

### **Possible Alternative Therapy Options:**

(Depending on the Summary Diagnostic Implications in Test Results report, you may select one of the following therapies. Please note that none of the therapies are evaluated by FDA.)

#### 1. Recommended (Mild) Acute ANS Dysfunction Therapy:

Alpha Lipoic Acid is recommended. The "10,000 patient study" [Practical Diabetology, 2000], recommends 600mg tid. This can get expensive. Some other doctors have found sufficient efficacy with as low as 200mg tid.

#### 2. Recommended Paradoxical-Parasympathetic Syndrome (PPS) Therapy:

The exercise alternative therapy approach to this condition is based on not stimulating the parasympathetics, only the sympathetics. Since the parasympathetics also deal with healing, and since they are already too active, the exercise has to be very low impact. The goal is to break a sweat, raise heart rate and blood pressure without causing any tissue damage. So, long easy walks, swimming, elliptical or simulated cross-country skiing exercise machines. The exercise is recommended at 40 minutes per day, 4 or 5 days a week for six weeks. If a week is skipped, usually the patient must start the six months over again.

#### 3. Recommended Sympathetic Withdrawal Therapy:

The alternative therapy approach can include support stockings or increase the patient's dietary salt intake to increase fluid levels.

#### 4. Recommended Cardiac Autonomic Neuropathy(CAN) Therapy:

No known alternative therapy approaches to autonomic neuropathy. Use alternative approaches to preventing the heart from sustained tachycardia.

#### 5. Recommended out of Balance ANS Therapy:

ANS is considered out of balance if initial baseline ratio is  $> 3.0$  or  $< 0.4$ . Corrections to lifestyle, diet, or exercise, is recommended against the imbalance to return balance (e.g., if the patient's LFa is low and the patient is on b-blockers, titrate them back to increase LFa response).

#### 6. Recommended (Moderate) Acute ANS Dysfunction Therapy:

If PPS exists, combine therapy 1 and 2 (above), otherwise Therapy 1 applies to this condition.

#### 7. Recommended (Mild) Chronic ANS Dysfunction Therapy:

If ANS is in balance (i.e baseline LFa and RFa are normal), combine therapy options 1, 2 and 3. Otherwise combine therapy options 1, 2, 3 and 5.

#### 8. Recommended (Moderate) Chronic ANS Dysfunction Therapy:

Combine therapy options 1, 2, 3 and 5 as described above.

Please note that all of the above recommendations can be combined as needed if multiple symptoms exist.

### **Notes:**

1. Acute ANS Dysfunction can be reversible (see disorder-specific therapy recommendations above).
2. Chronic ANS Dysfunction, especially mild or moderate can be equivalent to Diabetic Autonomic Neuropathy (DAN) in diabetic patients.
3. ANS Dysfunction should be expected (eventually) in all chronic, progressive diseases.
4. ANS Dysfunction should always be considered secondary to chronic disease(s).
5. ANS Dysfunction should only be considered a primary disorder if chronic disease(s) is (are) absent.