



Does Alcohol Prevent Weight Loss?

Did you know that alcohol consumption can decrease testosterone in men by 23%? What about how alcohol directly affects your ability to lose fat?

Alcohol is deeply entrenched in our culture as a way to have fun, let loose, and be social. Companies that market alcohol from vodka, to whiskey, to beer know the right buttons to push. Our brains are seemingly wired to desire a cold refreshing alcoholic beverage after a tough day at work.

But, the truth is that alcohol, when not consumed in moderation (1-2 drinks a few times per week) has very negative effects on weight loss. This article will delve into the physiology of how alcohol affects your ability to successfully lose weight and keep it off for good.

What is a "Drink" of Alcohol?

Research considers an alcoholic drink to be about 15 grams of ethanol alcohol. Fifteen grams of alcohol is found in 5 ounces of wine, 1 1/2 ounces of an 80 proof/40% drink such as vodka or whiskey, and 12 ounces of beer. Because these are general guidelines, clearly some drinks may be stronger than others. For example, light beer is slightly weaker than regular beer. Most restaurants and bars serve 16 oz beers (making it one and a third drink) while pouring more than 1 1/2 ounces in a mixed drink.

Every gram of alcohol that you drink counts for 7.1 calories. However, because you burn up some of those as your body processes them (thermic effect), the total calorie per gram is closer to 5.7.

Let's say you order a beer at dinner. With 20 grams of alcohol \times 5.7 calories + the total amount of carbs, you end up with a drink that contains 150 calories. The range of caloric intake for beers

ranges from 64-250+. Wine and shots also average about the same amount of calories. Watch out for mixed drinks, because besides the alcoholic calories they inherently have, depending on what's mixed in, you could be drinking an excessive amount of calories in just one drink.

Alcohol & Weight Loss | After Your First Two Drinks

After your first drink, your body starts to get rid of the alcohol quickly using the alcohol dehydrogenase (ADH) pathway. In this pathway, ADH converts the alcohol into acetaldehyde, which gets further broken down to acetate. These by-products (acetaldehyde and acetate) are considered to be highly reactive and can increase oxidation throughout the body, but especially in the liver.

Because your body sees these by-products as dangerous, it wants to use them as fuel. **This means your body will significantly blunt fat-burning close to 75% after just one and a half drinks.** And it will stop using carbs for energy. Therefore, although very little alcohol will be stored as fat (less than 5%), the fat and carbs you are eating have an increased risk of being stored as fat.

Your liver can process these toxins through the increased use of certain vitamins, such as the water soluble vitamins B1, B3, B6, folate and C, while also possibly depleting some of the fat-soluble vitamins, A, E and K1. Over-time these decreases in vitamins can play a secondary role in loss of motivation, energy, and well-being.

After your first couple of drinks, your brain also starts to increase its usage of GABA. GABA is an inhibitory neurotransmitter in the brain and is a large reason why alcohol is known as a "depressant." Over time, the GABA receptors get used to the effects of alcohol, which is a reason why people may need more and more alcohol to feel the effects from alcohol consumption. GABA is also the neurotransmitter, principally responsible for allowing you to stay asleep. Therefore when your brain uses more of it before you go to sleep, you have less while you're actually sleeping, causing a disruption in restful sleep.

Alcohol also affects the higher processing areas of the brain, the cerebral cortex, while leaving the lower areas of the brain somewhat unaffected. This leaves you more emotional than you would normally be. If you've ever experienced "drunk logic" while doing or saying things you would never think to do sober, then you've experienced the inhibitory effects of having your cerebral cortex taken out of the equation.

While your body has started to use the alcohol as energy, your body releases anti-diuretic hormone (ADH) to help your body rid itself of the alcohol. This basically means that your urine volume increases significantly (about 100 ml per 10 grams of alcohol). If you've ever "broken the seal," you know that the more you continue to drink, the more frequently you use the restroom.

Since your kidneys are working over-time, your body releases an increase in certain minerals and electrolytes especially calcium, magnesium, copper, selenium and manganese. All of these play important roles not only in blood volume, but in bone health, blood pressure and the anti-oxidant pathways.

In addition to everything above, a small increase in cortisol typically occurs with moderate

drinking while testosterone levels will drop about 6.8% in men (not so much in women). Aromatase will also increase. Aromatase is an enzyme that helps to convert testosterone to estrogen and is obviously not something that is welcomed by many guys.

Alcohol & Weight Loss | After Six to Eight Plus Drinks

If you're drinking a moderate amount of alcohol, those things listed above are the main effects, at least short-term. If you drink heavily and drink often, another system called the Microsomal Ethanol-Oxidizing System (MEOS) system kicks in at the point when the ADH pathway becomes overwhelmed.

This system is interesting because it causes your body to generally burn off more energy as useless heat and probably saves your life from too high of a blood alcohol level. It is primarily controlled by a special enzyme that plays an important role in utilizing certain medications and the metabolism of fatty acids. This increased rate of medication breakdown can decrease their effectiveness, while the incomplete breakdown of fatty acids can cause an increase in oxidation. This increase in oxidation becomes exacerbated as the body's main anti-oxidant (glutathione) is also impaired, decreasing your ability to fight the oxidation.

As your drinking levels continue to increase, testosterone levels drop from 6.8% with 4 drinks to 23% with 8 drinks. This drop, combined with a slowdown in protein synthesis, can cause havoc when trying to recover from a workout.

In addition to that, fluid loss will generally become more significant, causing dehydration that might affect you for days afterwards. **Finally, with heavy drinking, the breakdown of alcohol can occur for up to 48 hours after your last drink.** This means less glucose is reaching your brain and working muscles, making you both more tired and quicker to fatigue if you do exercise.

If You're Going to Drink Alcohol, Drink in Moderation and Not Too Often

You would think after listing all that happens in your body after consuming alcohol, the no-brainer suggestion would be to not drink. What is missing though are some of the benefits from consuming moderate amounts of alcohol.

Alcohol is shown to increase insulin sensitivity, which basically means that your body needs less insulin to do its job. In addition to that, research has shown that women who drink a moderate amount will have the same or slightly lower BMI, as those who don't drink. The same effect is not seen in men. Those who moderately drink are also at less risk of dying from heart disease and cancer while decreasing one's risk of Alzheimer's and even slightly improving your immune system.

In other words, complete abstinence may not be needed while trying to lose fat as long as it's done in moderation and not very often (think one time per week). If you don't drink, obviously don't start, but if you want to have a couple of drinks on the weekend, there is nothing necessarily wrong with having one or two. In future articles, I will list some of the best and worst drinks to have when going out and 5 strategies you can implement to decrease the deleterious effects of having a night of heavy drinking.

Alcohol & Weight Loss | Wrapping It Up - In any fat loss plan, there are three main components that should be priority: Diet, Exercise, and Sleep. As stated throughout the article, a moderate amount of alcohol can increase total calories, decrease your motivation for exercise, and negatively affect your sleep. Despite this, many people can enjoy a drink or two, without throwing those three components completely out of whack. On the other hand, drinking heavily can significantly derail energy levels, has a larger influence on dehydration, negatively impacts hormonal levels, and can significantly disrupt your sleep. Therefore, limit your overall levels of alcohol and put yourself in the best position to reap some of the benefits of alcohol consumption, while not derailing your overall progress.

How Alcohol Affects Metabolism –

Alcohol contains empty calories and has no nutritional value. Your body can't store alcohol, so it must metabolize it right away. Metabolizing alcohol, however, can have a detrimental effect on other metabolic processes. Here's what you should know about alcohol and your metabolism.

Alcohol and Nutrition - Alcohol contains only empty calories and has no nutritional value. It can often contribute to malnutrition because the high levels of calories in most alcoholic drinks can account for a large percentage of your daily energy requirements. Even one alcoholic drink a day can contribute to malnutrition.

Your body can't store alcohol, so it must metabolize it right away. When you drink alcohol, your body makes metabolizing it a priority over all other metabolic processes. Your body sends alcohol to the liver, which produces the enzymes necessary for the oxidation and metabolism of alcohol.

Not only does alcohol not contain any nutrients of its own, but it can impair your body's ability to absorb nutrients and vitamins from the food you eat. Alcohol irritates your gastrointestinal tract, and can damage your body's ability to absorb nutrients, vitamins and minerals from the food you eat.

Alcohol and Your Liver - Alcohol is toxic to your liver, and if you drink heavily for a long time you can experience cirrhosis of the liver and death. Heavy drinking over the long term can also impair your liver's ability to activate vitamins, which contributes to the malnutrition often suffered by long term alcoholics.

Alcohol and Blood Sugar - Maintaining adequate blood sugar levels is one of the key functions of your metabolism, but when you drink alcohol, maintaining healthy blood sugar levels is one of the first elements of metabolism to be shoved aside in your body's rush to excrete the toxins as efficiently as possible. Alcohol inhibits your body's ability to make glucose and to maintain healthy levels of glucose (or blood sugar) in the blood. Over time, heavy drinkers develop glucose intolerance and can even become diabetic.

Even occasional alcohol consumption can cause dangerous drops in blood sugar levels, especially when consumed on an empty stomach. That's why drinking alcohol can be very dangerous for diabetics and hypoglycemics.

Alcohol Can Cause Weight Gain - Because your body can't store alcohol and must metabolize it right away, other metabolic processes suffer. Your body won't metabolize sugars and fats as

efficiently during the metabolism of alcohol, and drinking heavily can cause your metabolism to slow. This can contribute to weight gain, as can the empty calories found in alcohol. You can use [FitDay.com](#) to keep track of the calories you consume and your nutrition, so that alcohol doesn't hinder your weight loss plans or put you at risk of malnutrition.

Alcohol Also Causes Weight Loss - Alcohol can also cause weight loss in those who drink heavily over the long term. Alcohol continues to slow the metabolism of long term drinkers, but it also causes inflammation in the organs of the digestive tract. If you drink heavily in the long term, alcohol can impair your body's ability to absorb nutrients. If you become chronically malnourished due to alcohol consumption, you'll lose weight in spite of your slower metabolism.

By HARLEY PASTERNAK 02/06/2013 at 02:00 PM EST - **Harley Pasternak**

Last week, country singer [Tim McGraw](#) made a splash when PEOPLE magazine featured an article about his [complete physique transformation](#).

What I found most interesting about Tim's turn around was his revelation that [drinking had been the primary roadblock](#). Tim realized that his alcohol intake not only added more girth to his gut, but it led to his poor dietary decisions, and sapped his desire to work out.

Tim also went on to explain how his family was the main reason behind his decision to give up drinking, get healthy, and be a positive/healthy role model. And [he looks better](#) than he ever has at 45!

There is a *lot* of conflicting information and opinion out there about alcohol and its role in weight gain. If I had a penny for every person who's told me about all the research showing how a glass of wine a day can actually be heart healthy (but that same person goes on to drink four beers with their glass of wine a day), I'd have a lot of pennies!

Believe it or not, the extra calories from alcohol is *not* the primary reason people gain weight when they drink too much or too often. In fact, it's a distant *third*.

I don't want to be a total killjoy and say that you can never have a drink again, but I don't want you to sabotage all your hard work to be healthier with alcohol, either. Let's take a look at how alcohol can undermine your weight-loss efforts.

1. ALCOHOL DIMINISHES YOUR BODY'S ABILITY TO BURN FAT

When you drink alcohol, it's broken down into acetate, which your body burns for energy first – before any other calorie source or stored fat. So the energy that we expend when we have alcohol in our system is coming from the alcohol, not the other carbohydrates or fats which have to be stored if they're not burned.

In plain English? Alcohol squashes our ability to burn fat. In fact, a study published in the American Journal of Clinical Nutrition found subjects who consumed less than an ounce of alcohol over a 30-minute time period decreased their body's ability to burn fat by 73 percent!

2. ALCOHOL WEAKENS OUR INHIBITIONS

Many of my clients tell me that they find themselves straying from their healthy eating habits when they've had a couple of drinks. When we drink alcohol, the functions our bodies use to tell us when we're full and when to stop eating are dulled. So not only are we more likely to give into temptation, we're also less likely to be able to tell when we've had enough.

In a UK Study that looked at alcohol's effect on calorie consumption, those who had the

equivalent of two drinks ate up to 30% more. Building on that same principle, a Dutch study found that it took subjects longer to feel full when they drank alcohol before a meal, when compared to those who had a non-alcoholic beverage prior to eating. To put it simply, when we drink alcohol, we're more likely to eat too much of the wrong things.

3. ALCOHOL IS LOADED WITH CALORIES

Alcohol has nearly twice as many calories per gram as protein or carbohydrates. We've all read about the surprising calorie counts of our favorite alcoholic beverages – 740 calories in a margarita! 210 in a cosmopolitan! But even if you cut out the sugary mixers and liqueurs used in your favorite cocktails, you're still consuming a lot of empty calories. Remember: alcohol is not an essential nutrient. Any calorie we consume from alcohol is completely valueless.

4. ALCOHOL PREVENTS ABSORPTION OF VITAL NUTRIENTS

When we drink alcohol, the body shifts gears and focuses its energies on expelling the alcohol, which leaves little time for it to perform its other necessary functions, like processing vitamins and minerals and maintaining blood glucose levels, which are integral to maintaining a healthy metabolism. So not only does alcohol not have any nutrient value of its own, it also makes your body less able absorb and process nutrients that are valuable to you. So when we drink, those superfoods that we're trying to include in our diets become a whole lot less super.

5. ALCOHOL PREVENTS US FROM GETTING A GOOD NIGHT'S SLEEP

If you read my blog post on [sleep's impact](#) on our weight and bodies as a whole, you understand how important sleep is to our weight and overall health. Alcohol affects the quality of our sleep in a number of ways, from increased waking to shallower sleep, to pain due to heartburn caused by inflammation of your digestive system.

Not only that, but you can develop a dependence on alcohol to fall asleep, which actually works against you because it may help you fall asleep, but it won't help you get good quality sleep.