The Third International Anxiety Congress
Shefa Neuroscience Research Center, Tehran, Iran, 23-24 November, 2016
The Neuroscience Journal of Shefaye khatam
Volume 4, No. 3, Suppl 1

Poster Presentation

Food and Behavior: Long Chain Poly Unsaturated Fatty Acids and Anxiety

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Published: ***23-24 November, 2016***

Abstract

The anecdote "we are what we eat" in line with the doctrine of Hypocrates in 400 BC "Let food be thy medicine and medicine thy food" are vividly portray the importance of daily regimen in human health and body well-functioning. There is a growing body of evidence that suggests the relative intake of specific nutrients can have a profound effect on physiology of individuals. In the meantime, fats in particular the fatty acids are of particular interest in this regard. Any deviation from evolutionarily adapted fatty acid profile of diet would give rise to mental illnesses such anxiety. A Google scholar search using terms "anxiety", "diet supplementation", "fatty acids", "human brain development", "human evolution history and DHA", "poly unsaturated fatty acids" and "highly unsaturated fatty acids" was conducted. The abstract, and, if necessary, the full paper, of any positive 'search result' was then scrutinized further to determine whether or not it was valid. Hints showed that there is probable relationship between individuals' diet and their mental health or illness. Some results clearly depicted that one might suffer from unbalanced ω-6:ω-3 PUFA ratio in their diets. On the other hand, there is a promising venue for safe treatment of mental illness such gestational anxiety using dietary supplementation with ω-3 fatty acids. It has also been well documented that subjects suffering from anxiety-like behaviors had increased plasma corticosterone levels. The "phospholipid hypothesis" has successfully been implemented in anxiety behavior explanation in people with lower daily ω-3 PUFAs intake. Literature clearly demonstrated that person might suffer from unbalanced ω-6:ω-3 PUFA ratio in diet with increased plasma corticosterone levels. On the other hand, there is a promising venue for safe treatment of mental illness such gestational anxiety using dietary supplementation with ω-3 fatty acids.

Keywords: Psychiatric illnesses, Anxiety, Diet, ω-6:ω-3 PUFA ratio, EPA, DHA

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