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LRA by ELISA/ACT[®]

CLINICAL PEARLS UPDATE#10

Chronic Fatigue Syndrome

November 10, 2003

Dear Colleague:

Chronic fatigue immune dysfunction syndrome (CFIDS) affects 10-30 million Americans according to the NIH and CDC. Successful comprehensive management using LRA by ELISA/ACT[®] tests and treatment plans are illustrated in the attached abstract reports. Attached is a clinical update newsletter that details how this advanced approach can be applied in your practice with beneficial results.

Functional, *ex vivo* lymphocyte response assays (LRA by ELISA/ACT) offer the most advanced tests available for determination of the individual's responses to the widest available range of substances tested by any lab in the world.

We are grateful for the opportunities to be of service to you and your patients.

Sincerely,

Russ Jaffe, MD, Ph.D., CCN, NACB
Lab Director

Natelson B H, Haghghi M, Ponzio N M. Evidence for the Presence of Immune Dysfunction in Chronic Fatigue Syndrome. *Clinical and Diagnostic Laboratory Immunology* 2002; 9 (4):747-752.

Chronic fatigue syndrome is a medically unexplained ailment characterized by new onset of fatigue accompanied by rheumatological, infectious, and neuropsychiatric symptoms. Because the ailment often begins suddenly with a flu-like presentation, early pathophysiological ideas as to cause included viral infection and immune activation. When early reports identified putative immunological abnormalities in this illness, it was given the name of chronic fatigue and immune dysfunction syndrome, or CFIDS.

The purpose of this review is to evaluate the immunological literature to determine if strong evidence to support this notion exists. We collected and reviewed 239 published papers, of which only 72 fulfilled a set of criteria for use in this review. For this review, we developed the following criteria: papers had to be published in the peer review literature; patients had to be from a group with substantial fatigue lasting at least 6 months (the vast majority fulfilled either the 1988 or the 1994 case definition of chronic fatigue syndrome [CFS]); papers had to compare CFS patients to healthy controls; and actual data had to be shown with evidence of testing for statistical significance. So, for example, when a paper reported no difference between patients and controls for some immunological variables but actual data were not included, we did not include it. Also, if a report compared patient data to normative values rather than to the study's own control group, we did not include it.

The numbers of immunologically active cells and immunologically active substances such as cytokines reported in the literature have mushroomed in the past decade. To keep this review manageable, we are reporting scientific papers only on those variables for which either consistent or inconsistent abnormalities were reported by more than one group. We did not review papers reporting immunological variables to be within normal limits but have listed those studies in which more than one group found such results in a table. We have chosen not to list those variables reported abnormal in only one study because those results have not yet been replicated. When inconsistent results among laboratories were found for any immunological variable, we reviewed the methods described in those papers in an effort to identify reasons for such discrepancies.

Chronic fatigue immune dysfunction syndrome (CFIDS) is among the most responsive conditions to LRA by ELISA/ACT tests and optional treatment plans.

Glaser R, Kiecolt-Glaser JK. Stress-associated immune modulation: relevance to viral infections and chronic fatigue syndrome. *Am J Med* 1998;105(3A):35S-42S.

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The frequent association of an active viral infection with the symptoms of CFS led researchers to hypothesize that chronic fatigue syndrome (CFS) is induced by a virus. Results of these studies indicated that despite clinical support for this hypothesis, there were no clear data linking viruses to



CFS. In this overview, we will explore the interrelation of the immune, endocrine, and central nervous systems, and the possibility that stress and/or the reactivation/replication of a latent virus (such as Epstein Barr virus) could modulate the immune system to induce CFS. **Relevant research conducted in the developing field of psychoneuroimmunology will be reviewed, with a particular focus on cytokine synthesis, natural killer (NK) cell activity, and T-lymphocyte function, as they relate to CFS.**

We have published a successful community-based, randomized controlled trial (RCT) applying this approach to Fibromyalgia ± Chronic fatigue (CFIDS), Reflex sympathetic dystrophy (RSD), and Mitochondrial dysfunction syndrome (MDS). Psychoneuroimmunology is included in the treatment guide we include as an option with LRA by ELISA/ACT tests.

Note: We believe the comprehensive optional treatment guide included with LRA by ELISA/ACT tests, if requested, provides the best current therapy for sustained remissions in chronic fatigue (CFIDS) and fatigue-ability syndromes.

