration of gluten may be causing you a wide variety of issues

Look around today and you may be observing a lot of people who are now going “gluten free” and more and more gluten free products are taking over shelves. I will talk about if these gluten free alternatives have any benefits in a moment..

So the two big issues with gluten are **gluten sensitivity and gluten intolerance**. Gluten sensitivity can cause issues with digesting, cramping, bloating, nausea, diarrhea etc. They can be mild or quite uncomfortable. But its hard to tell someone with an intense cramping issue thats in the middle of a presentation at work that it’s a “mild” occurrence.

Gluten intolerance is known as **celiac disease**. This is a full on condition where the consumption of gluten causes the above problems but intensely magnified. If you know anyone with celiac disease you know that after accidental consumption they are completely out of commission for the rest of the day and possibly longer.

How did gluten cause this complete intolerance and sensitivity?

The majority of absorption of the food you eat happens in the small intestine. Inside the small intestine you have a bunch of finger like projections called **villi** and **microvilli**. This is where specific nutrients and amino acids are absorbed and then passed through to the blood stream. Think of these finger like projections like shags on a carpet.

What happens with Gluten is that over time the gluten breaks down this shag until its left as basically a flat subfloor. Without these shags in place absorption becomes a painful and potentially dangerous situation. It is not the same in everyone but a person who is gluten intolerant can potentially face these issues

- anemia- usually resulting from iron deficiency
- loss of bone density (osteoporosis) or bone softening ([Osteomalacia](#))
- itchy blistering skin rash ([dermatitis herpetiformis](#))
- headaches and fatigue
- nervous system injury, including numbness and tingling in the feet and hands and possible problems with balance
- joint pain
- reduced functioning of the spleen ([hyposplenism](#))
- acid reflux and heartburn

YOU ARE WHAT YOU ABSORB

You are what you eat is a common expression but it is what you **absorb** that is of key importance, and with wheat, absorption becomes an issue.

Everyone is always told to eat more whole grains, the problem with whole grains is they still come mostly in the form of pulverized, ground flour. They also contain the husk of the grain which contains compounds that can block the absorption of nutrients.

When whole grains take up too large a percentage of the diet problems happen. One of these key problems is that even though there are a good amounts of minerals in it, the availability of having these minerals absorbed is low because they're bound by **phytic** acid. For sensitive people essentially the minerals can end up in the toilet.

Kind of like my singing career dreams..

In 1942 in Dublin, Ireland the emergence of rickets rose sharply when there was a mass changeover from the use of refined white flour to whole wheat flour. Rickets is usually caused by vitamin D deficiency but also from a mineral deficiency with calcium as the most important, even if one has good levels of vitamin D. The diet contained quite a lot of minerals but the interference by the whole wheat did not allow for the absorption of [them](#)

Some researchers including [Dr. Stephan Guyenet](#) a PH.D. from the University of Washington say that we are not yet well adapted as a species to consume a diet primarily made up of grains without facing health

consequences. And that if we had another million or so years of grain heavy diets we might be able to handle them [more effectively](#).

I wish I could wait and see but that time frame poses a bit of an issue..

The Problem with Inflammation

Foods that can cause inflammation in your body can lead to what is called [autoimmune disease](#). Gluten can break through in intestinal lining where it is attacked by the immune system. We sometimes think of the immune system like its a singular thing or large organ but 80% of the cells that help make up the immune system reside behind the large intestine

When a foreign substance like the protein gluten gets through it is attacked as its recognized as a threat. The problem is the body starts recognizing its own tissue as the same substance and the body essentially turns on itself. This is what [Autoimmune](#) disease is and can cause a multitude of diseases. The big ones include:

- Celiac disease itself
- Diabetes
- Hashimoto (a disease that causes the thyroid to not make enough thyroid hormone)
- Multiple sclerosis
- Rheumatoid arthritis

IS WHEAT ACTUALLY ADDICTIVE?

You wake up and have cereal for breakfast with maybe some juice or coffee. Two hours later you're feeling hungry, maybe even a little light headed so you have a snack of a donut or two. At lunch you might have anything from sandwiches or wraps to even pizza if you're in a rush. Two hours later you feel like your energy has dropped, you feel foggy, nervous and you need something else to eat. By dinner you're ready to eat an entire large plate of spaghetti and you might still not feel satisfied.

This situation can be a nasty combination of the way wheat can cause spikes in blood sugar and its addictive qualities.

Gluten is made up of two compounds, **Glutenin** and **Gliadine**. And it is Gliadin that might causing a lot of the issues.

Gliadine has been seen to be an appetite stimulant due to the high amounts of gluten that is now in your bread, cereal, pasta etc etc

Gliadine acts as an [opiate](#) by binding to the opiate receptors on the brain. This does not cause the same high as heroin or cocaine but it does produce a bit of a high. When you feel stressed or burnt out what do you reach for? **Comfort Foods**.

These tend to be things that are high in wheat like pizza, macaroni, pastas, cookies, cakes.. you get the picture. Could it be that we require a “hit” of one of these foods to satisfy the opiate receptors on the brain? For an individual who overdose on heroin there is a drug called [Naloxone](#) that when administered takes away the ‘high’ the user is experiencing. Wheat appears to have the same withdraw effect as people seem to crave breads and so on when they have not had it in awhile.

The same drug Naloxone has been shown to reduce the cravings of wheat in the individuals to whom it was administered and they found that on average they ate 440 calories less a day.

BLOOD SUGAR ALL OUT OF WHACK

Another compound that you should be aware of in wheat is [amylopectin-a](#). This is what causes wheat to be absorbed rapidly and cause spikes in blood sugar. Amylopectin-a reacts very quickly to our own **salivary amylase** in the mouth and causes a rapid rise in blood sugar. Even just putting a piece of bread in your mouth will raise blood sugar.

So the higher your blood sugar goes the farther the drop. Eating wheat can cause a 90-120 minute cycle of hunger as illustrated above with the sequence of meals and the feelings of lethargy and brain fog that come and go throughout the day.

WEIGHT GAIN FROM ALL THIS WHEAT

With the constant intake of wheat regardless as to if it is white bread, brown bread or whole grains blood sugar is affected on a daily basis. Insulin which has to be secreted constantly to clear this now converted sugar out of the blood starts to not be used as efficiently and the pancreas can burn out leading to **type 2 diabetes**.

Along with this insulin's main job is the fat producing hormone. When the glucose in the blood is not needed for energy or activity it is stored in the form of body fat by insulin, and it appears that this fat is stored primarily around the midsection as visceral fat. Some call this a wheat belly or beer belly but you can picture what I'm referring to.

ALTERNATIVES TO GLUTEN

Look all around you and you will probably see an onslaught of gluten free products. A lot of manufacturers have jumped on the gluten free bandwagon as having the distinction of being gluten free is seeming like a good marketing campaign right now.

I actually saw a carton of eggs labelled “gluten free” the other day..

Heres the issue with most gluten free products: Without gluten a form of flour has to replace it. Most products are using **potato starch, corn starch and even tapioca starch**. So yes none of these ingredients contain gluten but they are incredibly high on the **glycemic index** and can send blood sugar soaring even more than gluten.

Use these types of products moderately because you don’t want to eliminate one problem and then go ahead and substitute it with another.

ALTERNATIVES CHOICES

Some alternatives for home baking that are looking promising are **almond flour, coconut flour and flax seed meal**. These choices will have a lower glycemic index along with some protein and even a variety of beneficial nutrients.

Again use these for an occasional treat, you’re still consuming a processed “flour” but looks to be a better choice than commercial gluten free products.

Gluten free can be healthy as long as it’s the right kind of gluten free.

WHAT TO TAKE AWAY ABOUT WHEAT

There are a lot of issues here and gluten has become a hot topic. But before you go diving in to all the gluten free products out there take a second and check out the ingredients in them. Yes you maybe be avoiding gluten but as a substitute these products will use things like rice and potato flours that can skyrocket insulin levels even faster than wheat.

Try taking 5-7 days and cutting wheat out of your diet. If you eat it constantly you might feel some of those withdrawal symptoms like headaches but I really believe eliminating this modern wheat can only do good things as I’ve seen with myself and many other clients.

Sure you can see those 12 grain or ancient grain breads on the shelf but remember you’re not eating whole grains, you are eating flour; **pulverized, processed flour** that is coming from genetically modified unnatural forms of wheat.

Wheat and bread has always been a part of human history but now in the last 50-60 years we have seen an explosion in the rates of gluten sensitivity and in celiac disease. Celiac.com that deals with celiac disease and gluten intolerance research show an increase of **400% in the cases of celiac disease in these past 50-60 years**

1 in 133 people have celiac disease and the problem is it is something that can take 20-30 years to become [apparent](#)

Not to be ignored gluten sensitivity is on the rise and could be an indicator of increased damage and disease down the road.

CHAPTER 3: WATER

Whether it's for weight loss, athletic performance or overall well-being if you are neglecting your water intake you will be fighting a losing battle.

I want to inform you here on:

- Why you need to drink more
- what happens if you do not drink enough?
- exercise and sports drinks
- how much each day?

WATER AND YOUR BODY

There are certain things you can't go a long time without, If you are Canadian like me then more than a few hours without maple syrup sends me running for the nearest forest..

The other big one is water.

There's a rough rule of 3 when it comes to your bodies needs for survival:

In an extreme situation you can't go more than:

3 minutes without air

3 hours without shelter

3 weeks without food

and 3 days without water

Now unless you are stuck in space without a helmet, locked your keys in the space pod and co-astronaut Rosie O'Donnell has eaten your food supply, most people won't have to worry about the first 3. (Sounds like a bad first draft of the movie Gravity..)

However time without water is a real issue and the majority of people are walking around dehydrated. This is causing a wide range of problems. Here are some reasons why water is so crucial to your body.

1.WATER HELPS MAINTAIN A BALANCE OF BODY FLUIDS

These fluids are involved in:

- Digestion
- absorption
- circulation
- transport of nutrients through the body
- balance of body temperature

Like motor oil in a car, quite simply without an adequate water intake your body is not going to run optimally.

2. WATER HELPS TO CONTROL HUNGER AND REDUCE OVEREATING

This is probably of great concern to the average person.

It's not that hard to slip into a state of dehydration. A lot of people think dehydration is akin to crawling through a desert in rags having not had a drink in days but dehydration can happen relatively easy depending on activity level and environmental temperatures. Many times the signals of dehydration are mistaken for hunger. During those times or before meals having a large glass or two of water can help stave off possible confused hunger signals and help lead to less overeating.

The higher the water content in food the more beneficial it is for controlling urges to overeat. The obvious choice for a higher water content food will be vegetables and fruits.

A study done at [The University of Sydney](#) in 1995 tested 38 foods to see which ones were the most filling. The top scoring foods were the ones that had protein, fiber or water such as grapes, oranges, apples, porridge, eggs, cheese etc

Foods that cause overeating were things like refined carbohydrates, potato chips, candy bars and white bread.

There are other ingredients in these foods along with preservatives and additives that can play a part in overeating but these foods are also virtually devoid of water

3. WATER HELPS FLUSH OUT TOXINS (But unfortunately not the Kardashians..)

Body fluids transport waste in and out of the cells. Blood urea nitrogen is the main toxic substance in the body and the kidneys do an amazing job of cleansing and ridding the body of toxins like these AS LONG as you have an adequate fluid intake.

The best way to indicate adequate fluid intake is urine color, concentration and odor.

When you are well hydrated you will have urine flowing naturally that is a light straw color and virtually odorless.

A dehydrated body will be the exact opposite. This is because the kidneys are now trapping extra fluids for bodily functions

4. LACK OF WATER AFFECTS BRAIN FUNCTION

According to this ex-girlfriends of mine will say I was SEVERELY dehydrated, but thats another story..

Research from the Mayo Clinic says that the average person loses 80 ounces of water everyday from sweating. Not exercise, just normal perspiration.

And in conjunction with that the average person is only consuming around 32 ounces a day. If you combine that with consuming dehydrating beverages and an overexertion without replenishment you're looking at a real problem

This can result in a lack of water to the brain which can cause problems with:

- Focus
- memory
- brain fatigue
- headaches
- sleep issues
- depression

If you find yourself having problems with concentration a [study from 2012](#) by the British Psychological Society observed that students that took water with them to an exam outperformed other undergrads that did not.

The idea is that water is essential for every cell, tissue and organ in the body and the brain is no exception. Therefore drinking water may have a direct psychological impact on cognitive function.

5. WATER IMPROVES ATHLETIC PERFORMANCE

Whether you are a high level athlete or committed to an exercise program, neglecting an adequate water intake can really affect your performance and results.

Most everyone is aware that roughly 2/3rds of our body is water and roughly 2/3rds of that exists in the muscle.

Simply put water helps energize muscles.

When you are exercising, muscle cells that are not receiving a balance of electrolytes and water will shrink leading to muscle fatigue. Bad news if you're on a breakaway in hockey, getting back on defense in a pickup basketball game or when I've just fallen off the treadmill at the gym.

Muscles that are not efficiently hydrated will simply not work and perform their best.

The key in regards to exercise or sports is to get a jump on water intake early. Waiting until you're dying of thirst is probably too late. Hydration for exercise or sports performance starts a good two hours before. The [American College of Sports Medicine](#) has research showing to have around 17 ounces or about 2 cups of water a few hours prior to the activity.

During exercise you want to constantly keep water coming in but not in large quantities just a mouthful or two gradually throughout the exercise will suffice, this is roughly around one cup every 15 minutes. In hotter temperatures keep the intake quite constant to balance water loss through sweat.

After exercise you want to replenish the water you lost through sweat. It is not uncommon to lose at least a couple of pounds depending on the length and intensity of the activity. A good rule of thumb is 2-3 cups of water for every pound lost.

SPORTS DRINKS



Many people wonder about sports drinks as being a replacement for water and what place they have in an active lifestyle. The most famous is of course Gatorade, it accounts for 75% of the market share so will be the focus of the information here. In times of intense activity and in hot environments sports drinks can have their place, however there are superior choices.

Fun Fact: Gatorade was invented by [Robert Cade](#) who created a replenishing beverage for the football players at the University of Florida who are called the Gators. This aid for the Gators dates all the way back to 1965 and was of benefit to athletes in the Florida environment who were being strenuously active in hot and humid conditions for up to 3 hours at a time. Some of these athletes were losing up to 18 pounds over the course of a game or practice.

Severe dehydration like this leads to a loss of water and electrolytes, primarily sodium and potassium. This level of dehydration can lead to low blood pressure, shock, collapse, seizures, comas and even death.

WHAT'S IN THESE DRINKS?

Though they contain beneficial electrolytes such as sodium and potassium that are key to muscle performance and avoiding cramping in very intense activity, most sports drinks are filled with refined sugars and chemical dyes to give them bright, attractive colors. The original Gatorade would not be recognizable as

Gatorade today as its taste and appearance were not similar at all. The early version was made up of a combination of:

- water
- sodium
- sugar
- potassium
- phosphate

And to make it more palatable had lemon juice and cyclamate (one of the earlier artificial sweeteners) added to it. Lemon-lime would be the original commercial flavor along with orange. Fruit punch was added in 1983 and was most popular until Michael Jordan, a decent basketball player from the 80's... claimed his favorite flavor was 'citrus cooler' creating a massive demand.

Today a virtual rainbow of colors and flavors exists.

Observe the ingredient list in a 'blue' Gatorade today:

- water
- sugar
- dextrose*
- citric acid
- natural and artificial flavors**
- salt
- sodium citrate
- monopotassium phosphate
- modified food starch
- glycerol ester of rosin
- blue 1
- red 40

* from the 1990's up until 2011 Gatorade included high fructose corn syrup

** some flavors used [brominated vegetable oil](#) as a stabilizer. Protests lead to removal of BVO from Gatorade in the U.S in 2013

Some of those original ingredients are still there but a few things to note: Ingredients are listed in the order of what makes up the majority of the product. In this case you are looking at what is basically sugar water with some "flavor" and dyes thrown in. Artificial flavors can contain dozens and dozens of ingredients that do not have to be all listed but instead fall under the title of "artificial flavor". Those dyes are there to clearly give these drinks a more attractive and appealing look.

WHO ARE SPORTS DRINKS FOR?

In the case of the average person sports drinks would probably not be necessary as most workouts are not going to be severely depleting you of electrolytes. And if your exercise is not that intense you might be counteracting your work with the large amount of calories and sugar in these sports drinks that tend to come from glucose and fructose.

I play in a competitive hockey league still and will engage in various high intensity workouts that sometimes can take place in hotter weather, in these situations if there is not a better choice I will use a sports drink but mix it half and half with water to limit the sugar amount. More often than not though I always stick with water.

My favorite choices are natural ones such as coconut water. They are a more natural and healthy substitute for sports drinks that can provide a lot of [health benefits](#).

When it comes down to it water is always going to be your best choice for hydration during exercise and sports.

HOW MUCH WATER DO WE NEED ON A DAILY BASIS?

There has been a common understanding for quite awhile that people need 6-8 glasses of water a day as a benchmark*. This has never actually been scientifically proven. If you have been following this and it works for you stick with it. I think it's reasonable to start with 4-5 glasses of water a day and then adjust depending on the temperature, humidity and your activity levels. Individual needs are going to vary depending on your height, weight, gender, health needs, activity level etc

*(Fun fact: we get the term "benchmark" from chiseled horizontal marks made in stone structures used for surveying. A 'bench' is when a levelling rod was placed in those marks for measuring and could accurately be used again later. Ok that's not really fun, but instead the original name for Mickey Mouse was originally going to be 'Mortimer')

When drinking water make sure to not "flood" yourself. Similar to how you would water a plant your body handles water more efficiently when you consume it through sipping, rather than downing an entire pint in 3 seconds

In times of heat add in another few glasses a day. Remember also that thirst is not always an indicator of dehydration and you might be already slightly dehydrated by that point. It's best to get a jump on that by drinking before you get thirsty. Use these guides to recognize mild dehydration:

- Because kidneys are conserving water, urine will be more concentrated and have a darker color as opposed an optimal light-straw like color
- constipation or bloating can occur
- skin, lips and mucous membranes tend to get dry
- Thirst kicks in at the state of mild dehydration
- the face can become flushed

In addition to the water you drink remember that a diet rich in vegetables, fruits and even things like fish, eggs and potatoes will contribute to your overall water intake as these foods are made up of around 75% water

SUMMING IT ALL UP

So we've looked at why we need water including:

- it helps maintain body fluid balance
- helps control hunger and overeating
- flushes toxins from the body
- helps in daily brain function
- assists us in exercise and sport performance

Your ideal water source is going to be natural spring water but that's not always practical for people. If you live in an area where you are concerned about your tap water purity a water filter is going to be a great investment.

These filters can range from entire house water filtration systems to ones that you can attach to your tap.

Water filtration jugs can be effective but I personally use a faucet filter that attaches right on your tap.

They are not too expensive and can help reduce any unpleasant odours or taste as well as helping to reduce lead, [cryptosporidium](#) (microscopic parasites that can cause gastrointestinal illness) and [giardia cysts](#) (a parasite that can survive even in chlorinated water treatment).

Again there is a wide variety of water treatment depending on where you live and varies by country, cities and regions.

I look at water filtration as one simple thing I can do to create a more positive health effect.

CHAPTER 4: FIBER

What Is Fiber?

Once considered "[roughage](#)" fiber is the part of food that cannot be digested or broken down by the body and passes through the intestines. There are two types of fiber **soluble and insoluble**.

Soluble Fiber

Soluble fiber thickens and dissolves in water and is key in lowering cholesterol . It is made up of pectins and gums that secrete a gel like consistency that binds to cholesterol and bile acids in the small intestine to eliminate from the body.

Some sources of soluble fiber:

- oats
- barley
- dried beans
- sweet potato
- broccoli
- cacao nibs
- asparagus
- carrot
- apple
- pear
- citrus fruits
- berries
- bananas
- psyllium
- flax seeds
- chia seeds

Insoluble Fiber

This type of fiber does not dissolve but absorbs water as it passes through the body which adds bulk to the stool and um.. speeds up "transit time"...

Insoluble fiber has always been seen to reduce the risk of colon cancer as it moves toxins and cancer causing compounds through the digestive tract more quickly.

Studies now are showing that this [might not be the case](#) but including it in the diet will still provide health benefits that we'll look at below.

Some source of Insoluble fiber include:

- wheat bran
- fruits
- vegetables
- grains
- nuts
- beans

Now we know more about the two types of fiber here are 5 benefits it will help provide.

1. Helps To Combat Diabetes

Soluble fiber helps slow the absorption of carbohydrates and therefore reduce the rise of blood sugar after a meal.

People who consumed fiber had a 27% lower risk of developing type 2 diabetes.

In this study published in the [Archives Of Internal Medicine](#) researcher's followed a group of 15,000 people aged 35-64 for an average of 7 years. Over the course of this study 844 people developed type 2 diabetes. The results showed that the people who consumed more fiber were less likely to develop type 2 diabetes.

2. Heart Health

Those who eat a high fiber diet have been shown to have a 40% lower risk of heart disease.

[This study included](#) over 43,000 people aged 40-75 with no incidence of cardiovascular disease. In a 6 year follow up they found that a 10 gram increase in total dietary fiber was strongly associated with a reduced risk of total myocardial infarction

3. Reduced Risk Of Stroke

Researches have found that for every seven grams more fiber you consume on a daily basis, your risk for stroke goes down about 7%

[Eight studies were conducted](#) in the United States, Japan, Northern Europe and Australia and revealed that greater dietary fiber intake is significantly associated with lower risk of first stroke.

4. Improved Skin Health

This one may seem a bit weird but **fiber may help move yeast and fungus out of your body**. These things can usually be expelled through the skin causing acne and rashes so the quicker they are through you the less likely you may encounter these skin conditions.

Psyllium husk has been seen to be a key source of fiber for this situation.

5. Weight Loss & Weight Management

Fiber can help you feel fuller, longer.

Along with water and protein fiber makes up the major part of food that helps us feel full. This is ideally why you want to focus your diet on real, whole foods as they contain water, protein and fiber.

Along with that the blood sugar lowering effects of fiber allow you to not have peaks and falls in your blood sugar which can result in cravings which tend to be centered around sugar and carbs.

The old days of thinking of fiber just as something that keeps you regular are gone as we have become much more aware of how fiber is important to our health.

The great thing is it is not hard to include fiber in your diet, making sure you are getting multiple servings of vegetables each day sets you out on the right foot. When you start adding in things like blueberries and chia seeds you can be certain you've given your body that great soluble fiber that provides so many tremendous benefits.

CHAPTER 5: ASPARTAME & ARTIFICIAL SWEETENERS

People today are becoming more aware than ever of things they should avoid such as white bread, sugar and Keeping up with the Kardashians.

With this comes a need to replace favorite foods with other choices that we hope are not as bad for us. One of the most common substitutes is diet drinks for their heavily sugared and high calorie alternatives.

One of the best tips I can give new clients or any person in general is to eliminate liquid calories, especially those from high fructose corn syrup laden sodas. Eliminating this form of over refined, unnatural form of sugar helps avoid the havoc it plays on the body such as **skyrocketing insulin levels, increased LDL and triglyceride levels and increased obesity** just to name a few.

So avoiding a high sugar drink for one without any sugar would seem to make sense. This however does not appear to be the case.

Since these diet sodas don't contain any sugar the sweetness has to come from somewhere else. It comes in the form of artificial sweeteners. The most famous of these is aspartame.

ASPARTAME AND ITS SORDID HISTORY

Aspartame also goes by the name **NutraSweet or Equal** and is contained in over 9000 products. It is known to be **200 times** sweeter than sucrose and was accidentally [discovered](#) by a chemist working on an anti-ulcer drug.

In 1965 while working for international pharmaceutical company G.D Searle (G.D Searle is now owned by chemical giant Monsanto) a chemist named James M. Schlatter had accidentally licked his finger to turn a page with a finger that had been contaminated by aspartame derived from ethanol and was astounded at its sweet taste.

The discovery was reported in 1966 but not actually recognized until 1969. During the low calorie movement of the late 70's a use for aspartame and a great financial opportunity was recognized.

The FDA originally [disapproved](#) of aspartame in 1980 as it had a Board of Inquiry made up of a team of scientists that reported that "it might induce brain tumors"

This was challenged by then Searle chairman and future secretary of defense [Donald Rumsfeld](#) who vowed to "**call in his markers**" to get it approved. Having former connections in Washington Rumsfeld would look to his political pull in Washington rather than scientific means to make sure it got approved.

When Ronald Reagan became president in 1981 the very next day the new head of the FDA, [Arthur Hull Hayes](#), hand picked by Rumsfeld as part of Reagan's "transition team", starts a commission to question the original Board's disapproval,

The 5 person panel voted 3-2 to uphold the ban. Hayes then appointed a 6th member of his choosing who ended up deadlocking the vote at 3-3. Hayes then decided he would be the tie breaking vote and voted in favor of aspartame.

Hayes later left the FDA under allegations of impropriety (which included him riding in the General Foods private jet; General foods would be one of the first major customers of NutraSweet) and ended up taking a job with Burston-Marsteller, the chief public relations firm for both Monsanto and GD Searle...

Now all this seems right out of a Michael Moore documentary but just sheds some light on how, similarly to tobacco, big business and politics can come before the general public's health.

Issues like this always make me think of the great quote from **The Simpsons** by Reverend Lovejoy who said: **"Once something has been approved by the government, it's no longer immoral!"**

GETTING THE NEW SWEETENER ON THE MARKET

Looking over the [timeline](#) of aspartame's arrival on our shelves seems to be centered around 1983 and its inclusion in diet soda, specifically Diet Coke.

At first aspartame was used in dry food goods, cereals and chewing gum. Sweet N' Low, a saccharin, had been considered for drinks but its strong aftertaste was preventing it from being top choice. Aspartame was regarded as having no definitive aftertaste and In fall of 1983 the first carbonated beverages containing aspartame were sold for public consumption

People were still not sure of the safety of consuming this new chemical sweetener as pointed out in this [article](#) from the New York Times from back in 1983

HOW A CHEMICAL SWEETENER WORKS IN THE BODY

So what happens when a person consumes an artificial sweetener?

Firstly it acts as an **excitotoxin** in the brain causing potential nerve damage. This nerve damage is associated with the buzz a person feels while consuming a diet soda. Long term exposure to these excitotoxins has addictive properties and is connected to many long term illnesses such as **multiple sclerosis, ALS, brain lesions, Parkinson disease and dementia.**

In addition to that one of the ingredients that make up aspartame is **methanol**. In the body methanol is oxidated into **formaldehyde**. Formaldehyde is a known carcinogen and is linked to retinal damage and birth defects. If you talk to a heavy diet soda addict they might reveal the various vision problems that arise

from time to time. This could be traced back to an over consumption of aspartame, one of the [multiple](#) effects it has on the brain

I like to do a lot of research and use links to show where information comes from. I know there can be a lot to read here but when you finish this chapter come back and take a look at this actual very concerning report from the FDA in 2002 about [reported aspartame toxicity reactions](#)

They actually have an Aspartame Toxicity Information Center mentioned in the report!

If you can't get around to this let me share an interesting statement from its conclusion:

“..in mid- 1995, the FDA had admitted that it had stopped recording aspartame toxicity reactions. That may have something to do with why the numbers that the FDA reported to the Wall Street Journal (in 1996) were so low.”

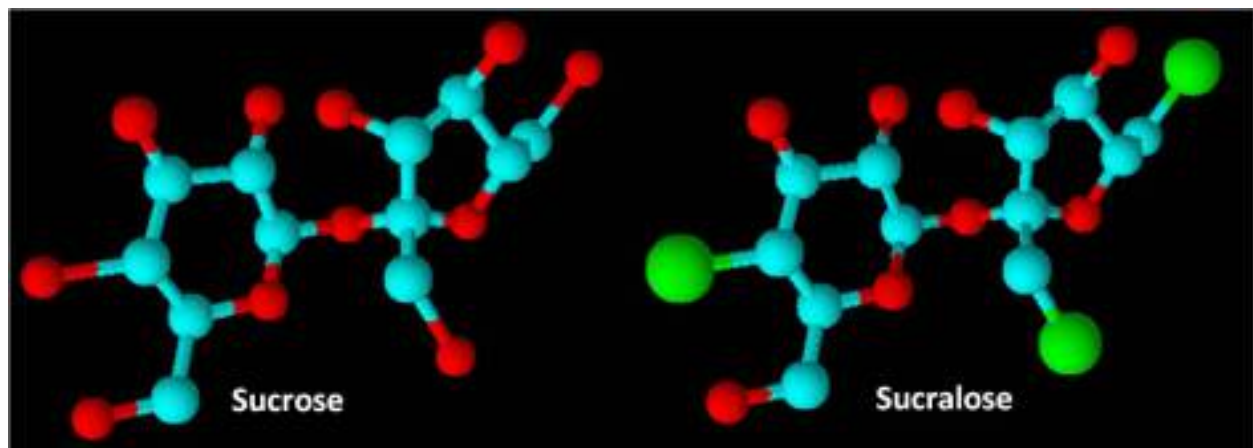
Just makes you wonder what else has gone on over the years..

SUCRALOSE THROWN INTO THE MIX

Sucralose is kind of like Android if aspartame was Apple.

Sucralose is most known as Splenda and came about later in 1976. It was seen as a healthier artificial sweetener because it was derived from real sugar. Some argue that it is not made from sucrose (table sugar) but a similar type molecule that is a trade secret.

In either case the molecule is **chlorinated** to change the physical structure of the “sugar” molecule by substituting in three chlorine atoms.that you can see here in green.



Sucralose can still come with the same side effects and potentially blood sugar and insulin raising issue (more on that below)

[Studies](#) are still showing some poisonous effects on the kidneys and liver as well as complications in fetal development. It's almost like trading in one problem for another when making the switch in artificial sweeteners.

As most people have noticed on an artificial sweetener package there is mention of tests on lab rats etc. There is various info though that there has been only 6 tests involving human subjects. Whether this is true or not still reveals that the status of Sucralose is definitely up in the air.

In fact just in 2013 the **CSPI** which is the Center for Science in the Public Interest has [downgraded](#) the use of sucralose from “**safe**” to “**caution**”. And also to note it gives saccharin and aspartame an “avoid” rating...

The toxic brain and body effects of artificial sweeteners are probably enough to put most people off it but if you are an individual looking to shed some body fat and lose some weight you may want to keep reading.

ARTIFICIAL SWEETENERS AND SUGAR CRAVINGS

When the body consumes an artificial sweetener it is consuming sweetness but without any calories. The body is used to tasting something sweet and then expecting a certain amount of sugar and calories to follow it. With an artificial sweetener this is not the case. Since there is not an intake of calories the body starts to crave what it believes it was about to receive. This can lead to carbohydrate and sugar cravings which if not rejected can set someone seriously back in their weight loss pursuits.

This might be explained by researchers at the [Washington School Of Medicine](#). They found that artificial sweeteners can peak blood sugar levels as insulin levels rose 20% in subjects drinking Sucralose compared to water. This also leads to an insulin drop and in turn a craving for sugar.

*On a semi related note, chewing gum has a similar effect in the body. The act of chewing anticipates food and digestion so the body releases enzymes and acids that can cause bloating and digestive problems.

Its ironic that a diet drink can lead to someone craving more carbs and sugars when it is originally turned to as a way to restrict calories.

WHAT PRECAUTIONS CAN YOU TAKE FOR YOURSELF?

So what can a person do to make sure they are avoiding these unnecessary chemical additives?

Reading labels on food is a good start. Even though aspartame and sucralose are the most well known of the artificial sweeteners one must be aware of all the different brands and forms they come in such as:

- NutraSweet
- Equal
- Sweet N' Low
- Sweet Twin
- Sugar Twin
- Splenda
- Sunnett
- Sweet One

The more we avoid foods that have labels and packaging the more likely we are to avoid all these chemical additives that can be included and in some cases hidden in our foods. You won't find Splenda in an eggplant, nor will you see Sweet N' Low in spinach.

Eating whole foods as they are found in nature helps you to get the correct amount of nutrients and takes the guess work out of wondering what exactly is in the foods you may come across in the grocery store.

ALTERNATIVES TO ARTIFICIAL SWEETENERS

People will always have a sweet tooth and I get that.

For the majority of the time I believe in keeping your sugar intake low. If you have constantly used artificial sweeteners in things like tea a little bit of honey might be a safer alternative. The sugar content has gone up but you're getting it from a natural source with some vitamins and minerals as well.

Cinnamon is always a good choice to turn to to add in a bit of sweetness and there seems to be some promise in [Stevia](#)

Derived from the South American stevia plant that contains natural sweeteners, liquid or powdered stevia can be used as a flavor enhancer or sweetener. The early research looks good but it is still early so its worth investigating further. And of course you would be well aware of it if you are Lydia from Breaking Bad... * no spoilers*.

As far as beverages go, which is clearly how the majority of artificial sweetener is consumed, water is always going to be your best bet. Adding in some fresh squeezed lemon or lime will give it some more flavor and zest and also some cleansing health benefits

WHAT TO TAKE AWAY ABOUT CHEMICAL SWEETENER

So we have looked at:

- how chemical sweeteners came to be
- the sketchy history that allowed them to be released
- the negative effects they have in the body
- how they affect sugar cravings
- alternatives to chemical sweeteners

Personally I'm not sure about about consuming something that has a warning label on it, whether it is Diet Coke, cigarettes or a Kanye West album..

The companies that make these sweeteners will say they are safe and are not detrimental to your health. But of course they are going to say that, they really don't have an alternative option if they want to stay in business. Remember the cigarette companies once said the same thing....

"Give your throat a vacation..."

Smoke a FRESH cigarette

IF the cigarette you have been smoking stings or burns your throat, switch to Camels and see the difference.

It's the peppery dust left in tobacco by inefficient cleaning methods that makes you cough.

It's the unkindly hot smoke of harsh, dried-out tobacco that burns and irritates your throat.

There is no peppery dust in Camels—that's whisked away by a special vacuum-cleaning process.

There are no stale, crumbly, parched tobaccos—the fine Turkish and mild Domestic tobaccos of which Camels are blended come to you in prime, factory-fresh condition, thanks to the Humidor Pack.

This scientific germ-safe wrapping—not plain ordinary Cellophane, but *moisture-proof* Cellophane which costs nearly twice as much—seals in all the natural aroma and freshness, seals it so tightly that wet weather cannot make Camels damp, nor drought weather make them dry.

Camels are milder and more throat-friendly because they are dust-free and fresh.

Give your throat a vacation, switch to Camels for just one day. Then leave them—if you can.

Tune in CAMEL QUARTER HOUR featuring Harmon Dwaney and Tony Martin—Camel Orchestra, direction Jacques Bonnard—Columbia System—every night except Sunday

CAMEL
Mild... NO CIGARETTE AFTER-TASTE

HUMIDOR PACK

Don't remove the moisture-proof wrapping from your package of Camels after you open it. The Humidor Pack is protection against dust and germs. In offices and homes, even in the dry atmosphere of artificial heat, the Humidor Pack delivers fresh Camels and keeps them right until the last one has been smoked.

I live in Canada and every country can have different standards as far as what is printed on food packages and the information they display. On our packages of Sweet N' Low there contains a small note on the back that says:

“ This sweetener should only be used on the advice of a physician”

I don't know about you but I find that quite concerning and makes me feel like I am reading medication warnings. I'm not going to see a warning like that on a cucumber or a big bunch of kale. Further reasoning on why it is probably best to avoid anything that comes in a package.

If you're unconvinced I suggest researching further and using this chapter as a jumping off point. Some people will say a little bit can't hurt. But as an awesome nutritionist I once worked for would say: **“ a little bit of poison, is still poison”**.

CHAPTER 6: HOW TO FEEL FULL WITHOUT OVEREATING

Truthfully all of us will encounter the problem of overeating. It may not be every meal but if you are consuming a lot of processed, manufactured or junk foods I know you will run into this problem of seemingly never feeling full and still finding yourself hungry even after a massive meal.

I will show you how artificial foods are created to trick you into thinking you're eating real food and how better food choices and even how you eat will help eliminate the feelings of never feeling full and overeating at each meal

WHY DOES JUNK NOT FILL US UP?

It's pretty safe to say if something comes out of a box or package it's a good bet it's not an ideal food choice. Items like these tend to be more like imitation foods. They have the appearance of food and even the taste but what you are eating is a designed and manufactured product.

These foods are pretty much devoid of real nourishment and when your body receives food it expects an abundance of vitamins and minerals. When this does not occur you have basically ingested a large amount of calories but are essentially starving on a cellular level. Your body will continue to crave the nourishment it believes it was neglected leading to continual food craving.

FRUCTOSE AND APPETITE STIMULATION

Possibly connected with this continual hunger is fructose. If you are eating a packaged or processed food it's a good bet that it contains fructose, especially in the form of high fructose corn syrup. HFCS helps give some added taste and texture to foods to make it more desirable and also allows for a longer shelf life leading to less wastage by manufacturers.

Studies from Yale have shown fructose to stimulate hunger and appetite more than other types of sugar.

These studies have been also promoted by the [University Of California in San Francisco](#)

This is just one more reason to avoid fructose and refined sugars.

HOW SYNTHETIC FLAVORS TRICK OUR BODIES

As mentioned about eating foods devoid of real nutrition, they don't satisfy our nutrient requirements and leave us still hungry for real vitamins and minerals.

So how are these food items developed and specifically why should we be aware of the ingredient that we all seem to gloss right over:

"Natural Flavor"

World class chefs know that their reputation is centered around flavor. Bland or tasteless meals are not going to let them climb the culinary ladder. And so it is with food manufacturers. No one is going to be a repeat customer if something is not pleasurable to the taste buds.

Since 90% of the money North Americans spend on food is used to buy processed food it has become a billion dollar industry centered around your taste buds. Flavor consistency is paramount. Have you noticed how something like grapes or an apple can taste a little different every time you have one but every Oreo cookie you have ever had in your life is exactly the same? Flavor variations can not exist in the name of continual profits so creating these flavors needs to be an exact science.

(FUN FACT: The name **Oreo** comes from the **re** of the word **cream** that is put in between the two **o**'s from the word **chocolate**. Just how the cookie is made up)

You will see natural and artificial flavor on a majority of things you might find in your freezer, fridge or cupboards. So where are these flavors created? In 3 Michelin Starred restaurant kitchens or culinary institutes?

Try New Jersey

CHEMICAL VALLEY

The "flavor industry" runs right through the New Jersey Turnpike. This is where you will find the home of some of the biggest chemical developers in the world including:

- [IFF](#) (International Flavors & Fragrances-the worlds largest flavor company
- [Givaudan](#)- the world's second largest flavor company
- [Haarmann & Reimer](#) - Germanys largest flavor company
- [Takasago](#)- Japans largest flavor company
- [Flavor Dynamics](#)
- [Frutarom](#)
- [Elan Chemical](#)

There are dozens more but basically 2/3rds of any chemical flavor sold in the United States is developed in this area.

And make no mistake these are complete laboratories.

90% of a food's flavor can be attributed to its aroma and its no coincidence that these chemical flavor factories also make a majority of the best selling perfumes. These factories are also making the smells of things like household cleaners, deodorant, floor cleaners, shampoo, shower gels etc etc.

The ability to manipulate volatile chemicals to create a particular smell is why science is behind the ability to give a smell to a hairspray as well as to your microwaved dinner.

NEW FAKE PRODUCTS, NEW FAKE FLAVORS

With up to 10,000 new products being introduced each year, new flavors have to be created as well. There is no such flavor as "spray can cheese"or [avocado free guacamole](#) .

Yep, things like that actually exist and the flavors have to come from somewhere so they are created. These products don't exist in nature so you just have to look to the Garden State to find them.

Flavors invented today are developed with things like [spectrometers](#), [gas chromatographs](#) and [headspace vapor analyzers](#).

Not a lot of natural that goes into "natural flavors".

Interestingly there is not even always a difference between natural and artificial flavors.

[Terry Acree](#), professor of Food Science from Cornell University says a natural flavor is "a flavor that has been derived with an out of date technology" and that sometimes natural and artificial flavors can contain exactly the same chemicals, produced through different methods.

WHERE IS THE FDA IN ALL THIS?

To me this is the most ridiculous part. The Food and Drug Administration does not require flavor companies to disclose the ingredients in their additives. This lack of public disclosure allows the companies to keep the secrecy of their formulas.

Try to find a recipe for Coca Cola. Besides supposed "discovered" recipes the soft drink Giant has been able to have their formula a guarded secret for over [127 years](#)

When allowing companies to simply list an ingredient as an artificial or natural flavor covers up the multitude of compounds and ingredients that make up that "flavor"

Probably most famous now is what is actually in Burger Kings "**artificial strawberry flavor**"

Have a look what makes it up:

amyl acetate, amyl butyrate, amyl valerate, anethol, anisyl formate, benzyl acetate, benzyl isobutyrate, butyric acid, cinnamyl isobutyrate, cinnamyl valerate, cognac essential oil, diacetyl, dipropyl ketone, ethyl acetate, ethyl amyl ketone, ethyl butyrate, ethyl cinnamate, ethyl heptanoate, ethyl heptylate, ethyl lactate, ethyl methylphenylglycidate, ethyl nitrate, ethyl propionate, ethyl valerate, heliotropin, hydroxyphenyl-2-butanone (10 percent solution in alcohol), a-ionone, isobutyl anthranilate, isobutyl butyrate, lemon essential oil, maltol, 4-methylacetophenone, methyl anthranilate, methyl benzoate, methyl cinnamate, methyl heptine carbonate, methyl naphthyl ketone, methyl salicylate, mint essential oil, neroli essential oil, nerolin, neryl isobutyrate, orris butter, phenethyl alcohol, rose, rum ether, g-undecalactone, vanillin, and solvent

It's kind of concerning that all this can be contained in one ingredient without it all being listed. This is not just looking at fast food companies but any product you have that might contain artificial and natural flavors. If you could see that ingredient list as I am right now through my word editor it's lit up like the red light district in Amsterdam. Not a lot of recognized words there...

Here's a fun game, try to find strawberries on that list of artificial strawberry flavor...

KEEP IT REAL

So the point behind showing you all this is to remind you that all these created flavors, colors, aromas etc are tricking the body into thinking it is consuming food. If it looks like fake duck and smells like fake duck... well you get the picture.

As long as you are consuming food like products you may be able to consume a lot but you are still going to be starving yourself nutritionally. And at the same time you have just consumed an enormous load of calories and chemicals that are going to be a nightmare for your body to deal with.

When we stick to real foods we allow our body to be fed and nourished correctly. Real food allows for our gut and digestive system to absorb and utilize those nutrients, vitamins and minerals and to work in keeping us healthy, rejuvenated and help to combat disease.

SLOW DOWN AND TAKE YOUR TIME

If there is one thing you want to take away from this chapter it's this: **slow down when you eat.**

Eating too fast and not chewing properly overwhelms our digestive system and doesn't allow for **natural satiation** aka feeling full.

When you eat too fast you take in too many calories before you realize you have eaten enough. Your brain receives a signal that it has had sufficient food but this can take anywhere from 15-20 minutes to kick in.

Devouring a meal in 3-5 minutes overrides this signal.

Studies from the North American Association for the study of Obesity showed that overweight men and women took in fewer calories when they slowed their normal [eating pace](#).

[Studies](#) from Osaka University in Japan have also looked into the speed of eating issue. They looked at the eating habits of 3000 people and found that 84% of men that ate quickly were more likely to be overweight than those that ate slowly. And woman were just over twice as likely.

LET THOSE RECEPTORS STRETCH

All of the studies in overeating reveal the issue of the connection between the brain and the stomach. Eating too fast doesn't allow those stretch receptors to reach the brain in time allowing for an over intake of calories. Essentially eating too fast can fill your stomach before your gastric feedback has a chance to start developing.

So the simple take away from this is just like your mother probably told you, and definitely told me, chew your food slowly.

You might want to set up a timer and space your meal out over the course of 15-20 minutes. This will do two things:

- Allow the natural signals to reach the brain to say you have had enough
- takes some pressure off the digestive system

So slow down and allow yourself to really taste the food you are eating and make your mealtime more about nourishing yourself instead of just getting it out of the way.

WHAT FOODS WILL FILL US UP THE BEST?



Alright, we know why we need to avoid foods that trick us into thinking we are eating real food and why we need to slow down when we eat, but what are the best food choices to nourish us **AND** keep us feeling full?

When it comes to satiation, the 4 things that determine us feeling full are:

- Protein
- water
- fiber
- healthy fats

As covered in the Water chapter a study done by the [University Of Sydney](#) looked at 38 foods and found the ones that tested higher in satiety were those containing protein, water and fiber

And not surprisingly the ones with low satiety scores causing us to overeat were the "foods" made up of fat, sugar and/or refined carbohydrates. What do you think are the chances that some of those items contained natural and artificial flavors?

Simply put when we eat foods that contain these protein, water, fiber and healthy fats we feel fuller for longer. Vegetables are far and away the ideal choice here. They are made up mostly water and fiber and are known as **high-volume foods**. They are a perfect combination of high nutrition containing vitamins, minerals and phytonutrients. They will fill you up but remain relatively low in calories.

Some top choices:

- artichokes
- turnips
- carrots
- bell peppers
- broccoli
- dark leafy greens
- eggplant
- brussel sprouts
- tomatoes
- squash

Along with vegetables you want to look at **fruits along with grass fed proteins and healthy fats such as olive oil and avocados**.

WRAPPING IT ALL UP

I am still pretty active as I am in the gym quite a bit and still play competitive sports. Basically I am able to eat a lot. When I combine some of the fresh, real food ingredients above I feel more full than I ever would eating a large pizza or 3 pounds of wings.

I usually will make a salad that's a mix of spinach and other greens. It will have tomato, avocado, red onion, cucumber, some goats cheese and some free range grilled chicken on top. I will make my own dressing that is just extra virgin olive oil and some balsamic vinegar. These type of salads leave me feeling stuffed for hours on end. Some days I will have that at dinner and i'm good for the rest of the night. And as a reminder I can eat A LOT, all day and everyday, but simple salads like these can do the trick.

So start incorporating some of these foods into your meals each day and remember to slow down and take your time while you eat

This way you will be **filling yourself up without filling yourself out**.

CHAPTER 7: SLEEP

People are always on the lookout for miracle cures, for the newest supplement or for a secret tip in the pursuit of fitness, health and wellness.

Well it's right in you and it's sleep.

There seems to be a badge of honor of sorts when it comes to seeing how long a person can go without sleep. This burning the candle at both ends is going to end up severely burning you in the long run if you choose to neglect sleep. Ill show you why.

Why Is Sleep So Important?

Our day doesn't wind down how it should naturally and we work long into the night and those in college know all about all nighters cramming for an exam I, I mean YOU, haven't prepared for.

You may have seen this before but the world record for lack of sleep is 11 days 24 minutes by a 17 year old high school student named Randy [Gardner](#)

This whole experiment was studied and monitored by researchers that showed by the end of his attempt he was noted as having cognitive and behavioral changes. He was experiencing problems with concentration, memory as well as paranoia and hallucinations.

The Australian Sleep Council claims that the new record is 18 days 21 hours and 40 minutes.

But this might have just been a vegemite hallucination...

Stages Of Sleep

Most people are aware of the different sleep stages. Here's a quick breakdown:

STAGE 1. - stage one is the beginning of the sleep cycle and is relatively light. It is almost a transition between being awake and being asleep. This period of sleep only lasts 5-10 minutes and is that stage where if you wake someone they will claim they weren't really asleep

Like me at my nieces piano recital..

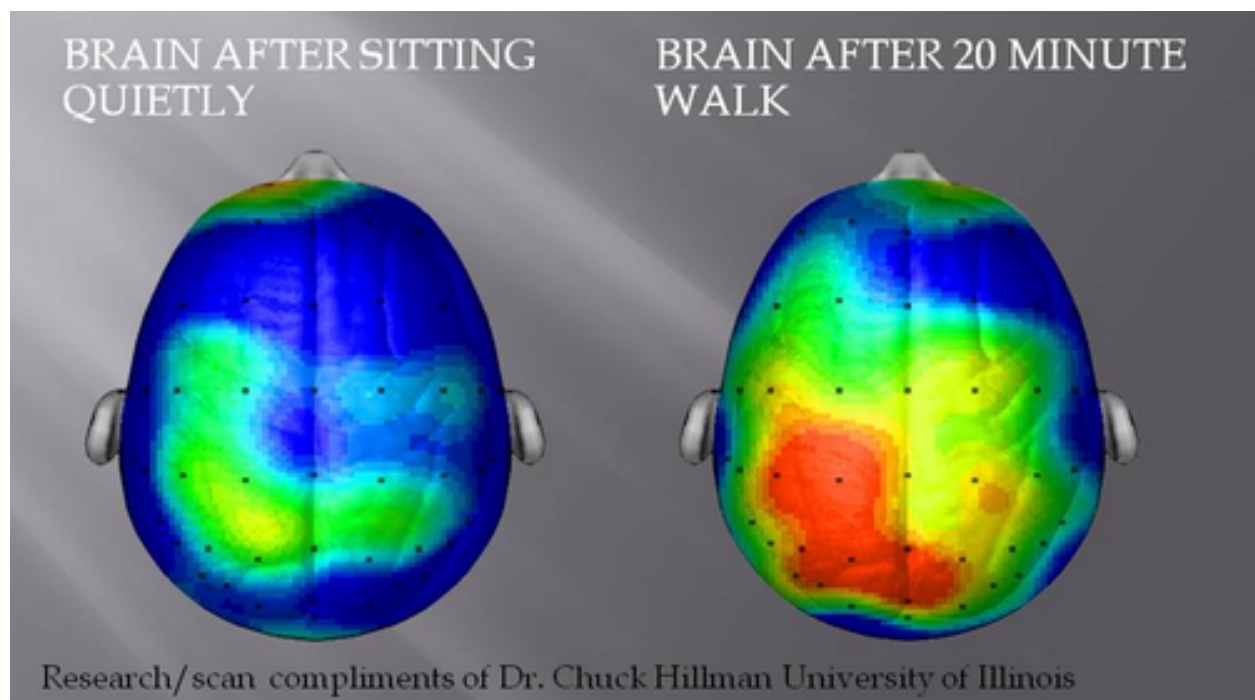
STAGE 2. - The second stage of sleep lasts around 20 minutes. The brain begins to release rapid, rhythmic brain activity known as [sleep spindles](#). Your body temperature and heart rate begin to slow down in stage 2.

STAGE 3. - Deep, slow brain waves known as delta waves begin to emerge in stage 3. This is the point where people begin to be less responsive and noises and movements fail to generate a response. This is a transitional stage between light sleep and very deep sleep. It is also the stage where sleepwalking occurs along with bedwetting. Not that I ever did...

STAGE 4. - This is the familiar dream stage of rapid eye movement or [REM](#). Along with the rapid eye movement there is more respiration and increased brain activity. Muscles become more relaxed while the brain and other body systems kick into overdrive. This is why we dream because of the enhanced brain activity.

The brain is so engaged during sleep that it is more engaged than when you're sitting on the couch watching t.v.

This is similar to the effect of exercise vs being inactive on the brain:



We typically enter REM sleep after about 90 minutes of falling asleep. The first cycle of REM is generally short but becomes longer as we cycle through the stages. The effective, deep dreaming stages of REM generally last around 90-120 minutes at night.

Interesting side note: We have just come to accept that when we watch a movie it is going to last around 1.5-2 hrs. Did you ever wonder why that was? Why are they that specific number? Why not 4 hours or 55 minutes?

When the film industry in Hollywood was first starting up everything was new and there was no frame of reference for how long a movie should be.

The early movie studio heads had studied that our dream state was around 90-120 minutes and it was thought that a movie of that length would be more naturally received by people. Almost like our subconscious responds better to that length due to it being familiar to us from being experienced every night.

Effects From Lack Of Sleep

Ok so the 17 day experiment is probably nothing that any of us will undertake, unless I'm going on a Storage Wars binge watching marathon...

When It comes to your health and fitness how does lack of sleep affect you?

When you don't sleep you are basically telling your body there is some form of stress or condition going on or else why would you not sleep. Your body perceives lack of sleep as a stress that might be a famine, predators or even a zombie apocalypse.

In your bodies eyes something serious must be happening that is preventing you from sleeping and this is where the stress hormone cortisol comes into play.

Cortisol

The primary stress hormone increases sugars (glucose) in the bloodstream, enhances your brains use of glucose and also increases the availability of substances that help repair tissues.

During these fight or flight stages when cortisol is released it helps to [reduce functions](#) that are non essential at that time. It alters immune system responses and suppresses the digestive system, the reproduction system and growth processes.

So this hormone response is certainly critical if it is avoiding a mountain lion, jumping out of the way of a car or I'm being attacked for the last Blu-ray player during a black Friday sale.

So after one of these stress events hormone levels begin to recede and things go back down to normal. But what if they never go down?

This is what lack of sleep does, since these stress hormones are constantly elevated and don't turn off. [This long-term activation](#) and constant cortisol exposure can disrupt most of all your body processes. This can lead to a number of health problems.

Ready for a long list?

- headaches & dizziness
- ADD/ADHD
- anxiety
- irritability and anger
- panic disorders
- grinding teeth and tension in the jaw
- increased heart rate
- stroke
- heart disease
- hypertension
- Diabetes type I & II
- Arrhythmias
- digestive disorders
- upset stomach
- IBS
- weight gain and obesity
- muscle tension
- insomnia
- depression
- ulcers
- lack of energy
- immune system dysfunction

Benefits Of Sleep

So we've seen why you don't want to deprive yourself of sleep, so if you are getting adequate sleep how does this benefit you?

Here are 5 reasons:

- 1. Less Pain-** Chronic or acute pain can be relieved with enough sleep and there are many studies that show a link between sleep loss and lower pain threshold.
- 2. Better Health-** Clearly insufficient sleep leads to some serious health problems like diabetes, heart disease, obesity and heart attacks due to chronic stress hormones.

And it doesn't take long either..Researchers from [Brigham and Women's Hospital in Boston](#) found that disrupted sleep patterns in 10 healthy adults who worked shift work, three of them had blood glucose levels that qualified them as pre-diabetic.

In only four days...

3. Better Mood- Not getting enough sleep affects your emotional regulation. This is something everyone is clearly aware of as your irritability and quickness to snap on people shows its ugly head when you're too tired.

Bad news for the people who run out of strawberry parfait at my local sandwich shop...

4. Better Memory- Studies show that when we sleep our brains organize and consolidate memories from the day. Kind of like putting them in a file folder. Lack of sleep is the equivalent of throwing those papers all over a room.

5. Stronger Immunity- [Another study](#) looked at how sleep can affect our ability to get sick. Researchers tracked over 150 people and monitored their sleep patterns for two weeks. At the end of the two weeks they exposed them to a cold virus.

People who got 7 hours of sleep at night were 3 times as likely to get sick than those that got 8 hours.

Sleep Disorders

Either you or someone you know probably has or has had a sleep disorder. They are quite common but can be controlled.

Insomnia

Everyone is aware of insomnia. It is simply the inability to fall asleep and stay asleep, and there are actually 3 kinds.

1. **Transient Insomnia-** usually lasts for less than a week and can be caused by another disorder, changes in environment, timing of sleep, depression and stress. Its consequences are similar to that of sleep deprivation
2. **Acute Insomnia-** The inability to sleep well for up to a month. It is a difficulty initiating sleep or maintaining it and when you do it is low quality. It is also known as stress related insomnia
3. **Chronic Insomnia-** Lasts for longer than a month, it can be caused by another disorder or can be the primary disorder itself. Having high levels of stress hormones can lead to chronic insomnia and its effects include muscular fatigue, hallucinations or mental fatigue.

Sleep Apnea

Sleep apnea is a condition where the individual stops breathing while they sleep and then snorts or gasps for air. These episodes can last a few seconds to a few minutes and can happen 5-30 times in an hour

The word apnea comes from the Greek word which means "without air"

The person can have slept through the night unaware that they have woken up dozens or even hundreds of times. They will experience daytime sleepiness, headaches and other health conditions.

There are two types of it as well..

1. **Obstructive Sleep Apnea**- This is the most common and happens when the throat muscles relax
2. **Central sleep apnea**- This is when your brain doesn't send proper signals to the muscles that control breathing.

Obstructive sleep apnea can be combated by losing weight so there is not as much excess skin around the throat, by regular exercise, eliminating caffeine or alcohol before bed and trying to get to sleep at the same time each night.

There are also dental devices that help keep your jaw forward, there are surgeries to remove excess skin and CPAP machines that enable air to flow when you stop breathing during the night.

How Much Sleep Do You Really Need?

So what is the best recommendation for the amount of sleep you should be aiming for each night?

The idea of 8 hours has been around for awhile and is a decent rule of thumb. There has been more emphasis on 7 hours a night but the main thing to take away is **the amount of sleep you need depends on what is going on in your life.**

If you are being very active or going through times of stress you need more sleep. Sleep is when you metabolize those stress hormones away and sleep is what helps you to repair and recover from workouts, training or injuries.

If you are sick the amount of sleep needed will rise. If you are not engaged in a physically demanding job and are feeling healthy shooting for 7 hours is probably going to be sufficient.

So the best advice I can give is don't be afraid to sleep. You are not "giving in" or being lazy. In the long run you are going to be helping yourself if you are feeling really run down. If you have a lot of people who rely on you this is just as important. You need to be at your best in order to give them your best and that means getting sleep is paramount.

Keeping A Good Routine

Sleep researchers always share that the secret to getting into healthy sleep patterns is **consistency.**

This means going to bed the same time each night and having the same wind down schedule to end your day. Ideally you don't want to be up too much past midnight and also wake with the sun. This is

obviously not practical for everyone but the closer you can keep to the natural rising and setting of the sun the more in tune with your body you will be.

Keeping your room dark and slightly cool is also important and avoiding caffeine and alcohol later in the day.

Whatever routine you find works it is key to stick with it and let your body get familiar and accustomed to it. The truth is some people can do ok with not a lot of sleep and somehow keep going. These people are few and far between but everyone is wired a bit different and it is possible.

Famous foul mouth chef Gordon Ramsay sleeps a reported 4 hours a night. Same thing with WWE owner Vince McMahon.

Their super-human work ethic and genetic makeup somehow has allowed them to do this for decades and their reasoning is that it gives them an extra 24 hour period to work each week.

24 Hours Of Daylight

A big issue that has only come up in the last 30 or so years is the concept of perpetual 24 hour light especially that of blue light that comes from t.v and electronics.

Our constant use of screens from late night t.v, tablets or phones exposes us to [blue light](#) which is disruptive to our natural sleep patterns. Blue light also comes from energy efficient light bulbs.

It also throws off our natural [melatonin](#) levels. Melatonin is a hormone that helps regulate our wake and sleep cycles.

Avoiding blue light a few hours before you go to sleep will help to restore those melatonin levels and help encourage more restful sleep.

For those who need to be exposed to electronics later in the day there are some things you can use to help reduce the exposure.

[F.lux](#) is a program that you can put on your laptop that eliminates the blue light and turns the screen softer and more similar to candle light or ember light. This is more natural to us similar to how our ancestors would have only seen fading out fire light as their last form of light in the day. Different devices also have similar applications in their various ecosystems that will also adjust your screens blue light levels.

I'm using F.lux at this very moment as I write this as it is close to midnight. And I wasn't up late watching a House Hunters marathon...

What's with everyone and the obsession with granite?

Hopefully this chapter has shed some light on the importance of sleep and all the health benefits it provides. It is key in keeping your recovered, repaired and rejuvenated while helping avoid health problems.

CHAPTER 8: SUGAR

There's two white, refined substances that have caused quite a lot of problems to people over the years.

One of these is staple in Lindsay Lohans life and the other, though legal should be considered as dangerous as a drug or narcotic.

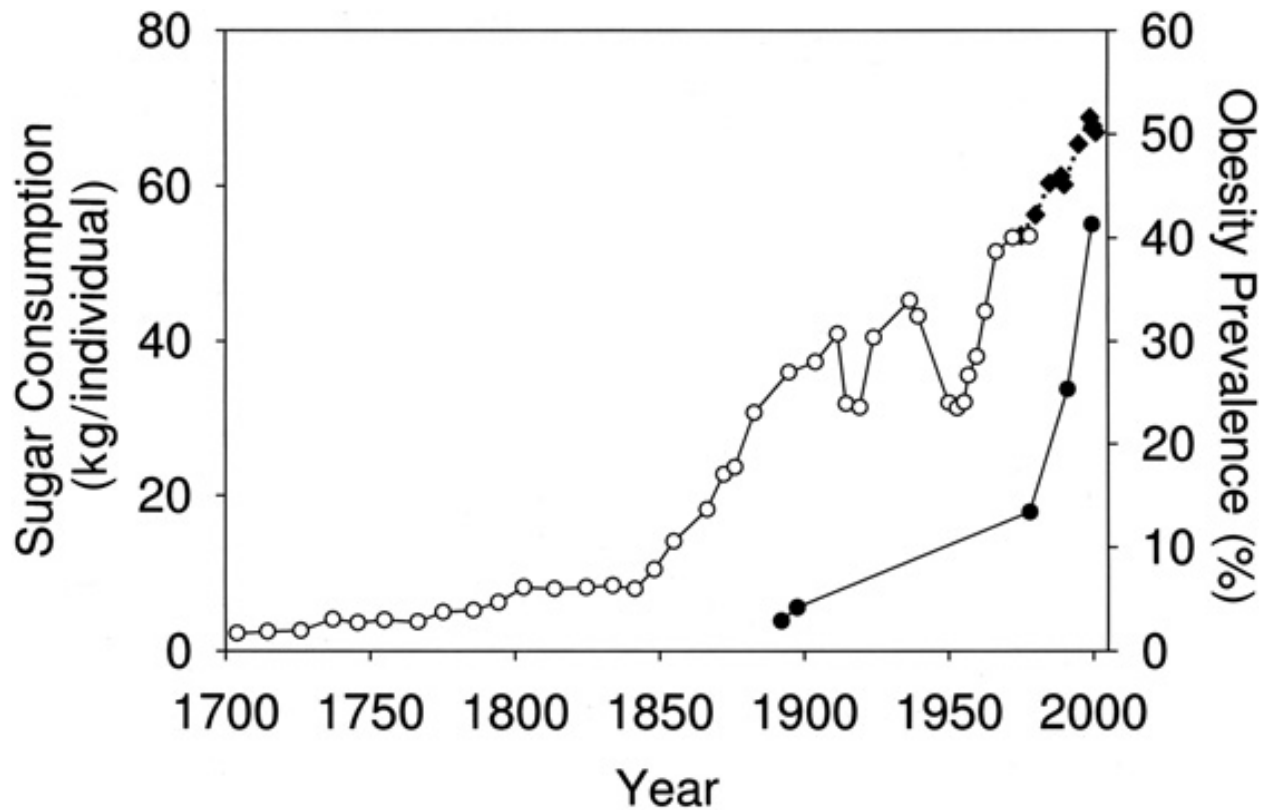
When you look at the detriment that sugar has had on our bodies and the terrible impact it has had on our health it's not hard to look at it similarly as another white, purified extraction.

If there was an absolute number 1 nutrition tip I could give you, and a lot of others would agree, is to remove or drastically reduce refined sugar consumption.

An Explosion Of Sugar

Sugar is one of the worst things to happen to society, and that includes Kim Kardashians rise to fame.

If you want to go back in time with me here and look at sugar consumption over the ages. First off lets look at the what we are up to today compared to the last 160 years:



Source: Johnson RJ, et al. [Potential role of sugar \(fructose\) in the epidemic of hypertension, obesity and the metabolic syndrome, diabetes, kidney disease, and cardiovascular disease.](#) The American Journal of Clinical Nutrition, 2007.

So give or take a shovel full we are consuming around a wheelbarrow full of sugar a year...

In the early 1800's, or around the time Larry King married his first wife, people were consuming what would equal a 12 oz can of soft drink every 5 days.

Today we are consuming that every 7 hours.

But looking back even further not only were our ancient ancestors eating an insane amount less but they were only consuming sugar at select times in the year.

And it definitely wasn't in the form of a Big Gulp or Toaster Strudels.

Depending on the location in the world that ancient people were living they only had access to "sugar" a few times a year in the form of ripened fruit or honey.

It is estimated that primitive man would have only at best consumed [4-5 pounds](#) of sugar a year but in the form of honey, and much of that from honey comb.

Why Is Sugar So Bad?

Refined sugar when consumed leads to spikes in blood sugar and releases of insulin by the pancreas. Unless there is some physical activity coming up the sugar needs to be stored somewhere as a backup energy source. That is essentially what fat is, it is a reserve fuel tank. And insulin is known as the fat producing and storing hormone. The sugar that is consumed ends up being stored as fat and over time can lead to obesity. Along with that consistent sugar intake creates insulin resistance in the body. The pancreas gets used to pumping out so much insulin that over time that it becomes resistant to insulin and now you're looking at type 2 diabetes.

Side note: Type 2 diabetes was always known as adult onset diabetes but with it showing up so much in teens and even pre-teens it is now classified as type 2 diabetes.

High Fructose Corn Syrup

When people discuss sugar we usually associate it with white table sugar which is derived from sugar cane and sugar beets. As bad as that is there is another champ as far as sugar and its negative effects on the body: High fructose corn syrup (HFCS)

We have covered high fructose corn syrup a little but a quick reminder that it is **a refined sweet syrup that is extracted from corn**. The majority of corn that is reserved for human consumption is turned into HFCS.

HFCS was developed as a cheaper alternative to higher sugar trade tariffs, and it gave products a longer shelf life. It became a top choice for use in products during the low fat craze as it was able to give products a texture and flavor to food with the absence of fat and allowed for browning characteristics.

This is another reason that soft drinks grew from smaller 8oz size servings to 20oz and further giant sizes without any real change in cost to manufacturers.

Here's a look at the change in soft drink sizes over the years



How Sizes Have Changed

MIKEBLOOMBERG.COM

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1 liter (34 ounce) contour bottles
introduced in the late
1990's

34
ounces

20 ounce contour bottles
introduced in the early
1990's

20
ounces

12 ounce cans
introduced in the
1960's

12
ounces

Original
1920's
size

6.5
ounces



Fructose in its natural fruit form is more mild on the body as it is packaged in with things like fiber and natural roughage so your body doesn't get a straight shot of sugar.

In the form of fructose and especially HFCS it is absorbed even faster but straight into the liver where it triggers [lipogenesis](#) (the production of fats like triglycerides and cholesterol)

It is one of the major causes of liver damage and why 70 million Americans suffer from a condition called "[fatty liver](#)".

Here now are 5 great ways to replace and combat sugar in your diet

1. Avoid Artificial Sweeteners

Referring back to our chapter on artificial sweeteners it still seems weird as drinks with artificial sweeteners have zero calories and zero sugar right? Technically yes but artificial sweeteners trick your body into believing that it is about to receive sugar. Since no sugar is consumed it can lead to actual sugar cravings causing you to constantly be wanting the very thing a zero calorie beverage was helping you avoid.

2. Consume Dark Chocolate

When sugar cravings hit turn to the dark master, the cocoa bean..

This is not recommending sugary milk chocolate but dark chocolate that is made up of at least 70% cacao solids, ideally 90% is best.

This surprises people but dark chocolate can help manage and lower blood sugar while helping stave off that sweet tooth. Dark chocolate is loaded with antioxidants and polyphenols which help in [glucose control](#).

How does dark chocolate do this and is able to be recommended for diabetic patients? Because it is mostly made up of fat and allows it rank very low on the glycemic index.

This fat is the good fat however in the form of medium chain triglycerides which provide tremendous health benefits like helping prevent cardiovascular disease and lowering blood pressure.

A square or two a day will help for that sugar craving while also providing tremendous health benefits.

3. Eating Protein With Sugars

If you're going to eat something that has refined sugar or if you have issues like hypoglycemia having something with some protein and fat before you consume sugar is going to help slow the release of blood sugar.

When you consume something that is a majority of sugar, even fruit on its own there will be a spike in blood sugar. Consuming a handful of nuts like almonds or walnuts before you have fruit or something that you know is high in sugar will help stave off that blood sugar spike a little better.

4. Stevia

We covered Stevia a little in the chapter on Artificial Sweeteners and it is showing some real promise as a sugar alternative.

As mentioned Stevia is a plant that has been used for thousands of years as a way to sweeten things and medicinally. It appears to not have the same negative effects as artificial sweeteners and provides some health benefits such as possibly [reducing blood pressure](#) and helping to [lower blood sugar levels](#).

Ideally you want to choose raw stevia leaf powder which has a brighter green color to it. There is even liquid stevia and these choices give you a more natural version of stevia. These are easy to find on Amazon.

It is also available in packets as a white color which comes from the extraction of the glycosides in the plant but some find this to have a bit of an after taste. This appears to still be a better choice than reaching for a sugar packet or artificial sweetener.

As always when in doubt with your food try to keep it real!

5. Exercise, Specifically Resistance Training

Granted it is hard to completely avoid sugar at times depending on the time of year, events and holidays or if I've had a rough week and binge on donuts while watching The Notebook.

You can however set yourself up for a bit of success and have the ability to conquer that sugar through exercise.

[Insulin sensitivity](#) is a state that your body can get into where it does not need to release so much insulin when it comes to dealing with sugar. This is the opposite of insulin resistance that we covered earlier. Exercise also allows the body to fight to help avoid developing insulin resistance, kind of putting you a few steps ahead.

Intense exercise allows for positive changes in fat metabolism and can [bring improvements in glucose output](#). Exercise allows for insulin sensitivity through changes in how the body transport glucose.

Basically exercise plays an important, if not essential role in the treatment and prevention of insulin insensitivity

Wrapping It Up

it is hard to avoid sugar, it is everywhere. Even in places you wouldn't expect to find it:

- ketchup
- pasta sauce
- salad dressing
- cereal bars
- bread
- crackers
- sushi
- cough medicine
- soy milk
- frozen dinners
- Beer

Turning to foods in the purest form and avoiding process and packaged "food" will be a big step in avoiding unnecessary sugar intake over the day.

And looking to replace refined sugar with new alternatives like stevia or reaching for some dark chocolate will help you in your quest to remove or drastically reduce sugar all together.

Chapter 9: Fat

There are many thoughts and ideas that we have that are ingrained in us as truth. The vilification of saturated fats over the years have been one of those things that people have accepted as truth without really looking into it for themselves.

What is saturated fat and does it really cause a great detriment to our health?

Common Facts That We Take As Truth

There are always certain facts that we have come to accept as truth without ever looking into it such as the idea that Kim Kardashian has any real talent. Certain ideas and facts are sprouted off as the gospel truth and I'm sure many of us have uttered the following untrue "facts":

1. The Great Wall Of China Is The Only Man Made Object Visible From Space

The question is from what point in space? Astronauts on the moon say this is not true and even up at higher altitudes above the earth. NASA members on board the International Space Station say it is not visible as the material used to make it is the same color and texture as what surrounds it

When they get to low earth orbit the Great Wall can become visible but so can a lot of other things such as the Pyramids and even entire cities. Further destroying the theory is when Yang Liwei, an astronaut from China said he [could not see the wall](#).

2. Dogs Are Colorblind

Somehow people forgot to even ask the dogs..

It was always thought that dogs only saw shades of grey, but not 50 shades of grey... This is not the case as [they can see colors](#) but maybe not as bright and bold as you and I.

We have [cones in our eyes](#) that catch light and respond to color. Dogs have these as well just not as many. You have to not only have these cones but different types of them and we have three different types. In a person with colorblindness they are missing one of these 3 types of cones. They can still see colors just fewer of them and this is the case with dogs.

3. Saturated Fat Makes You Fat & Gives You Heart Disease

This is a massive topic but I will try and break down what the research actually says. So where did this idea originate from? Obesity and heart disease has not always been at the rates it is now and people have been eating saturated fat as long as we have been on the earth.

Think even up to a few generations ago. Look at old black and white pictures of your great and great great grandparents prior to the early 1900's. Everyone looked pretty slim. These people did not go to gyms, they were not part of weight watchers or counted calories, they did not even know what a calorie was! They also were eating things like whole cream, butter, lard and animal proteins.

Why were they not fat or riddled with things like diabetes and heart disease at the rates we are seeing today?

Who Was Ancel Keys?

No this is not a hipster band from Brooklyn. Ancel Keys was an American scientist who in the 1950's started looking at why heart disease which had not been a problem three decades prior was now the number 1 killer in America.

Keys conducted the '[seven countries study](#)' to look into why this was so. Questions arise as to if Keys already had a conclusion in his head and then selected only countries that would support the hypothesis. The countries examined were:

- United States
- Finland
- Netherlands
- Italy
- Yugoslavia
- Croatia
- Serbia

These hand picked countries chose to not include places where there was a very high saturated fat intake yet did not suffer from high rates of heart disease such as **France, Switzerland, Sweden and West Germany**.

Keys also left off countries that had high heart disease rate but a lower saturated fat intake such as **Chile**. Basically there were 22 countries that had available data but Keys only selected the few that matched his hypothesis. This is more blatant cherry picking than me not getting back on defense in hockey waiting for a breakaway pass..

The New Standard

Keys became a part of the committee for the American Heart Association and his ability to influence and persuade allowed for the grand spread of his message despite skepticism by the committee. Either way the advice to avoid saturated fat became the guideline for decades.

In the meantime there were criticisms of the seven countries study that was saying saturated fat was causing heart disease. Keys was studying a "tenuous association" between the two and **not if there was any possible proof of causation**.

People have also associated the consumption of cholesterol with a rise in cholesterol in the body but in regard to Ancel Keys it needs to be shown that he did not observe this association and even [remarked that](#):

"The evidence-both from experiments and field surveys- indicates that the cholesterol content, per se, of all natural diets has no significant effect on either the serum cholesterol level or the development of atherosclerosis in man"

Changes To Us Over The Decades

- During the time of this work and in the [1960's](#) fats and oils supplied around 45% of calories. Around 13% of adults were obese and under 1% had type 2 diabetes
- [Today](#) we are taking in less fat, get around 33% of calories from fats and oils yet 34 % of adults are obese and 11% have diabetes

So what happened? Did we get some bad advice?

Not So Sweet Sugar

Another big issue with all the studies and recommendations was that Ancel Keys was not looking into the consumption of sugar as a possible cause of heart disease like [John Yudkin](#) was. Yudkin wrote a book in 1972 called [Pure, White and Deadly](#) that showed the incredibly toxic effect of sugar on our bodies including its ability to cause heart disease.

His work was pushed to the side and his protests of Keys "hypothesis" fell on deaf ears. Fortunately the work of Yudkin has been rediscovered and [Robert Lustig](#), professor at the University of California rediscovered his work and gave a talk in 2009 called '***Sugar: The Bitter Truth***' that shed some light on the toxin that is sugar.

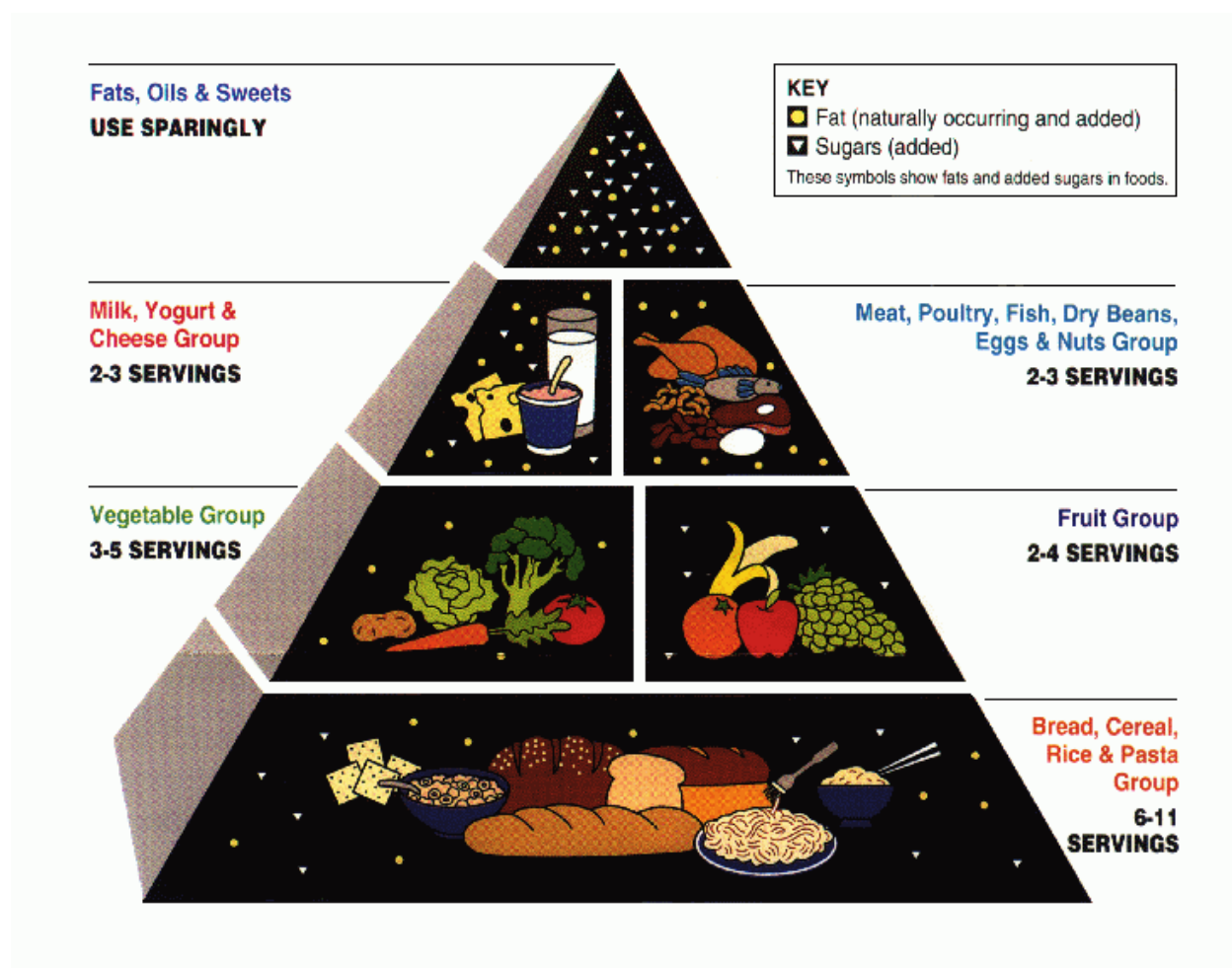
At some point try and watch this video over at YouTube because if you know anyone in the last few years getting off the sugar bandwagon or have seen about the anti-sugar movement you can be pretty sure it came from this talk.

Spreading The Low-Fat, High-Carb Message

The message from Ancel Keys was to:

- Eat less saturated fat and cholesterol
- Eat more complex carbs from vegetables, fruits and grains

This message was picked up by the United States Department of Agriculture that was more than happy to help share a diet that was low in fat and higher in carbs as they were in the grain business. You probably had noticed in food guide pyramids the entire base was centered around grains.



Interestingly there was some very shady politics that went behind the creation of this pyramid involving the USDA and why it is completely grain based. If you want an amazing insight to all that I highly recommend '[Death By Food Pyramid](#)' by the brilliant [Denise Minger](#).

The suggestions about reducing refined carbohydrates and sugars were great but replacing them with refined grains in the forms of breads and pasta was counter productive. Since everyone was cutting back on fat carbohydrate consumption raised at least [25% since the 1970's](#).

We covered the dangers of wheat and it is important to remember that pulverized, ground and processed flour from grains still acts like a sugar in the body causing a rapid release of insulin and blood sugar spikes. **And our diets now contained more refined carbohydrates than any other point in human history.**

This is why when you look at the [Glycemic index](#), the measurement of how a food affects your blood sugar and insulin you can see how whole wheat bread is a 71, while honey is a 61 and a snickers bar is a 51. Even straight table sugar is around a [60](#).

The Explosion Of 'Low Fat' Foods

Manufacturers capitalizing on the low fat 'instructions' released a ton of fat free products that continue to appear on shelves today

The problem is the removal of fats had to be replaced by something to still give the foods a texture, baking and browning characteristics and mouth feel. Carbs in the form of corn, refined flours, rice and potato starch were substituted in to replace saturated fats.

Along with that an explosion in the use of **high fructose corn syrup** also dominated these products and then found their way into soft drinks. However the same issue existed in that the high sugar content of these products cause blood sugar spikes leading to fat storage, [insulin resistance, type 2 diabetes and heart disease](#).

Eating a diet primarily of carbs whether its sugars, breads or grains and very little fat keep these insulin levels constantly high and at the same time continue to make us hungry.

So you can take a bag of sugar, slap a "100% fat free" label on it, so while technically true is also very misleading as it can lead to fat storage and disease.

The Danger Of Vegetable Oils

Since we were no longer able to use animals fats such as butter to cook and bake with what would replace them? Enter in vegetable oils in the form of margarine from canola, soybean, sunflower and corn oil and even straight bottles of them in liquid form.

Our dependence on these oils lead us to consume more trans fats which is where hydrogen atoms are injected into a vegetable oil to make them more solid at room temperature. They are also known as [partially hydrogenated fats](#). They allow for better texture and baking characteristics in food and most importantly to manufacturers; longer shelf life and less wastage.

If you have eaten a packaged and processed food you can be pretty sure you have consumed some trans fat. Now you are looking at a substance that can raise your bad cholesterol, lower your good cholesterol and ironically [increase your risk of heart disease](#).

What Do The Studies Say About Saturated Fat?

So here it is; the [real studies](#) are showing that there is **NO** link between saturated fat and heart disease. This is from the [American Journal Of Clinical Nutrition](#) that collected data from 21 unique studies and that included over 350,000 people. 11,000 of these people developed cardiovascular disease, were tracked over 14 years and it was concluded that there was **NO relationship between the intake of saturated fat and the incidence of heart disease or stroke.**

[Long term studies](#) show no association between saturated fat intake and blood cholesterol levels. 58,000 Japanese men [were studied](#) for an average of 14 years and there was no association between saturated fat intake and heart disease. And it goes on from there..

Unprocessed saturated fat is not the enemy, sugar is, trans fat are, refined carbohydrates are, things that we've had to manufacture are! Heart disease is a result of inflammation and oxidative stress and these things are to blame. At the moment the main sources of saturated fat in the average diet are pizza and cheese and the [Harvard School Of Public Health](#) also recognizes the need to end the low fat myth as long as we focus on the right types of fat.

This had already been observed by Weston A Price when he looked at primitive societies that were eating large amounts of saturated fat and were not obese nor showing signs of heart disease. It's when they introduced in modern foods and sugars that they began to see the occurrence of diabetes and heart disease.

The Benefits Of Healthy Fats

Not only are saturated fats not the evil they have been proclaimed to be but they are fats that are essential for us, and are the [essential fatty acids](#). Our bodies cannot make them so they must come from our diet. They help in:

- creating hormones and regulate thyroid and adrenal activity
- they help improve our good cholesterol,
- they are required for proper brain function
- help keep us full
- regulate blood pressure
- prevent blood clots that lead to heart attacks
- have anti inflammatory properties

We need fat. We are made of fat. It makes up our brains and they are crucial for us to function optimally. A lack of healthy fat can lead to:

- mood swings
- memory loss
- dementia

- vision problems
- poor skin and hair

Worth noting is how there are essential amino acids and essential fatty acids that our body require but there is not an essential carbohydrate or essential grain. Our body can use glucose for energy but has the ability to convert amino acids and fatty acids into that energy through [gluconeogenesis](#).

So now when people call me a “fat head” I take it as a compliment as I feel they are actually remarking on my great brain composition...

What's The Best Sources Of These Healthy Fats?

Your best choices if you eat beef is going to be grass fed and finished beef. This beef has a higher omega-3 content as well as high amounts of [CLA](#) which is a compound that can help burn body fat, enhance muscle growth and has potential cancer combating properties.

Interestingly there are two sources of CLA: grass fed beef and [breast milk](#).

Other healthy fat choices:

- nuts and seeds especially almonds and walnuts
- nut butters
- flax seeds
- avocados
- olive oil
- oily fish: salmon, mackerel, trout, sardines
- coconut oil

Wrapping It Up

Hopefully you can see the benefits of adding fat to your diet. Just make sure it is the right fat.

- Eliminate vegetable oils, processed foods and cheap meats and look for grass fed proteins and things like coconut oil which are better to cook with.
- Be careful of olive oil for cooking as it does make a good substitution but has a low smoke point and can degrade at high heats.
- coconut oil contains great healthy fats and is also the best cooking choice as it can handle high heat
- Use olive oil to make your own salad dressings by mixing with some balsamic or red wine vinegar.

- Reduce the amount of grains you eat and substitute in those healthy fats like avocados and nuts. They will provide you with tremendous health benefits as well as make you feel fuller, longer. They will always be superior choices to any low calorie "fat free" snack and the avoidance of sugar and it's horrific side effects.

The low fat-high carb dogma has existed for so long that it has taken place as common knowledge in society today but when you dig deeper and look at the real information you can see how the old way of thinking has led us astray.

Continue to do your own research and as usual when it comes to food and your street cred; Keep it real..

Chapter 10: Protein

Quick question: Why do you need protein?

Typical answer is it helps to [build and repair muscle](#).

That's part of it but protein confuses quite a lot of people including:

- How much do I need?
- What are the best sources?
- Can I consume too much?
- Should I be using Whey protein?
- Why was the ending of How I Met Your Mother so terrible?

O.k, there's not a lot I can do about that last one but I'll help give you a better understanding about protein and how you need it and also how much you should look to consume.

What Is Protein?

There still seems to be a lot of confusion out there about what protein actually is and how it helps us.

Protein is considered a [macronutrient](#) along with fats, carbohydrates and technically water.

Macronutrients are essentially nutrients that provide calories or energy. And we need these nutrients for growth, metabolism and other body functions. We call them 'macro' in that they are large and we need them in large quantities.

What Makes Up Protein?

We're going to get a bit technical but that will help give you a better understanding of the whole protein issue.

Proteins are [polymer](#) chains which basically means "many parts" and these parts are called Amino Acids that are linked together by peptide bonds.

Think of proteins like a pearl necklace and each pearl being an amino acid.

There are 21 amino acids, 9 which are essential in that we must get them from our diet because our bodies do not make them. They include:

- phenylalanine
- valine
- threonine
- tryptophan
- methionine
- leucine
- isoleucine
- lysine
- histidine

The non essential amino acids mean they are naturally occurring in that the human body can synthesize them for itself and does not need them provided by the diet. They include:

- alanine
- asparagine
- aspartic acid
- cysteine
- glutamic acid
- glutamine
- glycine
- proline
- serine
- tyrosine

Break It Down Now

When we eat, our stomachs contain hydrochloric acid which break down larger proteins into smaller peptides. This is crucial because these individual amino acids need to be in their singular version to be digested and utilized.

The proteins need to be in their individual amino acid form by the time they reach the small intestine. This is where real digestion takes place. When we refer to the "Gut" we are referring to the small intestine.

If peptides of 3 or 4 amino acids still remain together it is in the small intestine that they will finally be broken down into the individual amino acids.

The individual amino acids are then truly absorbed by the gastrointestinal tract for the various functions required by them for the entire body.

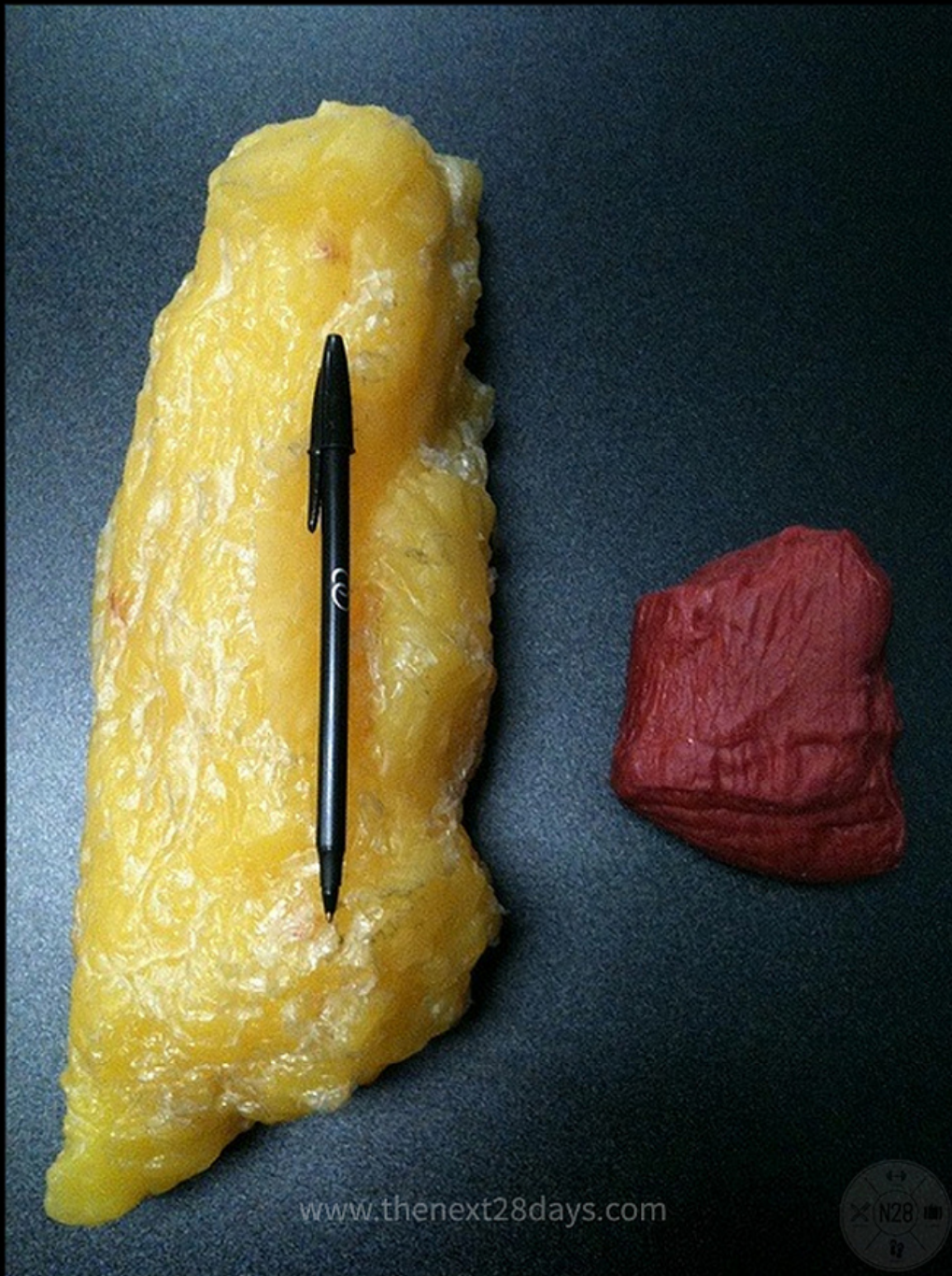
So Why Do We Need Protein?

Alright what are some of these functions that amino acids and protein are involved with?

Let's take a look:

- 1. Growth (especially in children, teens and pregnant women)**
- 2. Tissue Repair**
- 3. Immune Function**
- 4. Making essential hormones and enzymes**
- 5. Energy when carbohydrate is not available through [gluconeogenesis](#)**
- 6. Helps keep us fuller, longer**
- 7. Preserving lean muscle mass**

5lbs of Fat vs. 5lbs of Muscle



As you can see these are some very key areas. Besides water proteins are the most abundant kind of molecules in the body.

Protein is found everywhere in the body, like actually everywhere.. it's in every cell in the body and is the major structural component of all cells in the body.

Along with the obvious, muscle, proteins are found in body organs, skin and hair. Protein is needed to form blood cells and when they are broken down into amino acids they are used as precursors to:

- nucleic acid
- co-enzymes
- hormones
- immune response
- cellular repair
- and other molecules essential for life

See protein isn't just for having sweet pecs and big guns..

Where Is Protein Found?

Once again there are a few categories here. Complete and non-complete.

Complete proteins have all of those 9 essential amino acids that we require and we generally find this in:

- meat
- fish
- poultry
- milk
- eggs
- some vegetarian sources like:
- chickpeas
- black beans
- pumpkin seeds
- cashews
- cauliflower
- quinoa
- pistachios
- turnip greens
- black eyed peas
- soy

It becomes a little tougher for vegetarians to find these complete proteins outside of this list. You can combine incomplete protein types of foods together but you don't know for certain if you are getting the full range of amino acids.

How Much Protein Do We Need?

I'm glad you asked!

And as usual the answer to this question is it varies. It depends on how active you are, your amount of lean muscle, if you're male or female etc but i'll try to narrow it down.

If you are Sedentary, in that you do very little activity and sit at a desk all day the rule of thumb is around **0.8 grams of protein/Kg of body weight or 0.36 grams/per pound of body weight**

If you are active there has always been the understanding that you need higher protein intake. There has been an idea of **1-2 grams per pound of body weight** for a long time and it's not a bad framework however there has been research that concluded the **optimal amount of protein for athletes is 1.8 grams of protein/kg of body weight or 0.8 grams/pound of body weight**.

Other Factors

Protein requirements will go up depending on things like age as [the elderly](#) are in need of higher protein as their muscle mass declines with age. They should look for **1.0-1.3 grams/kg of body weight or 0.5-0.6 grams/lb of body weight**

Injured People are going to require some more protein to heal wounds and rebuilding lost or damaged tissue at around the rate of **1.5 grams/kg of body weight or close to 0.7 grams/lb of body weight**

Protein Burns Calories

Protein has what they call a "thermogenic effect" in that just the act of eating and digesting it burns calories. Your body turns into an assembly plant more or less when protein arrives as it takes a lot of systems to digest it and all of those require energy.

You've heard of the meat sweats i'm sure.. and that is showing you a thermogenic response . Usually around 10% of the energy in the food you eat is used to digest and process that food but for protein it is **upwards of 30%**

So if you ate a piece of meat that was around 200 calories worth of protein about 40-70 of them will be used for digesting it.

There is [convincing evidence](#) about the ability of consuming protein to increase this calorie burning effect along with keeping you feeling full compared to diets low in protein.

Whey Protein

You have all heard of whey protein even before you really knew what it was, I'll prove it...

*“Little Miss Muffet,
She sat on a tuffet,
Eating her curds and whey:
Along came a spider,
Who sat down beside her,
And frightened Miss Muffet away”*

(fun fact: There is the idea that this nursery rhyme had to do with Mary Queen of Scots and her fear of religious reformer John Knox. But that's for a whole other blog..)

Curds and whey are what come about from cheese production. The whey is the liquid material left over from the making of cheese.

The liquid whey can be dried and then used to make protein powders. Whey contains a large amount of amino acids especially the branch chain amino acids (BCAA) leucine, isoleucine and valine.

This can have positive effects for muscle building especially after intense exercise. [Protein synthesis](#) is higher with whey protein due to the fact it takes less time to digest and can be absorbed by the muscles quicker than whole food.

Whey protein is something you should research more to see if it is right for you but it is definitely NOT a requirement in the pursuits of getting fit and healthy.

Rule Of Thumb (Or Palm)

With all the recommendations with how much protein you should consume you need to incorporate habits that are the easiest and ones you are most likely to stick with.

This is where your palm comes in handy. Aiming for a portion of protein that is the size and width of your palm is a great rule of thumb for getting the amount of protein specific to your body.

Men tend to be bigger than woman with bigger hands and palms and that translates nicely into the protein portion they should get. In turn a female palm size is more reflective of the requirements of her body.

For each meal then you want to shoot for one palm sized portion of protein.

If you are very active in the gym, playing sports or looking to gain more lean muscle you can aim for two palm sized portions with each meal.

This is not an exact science but again it's a simple reference to make your meals less complicated.

Wrapping It Up

As you can see there is more to protein than meets the eye but hopefully you have a bit better understanding of this big subject.

Yes that was a meat joke in the first line...

And what the hell is a tuffet?

FITNESS & EXERCISE

This topic could be a whole book unto itself but I will provide two chapters that break down the importance of exercise as it relates to your health.

CHAPTER 11: Why You Need To Exercise

Committing to exercise is going to go hand in hand with nutrition for all around wellness. You might be focused on an exercise program but sometimes forget why you are even doing it. Let me show you 12 key benefits of exercising.

What Makes Up Your Exercise Routine?

Exercise possibilities are limitless, just getting out there and getting your body moving is extremely important. Here are some of the most common forms of exercise:

- weight lifting
- jogging
- biking
- yoga
- rowing
- crossfit
- tai chi
- tennis
- sprinting
- stair running
- recreational team sports
- boot camps
- cardio classes
- swimming
- cross country skiing

This list can go on and on but here is a breakdown of the main reasons you need exercise.

1. Exercise Promotes Weight Loss

Probably the #1 reason why people exercise so let's look at this first. Exercise increases the capacity of muscle to [burn fat](#) and along with that the formation of lean muscle again enhances metabolism. Muscle is metabolically active even at rest so the **leaner you are the more efficient your body is at burning calories**.

There's a growing interest now in activities that are called **high intensity interval training** or H.I.I.T as they promote a style of workout that allows the body to continue to burn calories after the exercise is completed.

H.I.I.T involves an intense burst of exercise for roughly 30-45 seconds followed by a lower intensity period of around 90 seconds or so. This encourages the body to use sugar as the primary fuel source during the higher intensity and fat during the lower intensity and leads to [greater fat loss despite its shorter time](#) than those engaging in less vigorous exercise of low or moderate intensity.

This type of training puts you into a different type of recovery mode called *excess post-exercise oxygen consumption* ([EPOC](#)). What this means is there is a larger oxygen uptake by the body to replenish the oxygen deficiency you experienced during the high intensity training. Essentially you enter into an afterburn effect as your body continues to burn calories long after this high intensity training.

A basic H.I.I.T workout would be sprints on a stationary bike where you perform an all out sprint at a higher resistance for 30 seconds and then a 90 second recovery time at a much lighter resistance and repeat that anywhere from 3-8 times.

2. Helps Prevent Type 2 Diabetes

I pointed out how this was always called Adult Onset Diabetes, however it is showing up in kids and teens. Type 2 diabetes is non insulin dependent diabetes. Long term intervention of exercise along with a clean diet can lead to great improvement to [prevent or postpone manifest diabetes](#).

3. Helps Build Strong Bones & Prevent Osteoporosis

High impact-weight bearing exercise helps to build bone and also keep them strong. Examples of high impact are running, hiking, stair climbing, sports etc. High impact exercise might not always be possible but low impact exercise still has benefits for strengthening and building bone.

That would include things like using elliptical machines, biking, low impact cardio classes. Exercise helps to increase the mineral content of bone. It also helps prevent the [age-related decline in axial skeletal mass](#).

4. Helps Protect You From Getting Heart Disease

Exercise makes the heart stronger so that it pumps more blood with fewer beats. It also helps in lowering blood pressure by increasing the diameter of the arteries that wrap the heart (aka the coronary arteries) and makes them more elastic.

Exercise will decrease the platelets in the blood which are like tiny discs and this will reduce the risk of clot formation. There have been four decades worth of studies that have made it clear there is a [link between physical activity and cardiovascular health](#).

5. Improves Cognitive Function

Research from the University Of Minnesota found that young adults who run or participate in aerobic activities preserved their thinking and memory skills for middle age.

While other studies from Finland showed that middle aged people who are physically active protect themselves from dementia in older age.

This information published in [Psychology Today](#) clearly shows how there are cognitive and mental health benefits by undertaking exercise at these various life stages. Ideally people will continue a life of physical activity to help the transition become smoother into each stage of life.

You can follow and try out the tests they used to measure cognitive function called the [Stroop Test](#) which makes you identify the color a word is written in without saying the actual word. Harder than it sounds!

6. Exercise Helps Improve Mood

Most people are aware that exercise stimulates the release of [endorphins](#). These endorphins [interact with the receptors in your brain](#) that reduce your perception of pain.

These endorphins have a similar effect on the body as morphine and the endorphins act as [analgesics](#) which help in diminishing the perception of pain and can lead to euphoric feelings. Many call this a 'runners high'. The problem with pain medicines is they can lead to addiction and dependency while physical activity activates the receptors by the bodies own natural pain killer and mood enhancer.

7. Improves Sleep

We covered the importance of sleep already but just need to point out how exercise does a few things when it comes to sleep. First off it helps strengthen you [circadian rhythms](#) which helps us roughly follow a 24 hour cycle based on light and darkness in our environment.

A strong circadian rhythm helps promote daytime alertness and helps bring on sleepiness at night. A poll done by the [National Sleep Foundation](#) found that people who exercise regularly were reported sleeping well on most nights compared to those who were not active.

Quality of sleep is also improved by exercise, not just the quantity. Studies are showing that daytime physical activity may stimulate longer periods of [slow-wave sleep](#), which is the deepest and most restorative portion of our sleep.

8. Reduces LDL Cholesterol

We've touched on saturated fat and cholesterol again is a massive topic. Most people are aware there is 'good' cholesterol in the form of high density lipoprotein (HDL) and 'bad' cholesterol known as low density lipoprotein (LDL).

It is not as simple as all that as there are a few forms of LDL. There are actually some good LDL that come in the form of large fluffy type molecules and then small dense LDL particles. Those small dense particles are the ones that cause the damage.

In regards to exercise it helps reduce those small, dense LDL by [up to 17%](#) observed over a 12 week endurance exercise program. Studies also suggest that exercise can increase the transport of cholesterol from the rest of the body to the liver, where it will eventually be expelled by the body.

9. Exercise Lowers Blood Pressure

Those with extremely high blood pressure obviously have to be cautious regarding strenuous exercise and definitely should consult with a physician first.

For the majority of people exercise is a drug-free approach to lowering blood pressure. This is related to the heart disease issue in that exercise makes the heart stronger and able to pump more blood with less effort. Becoming more active can lower your systolic blood pressure (the top number in a blood pressure reading) by an [average of 4-9 mm of mercury](#).

The Mayo Clinic points out how that's as good as some blood pressure medications. And exercise doesn't cost you a thing, if you don't include my massive headband collection..

10. Can Help Prevent Colds

This is not always associated with exercise but exercise is seen to boost the immune system and researchers from the University Of Carolina found that people who exercise regularly are [23% less likely](#) to get colds than those who didn't.

Along with that the exercisers that got colds had symptoms that were less severe and disappeared more quickly than those who did not exercise.

The potential of reduced sick days and lost labor is enough for many business to now encourage exercise and provide employees with either fitness facilities or gym memberships.

11. Reduces The Severity Of Asthma

Exercise-induced asthma is a real inconvenience and enough to put a lot of people off of exercise. Those of us who don't experience asthma don't understand the effect it can have. Picture having to breath through a straw and you get a bit of the idea of how tough it can really be.

Exercise will help with fewer and milder attacks and need for less medication. Besides helping control weight and boost your immune system exercise helps to strengthen your breathing muscles.

Experts suggest that exercise can be done only when [asthma is under control](#) and if it's not exercise can be dangerous. Proper warm up and cool down is important while also being mindful of things that can trigger an asthma attack like cold air, smog, pollen etc.

[Swimming](#) has been observed as one of the top activities for those who suffer from asthma along with yoga, biking and walking.

12. Exercise Has Anti Aging Effects

The fittest guy in my gym by far is a 65 year old man who puts 20 year olds to shame. He honestly looks half his age and I'm sure everyone has encountered one of these ageless wonders at some point.

Besides enhancing blood flow to the brain to reduce the risk of stroke, improve reasoning and memory, exercise arouses the brain and [slows down degeneration](#) of the central nervous system.

Exercise also reduces the risk of [chronic lifestyle diseases](#) in the elderly and it is thought that the greatest threat to health is not the aging process itself but inactivity.

How To Get Started

For anyone who has had a long lay-off from exercise or is just physically inactive you always want to double check with your doctor to make sure you ready. It is always key to know where you are at.

Exercise doesn't have to be complicated. For those of you who are well underway in programs, sports or activities you are definitely on the right path and the next step is to always keep your body guessing by changing up the routine, exercises, frequency and intensity. You want to keep providing your body with a new stimulus so that it can adapt and not get complacent.

Starting Slow But Steady

For those who might be new to exercise it's key to start slow but know even gradual changes are going to have tremendous benefits. Aiming for 30 minutes a day, each day is going to get you on the path to experiencing all these benefits listed above.

It might be a brisk 30 minute walk, a bike ride, a hike or even just playing tennis. You just want to engage in something that gets your heart rate up and can even make you break a sweat. If you're starting out listen to your body. Don't over do it and a key tip is to leave your body wanting more, not beaten down and exhausted.

The sooner you get underway in the pursuit of an active lifestyle the sooner you can start to reap all the rewards.

CHAPTER 12: How To Choose The Right Gym

So we have looked at the reasons why you need to exercise but it can be overwhelming wondering where to start. Usually first on the list is joining a gym but with so many options out there what's the best fit for you? I'll break down the different options when it comes to your fitness and what you can expect out of each of them whether it is a big box chain type gym or a home gym set-up.

Getting Started

I've been a personal trainer for a good 12+ years, I have worked in everything from giant corporate type gyms to small privately run little clubs. I've been fortunate to work in gyms in Canada, England, Australia and the U.S so I've seen all the options and the pros and cons that come with each.

What Are Your Goals?

This is the first thing you want to look at it, do you want general fitness? Weight loss? Muscle building? Athletic training?

Some facilities and organizations will cater to either one of these or a combination of all of them.

The first thing you need out of whichever option you pick is convenience. If the gym or club is a 40 minutes drive away will you really feel like making that trek after work each day or in the morning? The average person uses gyms that are a 7 minute drive away from them and with a lot of competition and options let's look at the different choices you can find yourself encountering.

1. Big Box Chain Gyms

This can take up a lot of information as there are quite a lot of options and variety depending on the country you live in. These clubs are usually massive but filled with the latest equipment, the membership rates can be relatively cheap and they will offer a wide variety of classes and activities like yoga. Depending on the club you can have access to hundreds of thousands of dollars of equipment for around \$1-2 a day. Here are some examples of some of the top chain gyms:

- [24 hour Fitness](#) - over 400 locations with most open around the clock. Memberships start at \$30 a month and they offer funky type workout classes

- [Equinox](#)- A smaller boutique type chain gym with locations in the U.S, Canada and the U.K. Memberships are more expensive starting at \$130 a month. Trainers have some of the highest standards and run top level cardio classes
- [YMCA](#)- somewhat overlooked but still a top choice for fitness and a valuable part of communities the Y is in more than 120 countries. Some can have outdated equipment but memberships are not expensive. Fun Fact: Basketball was invented in 1891 in a YMCA by Canadian [James Naismith](#) (I'm Canadian so always feel the need to share that..)
- [L.A Fitness](#)- with clubs in the U.S, Canada and England L.a Fitness makes use of large, warehouse style facilities but has state of the art equipment. Memberships start around \$30 and personal training is inexpensive too
- [Planet Fitness](#)- with a whopping 780 locations and super cheap memberships starting at \$10 a month planet fitness is a basic gym set up that stresses their "judgement free zone" to cater to the average person just wanting to get in shape.
- [GoodLife Fitness](#)- The dominant club in Canada that is on more street corners than Tim Hortons (if you're not Canadian please bare with me but that joke kills up here) Goodlife offers a wide range of cardio and fitness classes, female only gyms and as a member the ability to work out at any club in the country.
- [Fitness First](#)- The largest health and fitness club in the world in over 16 countries with a 160 clubs in the U.K alone. They have some flexible membership options allowing you to use your club at off peak times, full time or access to any club at any time.
- **Globo Gym**- run by fitness guru White Goodman the club offers great parking and the club motto: **"we're better than you, and we know it"**

Pros and Cons of big name gyms:

PROS:

- inexpensive memberships
- latest equipment
- cheaper personal training rates
- wide variety of cardio/fitness classes

CONS:

- lack of attention/feeling of just being a number
- overcrowded especially at peak times
- can tend to not have the highest quality trainers or trainers just getting started in the industry

- can have inflexible memberships
- Having to deal with meat heads..

2. Personal Training Studios

A personal training studio is a smaller type gym that is meant to be used to workout with a trainer each time you go. The studios generally only have enough room for a few people at a time who are all working with trainers. You book times for your workout and it doesn't function as a normal drop in style of gym.

Some studios will offer various classes, group training or yoga depending on the size of them but the point with a personal training studio is **for more focused and individualized attention**.

They can be sometimes harder to find as they can be smaller and out of the way but just searching online for studios in your area should reveal a bunch of them. They depend on a lot of word of mouth marketing and will offer great incentives for members who refer friends or family.

MEMBERSHIP RATES - can vary widely depending on how often you train each week. Most studios will offer packages per month that end up being cheaper per session the more you buy. In my city sessions can be as low as \$30/hr up to \$100. The bigger the city you live in the higher personal training rates tend to be.

PROS:

- individualized attention
- no over crowding
- focused attention to your goals
- sense of community

CONS:

- more expensive
- can only be used for scheduled training session
- distance issue if not near by

3. Crossfit

[Crossfit](#) is the biggest thing in fitness since the invention of the dumbbell..

If you are not familiar with it crossfit is a strength and conditioning program that combines elements of aerobic exercise, gymnastic or body weight exercises and olympic lifting. It is group training centered around the workout of the day (**WOD**) and involves hour long sessions that generally include a warm up,

skill development segment, the actual "work out of the day" and then a period of individual or group stretching.

Crossfit or "**boxes**" are everywhere with over 9000 affiliated gyms to it. Keep in mind these are bare-bones gyms usually in old warehouses, there is no fancy cardio equipment, step classes or cucumber infused water. It is a blood, sweat and tears kind of place but one that provides an intense workout.

MEMBERSHIP RATES- again it varies as classes are scheduled so monthly memberships will give you full access or there can be a pay per session option. The crossfit clubs near me charge around \$120 a month with single class sessions running \$20. They will begin with some assessment sessions called "on ramps" that will introduce you into everything and movements before you move into the workouts.

PROS:

- intense training environment
- real sense of community
- focus on fitness and results

CONS:

- more expensive than a normal gym
- more athletic focused
- not ideal for people new to fitness
- having to always hear people talk about crossfit, kind of a reverse fight club thing...

4. Home Gyms

You might like the idea of never leaving the house to fight the traffic and wait in lines for the equipment, or you just might like the idea of being able to workout in a onesie if you so desire...

A home gym can be very inexpensive as things like dumbbells and exercise balls won't even cost you \$100

Exercise DVD's can also give you great instructional workouts for \$20-\$30

Basic cardio equipment from places like Walmart can run around \$400-\$2000 for treadmills.

\$100-\$1000 for an exercise bike and \$150-\$1100 for an elliptical machine.

Box store multi use strength training machines can run anywhere from \$200-\$1000. These give you a variety of exercises you can do on a machine that is designed to be compact and take up very little space.

[Bowflex](#) If you have been up late at night watching a Duck Dynasty marathon at some point i'm sure you've seen commercials for Bowflex. Bowflex is a space saving machine that uses resistance bands to use for strength training. They have a variety of machines that can be easily kept in a small room and run anywhere from \$1500-\$3000.

Walmart offers a basic Bowflex version for around \$500. They might seem gimmicky to you but they are extremely [high rated](#) in customer reviews and satisfaction.

- **Second hand equipment can be a real cost saver. Looking on craigslist or Kijiji you can find some real steals.**

As with anything you get what you pay for and you can find some inexpensive home gym equipment but might not last in the long run with heavy use. However it is very easy to get a basic set up in your house without breaking the bank.

PROS:

- convenient
- no monthly membership costs
- control over desired equipment
- 24 hour access

CONS:

- distractions around the house
- no guidance or instruction
- possible unmotivating atmosphere

Pumping It Up & Wrapping It Up

Many options are at your disposal for getting fit. The most important thing is to ask yourself what you really need and what you are willing to stick with. Do you need motivation and a kick in the butt? A gym with fitness classes might be the way to go.

Do you have the discipline to commit to workouts on your own? You may benefit from your own set up at home.

Have you been working out for awhile and feel you've become stale with things? You might want to make the jump to crossfit.

In either case recognizing the need to add exercise to your life is an important step and the **sooner you get underway with it the sooner you can reap all the rewards.**

Now if you'll excuse me it's time for my workout as pictured below:



Taking Back Your Health: Conclusion

Whew! You made it through, great job!

There is a lot of great information here that you can start applying right away. What also makes this book valuable is you can refer back to the specific chapters and topics anytime when you feel you need a quick refresh.

The rest now is up to you.

Will you begin to apply what you have learned into your daily life? Knowledge is nothing without action and we all have the ability and opportunity through knowledge to make any change that we want in our lives.

Here's my best tip: Start slowly. Don't take on a million things at once but slowly add in new habits until they become part of your lifestyle. Taking on too much at once will only set yourself up for failure while going slowly but steady is the way to make long lasting changes.

Thank you for spending this time with me and make sure to check back to me at www.regainedwelless.com so you can be kept up to date with everything I'm doing with blogs, guides and my podcast.

It honestly is my privilege to be able to provide people with something of value.

Unlike Kim Kardashian....

Goodnight everybody! *mic drop*

ABOUT ME:



I like long walks on the beach, candle light dinners..

Nevermind, here's the real deal: I'm from London, Ontario, Canada (the town Justin Bieber was born in, same hospital actually but don't hold that against me)

I've played sports my whole life and developed a passion for fitness and nutrition. I studied kinesiology in University and have multiple personal training certifications as well as being a certified nutrition and wellness specialist.

I have travelled all over the world and have worked in gyms in Canada, America, England and Australia. I've seen so many cultures and societies and have observed first hand the problems that occur when a modern diet is undertaken. I started regainedwellness.com as a way to share as much information as possible to educate people on the dangers of unhealthy eating.

So please check me out there as well as my [podcast on iTunes](#)

You can follow me on twitter: [@RegainWellness](#)

And of course on Zuckerbok: facebook.com/ReginedWellness