

Resveratrol supplements cause pancreatic problems in developing fetus

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A widely available dietary supplement that had been considered safe—and that some claim provides anti-aging and other health benefits—caused significant developmental abnormalities in the pancreas of offspring of pregnant monkeys who were given the supplement, according to a study published today in the *FASEB Journal*, from the Federation of American Societies of Experimental Biology.

Because of the results, authors of the study strongly recommend that [pregnant women](#) or women who might get pregnant avoid taking the supplement.

The supplement contains resveratrol, which is a [plant compound](#) found in the skin of red grapes and in peanuts and berries, among other plants. The supplement form of the compound has been available in pharmacies and health food stores for years, with claims that it has a wide range of health benefits. The compound is thought to be an anti-oxidant and an anti-inflammatory, and some animal studies do confirm some benefits. All previous studies had found it to be safe in humans.

Researchers at Oregon Health & Science University's Oregon National Primate Research Center and the University of Colorado-Denver were focusing on some of those potential benefits when they began studying the compound in monkeys. They were specifically focusing on whether resveratrol might help protect against some of the effects of a Western high-fat, high-calorie diet on pregnant women—effects that include complications during pregnancy and long-term health complications for

the baby.

The research indicated that resveratrol did provide some real benefits in the pregnant monkeys, including improved blood flow through the placenta to the fetus. Placental abnormalities contribute to many of the pregnancy complications and [health](#) issues with babies of obese women who eat an unhealthy Western diet.

But the researchers also found an effect that surprised them—resveratrol had a significantly negative effect on the development of the pancreas in the monkey fetus. The pancreas is critical for the body's regulation of blood glucose.

"In the beginning, the results were promising and we had hoped to find a natural supplement that could improve the pregnancy complications. However, the negative impact on the pancreas is really concerning," said Kevin Grove, Ph.D., head of the Division of Diabetes, Obesity and Metabolism at ONPRC and a senior co-author of the study. "It immediately raised an alarm."

Antonio Frias, M.D., is director of the diabetes and pregnancy program at OHSU's Center for Women's Health, a scientist at ONPRC and a senior co-author of the study. He has not recommended that pregnant women take resveratrol in the past. But he thinks it's especially important now for obstetric providers to ask pregnant women or reproductive-age women whether they are taking it.

"I think it's something obstetric providers should now ask and they should advise women to stop taking it," Frias said.

Frias said the study results point to the benefits of research of this type in animals. It could have taken years for human clinical trials to uncover this potential effect—if they had uncovered it at all, he said. "Although

we are uncertain of the long-term impact of these changes, problems with pancreatic development might not have been evident for many years after the child was born," he said.

Researchers will continue to study the [resveratrol](#) effects on non-human primates to determine if there might be a way to isolate the positive effects while preventing the negative impact on pancreatic development.

Provided by Oregon Health & Science University

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