

Advances in Neonatal and Pediatric Nutrition & 14th International Congress on Advances in Natural Medicines, Nutraceuticals & Neurocognition

July 19-21, 2018 | London, UK

Omega 3 fatty acids- A new therapeutic target for childhood asthma?

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Asthma has been referred to as an umbrella of multifactorial diseases with similar clinical features including mast cell and eosinophil infiltration causing airway hyperresponsiveness, inflammation and airway obstruction that subsequently lead to symptoms of wheeze, cough, dyspnoea, tightness in the chest especially at night and early morning. It has been hypothesized that diets low in omega 3 fatty acids have contributed to the escalation in childhood asthma prevalence. We conducted a clinical trial of six months duration to investigate the effect of fatty fish ($\Omega 3$) intake in paediatric asthma. Seventy-two (72) children (54.2% boys; 45.8% girls), 5-12 years old with doctor-diagnosed 'mild asthma' were selected from a paediatric clinic in Athens, Greece and randomized to two groups. The intervention group consumed two fatty fish meals per week (≥ 150 g fillet fatty fish/meal) as part of the Greek Mediterranean diet and the control group, their usual diet. Pulmonary function was assessed using spirometry, bronchial inflammation with exhaled Nitric Oxide analysis (eNO), asthma control and quality of life qualitatively using scores. Multiple linear regression model showed a statistically significant change in eNO for the intervention group (95%CI: -27.39, -0.91; beta = -14.15; p=0.037) after adjusting for confounders of age, sex, regular physical activity and BMI. A unit increase in fatty fish intake reduced bronchial inflammation by 14 ppb. No significant differences were observed for spirometry, asthma control or quality of life. This clinical study highlighted that dietary $\Omega 3$ fatty acids intake as fatty fish might be a useful adjunct therapy for paediatric asthma.

Biography

Maria Papamichael is a registered dietician/sports nutritionist who has dedicated her life in educating people the importance of good nutrition and exercise in the prevention and management of disease as well as in improving health and well-being. Being an asthma sufferer since childhood, has motivated her to undertake a PhD research project at La Trobe University to investigate the prophylactic potential of a Mediterranean diet enriched with fatty fish in the management of asthma in children.

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