

## ALCOHOL EATS AWAY AT MUSCLE MASS

If increasing muscle mass is one of your goals, then think twice before you go out for a night of heavy drinking. Consuming alcohol in large quantities has a direct effect on your metabolism, causing fat to be stored instead of being utilized as an energy source. Alcohol contains seven “empty” calories per gram, meaning that these calories don’t provide you with any of the essential nutrients you need to build that muscle mass you desire.

### Effects of Excessive Alcohol Consumption on Your Body

- **Muscles**—Reduces blood flow to the muscles, causing weakness and deterioration
- **Hormones**—Reduces testosterone in your blood and increases conversion of testosterone to estrogen, causing increased fat depositing and fluid retention
- **Liver**—Creates imbalances that can cause hypoglycemia (low blood sugar), fatty liver and hyperlipidemia (build-up of fats in the bloodstream)
- **Brain**—Cuts off the supply of oxygen to the brain, resulting in a “blackout” caused by a lack of oxygen supply to the brain that can kill tens of thousands of brain cells

### Effects of Excessive Alcohol Consumption on Physical Performance

Alcohol is a known depressant that suppresses the brain’s ability to function. Even though you may feel a “high” after several cocktails, the truth is that your reaction time, accuracy, balance, hand-eye coordination and endurance all decrease dramatically. Furthermore, the after-effects of a night of excessive drinking can be detrimental to your fitness goals. Alcohol is a diuretic that may result in dehydration. This dehydration is known to decrease physical performance, so that previous night of drinking will continue to affect you the following day.

### Alcohol and Sleep

Alcohol consumption can cause sleep disorders by disrupting the sequence and duration of sleep states and by altering total sleep time and the time required to fall asleep. It is popularly believed that a drink before bedtime can help a person fall asleep. However, alcohol’s affect on sleep patterns results in increased fatigue and physical stress to the body. Therefore, alcohol consumption

indirectly affects a person’s strength-training ability due to increased fatigue and a lack of healthy reparative sleep.

### Alcohol and Nutrition

Alcohol inhibits the breakdown of nutrients into usable substances by decreasing the secretion of digestive enzymes from the pancreas. Regular alcohol consumption also impairs nutrient absorption by damaging the cells lining the stomach and intestines and disabling transport of some nutrients into the blood. In addition, nutritional deficiencies themselves may lead to further absorption problems. For example, folate deficiency alters the cells lining the small intestine, which in turn impairs the absorption of water and nutrients, including glucose, sodium and additional folate. Such interference of nutrient breakdown and absorption may impair the physical performance and recovery required to build and maintain muscle mass.

#### Calories Add Up Fast

12 ounces of beer = ~150 calories  
5 ounces of wine = ~100 calories  
1.5-ounces of distilled spirits = ~100 calories

### Putting on the Pounds

Many people under the influence experience “drunk munchies” that can result in the consumption of several hundred extra calories for the day. A study examining how alcohol affects caloric intake found that subjects who drank wine with their lunch consumed an additional 200 calories and did not compensate for those calories by cutting back at dinner.

### Safe in Moderation

Now that you know some of the negative effects of excessive alcohol consumption, you might be scared to have that glass of wine with dinner. Don’t be. When alcohol is consumed in moderation (no more than one drink per day for women and no more than two drinks per day for men), it has been shown to

have some positive effects:

- Increased HDL cholesterol (“good” cholesterol) within one to two weeks
- Reduced stress levels
- Reduced insulin resistance

### The Take-home Message

In conclusion, if you want to increase muscle mass, decrease fat or improve general health, make sure alcohol is only consumed in moderation. Next time you are asked to go out socially, be the designated driver. Not only will your friends appreciate it and be much safer, but you will be one step closer to your fitness goals.

### Additional Resources

National Institutes of Health—Alcohol Consumption: [www.health.nih.gov/topic/AlcoholConsumption](http://www.health.nih.gov/topic/AlcoholConsumption)

National Strength & Conditioning Association—Alcohol Consumption and its Effect on Performance: [www.nscs-lift.org/performance/article.asp?ArticleID=204](http://www.nscs-lift.org/performance/article.asp?ArticleID=204)

If you are interested in information on other health and fitness topics, contact: American Council on Exercise, 4851 Paramount Drive, San Diego, CA 92123, 800-825-3636; or, go online at [www.acefitness.org/GetFit](http://www.acefitness.org/GetFit) and access the complete list of ACE Fit Facts.™



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