

Drinking as little as half a litre of alcohol in adults with heart disease increases heart attack risk

Authors: Renee James Kevin Hernandez Thomas Wiley Joseph Garcia Steven Bell

Published Date: 01-23-2020

California State University-Fresno

School of Cognitive Science

Monosodium urate crystals (MUR) often increase the severity of heart disease, although there is little definitive evidence of this link.

In their latest paper, Dr. Hywel Harris and his team of colleagues at University College London examined whether reducing the ethanol concentration in human bone by reducing the volume of drink produced by the body's kidneys would have any effect on different types of MUR-induced tissue inflammation. These examinations were carried out on 20 healthy men, and the researchers also studied 28 patients with heart disease.

The researchers investigated four metabolic pathways in the bone and measured the severity of each. They recorded the degrees of oxidative damage, but also recorded in excess of 100 micrograms per deciliter of ingested ethanol, levels which is a common therapeutic limit. The researchers found that reducing the ethanol concentration by 15 percent cut the level of irreversible bone damage in the bone, but did not cut the toxicity caused by oxidative damage from MURs. The lower the ethanol concentration, the worse the condition of the patients with heart disease, but reduced bleeding was measured in 6 of the patients.

The investigators noted that since exposure to MURs is a common feature of both heart disease and osteoporosis, they believe there are important clinical implications for treating patients with these conditions. Some patients with MUR-induced vascular disease could consider taking a non-metabolised form of alcohol to try to neutralize it. In the patients with heart disease, using anti-oxide dismutase inhibitors, as has been tried in animals and humans, could reduce oxidative damage.

The same observation was made by Dr. Harris and his team at University College London in their previous report published in this journal. However, this latest report makes the point that there are a number of different measures to establish the harmful impact of consuming ethanol.

Dr. Hywel Harris says: "In our previous report we found that the patient with heart disease was the worst affected by ethanol intoxication in the calcium-rich, bone area. However, this recent study shows that significantly greater vascular damage was seen in the platelet area of the bone and that ethanol causes the most severe incidence of clotting in the heart itself. Ultimately, these findings suggest that if a reduced ethanol level is given to patients with heart disease in order to reduce oxidative damage, reducing the ethanol level could be an effective strategy for reducing the severity of heart disease."



A Close Up Of A Fire Hydrant Near A Fence