

Depression, Suicide, Aggression and the Neurobiology of Serotonin in Brain: The Varied Clinical Presentations of Major Depressive Disorders and Nutritional Therapies for Mental Health

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Abstract—According to the Diagnostic and Statistical Manual of Mental Disorders, 4 out of the 10 leading causes of disability in the US and other developed countries are mental disorders. Major depression, bipolar disorder, schizophrenia, and obsessive compulsive disorder (OCD) are among the most common mental disorders that currently plague numerous countries and have varying incidence rates from 26 percent in America to 4 percent in China. Though some of this difference may be attributable to the manner in which individual healthcare providers diagnose mental disorders, this noticeable distribution can be also explained by studies which show that a lack of certain dietary nutrients contribute to the development of mental disorders. Notably, essential vitamins, minerals, and omega-3 fatty acids are often deficient in the general population in most of the developed countries; and are exceptionally deficient in patients suffering from mental disorders. Studies have shown that daily supplements of vital nutrients often effectively reduce patients' symptoms. Supplements that contain amino acids also reduce symptoms, because they are converted to neurotransmitters that alleviate depression and other mental disorders. Based on emerging scientific evidence, this form of nutritional supplement treatment may be appropriate for controlling major depression, bipolar disorder, schizophrenia and anxiety disorders, eating disorders, attention deficit disorder/attention deficit hyperactivity disorder (ADD/ADHD), addiction, and autism. The aim of this manuscript is to emphasize which dietary supplements can aid the treatment of the four most common mental disorders currently affecting the developed and developing countries: major depression, bipolar disorder, schizophrenia, and obsessive compulsive disorder (OCD). Most antidepressants and other prescription drugs cause severe side effects, which usually discourage patients from taking their medications. Such noncompliant patients who have mental disorders are at a higher risk for committing suicide or being institutionalized. One way for psychiatrists to overcome this noncompliance is to educate themselves about alternative or complementary nutritional treatments. Although in the cases of certain nutrients, further research needs to be done to determine the best recommended doses of most nutritional supplements, psychiatrists can recommend doses of dietary supplements based on previous and current efficacious studies and then adjust the doses based on the results obtained.

Keywords: Depression, Bipolar Disorder, Schizophrenia, OCD, Nutritional Therapies, Mental Health, Serotonin.
