

# Low amounts of alcohol have different effects on left and right ventricles of the heart

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Few studies have examined the acute effects of alcohol on myocardial or heart function. While moderate-to-high blood concentrations of alcohol acutely impair conventional echocardiographic measures of left ventricular (LV) performance, the effects of low concentrations are unclear. An examination of the acute effects of low blood concentrations of alcohol on the left and right ventricles, which collectively pump blood to the entire body, has found that low doses of alcohol can have very different effects on LV and right ventricular (RV) function.

Results will be published in the October 2011 issue of *Alcoholism: Clinical & Experimental Research* and are currently available at Early View.

"Little data exist regarding the acute [effects of alcohol](#) on the heart," said Matteo Cameli, a cardiologist at the Cardiologia Universitaria of Siena as well as corresponding author for the study. "Previous studies have reported a reduction in LV performance after an assumption of moderate or high doses of [alcohol](#), but the effects of low doses are still unknown."

Cameli explained that LV and RV function work very differently. "They are like two different worlds," he said, "both for structure and function of myocardial fibers that they present. Yet their differences, and the effects that low doses of alcohol have on them, have relevant social

implications, given that light drinking is such a common practice."

Cameli and his colleagues asked 64 (35 men, 29 women) healthy volunteers in their twenties to drink, on two separate experiments, 5 ml/kg of Italian [red wine](#) (equivalent to 0.5 mg/kg of alcohol) and an equal volume of fruit juice. Study authors gathered a number of measures at baseline as well as 60 minutes following ingestion.

"We found that low doses of red wine is associated acute depression in left ventricular function and acute increase in right ventricular function," said Cameli. "These findings point out the importance of considering even low doses of alcohol as a socially relevant cause of acute cardiac toxicity because the truth is that light alcohol intoxication represents a very common occurrence worldwide."

Cameli added that this study is the first to examine the acute effects of low doses of red wine on cardiac performance through use of sensitive echocardiographic indices of cardiac function in a population of young healthy volunteers.

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