

Organic food may cause fewer pre-eclampsia cases

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Pregnant women who often eat organic vegetables have a lower risk of pre-eclampsia than women who rarely or never do. This is shown in an article using data from the Norwegian Mother and Child Cohort Study (MoBa) published in the *British Medical Journal Open*.

The study included 28,192 women who participated in MoBa from 2002 to 2008. All were pregnant with their first child. 5.3 per cent of the participants developed pre-eclampsia.

Pre-eclampsia is a complication that can occur in the later stages of pregnancy and is characterised by [high blood pressure](#) and protein in the urine. In mild cases, the mother can be unaffected by the condition, but

in severe cases, pre-eclampsia becomes life threatening for mother and foetus. The only treatment is delivery, and pre-eclampsia is therefore a cause of premature birth.

Unknown cause

The cause of pre-eclampsia is unknown. However, many of the [risk factors](#), such as obesity, hypertension and diabetes, are the same as for cardiovascular disease. It has previously been shown that diet during pregnancy can influence the risk of pre-eclampsia, and the new study supports this finding. This is the first time a possible link between the use of organic food and pre-eclampsia has been investigated.

The study compared women who regularly ate organic food while pregnant with those who rarely or never did. Information about organic [food consumption](#) was obtained from a comprehensive dietary questionnaire completed around mid-pregnancy. The question about the use of [organic foods](#) included six food groups: vegetables, fruits, cereals, eggs, milk and meat.

Those who frequently ate organically grown vegetables (8.8 per cent) had a 21 per cent lower risk of pre-eclampsia than those who rarely or never ate organically grown vegetables. For the other food groups, there was no correlation between organic food and pre-eclampsia.

Eat your greens

A diet with an adequate amount of vegetables is recommended for all [pregnant women](#), and this study suggests that there may be additional positive effects of eating organically grown vegetables.

"The result is intriguing and supports that diet during pregnancy can

influence the risk of pre-eclampsia," says Hanne Torjusen, PhD student and researcher at the National Institute for Consumer Research and the Norwegian Institute of Public Health.

The article proposes some hypotheses to explain the results, related to the characteristics of a diet with organically grown vegetables:

1. Lower exposure to pesticide residues
2. Higher intake of the plant's natural protective substances, such as antioxidants
3. A more beneficial gut microbiota that makes the body less vulnerable to inflammatory conditions

From previous studies of organic food consumption among MoBa participants, we know that those who often eat organic food also have a healthier dietary pattern, with a high intake of vegetables, fruits / berries and wholegrain products. The socioeconomic and lifestyle factors that characterise those who choose organic food during pregnancy were also examined. These differences, along with other known risk factors for pre-eclampsia, were controlled for when the relationship between organic food consumption and the occurrence of pre-eclampsia was studied. Nevertheless, other factors that we did not have information about that may have influenced the results cannot be ruled out.

Conclusions about causality cannot be drawn from this type of study, but the finding is still very interesting because this is one of the first studies to examine the link between the use of organic food and pregnancy outcome in a large sample, while taking into account the general diet and other factors.

The work is part of a PhD project which aims to investigate whether organic food in pregnancy is associated with health benefits for mother and / or child.

Hanne Torjusen is employed at the National Institute for Consumer Research (SIFO) and is working on a doctorate in a joint project between SIFO and the Norwegian Institute of Public Health based on data from MoBa.

More information: Torjusen H, Brantsæter, AL, Haugen M, Alexander J, Bakketeig LS, Lieblein G, Stigum H, Naes T, Swartz J, Holmboe-Ottesen G, Roos G, Meltzer HM. "Reduced risk of pre-eclampsia with organic vegetable consumption; results from the prospective Norwegian Mother and Child Cohort Study." *BMJ Open* 2014; 4: e006143.doi: 10.1136 / bmjopen-2014-006143

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