

# MICRONUTRIENT 3.0

## What are Micronutrients?

Micronutrients play an important role in energy production, hemoglobin synthesis, maintenance of bone health, adequate immune function, and protection of the body against oxidative stress and cellular damage.

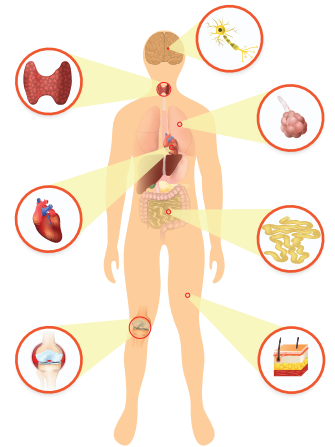
Micronutrients include vitamins, minerals, co-factors, amino acids, metabolites, antioxidants, and essential fatty acids. These nutrients are found in small amounts in foods and are essential for human health.



## Which Patients Can Benefit From Micronutrient Testing?

Individuals who have the following symptoms, diagnoses, or risk factors should consider testing their extra- and intracellular micronutrient status:

- ❑ Advanced age
- ❑ Stress
- ❑ Fatigue
- ❑ Depression or anxiety
- ❑ Diabetes
- ❑ Cardiovascular disease
- ❑ Arthritis
- ❑ Skin problems
- ❑ Numbness or tingling in extremities
- ❑ Weakened immune system
- ❑ Digestive disorders with malabsorption (Celiac, Crohn's, ulcerative colitis)
- ❑ SIBO (small intestinal bacterial overgrowth)
- ❑ Long-term use of prescription medication
- ❑ A diet high in processed foods
- ❑ Obesity
- ❑ Intense athletic training
- ❑ Following a vegan or vegetarian diet
- ❑ Neurological symptoms (impaired memory, confusion, ataxia, loss of balance, tremors)
- ❑ Stubborn weight gain
- ❑ Sudden unexplained weight loss
- ❑ Autoimmune disorders
- ❑ Digestive abnormalities: diarrhea, constipation, excessive bloating



## Why use Vibrant Micronutrients?

- ❑ Vibrant Micronutrients is the only test on the market to measure direct levels of extra- and intracellular micronutrients, giving advanced providers the most **complete** and **accurate** picture of a patient's micronutrient status.
- ❑ Mass spectrometry provides the highest accuracy of **direct** measures of micronutrients in serum and within cells.
- ❑ Treating complex diseases and conditions requires the most comprehensive tests to assess all facets of a patient's risk and health profile. Assessing absorption of nutrients at both the **gastrointestinal barrier** and **cellular membrane** by measuring extra- and intracellular levels is the only way to objectively determine **root causes** of malnutrition and inflammation.
- ❑ This holistic view of nutrient status can aid providers in differentiating between dietary, genetic, and other factors that impair nutrient metabolism or absorption.





## Micronutrients Tested:

The Vibrant Micronutrient test provides the following in-depth assessment of an individual's extra- and intracellular levels of micronutrients:

|                                   | Extracellular | Intracellular | Red Blood Cell (RBC) |
|-----------------------------------|---------------|---------------|----------------------|
| Vitamin A                         | ✓             | ✓             |                      |
| Vitamin B1                        | ✓             | ✓             |                      |
| Vitamin B2                        | ✓             | ✓             |                      |
| Vitamin B3                        | ✓             | ✓             |                      |
| Vitamin B5                        | ✓             | ✓             |                      |
| Vitamin B6                        | ✓             | ✓             |                      |
| Vitamin B12                       | ✓             |               |                      |
| Vitamin C                         | ✓             | ✓             |                      |
| Vitamin D3                        | ✓             | ✓             |                      |
| Vitamin D, 25-OH                  | ✓             |               |                      |
| Vitamin E                         | ✓             | ✓             |                      |
| Vitamin K1                        | ✓             | ✓             |                      |
| Vitamin K2                        | ✓             | ✓             |                      |
| Folate                            | ✓             |               | ✓                    |
| Sodium                            | ✓             |               |                      |
| Potassium                         | ✓             |               |                      |
| CoQ10                             | ✓             | ✓             |                      |
| Cysteine                          | ✓             | ✓             |                      |
| Selenium                          | ✓             | ✓             |                      |
| Glutathione                       |               | ✓             |                      |
| Asparagine                        | ✓             | ✓             |                      |
| Glutamine                         | ✓             | ✓             |                      |
| Serine                            | ✓             |               |                      |
| Citrulline                        | ✓             |               |                      |
| Arginine                          | ✓             |               |                      |
| Choline                           | ✓             | ✓             |                      |
| Inositol                          | ✓             | ✓             |                      |
| Carnitine                         | ✓             | ✓             |                      |
| Methylmalonic acid (MMA)          | ✓             |               |                      |
| Calcium                           | ✓             | ✓             |                      |
| Manganese                         | ✓             | ✓             |                      |
| Magnesium                         | ✓             |               | ✓                    |
| Zinc                              | ✓             | ✓             |                      |
| Copper                            | ✓             | ✓             |                      |
| Chromium                          | ✓             |               |                      |
| Iron                              | ✓             |               | ✓                    |
| Leucine                           | ✓             |               |                      |
| Valine                            | ✓             |               |                      |
| Isoleucine                        | ✓             |               |                      |
| RBC Omega fatty acids (n3 and n6) |               |               | ✓                    |

### Regulatory Statement

The general wellness test intended uses relate to sustaining or offering general improvement to functions associated with a general state of health while making reference to diseases or conditions. This test has been laboratory developed and its performance characteristics determined by Vibrant Genomics LLC, a CLIA-certified laboratory performing the test. The test has not been cleared or approved by the U.S. Food and Drug Administration (FDA). Although FDA does not currently clear or approve laboratory-developed tests in the U.S., certification of the laboratory is required under CLIA to ensure the quality and validity of the tests.