

The Psychoneuroimmunity of Stress, Diet and Lifestyles in Depression

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Abstract

The increasing global burden calls for the development of novel approaches to tackle unmet needs in prevention and treatment of depression underlying biological, psychological and social dysregulations. Depressed patients with chronic low-grade inflammation might be classified as a subgroup of major depressive disorder (MDD); therefore, looking for antidepressant therapies from anti-inflammatory pathways could improve treatment effectiveness for this subgroup of patients. Eicosapentaenoic acid (EPA), endocannabinoids (eCBs), and melatonin play a vital role in the mind-body harmony. EPA is an omega-3 fatty acid that is essential for maintaining a healthy brain and nervous system. eCBs are a group of signaling molecules that modulate a wide range of physiological and cognitive processes. Melatonin is a hormone that regulates sleep-wake cycles and circadian rhythms. The effects of EPA, eCBs, and melatonin on mental and medical diseases suggest that fine-tuning these molecules can be a powerful strategy for promoting mind-body health. For example, increasing EPA levels through diet or supplementation may be beneficial for mental health, sleep, and circadian rhythms. Additionally, targeting the eCB system with natural compounds or pharmaceuticals may offer a new approach to treating a wide range of mind-body disorders. This presentation discusses our latest translational research in depression with EPA, eCBs, and melatonin, and their implications for providing insights in daily lifestyle interventions.

