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2021 SUBMITTED ABSTRACTS

POSTER PRESENTATIONS

AMINO ACID THERAPY FOR MOOD DISORDERS: A CASE SERIES

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Abstract:

Background. The Office of Disease Prevention and Health Promotion reports that mental health disorders are one of the most "common causes of disability," affecting 18.1% of adults in the United States. This case series examines the use of amino acid therapy for the management of mood disorders as a treatment option.

Case Presentations. The three cases included a personalized amino acid therapy protocol, nutrient cofactor supplementation and diet and lifestyle recommendations. Clinical assessment questionnaires completed by the clients at intervals during care were used to determine proper amino acid dosing. The first client is a 65-year-old Caucasian male presenting with increased stress, anxiety, depression, and sleep disturbances. A marked decrease in symptoms was experienced three months. The second client is a 24-year-old Caucasian male presenting with concentration and memory impairment, anxiety and depression, food cravings leading to binge eating of carbohydrates, low sleep quality, and unsustainable energy. A substantial decrease in symptoms was achieved in under four months. The third client is a 23-year-old Caucasian male presenting with depression, easy agitation while ruminating on negative thoughts, difficulty focusing and making decisions, poor memory, concentration, and sleep quality, gaming addiction, and low energy and motivation. The client experienced considerable relief from all symptoms in under six months.

Conclusion. The case series demonstrated the value, safety, and efficacy of utilizing amino acid therapy along with dietary and lifestyle choices in the treatment and management of mood disorders, resulting in marked improvements in a wide range of mood related symptoms in 3-6 months.

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A SYSTEMATIC REVIEW TO PROPOSE AN EVIDENCE-BASED NUTRITION PROTOCOL IN DEPRESSION

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Abstract:

Background. Rates of depression have been rising steadily over the last several decades with more than 264 million people affected, making it one of the top three burdens globally. The pandemic has brought on a greater risk of depression. 42% of individuals surveyed in December 2020 by the US Census Bureau reported depressive symptoms. Many factors, including poor diet quality, play a role in the development of depression during traumatic events like the pandemic. A low-quality dietary pattern has been associated with obesity, low-grade chronic inflammation, dysbiosis, increased cortisol levels and monoamine neurotransmitter deficiency. Among others, these factors have been correlated with an increased risk of depression. Additionally, antidepressants have been shown to be

ineffective in up to 40% of individuals. Therefore, the potential of a nutrition-focused approach could be helpful.

Purpose/Objectives: A systematic review was conducted to determine if an evidence-based, targeted nutrition protocol could be developed for the prevention or treatment of depressive symptoms.

Methods: The proposed nutrition protocol was developed from the results of nearly 100 studies that strongly indicate certain nutrients and dietary patterns have the potential to reduce depressive symptoms.

Results: The Mediterranean-style and anti-inflammatory dietary patterns were associated with the greatest improvements by potentially mitigating oxidative stress and systemic inflammation associated with depression. Supplementation of certain nutrients including B vitamins, vitamin D, omega-3 fatty acids, zinc, or magnesium were associated with a decrease in depressive symptoms.

Conclusions: A proposed nutrition protocol was developed from the summary findings of this unique review and will be presented in this session.

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THE PSYCHOLOGICAL, METABOLIC, AND NEUROLOGICAL ASPECTS OF PTSD—A FUNCTIONAL TRAUMA NUTRITION APPROACH

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Abstract:

Background. PTSD is considered a neuropsychiatric anxiety disorder based on the DSM-IV classification and includes symptoms associated with psychological and physical trauma and increased avoidance, detachment, dissociative, suicidal, irritability, and hypervigilance behaviors along with various physical symptoms (Aaseth et al, 2019; Gandubert et al, 2016; Glover et al, 2015; Levine et al, 2014; Kolassa et al, 2007). Standard of care approaches often include counseling and pharmaceutical interventions, which may offer only limited relief indicating that innovation in PTSD management is needed (Mellon et al, 2018). PTSD may affect those who have experienced psychological and physical trauma and can be acute and chronic in nature(Levine et al, 2014). PTSD may be more severe or reduced in nature due to genetic predisposition, pre-trauma factors, and the nature of care after the acute traumatic event (Gandeubert et al, 2016; Bryant et al, 2008). In recent years, significant research has discovered the metabolic and neurological nature of PTSD beyond its psychological and psychiatric foundations along with its comorbid conditions(Ilchmann-Diounou and Menard, 2020; Aaseth et al, 2019; Blessing et al, 2017; Gradus et al, 2017; Michopoulous et al, 2016; Rosenbaum et al, 2015; Talbot et al, 2015; Sueki et al, 2014; Fadgyas-Stanculete et al, 2014; Pagoto et al, 2012; Weiss et al, 2011; Oglodek , 2011). PTSD has been shown to mimic Metabolic Syndrome (MetS) while significantly increasing the risk

for diabetes and cardiovascular disease (Aeseth et al, 2019; Michopoulouset al, 2016; Rao et al, 2014). Functional and clinical nutrition approaches for PTSD can help to alleviate symptoms and attempt to reduce the risk for comorbid conditions while reducing impacts on healthcare systems, job forces, mortality, and relationships.

Purpose. The purpose of this research review is to tie together the multi-disciplinary research showing the psychological, metabolic, and neurological aspects of PTSD while also introducing evidence based functional clinical nutrition solutions for the many symptoms and comorbid conditions of PTSD. Important biomarkers and functional nutrition themes will be considered in this introduction to a specialized trauma nutrition approach that would be especially suited for the practices of clinical nutritionists and integrative health practitioners.

Methods. Literature review searches were conducted on the topic of PTSD in PubMed, Google Scholar, and with outside experts between 2020 and 2021. Search terms included, "PTSD, inflammation, nutrition, biomarkers, diet, thyroid, cardiovascular disease, vitamin, mineral, HPA axis, probiotics, urine pH, neurological, metabolic" and other related terms to find original and supportive research. Focus was maintained on randomized controlled trials, systematic reviews, meta-analysis, cohort studies, reviews, and support literature that would lead to original research. Research was analyzed for significant results where PTSD was the main focus and population or where research supported a key symptom or comorbidity associated with PTSD. Biomarker and nutritional considerations were categorized based on the significance in a study to PTSD, the population studied, and the ability to translate results to a human population. Human and animal studies were considered, but significant results with repeatability in a human population held precedence for making associations.

Results. PTSD is found to be significantly associated with increased blood pressure, heart rate, respiratory rates, BMI, HbA1c, insulin/HOMA-IR, cholesterol, triglycerides, CRP, IL-6,IL-1ß, IL-10, Leptin, Norepinephrine, Free T3, Total T3, and intestinal permeability(Kim et al, 2020; Ilchmann-Diounou and Menard, 2020; Aeseth et al, 2019; Pan et al, 2018; de Oliveira et al, 2018; Blessing et al, 2017; Gandubert et al, 2016; Leclercq et al, 2016; Neigh and Ali, 2016; Michopoulous et al, 2015; Rosenbaum et al, 2015;Wingenfeld et al, 2015; Talbot et al, 2015; Smith et al, 2015;Farr et al, 2014;Newton et al, 2014;Rao et al, 2014; Gola et al, 2013; Nowotny et al, 2010; Bryant et al, 2008; Bedi and Arora, 2007; Gaeracioti et al, 2001; Shalev et al, 1998).In addition, PTSD has been found to be significantly associated with decreased cortisol, estrogen, and testosterone (Deuter et al, 2021; Pan et al, 2020; Josephs et al, 2017; Michopoulous et al, 2016;Wingenfeld et al, 2015;Glover et al, 2015;Glover et al, 2012; de Kloat et al, 2008; Bedi andArora, 2007; Kolassa et al, 2007; Mulchahey et al, 2001). Food sensitivities, starchy carbohydrates, sugary foods, nuts, fat, alcohol, and legumes can lead to increased incidence or exacerbation of PTSD symptoms (Davison et al, 2021; Aesethet al, 2019; Vatn, 1997). Effective nutritional strategies may include protocols with increased fiber, digestive enzymes, Vitamin A, Vitamin C, Vitamin D, Vitamin E, Magnesium L Threonate, Zinc, Copper,Co-Q10, probiotics (Bifidobacterium, lactobacillus), Omega 3 fatty acids,herbs (Curcumin, Garlic, Maca, Hibiscus, Amla),along with the FODMAP, Alkaline,

Gluten-free, and Mitodietto help improve psychological, metabolic, and neurological symptoms associated with PTSD and its comorbidities depending on a patient presentation (Davison et al, 2021; Farréet al, 2020; Ilchmann-Diounou and Menard, 2020; Alzoubi et al, 2020; Algera et al, 2019; The Institute of Functional Medicine, 2019; Raizner, 2019; Milton et al, 2018; Zozina et al, 2018; Pietrzaket al, 2017; Liu, 2017; Carnuba et al, 2017; Khan et al, 2017; Staudacher and Whelan, 2016; Michelpoulos et al, 2016; Feng et al, 2015; Mickley et al, 2013; Gopa et al, 2012; Catagol and Ozer, 2012; Oglodek, 2011; Souto et al, 2011; Hudson, 2011; Resnick, 2010; Cohain, 2004; Ross et al, 2001).

Conclusions. Results of this extensive review indicate strong evidence to consider the psychological, metabolic, and neurological symptoms of PTSD in patient care management with a need to include functional clinical nutrition strategies and other integrative medical treatment modalities in successful and personalized treatment planning.

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