

## **Food Allergies, Intolerances and Sensitivities: A Link to Mental Health Issues**

An estimated 26% of Americans ages 18 and older -- about 1 in 4 adults -- suffers from a diagnosable mental health disorder (depression, anxiety, bipolar, schizophrenia, others) in any given year. Recent meta-analyses have confirmed that these mental health issues are associated with increased levels of both peripheral inflammatory markers and systemic inflammation and with increasing IgG levels in relation to foods.

Mental health issues have always been one of the most challenging conditions to treat. Research has indicated that mental health issues - from generalized anxiety, mild-severe depression, schizophrenia, bipolar, ADHD, autism spectrum disorder and substance abuse issues may actually be linked to GUT related food sensitivities/intolerances.<sup>1,2</sup>

The main link to all these mental illnesses and at the base of most chronic health problems in our patients is due to METAFLAMMATION – the chronic systemic inflammatory processes. metaflammation, a chronic state of hyperimmune issues that include unregulated inflammatory compound release. Current literature supports the fact that food allergies, intolerances and sensitivities are directly tied to metaflammatory sequelae and the release of GUT mucosal related IgE and IgG type antibodies.<sup>3,4,5</sup> This inflammatory signaling “drives” patient’s health conditions, symptoms and disorders. One of the main culprits of metaflammatory signaling is the GUT, including mucosal integrity and microbiome issues. How we address metaflammation dictates the health outcomes and the ability to overcome these illnesses.

### **Mental Health Issues and Food Allergies/Sensitivities and Intolerances**

Given diet’s role in modulating inflammatory processes, excessive calorie-dense, nutrient-deficient processed food intake may contribute toward the heightened inflammation observed in mental illnesses.<sup>6</sup> Cross-sectional studies indicate that individuals with mental illness, particularly schizophrenia, consume more pro-inflammatory foods and fewer anti-inflammatory nutrients than the general population.<sup>7</sup> Cohort studies indicate that high levels of dietary inflammation are associated with increased risk of developing depression, with randomized controlled trials reporting that dietary interventions improve symptoms of depression.<sup>8</sup>

Calorie-dense diets that are high in saturated fats and simple carbohydrates appear to increase peripheral inflammatory markers, whereas diets high in fiber and vegetables reduce inflammation.<sup>9,10,11</sup> Systematic reviews of dietary patterns in people with mental illnesses have shown elevated intakes of sugar-sweetened soft drinks, refined grains, and processed meat are common in this population.<sup>12,13</sup>

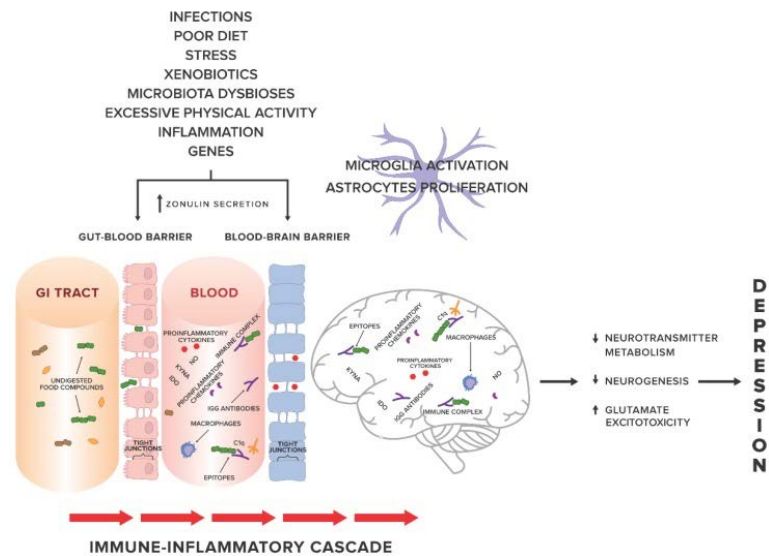
Clinical evidence of gut dysbiosis in human subjects with substance use disorder as well as preclinical evidence of gut dysbiosis in animal models of drug addiction exists.<sup>14</sup> Changes in short chain fatty acids (SCFAs) is reported to directly alter histamine metabolism and lead to histamine intolerance, which drives the brain toward depleted dopamine pools and cravings for drugs and also foods.<sup>15</sup>

The disruption of the gut-brain axis (enteric nervous system), which is related to low-grade inflammation occurring peripherally and, in the CNS, is directly related to mental health issues.<sup>16</sup> Altered gut microbiota is suggested to be responsible for increased gut permeability, leading to loss of tight-junction barrier integrity.<sup>17</sup> Insights into the gut-brain crosstalk have revealed a complex communication system that not only ensures the proper maintenance of gastrointestinal homeostasis, but is likely to have multiple effects on mood, affect, motivation, and higher cognitive functions.<sup>18</sup>

Given there is increasing evidence that IgG food hyperreactivity is a major factor in Gut-Brain signaling issues, finding these food allergies in individuals is of utmost importance.<sup>19</sup> **Testing for food allergies IgE, IgG, IgG4 and complement reactivity in patients with mental illnesses could play a valuable role in managing their condition.**

A 2018 large-scale study of the UK Biobank compared the macro- and micro-nutrient intake of individuals with diagnosed depression (MDD) (n = 14,619), bipolar disorder (n = 952), and schizophrenia (n = 262) to healthy controls (n = 54,010), showing that people with severe mental illnesses consumed significantly more carbohydrate, sugar, fat, and saturated fat than healthy controls, even when controlling for age, gender, education, BMI, social deprivation, and ethnicity.<sup>20</sup> Along with poor

mental health, people with mental illnesses generally experience issues in physical health, including elevated rates of obesity, Type 2 diabetes/insulin resistance, and cardiometabolic disorders, ultimately contributing to a reduced life expectancy of around 20 years.<sup>21</sup>



*Over a 15-year period, a study of over 250,000 patients, reported more than 10% of people with at least one allergy developed a psychiatric condition, compared to 6.7% of people without any allergies. (Tzeng NS, et al. 2018)<sup>22</sup>*

### Conclusion

Testing for IgE, IgG, IgG4 and complement vs. a food panel is a valuable tool for improving patient outcomes in patients with a mood disorder or mental illness patient, including anxiety, depression, schizophrenia, bipolar disorder, ADHD, substance abuse and others. Certain foods may trigger inflammation, GUT microbiome issues that then disrupt GUT-Brain signaling.

Also, targeting a specific diet that minimizes foods that provoke these responses will decrease many types of inflammation and symptoms and is foundational to wellness. By incorporating a less inflammatory diet, we are optimizing patient's chance for success and improved health. Remember that HPA axis dysregulation due to chronic stress and imbalanced cortisol levels is directly related to GUT issues, so take that into consideration when issuing a treatment plan. Proper diet, stress control and sleeping 7-8 hours a night results in stronger immunity and better protection for the body from many factors including foods that irritate the GUT.

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