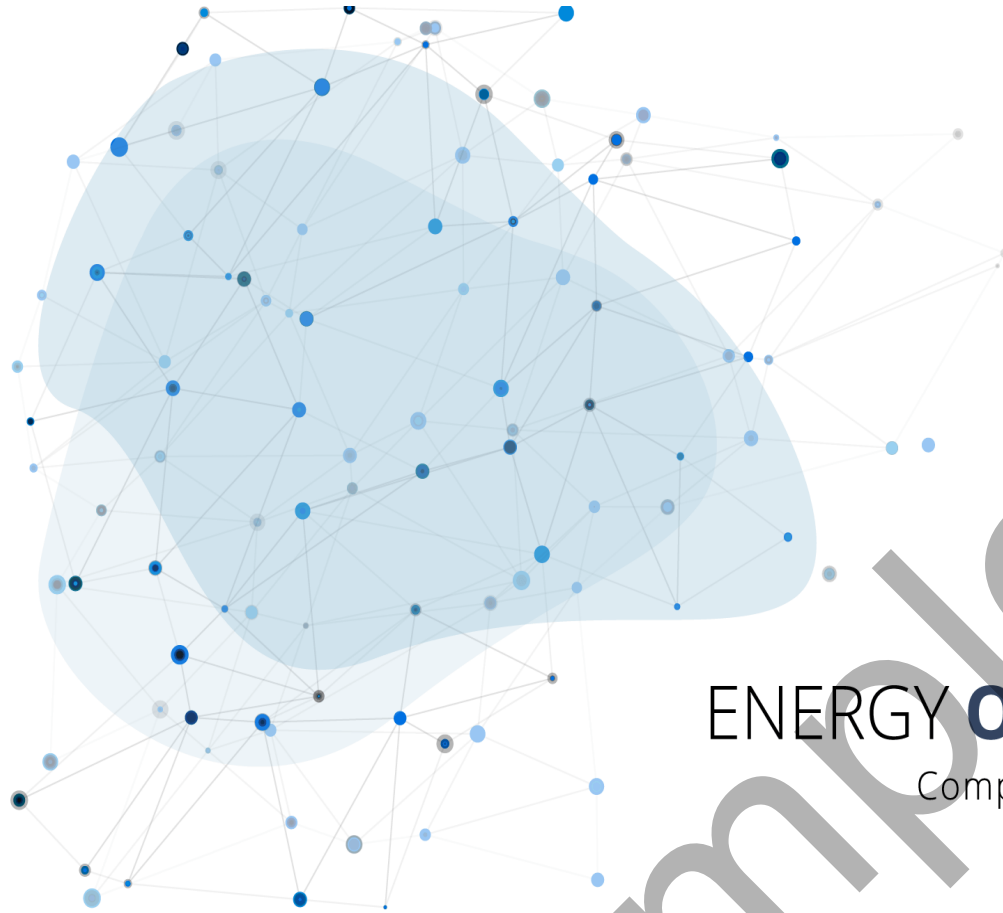




ENERGY **OPTIMIZATION**

Comprehensive Nutrient Panel

Patient: **SPECTRACELL, TEST**

Accession ID: 2107060010

Provider: Sample Provider, M.D.

Order Status: **Complete**

6030 North Course Drive, Houston, TX 77072
1(800) 227-5227 | support@spectracell.com | www.spectracell.com

 **SpectraCell Laboratories**
Science + Health + Solutions

PATIENT		SPECIMEN		PROVIDER	
NAME	AGE	ACCESSION ID	DATE COLLECTED	ACCOUNT ID	CLIENT NAME
SPECTRACELL, TEST	52	2107060010	07/06/2021	00000000	Sample Provider, M.D.
DOB	GENDER	ORDER ID	DATE RECEIVED	ADDRESS	
1/1/1970	Male	1009-MD Location-210706	07/06/2021	123 S. Any Street	
PATIENT ID			DATE REPORTED	ANYWHERE, TX 77000	
19-115-00445			07/22/2021		

Your Micronutrient Results Summary

These cellular deficiencies may suggest the underlying cause of a myriad of unwanted symptoms and if corrected, can optimize overall health and performance.

Functional Deficiencies

Abnormal	Suggested Supplementation *
Chromium	200 mcg daily of chromium nicotinate or glycinate for 90 days
Glutathione	600 mg b.i.d. (1200 mg daily) of N-Acetylcysteine (NAC) Take each dose with a meal
Selenium	200 mcg daily of selenium glycinate or selenomethionine for 3 months and then reduce to 100 mcg daily

Borderline Deficiencies

Borderline
Folate
Pantothenate
Vitamin B6 (pyridoxine)
Zinc

Micronutrients and Energy

Micronutrients directly affect your energy levels because nutrients are required by every cell in order to convert food into ATP, which is the energy currency of our cells. ATP (adenosine triphosphate) is made from fats, carbohydrates or protein via different pathways. These metabolic pathways absolutely need micronutrients in order to work. If the metabolic pathway that converts food to energy does not have the nutrients it needs, energy production is compromised, which can present as fatigue, among other things.

* SpectraCell is a CLIA certified laboratory that reports functional micronutrient deficiencies in an individuals' cells, which is the purpose of this report. It is not intended to diagnose or treat specific medical conditions. The quality and bio-availability of supplements varies considerably and should be taken into account when developing a repletion regimen.

* The RDA (Recommended Daily Allowance) was first published in 1968 primarily for use in nutritional labeling of packaged foods. The DRI (Dietary Reference Intake), published in 1997, serves as replacements for the former RDA, although the actual values are generally within an order of magnitude, and are also primarily for use in nutritional labeling and fortification of packaged foods. In most cases, neither the RDA nor the DRI will be adequate to replete a nutrient in people who demonstrate a functional cellular deficiency of said nutrient. An evidence based approach was used to develop clinically relevant repletion recommendations, consisting of data from published studies and clinician expertise. However, the information presented is not intended nor implied to be a substitute for professional medical advice, diagnosis or treatment.

* Listed repletion suggestions are for patients 12 and older.

* For more information on nutrients (food sources, symptoms of deficiency, physiological functions), go to www.spectracell.com.

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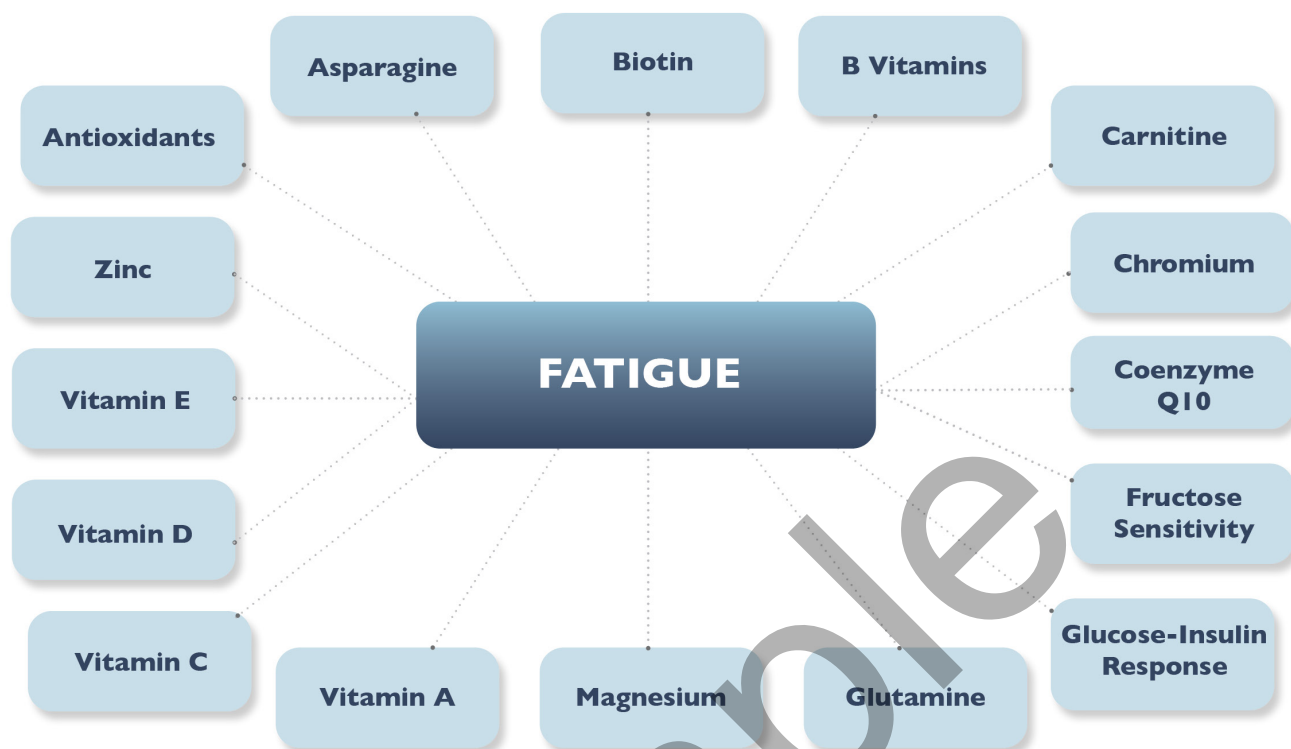
Micronutrients	Patient Results	Reference Range	Patient Result	Interpretation
VITAMINS				
Vitamin A		>70%	75	
Vitamin B1 (thiamine)		>78%	96	
Vitamin B2 (riboflavin)		>53%	60	
Vitamin B3 (niacin)		>80%	92	
Pantothenate		>7%	10	Borderline
Vitamin B6 (pyridoxine)		>54%	58	Borderline
Biotin		>34%	50	
Folate		>32%	36	Borderline
Vitamin B12 (cobalamin)		>14%	21	
Vitamin D3		>50%	75	
MINERALS				
Chromium		>40%	31	Deficient
Copper		>42%	57	
Magnesium		>37%	53	
Selenium		>74%	73	Deficient
Zinc		>37%	42	Borderline
AMINO ACIDS AND METABOLITES				
Asparagine		>39%	47	
Carnitine		>46%	57	
Cysteine		>41%	49	
Glutamine		>37%	48	
Serine		>30%	38	
Oleic Acid		>65%	72	
ANTIOXIDANTS				
Coenzyme Q10		>86%	93	
Glutathione		>42%	41	Deficient
Alpha Lipoic Acid		>81%	90	
Vitamin C		>40%	50	
Vitamin E		>84%	88	
CARBOHYDRATE METABOLISM				
Fructose Sensitivity		>34%	45	
CELL HEALTH				
Spectrox		>40-86%	45	
Immunidex		>40-86%	42	

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Antioxidants - Several studies confirm that oxidative stress exacerbates clinical symptoms of fatigue. Selenium, cysteine, a-Lipoic acid and glutathione can help improve energy metabolism.

Asparagine - Supplementation of this amino acid delayed fatigue during exercise by decreasing the rate at which glycogen was used up.

Biotin - Helps liver utilize glycogen for energy. Animal studies confirm biotin deficiency causes clinical fatigue.

B Vitamins (B1, B2, B3, B4, B6, B5, B12)- Directly impact energy pathways in mitochondria.

Carnitine - Transports fatty acids into mitochondria to produce energy. Shown to decrease physical and mental fatigue in clinical trials.

Chromium - Promotes glucose uptake into cells, helping stabilize sugar.

Coenzyme Q10 - Helps generate energy into cells. Benefits particularly noticeable in chronic fatigue syndrome.

Fructose Sensitivity - Depletes the main form of energy, ATP.

Glucose-Insulin Response - Impairs energy metabolism, thereby increasing blood sugar levels.

Glutamine - Mental and physical fatigue coincides with a deficiency of this amino acid in various tissues.

Magnesium- Required to store energy. Repletion in chronic fatigue syndrome patients shows clinical improvement in energy levels.

Vitamin A - Helps maintain cellular equilibrium when energy ramps up.

Vitamin C - Precursor to carnitine and several hormones that affect energy levels. Supplementation reduced fatigue in various trials.

Vitamin D - Low levels seen in patients with chronic fatigue syndrome. Deficiency causes reduced muscle strength.

Vitamin E - Protects ATP, the "energy currency" of our bodies.

Zinc - Involved in several reactions for energy metabolism.

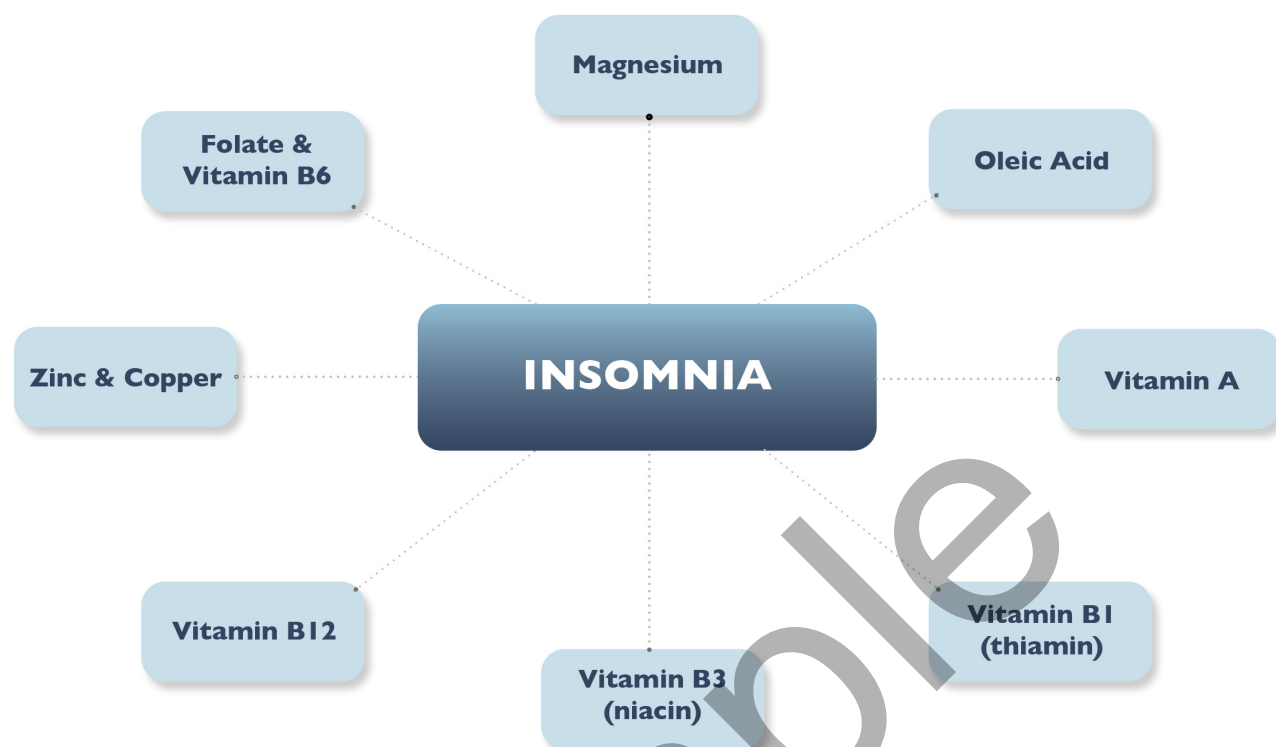
This list is non-exhaustive. Other nutrients affect fatigue.

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Folate & B6 - Cofactors needed to regulate sleep patterns.

Magnesium - Regulates hormones that affect sleep.

Oleic Acid - Precursor for important sleep hormones.

Vitamin A - Deficiency makes sleep less restorative.

Vitamin B1 (thiamin) - Supplementation may improve sleep.

Vitamin B3 (niacin) - Improves sleep via its effect on brain chemicals that regulate sleep

Vitamin B12 - Normalizes sleep-wake cycles.

Zinc & Copper - Interacts with brain receptors that affect sleep

This list is non-exhaustive. Other nutrients affect insomnia.