MEDIA RELEASE

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Taking fish oil supplements in late pregnancy might reduce the risk of your child developing asthma

Mothers who take fish oil supplements during the last trimester of their pregnancy could be reducing the risk of their child going on to develop asthma, claims a study published today in the American Journal of Clinical Nutrition (9th July, Volume 87, Issue 7).

The research, carried out by a team from Denmark as part of the EC-funded EARNEST project ,[1] traced the children born to mothers who had taken part in a trial conducted in1990. In this original trial, more than 500 pregnant women were randomised into three different groups for the last 10 weeks of their pregnancy. One group was given fish oil supplements, another olive oil supplements and the third no supplements. The aim of that trial was to see whether fish oil reduced the risk of pre-term delivery and low birth weight. Mothers in the fish oil supplementation group increased, on average, the length of their pregnancies by 4 days and the average birth weight of their babies by about 100g.

"*We wanted to see whether the effects of fish oil in very early life had any effect on the child's risk of developing asthma as they grew up,*" said Professor Sjurdur F Olsen, the lead investigator from the Maternal Nutrition Group, Statens Serum Institut in Denmark. The researchers managed to trace all but three of the babies born to the mothers in the original trial.

By the time they were sixteen years old, 19 children had developed such severe asthma at some point that they had had to go to hospital. The risk of developing asthma was reduced in those whose mothers had been given fish oil supplements, compared to those whose mothers had been given olive oil supplements.

"*There is strong biochemical evidence that the omega-3 fatty acids in fish oil may have modulatory effects on the immune system. The reason fish oil might protect a fetus from developing asthma in later life could possibly also be related to its effect on increasing pregnancy duration,*" suggested Professor Olsen. Pre-term children have a higher risk of developing asthma and it is possible that the omega 3 fatty acids found in fish oils could both reduce the risk of pre-term birth and the likelihood of a baby later becoming asthmatic through their effect on reducing inflammation.

"It may be that the period shortly before delivery is the critical window for these effects of omega 3 fatty acids," Professor Sjurdur F Olsen said.

However, Professor Sjurdur F Olsen added a note of caution: *"These are results from a relatively small trial and therefore it is most important that our results are confirmed by other trials before we change any dietary recommendations for pregnant women."*

ENDS/ notes follow

[1] EARNEST – Early Nutrition Programming Project www.metabolic-programming.org

Further media information
Rhonda Smith/Marc Catchpole Minerva PRC Ltd (UK)
+44 (0) 1264 710428 - +44(0)7887-714957 +44(0) 7753-821525 info@minervaprc.com

To arrange interviews with Prof Sjurdur F Olsen contact
Maternal Nutrition Group
Division of Epidemiology
Statens Serum Institut
Dk-2300 Copenhagen S, DENMARK
Email sfo@ssi.dk, mobile phone +4522289568

Prof Sjurdur F Olsen is also
Adjunct Professor of Nutrition
Department of Nutrition
Harvard School of Public Health
sfolsen@hsph.harvard.edu

Notes for editors

1. This study was carried out as part of a much larger ongoing research project funded by the European Commission to investigate the effects of early nutrition on later health outcomes, the Early Nutrition Programming Project (www.metabolic-programming.org). This 5 year research programme (acronym EARNEST) 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 postnatally can affect life-long health.

2. EARNEST has committed itself, as part of its implementation plan, to establish the Early Nutrition (Programming) Academy (ENA). The key aims of the Early Nutrition Academy are to foster early nutrition research in particular in nutrition in women of childbearing age, infants and children, covering basic science, epidemiology and applied nutrition, and to establish standards in this research as well as in nutrition practice.

www.earlynutrition.org; www.metabolic-programming.org