Clinical Update

Omega-3, vitamin C, and zinc may ease childhood asthma

Study on 60 asthmatic children showed a combination supplement containing omega-3, vitamin C and zinc may improve symptoms of asthma.

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The trio of nutrients were associated with improvements in asthma measures, lung function, and markers of inflammation in the lungs, according to findings of a randomized, double blind, placebo-self-controlled crossover trial published in Acta Pædiatrica. The study adds to a growing body of science linking fish consumption and fruit and vegetable intakes to a reduction in the risk or asthma, or improvements in the symptoms associated with the condition.

According to the American Lung Association, almost 20 million Americans suffer from asthma. The condition is reported to be responsible for over 14million lost school days in children, while the annual economic cost of asthma is said to be over $16.1 billion.

Study details

Dr. Al Biltagi and his co-workers recruited 60 children (average age 8, average BMI 17 kg/m2) with moderate persistent asthma and randomly assigned them to alternating phases of supplementation with omega-3 (1000 mg of a triglyceridic oil containing about 30 per cent EPA/DHA), zinc (15 mg), and vitamin C (200 mg), either singly or in combination for six weeks.

Asthma was analyzed using the childhood asthma control test (C-ACT), while lung function and inflammatory markers were also assessed. The Egyptian researchers report significant improvement of C-ACT for all four interventions (three single nutrients or a combination of the nutrients). The combination of all three was associated with an increase in C-ACT scores from 16.5 to 22.1, said the researchers.

Commenting on the potential mechanisms at work, the research note that omega-3 and zinc have anti-inflammatory effects. Moreover, vitamin C is an antioxidant and this may “counteract oxidant stress and reduce the external attacks (bacteria, virus, toxins and xenobiotics) in the lung,” said the researchers. “The antioxidant effect of vitamin C may modulate the development of asthma and the impairment of pulmonary functions.”

Zinc may work via different mechanisms, they said, including the regulation of T-cell lymphocytes, which are part of the bodies allergy response. “It also inhibits the activation of NF-kB, a transcription factor implicated in the expression of many proinflammatory genes,” they added.

Source: www.nutraingredients.com