

Red-Wine Polyphenol May Help Keep the Heart Healthy, Research Finds

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By Jacob Gaffney

Numerous medical studies have already shown that moderate consumption of red wine may help reduce the risk of heart disease. Now a team of scientists in China have found that resveratrol, a polyphenol in red wine, may be at least partly responsible for improving cardiovascular health.

According to their research, rabbits that drank a little red wine -- with or without alcohol -- while nibbling on a high-cholesterol diet had healthier hearts and veins than fellow lab bunnies that drank only water. And rabbits that drank water mixed with a resveratrol extract had even better cardiovascular health than the rabbits that drank the red wine, according to the study, which was conducted at Nanjing Medical University.

Based on these results, the scientists theorized that the potential cardiovascular benefits of drinking red wine may not come from the alcohol, but from other compounds in the beverage.

The findings add more support to earlier studies indicating that [red wine imparts greater protection from heart disease](#) than drinking beer or spirits or abstaining, and that this may be due to the levels of polyphenols in red wine. Other research has shown that resveratrol -- which is found in grapes and peanuts, among other foods -- may help [fight some forms of cancer](#).

For the study, which was published in the April 20 issue of *Heart Disease Weekly*, 40 healthy male rabbits were divided into five equal groups. One group was given water and allowed to continue with their standard diet. The other four groups ate meals that contained nearly 2 percent cholesterol -- considerably high for herbivores, according to the researchers.

One of the high-cholesterol groups was given only water to drink every day. Another group drank water mixed with 3 milligrams of resveratrol for every kilogram the rabbit weighed. The remaining two groups received 4 milliliters of red wine per kilogram of weight per day; one group drank nonalcoholic wine, the other had wine with 12 percent alcohol. (The wines contained close to 4 milligrams of resveratrol per liter.)

Every day, the scientists measured the ability of arteries in the rabbits' ears and legs to dilate, as well as the rabbits' capacity to maintain proper levels of nitric oxide in the bloodstream. Both factors help "relax the vessels and make the blood flow easier," said study spokesman Joseph Wu, a professor of biochemistry and molecular biology at New York Medical College in Valhalla, who has collaborated with the Nanjing Medical University researchers. Having too much nitric oxide in the blood may also

cause oxidative damage to the body, according to Wu. The researchers also measured the rabbits' blood pressure and the endothelium cell levels in their blood vessels.

After 12 weeks, the scientists found that the rabbits on a high-cholesterol diet that drank only water showed an approximate 25 percent decrease compared to the control rabbits in their ability to regulate both arterial dilation and nitric oxide levels. On the other hand, rabbits that drank red wine, nonalcoholic wine or the resveratrol-water mix showed similar cardiovascular health as the rabbits on a regular diet.

"The significant [cardiovascular] dysfunctions observed in high-cholesterol diet groups were effectively mitigated by oral administration of resveratrol, red wine and de-alcoholized red wine," the authors wrote.

Despite the benefits seen in the rabbits, Wu cautioned against extending the study results to humans until further research can be conducted.