

INA

Test Results for:

SAMPLE, PRETEND

Date of Birth: 09/04/1972

Lab ID: 123456

Received: 02/02/2022

Your test results include:

- Nutrient insufficiency
- Borderline nutrient insufficiency
- Nutrient sufficiency
- Detailed description of nutrient insufficiencies
- Gluten/Grain free food sources
- Suggested Supplementation



INTRACELLULAR NUTRIENT ANALYSIS

VITAMINS				
Biotin	V	Vitamin B2	Y	
Delta tocotrienol	T	Vitamin B3	Y	
MK4	Υ	Vitamin B6	v	
MK7	₩	Vitamin B9	Y	_
Pantothenic acid	¥	Vitamin C	¥	
Vitamin A Vitamin B1	×	Vitamin D Vitamin K1	-	
Vitamin B12	v	Vitanini Ki		
MINERALS				
Boron	115% Borderline	Magnesium		110% Borderline
Calcium	Y	Manganese		_
Chromium	Υ	Molybdenum	T	_
Copper	Y	Selenium	v	_
lodine	T	Strontium	v	_
Iron	Y	Vanadium		_
Lithium	T	Zinc	v	_
AMINO ACIDS				
Arginine	Y	L-Tyrosine	×	
Asparagine	V.	Lysine	T	_
Cysteine	V.	Methionine	V	_
Glycine	Y	Phenylalanine	T	116% Borderline
Histidine	110% Borderline	Taurine	v	_
Isoleucine	Y.	Threonine	v	_
Leucine	Y.	Tryptophan	T	_
L-Glutamine	Y	Valine	T	_
L-Serine	V			
OTHER NUTRIENTS				
Carnitine	Y.	Lipoic Acid	v	_
Choline	V	Omega 3 DHA	Y	_
Coenzyme Q10	Y	Omega 3 EPA		_
Glutathione	>140%Insufficient	Omega 9	T	_
Inositol	Ŧ			
100% - 109%	Nutrient Sufficiency			
110% - 119%	Borderline Insufficiency			
≥ 120%	Insufficiency*			



Nutrient Insufficiency

The descriptions that follow are for educational purposes only. Statements are not to be interpreted as treatment recommendations and do not take the place of advice from a qualified practitioner.

<u>Glutathione</u>: Glutathione is produced in the liver from the amino acids, glycine, cysteine, and glutamic acid. It is considered the body's "master antioxidant". **+ It is important for:** • DNA synthesis and repair • Metabolism of toxins and carcinogens • Immune support • Prevention of oxidative cell damage • Protein and prostaglandin synthesis • Transport of amino acids • Antioxidation, fights free radicals • Antiviral • Anti-inflammation. **+ Insufficiencies have been associated with:** cancer, Parkinson's disease, neurodegenerative disorders, flu, AMD, glaucoma, cataracts, diabetes, heart disease, asthma (not inhaled glutathione), lung disease, liver disease, GI disease, CFS, and side effects of chemotherapy. **+ Gluten/Grain free food sources:** Fruit, vegetables, and meat but glutathione is poorly absorbed from the GI tract. Consuming foods used in cysteine production is recommended, onions, garlic, chives, leeks. Supplementing with N-acetyl L Cysteine can also help boost glutathione levels. **+ Suggested Supplementation:** 250mg-500mg daily



Borderline Nutrient Insufficiency

The descriptions that follow are for educational purposes only. Statements are not to be interpreted as treatment recommendations and do not take the place of advice from a qualified practitioner.

Boron: Boron is a trace mineral that is not yet classified as an essential nutrient for humans but is gaining acceptance as one. **+ It is important for:** • Bone formation/health • Mineral, calcium metabolism • Membrane function • Synthesis of steroid hormones (estradiol, testosterone, dehydroepiandrosterone, and 1,25-dihydroxyvitamin D. • reproduction and development • Brain function • Antimicrobial • Antioxidation • Insulin and energy substrate metabolism • immunity. **+ Insufficiencies have been associated with:** Dysmenorrhea, osteoarthritis (preliminary evidence), osteoporosis (preliminary evidence), prostate, cervical, and lung cancer, and age-related cognitive decline (preliminary evidence). Topically, boric acid, the most common form of boron, is used as an astringent, to prevent skin infection, and as an ophthalmological irrigant. Another form of boron, sodium pentoborate pentahydrate, is used to prevent radiation dermatitis (preliminary evidence). Intravaginally, boron is used for vaginal candidiasis. **+ Gluten/Grain free food sources:** fruit, vegetables, tubers, and legumes, prune juice, avocado, raisins, peaches, grape juice, apples, pears, peanuts, peanut butter, refried beans, grapes, oranges, lima beans. **+ Suggested Supplementation:** 2mg-4mg daily

Magnesium: magnesium is an essential mineral, a cofactor in more than 300 cellular reactions, and necessary for the synthesis of energy. + It is important for: • Structural integrity of teeth and bones Energy, DNA, RNA, and protein synthesis Essential fatty acid metabolism • Glutathione (antioxidant) synthesis • Immune support • Transport of calcium and potassium ions across cell membranes • Muscle contraction and nerve function • Regulation of heart rhythm • Regulation of blood glucose • Blood pressure regulation • Regulation of stress response. + Insufficiencies have been associated with: angina, arrhythmias, CHF, hypertension, stroke, brittle nails, Meniere's disease, olfactory issues, gastrointestinal issues, constipation, fibromyalgia, headaches, migraines, muscle cramps (especially nocturnal), anxiety, depression, cognitive decline, fatigue, menstrual cramps, PMS, and glucose tolerance. + Gluten/Grain rain free food sources: spinach, swiss chard, beet greens, turnip greens, summer squash, pumpkin seeds, sesame seeds, sunflower seeds, cashews, almonds, kidney beans, tofu. + Suggested Supplementation: 200mg-400mg daily + Check out our full crash course here.

Histidine: Histidine, an essential amino acid, is involved in a wide range of metabolic processes in the body, and is needed for growth and tissue repair. **+ It is important for:** • Protection of nerve cells • Metabolism of the neurotransmitter, histamine • Immune, gastric, and sexual function • Manufacturing of red and white blood cells • Protection of tissues against radiation and heavy metals. **+ Insufficiencies have been associated with:** rheumatoid arthritis, allergic diseases, ulcers, and anemia caused by kidney failure or kidney dialysis. **+ Gluten/Grain free food sources:** beef, lamb, pork, poultry, fish, cheese, nuts, seeds, eggs, and legumes. **+ Suggested Supplementation:** 650mg-1950mg daily

Phenylalanine: Phenylalanine is an essential amino acid used by the body to produce proteins and neurotransmitters. **+ It is important for:** • Mood and appetite regulation • Mental function • Pain tolerance. **+ Insufficiencies have been associated with:** depression, attention deficit-hyperactivity disorder (ADHD), Parkinson's disease, chronic pain, osteoarthritis, rheumatoid arthritis, alcohol withdrawal symptoms, and vitiligo. **+ Gluten/Grain free food sources:** Meat, seafood, eggs, cheese, milk, peanuts, pumpkin seeds, bananas, almonds, avocados . **+ Suggested Supplementation:** 500mg-1000mg daily



INA (Intracellular Nutrient Analysis)

O Micronutrient insufficiencies

The INA (Intracellular Nutrient Analysis) directly measures the effect of specific micronutrients on the ability of T and B lymphocytes to reproduce when stimulated with a mitogen (i.e., mitosis generator).

When the body has an infection, it increases production of the T and B lymphocytes (memory cells) that "recognize" and combat that specific invader. The faster these cells reproduce the faster infection is overcome.

The ability of these cells to multiply is driven by our nutrient stores. Cells need nutrients in order to grown and multiply. Those nutrient requirements are individual and are impacted by many factors. Stress, genetics, and other conditions, for example: high energy output in sports, pregnancy, recent infection, toxic burden, sleep patterns, etc., all play a role.

Measurement of the effects of nutrients on your immune function can be more revealing than just knowing if your blood serum levels of a vitamin, mineral, and amino acids, fall within "normal ranges".

Metabolism happens WITHIN the cells. Serum nutrient measurement is only a "SNAPSHOT" of nutrient status. Cellular activity gives insight into LONG TERM nutrient status.



How does the test work?

Serum and a mixture of lymphocytes are isolated from the whole blood of patients. This mixture is diluted with minimal media to the targeted concentration and grown in the presence of different micronutrients.

- The lymphocytes' growth rate stimulated by the mitogen, without the addition of micronutrients, is defined as the patient's baseline.
- 2) Micronutrients are added one at a time to the lymphocytes.
- The enhancement of the mitogen induced proliferation rate occurs with the addition of the nutrients the patient needs (insufficiency).
- 4) Each individual essential micronutrient is assessed and compared against the patient's baseline.

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100% - 109%	 Native Sufficiency 		
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Baseline
 No significant response
 Borderline
 Insufficient

