

Mediterranean diet linked to lower preeclampsia risk

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In a new study evaluating the Mediterranean diet and adverse pregnancy outcomes, investigators from the Smidt Heart Institute at Cedars-Sinai found that women who conceived while adhering to the anti-

inflammatory diet had a significantly lower risk of developing preeclampsia during pregnancy.

The study, published today in the peer-reviewed journal *JAMA Network Open*, also evaluated the association between the Mediterranean diet and other adverse pregnancy outcomes, including gestational diabetes and hypertension, [preterm birth](#), delivery of a small-for-gestational-age infant, and stillbirth.

"This multicenter, population-based study validates that a healthier eating pattern is associated with a lower risk of adverse pregnancy outcomes, the most exciting being a 28% lower risk for preeclampsia," said Natalie Bello, MD, MPH, senior and corresponding author of the study and director of Hypertension Research in the Smidt Heart Institute. "Importantly, this connection between the Mediterranean diet and lower risk of adverse pregnancy outcomes was seen in a geographically, racially and ethnically diverse population."

Bello also notes that researchers found the association was stronger in [women](#) who are traditionally considered to be of advanced maternal age, those 35 or older.

Preeclampsia is a serious blood pressure condition that develops during pregnancy and puts stress on the mother's heart. Left untreated, the condition can cause serious complications like weakened kidney and liver function and decreased [blood supply](#) to the fetus.

In addition to preeclampsia, the risk of gestational diabetes also decreased in women who more closely followed the heart-healthy diet.

The study was part of the Nulliparous Pregnancy Outcomes Study: Monitoring Mothers-to-be, which enrolled 10,038 women between 2010-2013. Of the women enrolled, 7,798 were included in the *JAMA*

Network Open study.

Women who were pregnant with their first child were asked to complete a semi-quantitative food frequency questionnaire during their first study visit, which occurred in the first trimester.

The questionnaire focused on the women's eating habits during the three months prior to their visit and asked the participants to report their intake of common foods and beverages. Individuals' responses were then categorized into the nine components of a Mediterranean diet—vegetables, fruits, nuts, whole grains, legumes, fish, monounsaturated-to-saturated fat ratio, red and processed meats, and alcohol—to calculate a Mediterranean diet score.

The data was compiled, analyzed and studied by researchers and showed:

- Of the 7,798 women enrolled, 10% were 35 years old or older, 11% were non-Hispanic Black, 17% were Hispanic, and 4% were Asian.
- 20% of enrollees had obesity at the onset of their participation.
- A high Mediterranean diet score was related to 21% lower odds of having any adverse pregnancy outcome, as well as a 28% and 37% lower risk of having preeclampsia/eclampsia and [gestational diabetes](#).

"We also looked at the individual components of the Mediterranean diet and found higher intakes of vegetables, legumes and fish were related to lower associated risk of an adverse pregnancy outcome," said Bello.

Christine Albert, MD, MPH, chair of the Department of Cardiology, who was not involved in the study, says that taken together, these findings uniquely demonstrate that in United States women, adoption of a Mediterranean diet pattern may represent an important lifestyle

approach for the prevention of adverse pregnancy outcomes, particularly in women with advanced maternal age.

Previously, only three [observational studies](#)—each with a modest number of participants—have investigated the association of adherence to this healthful diet pattern around the time of conception and risk of developing preeclampsia.

"These findings add to the growing body of evidence demonstrating that the Mediterranean-style diet may play an important role in preserving the health of women across the lifespan, including during pregnancy," said Albert.

Bello says long-term studies are needed to assess whether promoting a Mediterranean-style [diet](#) around the time of conception and throughout pregnancy can prevent adverse [pregnancy](#) outcomes and reduce future cardiovascular risk.

More information: Association of a Mediterranean Diet Pattern With Adverse Pregnancy Outcomes Among US Women, *JAMA Network Open* (2022). [DOI: 10.1001/jamanetworkopen.2022.48165](https://doi.org/10.1001/jamanetworkopen.2022.48165)

Provided by Cedars-Sinai Medical Center

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