

Montclair State University  
Counseling and Psychological Services (CAPS)  
**How Alcohol Affects Muscle Development  
and Recovery**

Everyone knows that working out while under the influence of alcohol is dangerous because of the likelihood of injury, but few athletes realize that consuming alcohol after a workout, practice, or competition can cancel out any physiological gains you might have received from such activities. Not only does long-term alcohol use diminish protein synthesis resulting in a decrease in muscle build-up, but even short-term alcohol use can impede muscle growth.

In order to build bigger and stronger muscles, your body needs sleep to repair itself after workouts. Because of alcohol's effect on sleep, however, your body is robbed of a precious chemical called "human growth hormone" or HGH. HGH is part of the normal muscle-building and repair process and the body's way of telling itself your muscle needs to grow bigger and stronger. Alcohol, however, can decrease the secretion of HGH by as much as 70 percent! Also, when alcohol is in your body, the production of a substance in your liver is triggered that is directly toxic to testosterone, a hormone essential to the development and recovery of your muscles.

Speeding the recovery of sore muscles and injuries is integral to optimal performance. Alcohol is a toxin—a toxin that travels through your bloodstream to every organ and tissue in your body, thus slowing your body's ability to heal itself. Additionally, once alcohol is absorbed through your stomach and small intestine and finally into your cells, it can disrupt the water balance in muscle cells, thus altering their ability to produce adenosine triphosphate (ATP), which is your muscles' source of energy. ATP provides the fuel necessary for your muscles to contract.

Adapted from:

*Pumped: Straight Facts for Athletes about Drugs, Supplements, and Training*, C. Kuhn, S. Swartzwelder, and W. Wilson (New York: W.W. Norton, 2000).

*The information provided is for educational purposes only and in should not substitute consultation with a trained professional.*

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