



Health in Pregnancy and Postpartum Study: Overview and Findings

Background

Gaining too much weight during pregnancy can lead to health issues for mothers and their babies. These issues include gestational diabetes and poor birth outcomes like preterm birth. About half of all pregnant women in the U.S. gain more weight than is recommended. Women who enter pregnancy with overweight or obesity are more likely than women with normal weight to gain weight above the recommended level. Health programs that include physical activity and diet goals can be especially helpful for weight control among pregnant women and after they give birth. The Health in Pregnancy and Postpartum (HIPP) program was designed to help women with overweight or obesity gain a healthy amount of weight during pregnancy through physical

activity, diet, and keeping track of their weight gain. The program also helped women lose weight after having their baby.

What we did

We partnered with 13 OB/GYN clinics across South Carolina to recruit women for the study through ads and screenings at clinics. Women were able to take part in the study if they:

- were between 18-44 years old
- were white or Black/African American
- could read and speak English
- were within the first 16 weeks of pregnancy
- planned to stay in the state during the study
- had overweight or obesity

We did not include women who had health conditions that could make exercise during pregnancy

risky. We also did not include women who were told by their doctor not to exercise during pregnancy.

Of the 228 women who enrolled in the study, we assigned at random 114 to receive standard prenatal care (control group) and another 114 to receive the HIPP program (intervention group). Nine women withdrew from the study due to medical reasons. In total, 107 women received standard care while 112 received the HIPP program. The HIPP program, delivered from pregnancy to 6 months after having their baby, included:

- Two in-depth counseling sessions with health educators where women learned physical activity and healthy eating goals for pregnancy and after delivery
- Telephone counseling calls from health educators that helped

women learn and try strategies to make healthy changes

- Podcasts that shared these strategies in a user-friendly way
- Access to a private Facebook group where staff shared regular posts like healthy recipes, exercise classes, and tips, and where women could support and interact with each other

To test our program's effects, all women completed four study visits (early pregnancy, late pregnancy, 6 months after having their baby, 12 months after having their baby). In each visit, they answered survey questions and had their height and weight measured. Participants were asked to wear armbands that measured their physical activity over eight days. They also reported what they ate in the past 24 hours twice (once at the visit, once during the week afterward).

What we found

The average age of women who took part in the study was 29.7 years; 44.3% were Black/African American while 55.7% were white. In terms of weight status, 48.4% had overweight while 51.6% had obesity. Two-thirds of the participants were married, and 42.9% had no other children. Most were college educated (59.5%) and had a family income over \$50,000 (56.9%).

Pregnancy Outcomes: At delivery, women in the HIPP program gained a similar amount of weight as those in the control group. However, there were different results based on participants' race as well as their weight before pregnancy. Women in the HIPP group who were African American and had overweight gained about 10 pounds less than those in the control group. However, women in



the HIPP group who were African American and had obesity gained about 9 pounds more than those in the control group. White women, no matter their weight status or group (HIPP or standard care), gained similar amounts of weight during pregnancy. Importantly, women in the HIPP program had fewer adverse pregnancy outcomes, such as preterm birth or low birth weight, than those in the control group.

Postpartum Outcomes: At both 6 and 12 months after having their baby, women in the HIPP program had lost more pregnancy weight than those in the control group (about 8 more pounds at 6 months and about 5 more pounds at 12 months). Also, at 6 months after having their baby, women in the HIPP program were twice as likely to have lost all weight gained during pregnancy.

Summary

Excess weight gain during pregnancy can lead to health issues for both mothers and their babies. Weight retention after pregnancy can also lead to long-term health issues for mothers. The HIPP study was a randomized trial to help pregnant women with overweight and obesity gain a healthy amount of weight during pregnancy and lose weight after delivery. The HIPP program focused on physical activity, diet, and weight tracking to help women meet weight-related goals. During pregnancy, women in the HIPP program gained similar amounts of weight as those who were in the control group, although results differed based on race and weight status. Women in the HIPP program had fewer adverse pregnancy outcomes than women in the control group. Also, through the first year postpartum, women in the HIPP program were more likely to have lost all pregnancy weight.

To Learn More

The full research reports for the HIPP study are available online:

- <https://pubmed.ncbi.nlm.nih.gov/29371061/>
- <https://www.liebertpub.com/doi/full/10.1089/whr.2020.0089>
- <https://onlinelibrary.wiley.com/doi/full/10.1002/oby.23449>
- <https://onlinelibrary.wiley.com/doi/full/10.1002/oby.23119>
(Abstract only)

If you would like a full version of the research report or if you have questions about the study, please contact Dr. Sara Wilcox, Professor, Department of Exercise Science and Director, Prevention Research Center at the University of South Carolina at wilcox@mailbox.sc.edu. To learn more about the HIPP study, please visit: <http://prevention.sph.sc.edu/projects/HIPP.html>.

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