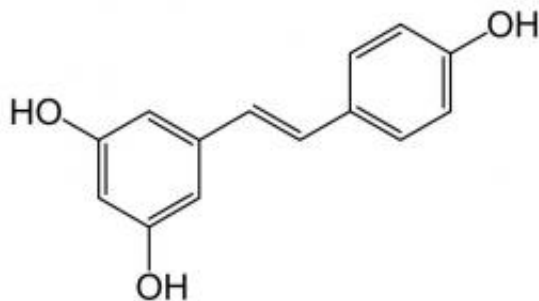


Resveratrol can help correct hormone imbalance in women with PCOS

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Skeletal formula of trans-resveratrol. Image: Wikipedia

Resveratrol—a natural compound found in red wine and grapes—can help address a hormone imbalance in women with polycystic ovary syndrome (PCOS), a leading cause of infertility in women, according to a new study published in the Endocrine Society's *Journal of Clinical Endocrinology & Metabolism*.

An estimated 5 million to 6 million women in the United States have PCOS, according to the Hormone Health Network. It is one of the most common endocrine conditions in women of childbearing age.

Women who have PCOS produce slightly higher amounts of testosterone and other androgen hormones than average. Although these reproductive hormones are typically associated with men, women also have small amounts. The elevated levels in women with PCOS can contribute to

irregular or absent menstrual periods, [infertility](#), weight gain, acne or excess hair on the face and body. Women who have PCOS also face a higher risk of developing other health problems, such as diabetes.

Resveratrol is one of a group of plant compounds known as polyphenols. In addition to [red wine](#) and grapes, resveratrol is found in nuts. The compound has anti-inflammatory properties.

"Our study is the first clinical trial to find resveratrol significantly lowers PCOS patients' levels of testosterone as well as dehydroepiandrosterone sulfate (DHEAS), another hormone that the body can convert into testosterone," said the study's senior author, Antoni J. Duleba, MD, of the University of California, San Diego in La Jolla, CA. "This nutritional supplement can help moderate the [hormone imbalance](#) that is one of the central features of PCOS."

Thirty women with PCOS completed the randomized, double-blind, placebo-controlled trial conducted at Poznan University of Medical Sciences in Poznan, Poland. The women were randomly assigned to either take a resveratrol supplement or a placebo pill daily for three months. The participants had blood samples drawn at the beginning and end of the study to determine levels of testosterone and other androgen hormones. The women also underwent an oral glucose tolerance test at the start and conclusion of the study to measure diabetes risk factors.

The researchers found total testosterone levels fell by 23.1 percent among the women who received the resveratrol supplement. In comparison, testosterone levels increased 2.9 percent in the placebo group. DHEAS declined by 22.2 percent in the resveratrol group, while the placebo group experienced a 10.5 percent increase in DHEAS levels.

In addition to moderating androgen hormones, the women who received resveratrol showed improvement in diabetes risk factors. Among the

resveratrol group, fasting insulin levels dropped by 31.8 percent during the three-month study. The researchers also found the women who received resveratrol during the study became more responsive to the hormone insulin over the course of the study.

"The findings suggest resveratrol can improve the body's ability to use insulin and potentially lower the risk of developing diabetes," Duleba said. "The supplement may be able to help reduce the risk of metabolic problems common in [women](#) with PCOS."

More information: Beata Banaszewska et al, Effects of Resveratrol on Polycystic Ovary Syndrome: A Double-blind, Randomized, Placebo-controlled Trial, *The Journal of Clinical Endocrinology & Metabolism* (2016). [DOI: 10.1210/jc.2016-1858](https://doi.org/10.1210/jc.2016-1858)

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