Healthy pregnant women do not need extra calcium

Embargoed: 00.01am 1st October 2008

Well-nourished women who boost their calcium intake in pregnancy may be doing it unnecessarily, new research suggests today.

The British study, funded by the Medical Research Council, revealed significant decreases in the bone mineral status of healthy women during pregnancy, independent of calcium intake. The research was published in the American Journal of Clinical Nutrition.

The study, carried out at MRC Human Nutrition Research (HNR) in Cambridge involved scanning the bones of 34 healthy women before they became pregnant and in the two weeks after giving birth, and comparing with data from 84 healthy non-pregnant, non breastfeeding women of the same age and over the same time.

The aim was to investigate changes in bone mineral content, bone size and bone mineral density of the whole-body, spine, forearm and hip during pregnancy and to consider the impact of calcium intake. The results showed that reductions in bone mineral content occurred during pregnancy but the differences between women were not a result of differences in calcium intake.

Dr Gail Goldberg, Senior Research Scientist in the Nutrition and Bone Health Research Group at HNR said: "These results show that the substantial skeletal changes in well-nourished pregnant women can be regarded as a physiological effect of the pregnancy, and are not related to calcium intake or the amount of weight gained. This supports current recommendations that well-nourished women do not need extra calcium in pregnancy for their health or that of their baby.

"However, it's important to note that these findings may not apply to women who are under-nourished and those women on low calcium diets. These findings involved women who were well-nourished and the majority had a calcium intake of more than 700mg/day, the UK recommendation for calcium for women aged between 19 and 50 years."

Ongoing work at HNR is investigating the effects of nutrition on long-term bone health in women of reproductive age and whether the skeletal changes measured in this study are long-term or are reversed once pregnancy and breastfeeding are completed.

"These studies include work being undertaken in The Gambia where calcium intakes are less than 400 mg/day. This work will better define the calcium requirements of the mother, foetus and newborn baby," said Dr Goldberg.

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Notes to Editors:

- Changes in bone mineral status and bone size during pregnancy and influences of body weight and calcium intake, *American Journal of Clinical Nutrition* 2008; 88: 1032 Hanna Olausson, M Ann Laskey, Gail R Goldberg, and Ann Prentice.