Maternal diet of oily fish may prevent asthma in offspring

- 26/05/2004 - Pregnant women with asthma who eat oily fish, such as salmon or trout, may help protect their children against developing asthma, according to a study presented at the American Thoracic Society International Conference in Orlando yesterday.

The study also found that children whose mother ate fish sticks during pregnancy were twice as likely to develop asthma, whether or not their mothers had asthma themselves. "Fish sticks are deep-fried, and they contain omega-6 fatty acids, which encourage inflammation of the airways," said study co-author Frank Gilliland, professor of preventive medicine at the Keck School of Medicine at the University of Southern California in Los Angeles.

However oily fish contain omega-3 fatty acids, which appear to be anti-inflammatory, and lead to the reduced potential for developing asthma and allergies, he said. The study found that children whose mothers with asthma ate oily fish during pregnancy were 71 per cent less likely to develop asthma on average; the more oily fish a woman ate, the less likely her child was to develop asthma.

Children with non-asthmatic mothers did not benefit from having their mother eat oily fish during pregnancy. "A family history of asthma is a very strong risk factor for a child developing asthma," Dr Gilliland said. "It appears that oily fish interacts with the genes involved in the predisposition to develop asthma, and somehow reduces the risk."

There is already some evidence to show that a mother's diet rich in fish oils may help prevent allergies in offspring. A trial reported in the December issue of the Journal of Allergy and Clinical Immunology (vol 112, no 6) examined the effect of fish oil supplementation on the offspring of 40 pregnant women with a history of hay fever or asthma, making their children at increased risk of developing allergies.

At one year of age the offspring of mothers who had taken fish oil supplements were three times less likely be sensitized to egg allergen, and though they were more likely to develop atopic dermatitis, they were 10 times less likely to have severe disease. "We are learning more and more about the importance of foetal exposure to different substances, and how this affects the programming of the baby's immune system," noted Dr Gilliland.

The prevalence of asthma is increasing in all western populations and diet is being increasingly investigated as a factor in this increase. From 1980 to 1995, the prevalence of asthma increased 5 per cent each year among American children, and the death rate for children 19 years of age and younger increased by 78 per cent between 1980 and 1993, according to the Asthma and Allergy Foundation of America.