

Eat To Win

Force=Mass x Acceleration, $F=M \cdot A$, or it can also be written as $A=F \div M$. A fundamental formula we all learned in high school. It is also a fundamental formula in reducing lap times with your race car. The acceleration factor in the formula applies to the acceleration in the lateral axis (side to side, or what is felt when you go through a turn, it is the g-force) and the longitudinal axis (forward and backward). When we add mass to our car be it through heavier components or a **heavier driver**, our lap times will get slower. Pure truth, plain and simple, no arguments.

A calorie is a calorie. Cut calorie intake or increase calorie expenditure, and you will lose weight. If you eat it, you better burn it, or you will store it. That is one of the biggest fundamental lies ever told to you.

Losing weight off your body and your race car will go fast and handle better. And it will save you money. Not only that, you will be happier, have more energy, and be more prosperous. And even if you don't have the pounds to shed, you may still be a health risk.

In 2001 there were 6 million kids in America that were seriously overweight, today that number has surpassed 20 million. In 1992 there were 500,000 new cases of diabetes, in 2010 there were almost 2,000,000 new cases. In 1980 15% of Americans were obese, today we have more than doubled that to 36%. We are getting sicker, lazy, tired, less happy, and a 12 oz. soda is not enough anymore.

I am going to try explain why America is the most obese nation in the world and why it is so hard for you to lose weight and keep it off.

Scientist have proven that your fat storage system is driven by the hormones leptin and insulin. **Leptin** is the protein hormone made and released by fat cells. It signals the hypothalamus (a part of the brain) that you have enough energy stored as fat and you are full and have had enough to eat. When the brain doesn't see leptin, it interprets starvation sending a signal to the pancreas to make more insulin, and for you to eat more. This is a Darwinian advantage and has led to the survival of our species.

Insulin is a peptide hormone produced in the pancreas and signals fat cells to store energy as fat. More insulin release results in more calories stored as fat.

Normally the fat cells will make Leptin which will feedback to the pancreas to not make as much Insulin. During times of high insulin states (from eating a lot of sugar, or simple carbs being converted to sugar), the extra insulin blocks the receptors in the brain from seeing the Leptin, so it never knows it has enough fat storage or that you have had enough to eat. The constant high state of insulin will eventually cause **Leptin resistance**, a condition where your brain can no longer know when you have eaten enough and when you have enough fat storage. It thinks you are always hungry, and when you eat, it will store fat regardless of how much fat you already have.

On top of all this, the lack of leptin observed by your brain drives you into sloth and gluttony to try to conserve energy for survival because your brain thinks you do not have enough energy storage. It makes us tired and lazy...sound familiar? It is not that being lazy leads us to weight gain, it is the leptin resistance that makes us lazy. Yes, you are a victim of what you eat.

Our bodies have a natural reward center that is fed by dopamine. When we eat something good, we get to feel good because our brain receives dopamine. When we get full, leptin tells the brain not to release any more dopamine so the reward is taken away and we don't want to eat anymore. However when the leptin signal is blocked by the insulin, you keep getting the reward and you keep eating.

The normal American releases double the amount of insulin today than he did 30 years ago, leading to an annual obesity cost of \$147 billion. Where did the excess insulin come from?

Sugar, specifically **fructose** is bad guy in this story. Back in the 90's when the government endorsed the low fat diet (because they thought fat was the bad guy), Food Inc. replaced the fat with sugar to make it taste good. And the government subsidizes the corn industry so much that corn syrup is almost free. And it is now in almost everything you eat. And do not be fooled, even sucrose, which is regular table sugar, is 50% fructose. It is not that corn syrup is worse for you than other sugar it is just that it is so cheap that makes it a problem.

Evolutionarily, sweetness was the signal to our ancestors that something was safe to eat, no sweet foods are poisonous to eat. We are wired to want to eat sweet things. Just like other evolutionary hangovers like ego and selfishness, we need to rise above and overcome these desires.

Americans currently consume sugar at a rate of 6.5 ounces a day, or a 130 pounds a year. Our current fructose intake has increased 5x compared to 100 years ago. The cheaper sugar became, the more of it and everything else we ate.

The only way out of this situation is to eat less sugar, fructose specifically. I will highlight the reasons why fructose is worse than other sugars at the end of this article, I need to keep you attention.

A few pointers along this path:

- Fruit juice is just sugar, it has as much sugar as soda, if not more. When a fruit or vegetable is juiced, all the natural fiber is gone. In nature, fruit has soluble and insoluble fiber, it is these two fibers together that help slow down the absorption of sugar into the bloodstream reducing the insulin spike. When fruits are processed, they either remove all the fiber, or they process the insoluble fiber into soluble fiber which drastically reduces the beneficial effect of the two when combined. So eat fruits and vegetables as found in nature, not processed. Don't be fooled when you read a label that says "sweetened naturally with fruit juice" it makes no difference.
- Alcohol is no different than sugar, its chemical makeup is almost exactly the same and your body metabolizes it the same way as fructose. That is why we see so many kids/teenagers now with beer bellies. Drink beer and suffer the same fate.
- Yogurt is loaded with sugar, they add so much to make it taste good, stay away unless it is plain yogurt, yes you will see sugar on the nutritional label, but it is only the sugar that is in Milk which is lactose, there is no fructose.
- Any kind of soda is loaded with sugar, the rated 12 oz. serving on the label has 24 grams of sugar, which no one gets 12 oz. anymore, the size of sodas has gotten out of hand, and most vending machines now have 24 oz. bottles so you have to double that to 48 grams of sugar, insane.

- You should try to keep your **added** sugar intake to 12 grams per day. Sugar in whole fruits and vegetables is ok, thanks to the fiber, read on.
- Shy away from diet sodas or artificial sweetener. While these guys do not have any calories, they do reward you for snagging something sweet, and your palate becomes accustomed to eating sweet things.
- White potatoes and white rice and white flour are simple carbohydrates and are almost as bad as sugar as your body metabolizes them very quickly into sugar. As a matter of fact, they are higher than sucrose on the glycemic index scale, a scale that measures how quickly a food will make your blood sugar rise. Your body performs best when your blood sugar is kept constant. If your blood sugar drops too low, you become tired and hungry. And if it goes too high, you secrete more insulin. Insulin brings your blood sugar back down by converting the excess sugar to stored fat. The greater the rate of increase of blood sugar, the quicker you will release excess insulin, and drive your blood sugar back down too low. When you eat foods that cause a large and rapid glycemic response, you may feel an initial elevation in energy and mood as your blood sugar rises, but this is followed by a cycle of increased fat storage, lethargy, and more hunger.
- Without eating all the sugar you will need to replace those calories with something. I found nuts to be a great replacement, almonds, sunflower seeds and walnuts especially as they have very beneficial fats, but peanuts are great as well. Macadamias, pecans, pumpkin seeds are also good.
- Exercise has many great benefits, many of which reverse the effects of fructose.
- 40% of normal weight people are insulin resistant or have metabolic syndrome and fatty livers. It is better to be fat and in shape than to be skinny and sick. Cut the sugar and exercise even if you are skinny.
- Not only is corn killing us directly through corn syrup, it is changing the makeup of the meat we eat. Since corn is so cheap (thanks Uncle Sam) that is what farmers feed to their livestock. Corn changes the fat makeup of the animal to be of the omega 6 variety and not the beneficial omega 3. Omega 6 fats combined with the toxins of sugar create the perfect storm for plaque buildup in our arteries and cause heart failure.
- Be leery of labels. Made with whole grains, just means there are whole grains in it. Make sure it says 100% whole wheat or 100% whole grain.
- “low fat” is usually a sign of high sugar.
- It is hard to know what kind of sugar a product contains. Fruit juice is always bad, HFCS, high fructose maltose, high maltose corn syrup, etc. Just avoid added sugar is the easy way to live right. Avoid processed foods.
- Eat real food. The less food is processed, the better it is for you. If it is in a bag or a box, it is processed.
- Children who eat fast food twice a week are 60% more likely to be obese.
- Please know that it is way more complex than I am describing here. If you want to know more on this subject, Read Dr. Lustig’s book called **Fat Chance**, it is an amazing book

that will change your life. Or you can watch his YouTube video called **Sugar: the Bitter Truth**.

Why is Fructose so bad?

- Other sugars are largely metabolized by all organs, the liver is the primary site for fructose metabolism.
- Fructose means the liver needs 3x the energy to metabolize it, depleting the liver of ATP the vital chemical that conveys energy within cells. ATP depletion leads to an excess of the waste product uric acid which causes gout and increased blood pressure.
- Fructose does not metabolize to glucose, it goes straight to the cells mitochondria forming excess acetyl-CoA, and this leaves the cell and gets metabolized directly to fat. This is the bad type of visceral fat which causes heart disease.
- Fructose activates a liver enzyme, which is the bridge to liver inflammation. This is the key to liver insulin resistance.
- The lack of insulin effect in the liver means that there is no method to keep the glucose down, blood glucose rises, leading to diabetes.
- Liver insulin resistance leads to the pancreas making more insulin which leads to obesity.
- High insulin can also drive the growth of many cancers.
- The high insulin blocks leptin signaling in the hypothalamus signaling false starvation.
- Fructose triggers the reward pathway that you want more and more of it, similar to the effect of alcohol.
- There are many other bad effects of fructose beyond the scope of this article.

Maintaining your race car is very important, but maintaining your body is even more important. It will lead to a happy, productive, energetic life.