

The Affects of Alcohol and Training

Q: My buddy that I train with doesn't drink at all. I have a few drinks occasionally, who is better off in terms of building muscle. I'm interested to know of any research about the effects of alcohol consumption on building muscle?

A: It is believed that small amounts of alcohol do have reported health benefits. However, the small amount of research on alcohol and muscle growth indicates that alcohol consumption isn't any good.

Alcohol acts as a direct toxin to type-2 fast twitch muscle fibers; the type most responsive to muscle hypertrophy (increase in size). A few studies have appeared in the journal *Alcoholism: Clinical and experimental Research* (22;1998) one examined the effects of a 12-week diet containing alcohol on protein synthesis rates in mice. Alcohol decreased muscle protein synthesis rates by 23-26% in the fast-twitch fibers of the rodents that habitually consumed moderate serves of alcohol. What appeared to cause this alcohol-induced drop in muscle building was a marked reduction in the anabolic hormone, insulin-like growth factor-1 (IGF-1). In the presence of alcohol, circulating levels of IGF-1 dropped by up to 42%! That's IGF-1 in blood and muscle.

Therefore, if you are serious about building muscle, you may want to make sure you don't hit the booze too often.

Q: Does having a few drinks on the weekend interfere with my bodybuilding results?

A: Good question. It takes about 48-hours for the body to clear one ounce of alcohol. If you are not training over the weekend then this should not matter. Neither should the slight dehydration effect that alcohol consumption provides. However, a recent review of the scientific literature on alcohol's impact on muscle growth (published in *Int. J. Biochem Cell Biol.* 33:457-73, 2001) has provided bodybuilders with some very interesting research.

It appears that even moderate drinking decreases the rate of protein synthesis in muscle by 20%. Alcohol consumption also interferes with the structure of creating specific proteins within the cell. Alcohol also blocks the action of the powerful anabolic hormone IGF-1. Binge drinking on the weekend could erase all the hard work you've done in the gym that week. This is important information if you really want to see results from your efforts in the gym.