Higher Omega-6 Intake During Pregnancy Means Fatter Children

Source: Food Product Design

Higher intake omega-6 (n-6) polyunsaturated fatty acids (PUFAs) during pregnancy can result in heavier offspring, according to a new study published in the *Journal of Clinical Endocrinology and Metabolism*.

Researchers at the Medical Research Council (MCR) Lifecourse Epidemiology Unit, University of Southampton assessed fat and muscle masses of 239 boys and girls at age 4 and 6 years who were part of the Southampton Women's Survey (SWS)—a large prospective mother-offspring cohort. Assessments were compared to the concentrations of PUFAs, measured in blood samples that were collected from their mothers during pregnancy. The research team found children born to mothers who had higher levels of n-6 PUFAs during pregnancy had a higher fat mass. Ph.D. Nicholas Harvey, senior lecturer at the MRC Lifecourse Epidemiology Unit, who led the research with Rebecca Moon, clinical research fellow said, "Obesity is a rising problem in this country and there have been very few studies of mother's fatty acid levels during pregnancy and offspring fat mass. These results suggest alterations to maternal diet during pregnancy to reduce n-6 PUFAs intake might have a beneficial effect on the body composition of the developing child."

While other studies have shown low fish intake to be associated with fetal growth, results from this study showed weaker associations between a mother's levels of omega-3 (n-3 PUFAs), found in fish, and muscle mass of their offspring.

Whether there is an association or opportunity to address children's muscle mass during their prenatal development via PUFA consumption is unknown. According to Moon, "n-6 and n-3 PUFAs seem to act in opposite directions on fat mass; previous trials have attempted to use n-3 supplementation to reduce fat mass, but our results suggest that such an approach might work best when combined with a reduction in dietary n-6 intake."

Sources:

University of Southampton: Limiting polyunsaturated fatty acid levels in pregnancy may influence body fat of children