A New Hypothesis on the Pathophysiology of Psychiatric Disorders and Its Relation to the Treatment and Prevention of Chronic Disease

Abstract: Short of a clear understanding of how psychiatric symptoms are produced, the various cognitive, emotional, and behavioral patterns that characterize psychiatric disorders continue to be grouped into syndromes and treated accordingly. However, an emerging hypothesis contends that psychiatric symptoms are driven by pathological hyperactivity in symptom-related circuits in the brain. According to the Multi-Circuit Neuronal Hyperexcitability (MCNH) Hypothesis of Psychiatric Disorders, persistent firing in anxiety circuits causes persistent feelings of anxiety; persistent firing in depressive circuits causes persistent feelings of depression; persistent firing in cognitive circuits causes ruminative and obsessive thoughts; etc... This pathological circuit-specific hyperactivity is believed to be the consequence of a genetically-transmitted failure of the neurological system to self-regulate when perturbed by a psychological, emotional, or biological stressor. The failure of neurons to shut off is also believed to drive a chronic hyper-activation of the autonomic nervous system, the hypothalamic-pituitary-adrenal system, the immunologic system, the metabolic system, and various other systems of the body, thus explaining the link between upper-end-of-normal resting vital signs and the development of any of a wide range of chronic diseases, such as anxiety disorders, mood disorders, diabetes, high blood pressure, heart disease, autoimmune diseases, and cancer. This presentation will discuss the enormous implications that this has for the treatment and prevention of nearly all illnesses, both psychiatric and medical. It will also discuss the source of the abnormality and a simple, objective means by which persons at risk can be identified. In an era of smartphones, wearable devices, and a growing public desire to prevent rather than react to illness, the ability to use resting vital signs to identify the fundamental driver of both mental and physical illness could usher in history's greatest campaign in the fight against sickness and disease.

Recent Publications:

Binder MR. The multi-circuit neuronal hyperexcitability hypothesis of psychiatric disorders. AJCEM 2019;7(1):12-30.

Binder MR. FLASH syndrome: Tapping into the root of chronic illness. AJCEM 2020; 8(6):101-109.

Binder MR. The neuronal excitability spectrum: A new paradigm in the assessment, treatment, and prevention of mental illness and its relation to chronic disease. AJCEM 2021;9(6):193-209.

Binder MR. Anticonvulsants: The psychotropic and medically protective drugs of the future. AJCEM 2021:9(5):180-188.

Binder MR. Introducing the term "Neuroregulator" in psychiatry. AJCEM 2019;7 (3):66-70.

Binder MR. A pathophysiologically-based approach to the treatment and prevention of mental illness and its related disorders. AJCEM 2021;9(6):223-232.

Speaker Bio

DR. MICHAEL BINDER is a board-certified adult and adolescent psychiatrist with nearly 30 years of experience treating a wide range of psychiatric disorders. He is also a neuroscience researcher with a focus on identifying the mechanisms by which psychiatric symptoms develop and the means by which psychotherapy and pharmacotherapy combine to help alleviate symptoms. In 2019 he published the Multi-Circuit Neuronal Hyperexcitability (MCNH) Hypothesis of Psychiatric Disorders, the first neurophysiologically-based hypothesis to explain how psychotherapy and biological therapy combine to alleviate psychiatric symptoms. Somewhat by serendipity, the MCNH hypothesis also led to the discovery that an inherent hyperexcitability of the neurological system is also the fundamental driver of virtually every physical illness that can be triggered or exacerbated by stress.