

Brain Injury and Lyme Disease
A Differential Diagnosis - Similarities and Differences

Leo J. Shea III, Ph.D. and Judith G. Leventhal, Ph.D.
NYUMC-Rusk Institute, NYC

Expert Needs: A discussion with a peer faculty at NYUMC and Columbia as well as a review of literature suggest the need for diagnosing and treating medical and mental health professionals to understand the similarities and differences in the neuropsychological sequelae of Lyme disease versus traumatic brain injury (see multiple studies by B. Fallon and J. Nields on psychiatric and medical aspects of Lyme and other tick-borne illnesses). It should be noted that Lyme disease is the fastest growing infectious disease in the United States based on a diagnosis of 24,000 which according to CDC estimates (on the statistical understatement of the disease) suggests that it is likely that 240,000 people acquired it last year.

Participant Needs: The assessment of need comes from interviews with hundreds of patients, teachers and school administrators, medical doctors and psychologists who have appealed for help in understanding the early and late signs of Lyme disease and how the neurological components differ from other neurological conditions, especially TBI.

Observed Needs: The Lyme Disease Association, the National Research Fund for Tick-borne Diseases and the National Lyme Disease Foundation have illuminated the need for better diagnostic and treatment methods to intervene early in this disease so that patients do not acquire chronic late stage Lyme with its devastating physical, cognitive, emotional, behavioral and interpersonal sequelae. Such results in most patients by them becoming temporarily or permanently disabled, causing a significant drain on mental and mental health resources as well as a negative economic impact on our economy due to lost hours of employee and managerial productivity.

Environmental Scanning: Stories have been published in every major American newspaper each year between April and October about the dangers of Lyme and most recently legislatures across the country have been convening expert and patient panels to discuss the impact of tick-borne illnesses in their respective states. Furthermore some states have enacted legislation related to these diseases and many states have implemented public information websites within both their public health and agricultural departments.

Objectives of the Program:

Identified Needs: Medical and mental health professionals need a greater body of detailed clinical knowledge from which to draw in order to more accurately diagnose Lyme and other tick-borne diseases early to prevent the patient from acquiring late state Lyme with its devastating economic, physical and psychological consequences. Too often the symptoms are dismissed with devastating later results. Often the illnesses are misdiagnosed by medical professionals and/or placed solely in the somaticizing or psychiatric realm. Since these diseases have emerged into the culture with such explosive frequency, the medical and mental health communities are poorly equipped in their understanding of what to look for and how to diagnose and treat these illnesses.

Desired Results: The attendees will become better acquainted with the subtleties of Lyme disease, its pathogenesis, physical timeline and how the neuropsychological sequelae differs dramatically from TBI over time. Participants will learn what signs to look for from a physical and neuropsychological standpoint, what treatments have been effective, how to access professional

and patient materials and how to access national specialists knowledgeable in the field to support their professional knowledge and patient needs.

Learning Objectives: It is expected that those attending this program will learn the following:

1. The nature and sequelae of both Lyme disease and TBI
2. Provide diagnostic guidelines that will differentiate between both Lyme and tick-borne diseases and TBI
3. Provide education on the various treatment modalities that can be offered to individuals with Lyme and other tick-borne diseases.
4. Learn how those modalities are similar and different from the modalities in use with the TBI population
5. Help the attendees understand the role of neuropsychology and how a comprehensive neuropsychological evaluation can assist the primary care physician in diagnosing the disease and treating it effectively.