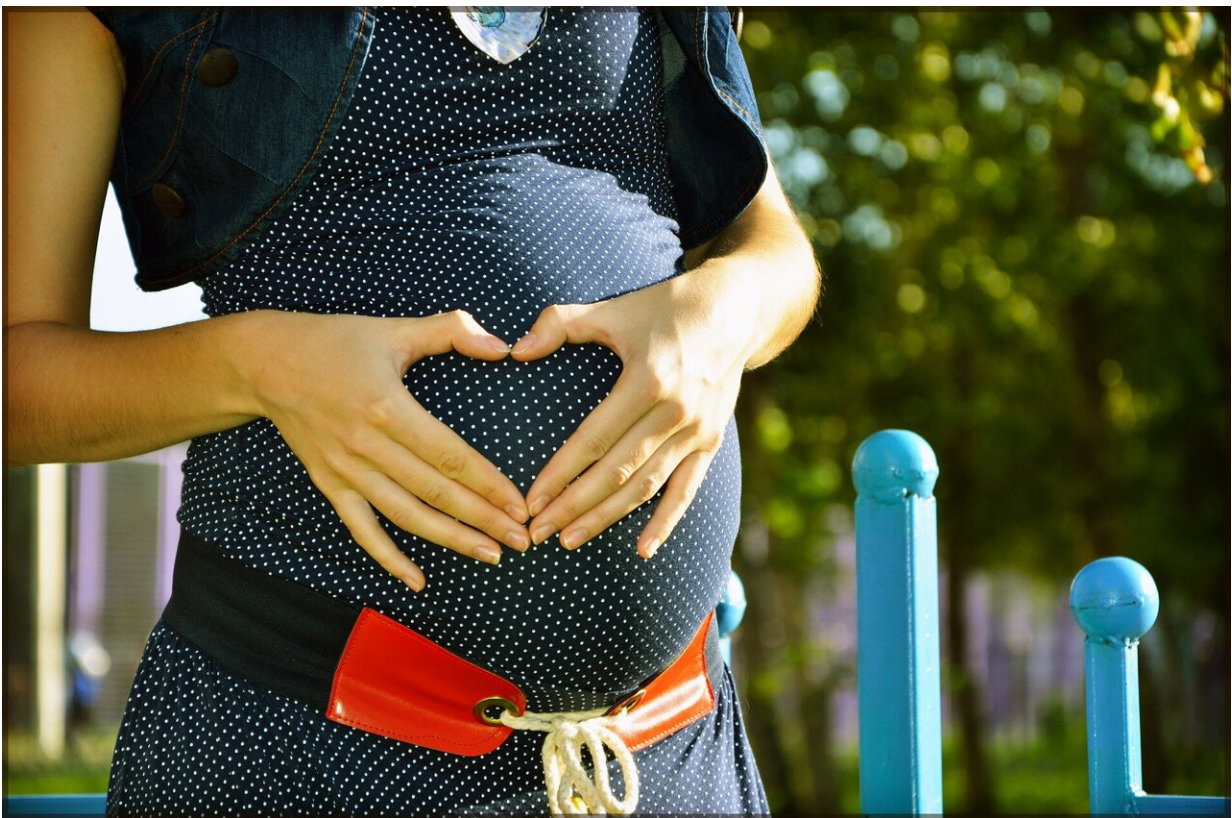


# A healthy lifestyle helps to prevent gestational diabetes in those at highest genetic risk

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Gestational diabetes is the most common health-related challenge during pregnancy. Today, it is diagnosed in every fifth expectant mother in

Finland. Gestational diabetes has a significant impact on the health of both the mother and the child, both during pregnancy and after delivery.

A study conducted at the University of Helsinki investigated the effects of lifestyle intervention on the prevention of gestational diabetes in women at high risk of developing gestational diabetes. In the Finnish Gestational Diabetes Prevention Study (RADIEL), the study subjects received intensified [physical exercise](#) and dietary counseling during [pregnancy](#) and for the first year following delivery.

In this study, a [polygenic risk score](#) (PRS) describing the genetic risk of diabetes was calculated using gene variants known to increase the risk of type 2 diabetes. The risk score for type 2 diabetes was associated with elevated glucose levels in mid- and late pregnancy as well as one year after delivery.

"Gestational diabetes as well as prediabetes and diabetes one year after delivery were also more common among those with higher scores," says Emilia Huvinen, specialist in obstetrics and gynecology.

## **Targeted measures produce better results**

The study discovered that genetic risk also affected the link between lifestyle counseling and gestational diabetes as well as diabetes.

"Based on our research, intensified lifestyle interventions benefitted only women at highest genetic risk of developing type 2 diabetes," Huvinen confirms.

According to her, the results are significant and even globally unique.

"Our study offers one possible explanation for the contradictory results of previous studies investigating the prevention of [gestational diabetes](#)

till now," Huvinen explains.

According to the researchers, genetic-risk scoring would make it possible to identify the expectant mothers most at risk as well as to direct resources and the most effective preventive measures specifically at them. This would be of great importance in terms of both limited societal resources and the health of these mothers and their children.

"At the same time, it's important to realize that, in the case of diabetes, our genetic background does not determine our future. With the help of a healthy lifestyle, you can reverse the effect of a high genetic [diabetes](#) risk," Huvinen says, offering encouragement.

The research was published in *Diabetologia*.

**More information:** Emilia Huvinen et al, Genetic risk of type 2 diabetes modifies the effects of a lifestyle intervention aimed at the prevention of gestational and postpartum diabetes, *Diabetologia* (2022). [DOI: 10.1007/s00125-022-05712-7](https://doi.org/10.1007/s00125-022-05712-7)

Provided by University of Helsinki

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