

Compound Found in Red Wine Could Reduce Hypertension in Postmenopausal Women, Study Finds

Research from Spain performed on rats shows that polyphenols found naturally in red wine may keep blood vessels healthy in older, hypertensive women

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Compounds found in red wine could potentially help ease hypertension in postmenopausal women, according to a study that will be published in the April 2008 issue of the medical journal *Hypertension*. Women who have gone through menopause are at a greater risk of hypertension than men of the same age, underlining the need to identify potential therapeutic measures, the study's authors wrote.

"The present findings may help to explain the potential benefit of red-wine polyphenols as a therapeutic agent for preventing menopausal vascular complications," the authors wrote, "especially in hypertensive women." The red-wine compounds, it was found, may help reduce hypertension as well as the complications associated with it, such as inflammation of the arteries, a restricted aorta or oxidative stress on the blood vessels.

The study was led by Rocío López-Sepúlveda, a researcher at the department of pharmacology at the University of Granada, who noted in the study text that previous research has found that red-wine polyphenols can offer protection against cardiovascular disease. One such polyphenol, resveratrol, has shown potential for possibly treating and preventing myriad disorders, such as cardiovascular diseases, pulmonary disorders and some forms of cancer. Other red-wine polyphenols may hold promise for fighting prostate cancer. But the compounds' effects on women's blood vessels was important to research, the study noted, because a woman's risk of hypertension before menopause is below that of a similarly aged man, but it can rise significantly after menopause.

The study, which also included research from the University Complutense of Madrid, used female rats that were genetically engineered to have high blood pressure. The researchers then stimulated menopause by removing the rats' ovaries, after which time the rats' blood pressure rose (due to their altered DNA). The scientists treated half the rats with a mixture of several types of red-wine chemicals associated with improved circulation, including resveratrol, for a period of five weeks. The remaining rats served as a control group, and received only water along with their diet.

After five weeks, the scientists examined the rats' blood vessels. They found that the high blood pressure had been alleviated in the rats that received a regular red-wine-compound treatment added to their food. The rats had more relaxed aortas, healthier linings to the veins and arteries, as well as less oxidative stress—all of which are associated with lower blood pressure.

The researchers noted that previous studies on red-wine compounds and their effects on estrogen-related disease risks did not involve mammals, reducing the applicability of the results to humans. This study, however, hoped to show that treating estrogen-deficient mammals with red-wine compounds could produce similar results. The use of genetically engineered rats with their ovaries removed, the study text states, is an established method of research that emulates women who have gone through menopause.

The scientists cautioned, however that while their results indicate that the risk of hypertension in postmenopausal women could potentially be reduced through the use of regular red-wine-chemical supplements, the results may not extend to women who drink red wine. Not only was red wine itself not used in the study, the authors noted that the exact mechanisms involved in red-wine polyphenols alleviating high blood pressure remain unclear, and require further study.

[Back to top](#)

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