

Following a Mediterranean-style diet during pregnancy may reduce the risk of preeclampsia

April 20 2022



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Following a Mediterranean-style diet during pregnancy was associated with a reduced risk of developing preeclampsia, and Black women

appeared to have the greatest reduction of risk, according to new research published today in the *Journal of the American Heart Association*.

Previous studies have found that following a Mediterranean diet, which consists primarily of vegetables, fruits, legumes, nuts, olive oil, whole grains, and fish, reduces [heart disease risk](#) in adults.

Preeclampsia, a condition during [pregnancy](#) characterized by severe high blood pressure and liver or kidney damage, is a major cause of complications and death for the mother and her [unborn child](#).

Preeclampsia also increases a woman's risk of heart diseases, such as high blood pressure, heart attack, stroke or heart failure, by more than two times later in life. Women with preeclampsia have a higher risk of preterm delivery (giving birth before 37 weeks gestation) or low birth weight babies, and children born to mothers with preeclampsia are also at higher risk of developing [high blood pressure](#) and heart disease.

Black [women](#) are at higher risk of developing preeclampsia, yet research on potential treatments for high-risk women are limited, according to the study researchers. The researchers investigated the potential association of a Mediterranean-style diet among a large group of racially and ethnically diverse women who have a high risk of preeclampsia.

"The U.S. has the highest maternal mortality rate among developed countries, and preeclampsia contributes to it," said Anum S. Minhas, M.D., M.H.S., chief cardiology fellow and a cardio-obstetrics and advanced imaging fellow at Johns Hopkins University in Baltimore.

"Given these [health hazards](#) to both mothers and their children, it is important to identify modifiable factors to prevent the development of preeclampsia, especially among Black women who are at the highest risk of this serious pregnancy complication."

This study included data for more than 8,500 women enrolled between 1998 and 2016 in the Boston Birth Cohort. Participants' median age was 25 years old, and they were recruited from Boston Medical Center, which serves a predominantly urban, [low-income](#), under-represented racial and ethnic population. Nearly half of the participants were Black women (47%), about a quarter were Hispanic women (28%) and the remaining were white women or "other" race, according to self-reported information on a postpartum questionnaire. Researchers created a Mediterranean-style diet score based on participants' responses to food frequency interviews and questionnaires, which were conducted within three days of giving birth.

The analysis found:

- 10% of the study participants developed preeclampsia.
- Women who had any form of diabetes before pregnancy and pre-pregnancy obesity were twice as likely to develop preeclampsia compared to women without those conditions.
- The risk of preeclampsia was more than 20% lower among the women who followed a Mediterranean-style diet during pregnancy.
- Black women who had the lowest Mediterranean-style diet scores had the highest risk (78%) for preeclampsia compared to all other non-Black women who more closely adhered to the Mediterranean-style diet.

"We were surprised that women who more frequently ate foods in the Mediterranean-style diet were significantly less likely to develop preeclampsia, with Black women experiencing the greatest reduction in risk," Minhas said. "This is remarkable because there are very few interventions during pregnancy that are found to produce any meaningful benefit, and medical treatments during pregnancy must be approached cautiously to ensure the benefits outweigh the potential risks to the

mother and the unborn child."

Minhas added, "Women should be encouraged to follow a [healthy lifestyle](#), including a nutritious diet and regular exercise, at all stages in life. Eating healthy foods regularly, including vegetables, fruits and legumes, is especially important for women during pregnancy. Their health during pregnancy affects their future cardiovascular health and also impacts their baby's health."

The study's limitations are related to the food frequency interviews: they were conducted once after the pregnancy, and they relied on self-reported information about which foods were eaten and how frequently they were eaten.

More information: *Journal of the American Heart Association* (2022). www.ahajournals.org/doi/10.1161/JAHA.121.022589

Provided by American Heart Association

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