

Effective November 1, 2023, refer to CMS Manual 100-02, Chapter 16-General Exclusions from Coverage for services included in this policy.



**BlueCross BlueShield
of Alabama**

Name of Blue Advantage Policy:

Diagnosis and Management of Idiopathic Environmental Intolerance (i.e., Multiple Chemical Sensitivities)

Policy #: 267

Latest Review Date: September 2023

Category: Medicine

ARCHIVED EFFECTIVE 11/1/2023

BACKGROUND:

Blue Advantage medical policy does not conflict with Local Coverage Determinations (LCDs), Local Medical Review Policies (LMRPs) or National Coverage Determinations (NCDs) or with coverage provisions in Medicare manuals, instructions or operational policy letters. In order to be covered by Blue Advantage the service shall be reasonable and necessary under Title XVIII of the Social Security Act, Section 1862(a)(1)(A). The service is considered reasonable and necessary if it is determined that the service is:

- 1. Safe and effective;*
- 2. Not experimental or investigational*;*
- 3. Appropriate, including duration and frequency that is considered appropriate for the service, in terms of whether it is:*
 - Furnished in accordance with accepted standards of medical practice for the diagnosis or treatment of the patient's condition or to improve the function of a malformed body member;*
 - Furnished in a setting appropriate to the patient's medical needs and condition;*
 - Ordered and furnished by qualified personnel;*
 - One that meets, but does not exceed, the patient's medical need; and*
 - At least as beneficial as an existing and available medically appropriate alternative.*

Routine costs of qualifying clinical trial services with dates of service on or after September 19, 2000 which meet the requirements of the Clinical Trials NCD are considered reasonable and necessary by Medicare. Providers should bill **Original Medicare for covered services that are related to **clinical trials** that meet Medicare requirements (Refer to Medicare National Coverage Determinations Manual, Chapter 1, Section 310 and Medicare Claims Processing Manual Chapter 32, Sections 69.0-69.11).*

POLICY:

Blue Advantage will treat **laboratory tests designed to affirm the diagnosis of idiopathic environmental intolerance** as a **non-covered** benefit and as **investigational**.

Blue Advantage will treat **nutritional assessments, including intracellular analysis of micronutrients**, as a **non-covered** benefit and as **investigational** in both asymptomatic persons and individuals with symptoms suggestive of idiopathic environmental illness.

Blue Advantage will treat **treatment for idiopathic environmental intolerance, including but not limited to IVIg, neutralizing therapy of chemical and food extracts, avoidance therapy, elimination diets, and oral nystatin (to treat Candida)** as a **non-covered** benefit and as **investigational**.

Blue Advantage does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Advantage administers benefits based on the members' contract and medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

DESCRIPTION OF PROCEDURE OR SERVICE:

Idiopathic environmental intolerance (also known as multiple chemical sensitivities) is typically characterized by recurrent, nonspecific symptoms that the individual or clinician believes are provoked by low levels of exposure to chemical, biologic, or physical agents. Reported symptoms are wide-ranging, and there are not clearly established diagnostic criteria. Various tests, e.g., nutritional assessment and treatment, e.g., immunoglobulin therapy (IVIg), have been proposed.

Idiopathic environment intolerance has been labeled in a variety of ways over time. The original term, clinical ecology, was replaced by the term multiple chemical sensitivity (MCS). Most recently, it has been replaced by idiopathic environmental illness, a term that reflects the uncertain nature of the condition and its relationship to chemical exposure. The central focus of the condition is the fact that the individual describes recurrent, nonspecific symptoms referable to multiple organ systems that the sufferers believe are provoked by exposure to low levels of chemical, biologic, or physical agents. The most common environmental exposures include perfumes and scented products, pesticides, domestic and industrial solvents, new carpets, car exhaust, gasoline and diesel fumes, urban air pollution, cigarette smoke, plastics, and formaldehyde. Certain foods, food additives, drugs, electromagnetic fields, and mercury in dental fillings have also been reported as triggering events. However symptoms do not bear any relationship to established toxic effects of the specific chemical and occur at concentrations far below those expected to elicit toxicity.

Reported symptoms are markedly variable, but symptoms generally involve either the central nervous system, respiratory and mucosal irritation, or gastrointestinal symptoms. Symptoms may include fatigue, difficulty in concentrating, depressed mood, memory loss, weakness, dizziness, headaches, heat intolerance, and arthralgia. In contrast to the frequently debilitating symptomatology, no specific and consistent abnormalities are noted on laboratory or other diagnostic testing. In addition to multiple-chemical-sensitivity, other terms used to describe idiopathic environmental intolerance include universal allergy, 20th century disease, or cerebral allergy. Other primarily subjectively defined disorders have symptoms that overlap with idiopathic environmental intolerance including chronic fatigue syndrome, sick building syndrome, fibromyalgia, and irritable bowel syndrome. Intestinal dysbiosis is a diagnosis that could be considered within the category of idiopathic environmental intolerance.

The variable nature of the reported symptoms and the lack of recognized pathologic abnormalities make it extremely difficult to establish objective diagnostic criteria for the condition, which further hinders research into both the causes and appropriate treatment. Various causes for idiopathic environmental intolerances have been proposed; these have prompted different diagnostic and treatment approaches. An unrecognized form of allergy or immunologic hypersensitivity is a commonly proposed cause. Advocates of this etiology may recommend a large series of immunologic tests, including a variety of provocation-neutralization tests and a panel of immunologic tests, including immune function tests and levels of lymphocyte subsets (i.e., natural killer cells, CD8 cells). Proposed therapies have included avoidance of exposure, either in the environment or in the diet. IVIg may be recommended for injection or sublingual drops of “neutralizing” chemical and food extracts. Others have proposed that exposure to toxic substances may have prompted the immunologic abnormality and, based on this theory, testing of levels of environmental chemicals in the blood, urine, or fat may be suggested. Detailed nutritional analyses have also been performed, including levels of trace minerals in the blood, urine, or intracellular levels. Such elaborate nutritional assessments may also be performed in asymptomatic subjects. For example, Functional Intracellular Analysis (FIA™) is a series of laboratory tests offered by SpectraCell Labs that measure the intracellular levels of micronutrients, such as vitamins, minerals, and antioxidants in lymphocytes.

In some instances, symptoms may appear to coincide after exposure to a viral illness (particularly common in the related condition of chronic fatigue syndrome); supporters of this theory may recommend a wide variety of tests to detect antibodies or antigens of various viruses. Some have also suggested that hypersensitivity to *Candida* may present with a similar array of subjective complaints, and thus recommend testing for *Candida* in the stool or urine. Finally, it has also been proposed that idiopathic environmental illness is a manifestation of a psychiatric disease or personality disorder based in part on results of psychologic/psychiatric interviews.

It should be noted that some environmentally caused illnesses can be well characterized by their clinical presentation and laboratory tests. For example, in certain instances “sick building” syndrome can be traced back to exposure of microorganisms related to air-handling symptoms. However, in contrast to idiopathic environmental intolerances, these individuals experience a limited range of symptoms, and they occur in the affected building only.

KEY POINTS:

This policy's most recent literature review was performed through September 20, 2023. The following is a summary of the key literature.

Summary of Evidence

There is a lack of clear diagnostic criteria for idiopathic environmental intolerance (also known as multiple chemical sensitivities) and a lack of evidence on the diagnostic accuracy of laboratory or other tests for this condition. Overall, studies have not found that individuals diagnosed with the condition using existing criteria can reliably distinguish between chemical exposure and placebo. Moreover, studies have not consistently found that low-level electromagnetic field exposure affects objective outcomes (e.g., heart rate or cognitive function). There is also a lack of controlled studies evaluating treatments for idiopathic environmental intolerance. Thus, all tests and treatments for this condition are considered investigational.

Practice Guidelines and Position Statements

A variety of organizations have presented position papers on idiopathic environmental intolerance, previously referred to as MCS or clinical ecology.

In 1999, the American Academy of Allergy, Asthma and Immunology (AAAAI) issued a position statement on idiopathic environmental intolerance. This statement is still posted on the AAAAI website, but it has been archived. The summary of the position states:

IEI [idiopathic environmental intolerances]-also called environmental illness and multiple chemical sensitivities-has been postulated to be a disease unique to modern industrial society in which certain persons are said to acquire exquisite sensitivity to numerous chemically unrelated environmental substances... Because of the subjective nature of the illness, an objective case definition is not possible...there is an absence of scientific evidence to establish any of these mechanisms as definitive. Most studies to date, however, have found an excess of current and past psychopathology in patients with this diagnosis. The relationship of these findings to the patient's symptoms is also not apparent. Rigorously controlled studies to verify the patient's reported subjective sensitivity to specific environmental chemicals have yet to be done. Moreover, there is no evidence that these patients have any immunologic or neurologic abnormalities. In addition, no form of therapy has yet been shown to alter the patient's illness in a favorable way. A causal connection between environmental chemicals, foods, and/or drugs and the patient's symptoms continues to be speculative and cannot be based on the results of currently published scientific studies.

In 1999, the American College of Occupational and Environmental Medicine published a position statement that concluded, in part:

Although specific diagnostic test and treatment have not yet been demonstrated to be helpful, a generalized clinical approach useful in the management of other nonspecific medical syndromes can be adopted pending further scientific findings. This approach emphasizes 1) establishing a therapeutic alliance with a goal toward functional restoration; 2) performing a medical evaluation appropriate to the presenting complaints and physical findings; 3) avoiding ineffective, costly, and potentially hazardous, unproven diagnostic tests or remedies that may increase a patient's

distress or disease; 4) treating all diagnosable medical and psychological problems; 5) individualizing medical and behavioral coping strategies useful in managing symptoms; and 6) educating the patients about the current state of knowledge about MCS.

U.S. Preventive Services Task Force Recommendations

Not applicable.

KEY WORDS:

Allergy, clinical ecology, idiopathic environmental illness, idiopathic environmental intolerance, environmental medicine, multiple chemical sensitivities

APPROVED BY GOVERNING BODIES:

Not applicable.

BENEFIT APPLICATION:

Coverage is subject to member's specific benefits. Group-specific policy will supersede this policy when applicable.

CURRENT CODING:

CPT Codes:

There are no specific CPT codes identified since a wide variety of codes could be reported.

REFERENCES:

1. American Academy of Allergy, Asthma, and Immunology (AAAAI). Position statement on idiopathic environmental intolerances. 1999. Available online at: www.aaaai.org/Aaaai/media/MediaLibrary/PDF%20Documents/Practice%20and%20Parameters/Idiopathic-environmental-intolerances-1999.pdf.
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4. Black, D. W., & Temple, S. (2019). Idiopathic environmental intolerance (multiple chemical sensitivity). UpToDate®. Retrieved from [www.uptodate.com/contents/idiopathic-environmental-intolerance-multiple-chemical-sensitivity?search=Idiopathic Environmental Intolerance&source=search_result&selectedTitle=1~9&usage_type=default&display_rank=1](http://www.uptodate.com/contents/idiopathic-environmental-intolerance-multiple-chemical-sensitivity?search=Idiopathic%20Environmental%20Intolerance&source=search_result&selectedTitle=1~9&usage_type=default&display_rank=1)
5. IOM (Institute of Medicine). 2011. Clinical Practice Guidelines We Can Trust. Washington, DC: The National Academies Press.

6. Rubin GJ, Hillert L, Nieto-Hernandez R et al. Do people with idiopathic environmental intolerance attributed to electromagnetic fields display physiological effects when exposed to electromagnetic fields? A systematic review of provocation studies. *Bioelectromagnetics*. 2011; 32(8):593-609.
7. Skovbjerg S, Hauge CR, Rasmussen A et al. Mindfulness-based cognitive therapy to treat multiple chemical sensitivities: a randomized pilot trial. *Scand J Psychol* 2012; 53(3): 233-8.
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9. Zucco GM, Doty RL. Multiple Chemical Sensitivity. *Brain Sci*. 2021 Dec 29;12(1):46. doi: 10.3390/brainsci12010046.

POLICY HISTORY:

Adopted for Blue Advantage, June 2006

Available for comment June 21-August 4, 2006

Medical Policy Group, June 2008

Medical Policy Group, June 2010

Medical Policy Group, June 2011

Medical Policy Group, June 2012

Medical Policy Group, May 2013

Medical Policy Group, June 2014

Medical Policy Group, June 2015

Medical Policy Group, October 2019

Medical Policy Group, August 2021

Medical Policy Group, September 2022: Reviewed by consensus. No new published peer-reviewed literature available that would alter the coverage statement in this policy.

Medical Policy Group, September 2023: Reviewed by consensus. No new published peer-reviewed literature available that would alter the coverage statement in this policy.

Medical Policy Group, November 2023: Archived effective 11/1/2023.

This medical policy is not an authorization, certification, explanation of benefits, or a contract. Eligibility and benefits are determined on a case-by-case basis according to the terms of the member's plan in effect as of the date services are rendered. All medical policies are based on (i) research of current medical literature and (ii) review of common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.

This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield's administration of plan contracts.