Wine only protects against CVD in people who exercise

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Wine only protects against cardiovascular disease (CVD) in people who exercise, according to results from the In Vino Veritas (IVV) study presented at ESC Congress today by Professor Milos Taborsky from the Czech Republic.

Professor Taborsky said: "This is the first randomised trial comparing the effects of red and white wine on markers of atherosclerosis (1) in people at mild to moderate risk of CVD. We found that moderate wine drinking was only protective in people who exercised. Red and white wine produced the same results."

Evidence suggesting that mild to moderate consumption of wine protects against cardiovascular disease has been accumulating since the early 1990s. In particular, retrospective studies have found that wine increases levels of HDL, the "good" cholesterol. But until now there has been no long-term, prospective, randomised study comparing the effects of red and white wine on HDL cholesterol and other markers of atherosclerosis.

The IVV study (2) is the first long-term, prospective randomised trial comparing the effect of red and white wine on markers of atherosclerosis. The study included 146 people with mild to moderate risk of cardiovascular disease according to the HeartScore (3). Participants were randomised to one year of moderate consumption of red wine (Pinot Noir) or white wine (Chardonnay-Pinot) from the same year and wine region of the Czech Republic.

Moderate consumption was the World Health Organization definition of 0.2 L for women and 0.3 L for men, a maximum of five times a week. The primary endpoint was the level of HDL cholesterol at one year. Secondary endpoints were levels of other markers of atherosclerosis including LDL cholesterol. Participants consumed their usual diet.

Participants kept a logbook on their consumption of wine and other alcoholic beverages, medication use, and amount and type of exercise. They were required to return the corks from the wine bottles to confirm that they had drank the wine rather than sold it.

The researchers found that there was no difference between HDL cholesterol levels at the beginning of the study compared to one year in either the red or white wine groups. LDL cholesterol was lower in both groups at one year while total cholesterol was lower only in the red wine group.

Professor Taborsky said: "A rise in HDL cholesterol is the main

indication of a protective effect against CVD, therefore we can conclude that neither red or white wine had any impact on study participants as a whole."

He added: "The only positive and continuous result was in the subgroup of patients who took more exercise, which means regular exercise at least twice a week, plus the wine consumption. In this group HDL cholesterol increased and LDL and total cholesterol decreased in the

red and white wine groups. There may be some synergy between the low dose of ethyl alcohol in wine and exercise which is protective against CVD."

He continued: "In a future study we will compare the effects of red and white wine on markers of atherosclerosis in patients at high risk for CVD who take statins and do regular exercise. We hope to find that moderate wine consumption is safe in these patients."

Professor Taborsky concluded: "Our current study shows that the combination of moderate wine drinking plus regular exercise improves markers of atherosclerosis, suggesting that this combination is protective against cardiovascular disease."

More information: References:

(1) Atherosclerosis is a condition in which the arteries become clogged with fatty substances including cholesterol. Atherosclerosis is a major risk factor for cardiovascular disease.

(2) Taborsky M, Ostadal P, Petrek M. A pilot randomized trial comparing long-term effects of red and white wines on biomarkers of atherosclerosis (in vino veritas: IVV trial). Bratisl Lek Listy. 2012;113(3):156-158. (full paper available in the press kit)

(3) HeartScore is an interactive tool for predicting and managing the risk of heart attack and stroke. See www.heartscore.org for more information.

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