05-86000-31

Original Effective Date: 09/15/11

Reviewed: 02/27/25

Revised: 03/15/25

Subject: Intracellular Micronutrient Analysis

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

DESCRIPTION:

“Micronutrients” collectively refer to essential vitamins and minerals necessary in trace amounts for health. Clinical deficiency states (states occurring after prolonged consumption of a diet lacking the nutrient that is treated by adding the nutrient to the diet) have been reported for vitamins A, B1, B12, C, and D, selenium, and other micronutrients. Classic nutritional deficiency diseases are uncommon in the U. S.; most people derive sufficient nutrition from their diets alone or in combination with over-the-counter multivitamins. Laboratory tests are available for individual micronutrients and are generally used to confirm suspected micronutrient deficiencies. Testing is performed by serum analysis using standardized values for defining normal and deficient states. There are also some commercial laboratories that offer panels of tests evaluating intracellular levels of micronutrients. Potential uses of these tests include screening for nutritional deficiencies in healthy people or those with chronic disease and aiding in the diagnosis of disease in patients with nonspecific symptoms.

Summary and Analysis of Evidence: For individuals who have chronic diseases or nonspecific generalized symptoms who receive intracellular micronutrient analysis, the evidence includes an observational study with relevant outcomes of symptoms and change in disease status. No studies were found that evaluated the clinical validity or clinical utility of intracellular micronutrient testing compared with standard testing for vitamin or mineral levels. Limited data from observational studies are available on correlations between serum and intracellular micronutrient levels. No randomized controlled trials were found that evaluated the direct health impact of intracellular micronutrient testing. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

POSITION STATEMENT:

Intracellular micronutrient panel testing is considered **experimental or investigational** for all indications. The evidence is insufficient to determine the effects of the technology on health outcomes.

BILLING/CODING INFORMATION:

There is no specific CPT or HCPCS code for intracellular micronutrient panel testing. Code 86353, 88348, or 84999 may be used to report an intracellular micronutrient panel test.

REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline reviewed date.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at Coverage Protocol Exemption Request.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

None applicable

OTHER:

Other names or key words used to report intracellular micronutrient analysis:

Note: The use of specific product names is illustrative only. It is not intended to be a recommendation of one product over another, and is not intended to represent a complete listing of all products available.

- Essential metabolic analysis
- ExaTest®
- Functional intracellular analysis (FIA)
- IntraCellular Diagnostics, Inc.
- Intracellular mineral electrolyte analysis
- Leukocyte nutrient analysis
- Live blood cell analysis

- Micronutrient Panel testing
- SpectraCell Laboratories, Inc.
- Spectrox™
- Total Antioxidant Function Test.

REFERENCES:

1. Berger MM, Talwar D, Shenkin A. Pitfalls in the interpretation of blood tests used to assess and monitor micronutrient nutrition status. Nutr Clin Pract. 2023 Feb;38(1):56-69. PMID:36335431.
2. Blue Cross Blue Shield Association (BCBSA) Evidence Positioning System®; 2.04.73- Intracellular Micronutrient Analysis, 01/25.
3. Filipek PA, et al, Practice Parameter: Screening and Diagnosis of Autism- Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Child Neurology Society. Neurology. 2000 Aug 22;55(4):468-79; accessed at aan.com.
4. Fletcher RH, et al, Vitamins for Chronic Disease Prevention in Adults: Clinical Applications. JAMA, 2002 Jun 19;287(23):3127-9.
5. Houston MC. The role of cellular micronutrient analysis, nutraceuticals, vitamins, antioxidants and minerals in the prevention and treatment of hypertension and cardiovascular disease. Ther Adv Cardiovasc Dis. Jun 2010;4(3):165-183. PMID 20400494.
6. IntraCellular Diagnostics Inc. Exa Test®; accessed at exatest.com.
7. Ostroff C, SPECTROX™ (Total Antioxidant Function), accessed at drcathyostroff.com.
8. SpectraCell Laboratories. Micronutrient Test; accessed at spectracell.com.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 02/27/25.

GUIDELINE UPDATE INFORMATION:

09/15/11	New Medical Coverage Guideline.
09/15/12	Annual review; position statement maintained and references updated.
09/15/13	Annual review; position statement maintained and references updated.
09/15/14	Annual review; position statement maintained; references updated.
09/15/15	Annual review; position statement maintained and references updated.
05/15/17	Revision; Investigational position statement maintained; description and references updated.
03/15/19	Review; Position statement maintained; coding and references updated.
03/15/21	Review; Position statement maintained and references updated.
04/15/22	Review: Position statement maintained and description section updated.
01/01/24	Position statements maintained.
03/15/24	Review: Position statement maintained; description and references updated.
03/15/25	Review: Position statements maintained and references updated.