



## MEDIA RELEASE

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### **Excessive dieting during pregnancy might cause problems for child later on**

Mothers who diet excessively during pregnancy might be storing up problems for their child later on and might be increasing the risk that if their child becomes obese, he or she will develop the adverse consequences of obesity sooner rather than later.

Research from the Centre for Reproduction and Early Life at the University of Nottingham has been exploring the possible risks associated with restricted diets during pregnancy in sheep as part of the EU funded Early Nutrition Programming Project. A study, published on 1<sup>st</sup> May in the Journal of the Federation of American Societies of Experimental Biology, has shown that lambs whose mothers had a restricted diet during early pregnancy and who were then allowed to grow fat, have a reduced capacity to store fat compared to fat lambs whose mothers had not been on a restricted diet. This reduced fat capacity meant that as the lambs became fatter they deposited fat in other organs such as the heart instead.

Professor Mike Symonds said, "*Sheep are a very good animal in which to investigate these effects because they have a similar length of pregnancy to humans and the lambs are at a similar stage of development when they are born.*" The way in which the lambs were encouraged to become fat is also similar to the way children who put on excessive weight do so – through not enough exercise and too much food. This study found that when they became obese, the fat tissue of the lambs of the nutrient restricted mothers showed more signs of insulin resistance. This is one of the symptoms of the metabolic syndrome and it suggests that the health of these lambs will deteriorate sooner than the other lambs, even though they were equally fat.

Overweight adolescents are much more likely to develop the metabolic syndrome than normal weight teenagers. If the effects seen in this study are the same in humans it suggests that fat adolescents whose mothers dieted during pregnancy and lost weight, might face even greater problems than other fat teenagers. Professor Symonds concluded, *“These findings emphasize the need to maintain optimal food intake throughout pregnancy and also indicate the potential dangers of excessive dieting at this time.”*

Professor Lucilla Poston, the Director of the Maternal and Fetal Research Unit at King's College London commented, *“This interesting study emphasises just how important it is that expectant mothers are aware of eating a sensible diet in pregnancy. Women should not go on a crash diet in pregnancy- whilst it might make them thinner, their babies could end up being overweight. It is much better to think about losing weight sometime before planning a pregnancy, and then to try hard not to put on too much weight after pregnancy.”*

**ENDS/Note for Editors follows.**

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## Notes for Editors

1. The study was supported by the British Heart Foundation and the European Union Sixth Framework Programme for Research and Technical Development of the European Community–The Early Nutrition Programming Project (FOOD-CT-2005-007036) as part of a much larger ongoing research project funded by the European Union to investigate the effects of early nutrition on later health outcomes, the Early Nutrition Programming Project – EARNEST ([www.metabolic-programming.org](http://www.metabolic-programming.org)).

This 5 year research programme is following up a number of intervention trials in early life to see whether the interventions have long term effects on programming various physiological functions. Together with studies in animals to investigate possible mechanisms and observational studies in large numbers of people, the project hopes to gain a better understanding of how conditions in early life, either pre- or post-natally can affect life-long health.

2. **Diary date to note:** Results from the EC-funded Early Nutrition Programming Project (EARNEST) will be presented at **The Power of Programming** international conference 6/8 May 2010 in Munich. For more information log on to [www.metabolic-programming.org](http://www.metabolic-programming.org)

**THE POWER OF PROGRAMMING**  
International Conference on Developmental  
Origins of Health and Disease

Munich, Germany 6th - 8th May, 2010

The banner features a background image of a cityscape with mountains in the distance. It includes three logos: a globe with 'DOHaD' below it, a teddy bear with 'EARNEST' on its chest, and a circular logo with 'EARLY NUTRITION ACADEMY' around a central figure.