

# Too much weight in pregnancy may lead to future heart risks

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(PhysOrg.com) -- New research from the University of Bristol's Children of the 90s project have found that piling on too many pounds in pregnancy may lead to future heart risks in the child.

The new research from the University of Bristol's [Children](#) of the 90s project, shows that women who put on more weight during [pregnancy](#) than recommended by the 2009 Institute of Medicine's guidelines had children who at the age of nine:

- were 1 kg heavier than children of mothers who gained the recommended amount
- had larger waists by 2 cm
- had more body fat by 1 kg
- had higher systolic blood pressure by 1 mmHg

- had higher levels of inflammatory markers by 15 per cent
- had lower levels of (good) HDL cholesterol by 0.03 mmol/l

Antenatal records were used to collect detailed information about mothers' weight gain during pregnancy. Over 5,000 Children of the 90s youngsters were assessed at nine-years-old and blood samples were available for 3,457 children. Researchers studied the associations between pre-pregnancy weight and weight gain in pregnancy with cardiovascular disease risk factors in the children.

Professor Debbie Lawlor and her colleagues' research is published in the latest edition of *Circulation: Journal of the American Heart Association*.

She points out that information from the Children of the 90s research has been vital in this research as, at the time the women were pregnant, it was routine to regularly check the weight of pregnant women at every antenatal clinic. However, this practice was stopped in the mid-1990's so that the Children of the 90s study is a unique resource for studying the effects of weight gain in pregnancy.

“What the ideal weight gain is in pregnancy is a much debated question and at the moment we do not know the answer,” cautions Professor Lawlor, who is the deputy director of the MRC's CAiTE Centre\* at the University of Bristol.

This is because weight gain in pregnancy is complex and reflects not only how the baby is growing but also how much weight the mother has put on, how much amniotic fluid there is and how much the mother's blood volume has increased. Therefore the ideal [weight gain](#) in pregnancy should reflect what is best for both mother and child in both the short term (around the time of birth) and the long term.

Dr Abigail Fraser also from the CAiTE Centre and a co-author on the

paper adds: “Our research also shows that perhaps even more important than the weight gained in pregnancy is how much a woman weighs before she gets pregnant.

“This supports initiatives aimed at maintaining a healthy weight in women of reproductive age.”

**More information:** Paper: Association of maternal weight gain in pregnancy with offspring obesity and metabolic and vascular traits in childhood. Abigail Fraser, Kate Tilling, Corrie Macdonald-wallis, Naveed Sattar, Marie-Jo Brion, Li Benfield, Andy Ness, John Deanfield, Aroon Hingorani, Scott M Nelson, George Davey Smith, and Debbie A.Lawlor will be published in the Journal of the American Heart Association on-line edition of Circulation on June 1.

[circ.ahajournals.org/cgi/content/full/109.906081v1](http://circ.ahajournals.org/cgi/content/full/109.906081v1)

Provided by University of Bristol

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