

# First clinical trial of red wine ingredient shows metabolic shifts

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When obese men take a relatively small dose of resveratrol in purified form every day for a month, their metabolisms change for the better. In fact, the effects appear to be as good for us as severe calorie restriction. Resveratrol is a natural compound best known as an ingredient in red wine.

"We saw a lot of small effects, but consistently pointing in a good direction of improved metabolic health," said Patrick Schrauwen of Maastricht University in The Netherlands.

The findings in the November issue of the Cell Press journal [Cell Metabolism](#) are the first to report the clinical effects of resveratrol.

Earlier studies in animals had shown that resveratrol alleviates [insulin resistance](#) and protects against the ill effects of a high-fat diet, among other benefits, he explained. The effects are comparable to what happens when animals or humans significantly restrict the number of calories they consume, a diet plan shown to delay the onset of age-related diseases. Still, no studies had systematically examined the metabolic effects of resveratrol in humans.

To fill that gap, the researchers gave 11 obese but otherwise healthy men a dietary supplement containing 150 milligrams of a 99 percent pure trans-resveratrol (trade name resVida) for 30 days while they measured the amount of energy they expended, the amount of fat they were storing and burning, and more.

The data show that, like calorie restriction, resveratrol supplements lower energy expenditure and improve measures of metabolism and overall health. Those changes include a lower metabolic rate, less fat in the liver, lower [blood sugar levels](#) and a drop in blood pressure. Trial participants also experienced changes in the way their muscles burned fat.

"The immediate reduction in sleep metabolic rate was particularly striking," Schrauwen said. Of course, in the case of obesity, it's not entirely clear whether burning fewer calories is a good or a bad thing. It does suggest that participants' cells were operating more efficiently, as they do following [calorie restriction](#).

Those metabolic effects of resveratrol also came with no apparent side effects.

Schrauwen said they chose to study obese individuals given their increased risk for type 2 diabetes. In future studies, he hopes to explore the effects of resveratrol in people who have already progressed to diabetes.

ResVida and other [resveratrol](#) supplements are already widely available, but more work is needed to establish whether they indeed have the potential to overcome the metabolic aberrations associated with obesity and aging, according to the researchers.

"I don't see a reason for particular caution, but we do need long-term studies," Schrauwen says.

Provided by Cell Press

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