

# How can weight gain during pregnancy be optimized?

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If a pregnant woman gains excessive weight, it can pose a problem for both the mother and child. As a solution, regular counseling appointments have been proposed. Based on results with 2286 women, a

team of the Technical University of Munich (TUM) in cooperation with the Competence Center for Nutrition (KErn), has now shown that although counseling appointments as part of routine prenatal care can encourage a healthier lifestyle, they do not reduce weight gain.

If a woman gains [excessive weight](#) during pregnancy, it could lead to gestational diabetes, an increased risk of cesarean section or excessive birth [weight](#) of the newborn. The goal of the Bavarian Healthy Living in Pregnancy Study (GeliS) was to make pregnant [women](#) aware of the problem and to improve their dietary behavior and physical activity. More than 70 medical and midwife practices in Bavaria participated in the study.

Women in the study group received three counseling sessions (30-45 minutes each) from week 12 of pregnancy, followed by another consultation several weeks after childbirth as part of their preventive check-ups. They also received additional information material as well as forms that allowed them to independently record and monitor their [weight gain](#) and physical activity. The control group only received the information material.

## **Slight reduction in newborn weight**

Study Director Professor Hans Hauner, professor of nutritional medicine at the TUM, explains the initial findings: "Unfortunately, the counseling concept proved unsuccessful and had no measurable effect on maternal weight [gain](#)."

Despite the counseling, over 45 percent of the participants gained more weight than recommended by the international standard of the Institute of Medicine (IOM)—over 14 kilograms on average. Nor did the counseling lead to a reduction in complications such as gestational diabetes, hypertension or premature labor.

Nevertheless, his research team did find some positive effects: An initial look at the extended data shows that many pregnant women did in fact pay close attention to their diet and exercised regularly. In addition, more than 85 percent of women continued the program to the end and readily took the advice they received to heart. "Evidently, that was not enough to reduce their weight gain. What we saw, however, was a reduction in the size and weight of the babies of the women who participated in the program. That, too, is a small but important achievement," Hauner says. The study team also recommends that counseling sessions be started before the 12th week of pregnancy.

### **Main criterion: suitability for routine use**

In addition, a special feature of the study was the fact that the counseling sessions were integrated into routine prenatal check-ups. It is the largest study in the world to use this approach. "It was important to us that the concept be suitable for routine use. The pregnant women did not have to appear for any additional appointments, and the effort on the part of the doctors and midwives was well defined. Only such solutions are practicable. "Numerous studies have looked after and monitored pregnant women with the help of separate regular appointments," Hauner says. "Even if that has a positive effect, it's not a practical solution for all [pregnant women](#) ? and that should be the goal," Hauner says.

**More information:** Julia Kunath et al, Effects of a lifestyle intervention during pregnancy to prevent excessive gestational weight gain in routine care – the cluster-randomised GeliS trial, *BMC Medicine* (2019). [DOI: 10.1186/s12916-018-1235-z](https://doi.org/10.1186/s12916-018-1235-z)

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[DOI: 10.1186/1471-2393-14-119](https://doi.org/10.1186/1471-2393-14-119)

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