

Vegetable and fish diet linked to reduced risk of high blood pressure in pregnancy

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A diet rich in vegetables and fish is associated with a lower risk of developing high blood pressure, and a related condition known as pre-eclampsia.

These findings were suggested in a large study published in *BJOG: An International Journal of Obstetrics*.

The results also show that a Western diet – high in potatoes, meat, [white bread](#) and margarine – increase the odds of developing these conditions during [pregnancy](#).

Role of the mother's diet

The team of authors from Imperial College London and the University of Bristol say the findings support [women](#) who are at risk of developing these conditions and planning to conceive, or are already pregnant, to eat a well-balanced [healthy diet](#) to reduce their risk.

High [blood](#) pressure, also known as [hypertension](#), affects around 1 in 10 pregnancies. There are different types of hypertensive disorders that occur during pregnancy. The most common are pre-existing high blood pressure, hypertension that develops during pregnancy (gestational hypertension) and [pre-eclampsia](#) which affects 2-8 in 100 women and develops from around 20 weeks of gestation.

In a bid to find out about the role of a mother's diet in the risk of high blood pressure and pre-eclampsia, a team of researchers carried out a large study of the dietary habits of pregnant women and their associated risks of these conditions.

The study involved 55,138 women who took part in the Danish National Birth Cohort.

Women took part in two telephone interviews during pregnancy, at 12 and 30 weeks of gestation and in two interviews at six and 18 months after birth. A questionnaire assessed dietary intake at 25 weeks of gestation.

Decreasing the odds

The results show that a diet rich in vegetables and fish decreased the odds of developing gestational hypertension by 14 percent (5491/39,362 women developed hypertension) and pre-eclampsia by 21 percent (1168/54,778 women developed pre-eclampsia).

Meanwhile, a Western diet increased the odds of developing gestational hypertension by 18 percent (5491/39,362 women developed hypertension) and pre-eclampsia by 40 percent (1168/54,778 women developed pre-eclampsia).

In total, 14 percent of women had gestational hypertension, 2 percent had pre-eclampsia and 0.4 percent had severe pre-eclampsia. On average, women with high blood pressure or pre-eclampsia had a higher body mass index (1.6-2.3 kg/m² higher) than those without the conditions.

Healthy, well-balanced diet

While the study shows only an association between diet and risk of hypertension during pregnancy, the results add to an existing body of evidence that supports the consumption of a healthy, well-balanced diet.

Ms Emmanuella Ikem, School of Public Health, Imperial College London and School of Medicine, University of Bristol, and author of the BJOG study, said: "Our findings support the importance of eating a healthy and well-balanced diet in vegetables and fish and cutting out processed foods where possible. This will help to reduce a woman's risk of developing [high blood pressure](#) and pre-eclampsia during pregnancy.

"Current advice recommends eating at least five portions of different

fruit and vegetables every day, instead of foods high in fat. And generally it is safe to consume fish during pregnancy – no more than two portions of oily fish, such as mackerel or salmon, a week, and no more than two fresh tuna steaks or four medium-sized cans of tuna a week. Women should avoid eating shark, swordfish or marlin."

Encouraging findings

Dr. Pat O'Brien, Consultant Obstetrician and Spokesperson for the Royal College of Obstetricians and Gynaecologists, said: "High blood [pressure](#) and pre-eclampsia can result in harmful complications for mother and baby. These conditions must be managed with medications and monitored closely by healthcare professionals during pregnancy and birth.

"These latest findings are encouraging as it shows there are additional steps a woman can take to reduce her risk of these [conditions](#) by eating healthily. It is also vital that women and their partners are encouraged to manage their weight and to have a healthy [diet](#) ideally before conception, to ensure the healthiest possible pregnancy and best start to their child's life."

Provided by Imperial College London

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