Does Mediterranean dietary pattern enriched with fatty fish improve respiratory function in asthmatic children?
A Randomized Controlled Trial

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Background

Globally, asthma has rapidly become the most frequent allergic disease in children. It causes significant burden and is the most common reason for hospitalisation, absence from school and work for sufferers and their parents/carers, respectively [6], [7]. There is no cure for asthma, it can only be controlled by medication. Emerging evidence from observational studies indicate that diet and lifestyle play a role in the aetiology and management, with potential for a protective effect of a Mediterranean diet [1], [2]. In particular, fatty fish consumption has been associated with improved pulmonary function and reduced asthma symptoms in children [3], [4], [5]. However, randomized controlled trials are lacking.

Aim

To investigate whether fatty fish consumption as part of a Greek Mediterranean dietary pattern improves pulmonary function and reduces asthma symptoms in children.

Materials & Methods

Study Design: Parallel Randomized Controlled Trial

Groups:

a) Intervention group: Consumption of two fatty fish meals (≥150gr cooked) per week as part of Greek Mediterranean Dietary pattern
b) Control group: Consumption of usual diet.

Enrolment date: November 2016

Outcome measurements: baseline, 6 months

Target population: Children aged 5-12 years old suffering from mild asthma

Sample size: N=72

Recruitment: Paediatric Asthma Clinic, Greece

Assessment Tools:

- **Pulmonary function**: Spirometry (FEV1), Exhaled Nitric Oxide Analysis (eNO).
- **Asthma symptoms**: Child Asthma Control Questionnaire (ACQ)
- **Quality of life**: Paediatric Asthma Quality of Life (PAQLQ) Questionnaire
- **Dietary habits**: Food Frequency Questionnaire (FFQ)
- **Adherence to Mediterranean Diet**: KIDMED Index
- **Biomarkers**: Plasma fatty acid composition, antioxidant levels, Vitamin D, Metabolic profile (Kreb cycle metabolites)

References


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Application

This study is important in establishing the effect of a Mediterranean diet enriched with fatty fish in the management of asthma in children. **Findings will inform the development of dietary guidelines for asthma management in children.**