BlueCross BlueShield of Vermont

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Allergy Testing
Corporate Medical Policy

File Name: Allergy Testing
File Code: 1.02.VT201
Origination: 09/2016
Last Review: 09/2023
Next Review: 01/2023
Effective Date: **ARCHIVED** 12/01/2022

Description/Summary

Specific allergy testing and allergy immunotherapy medically necessary for members with clinically significant allergic symptoms. Allergy Testing is used to determine what types of allergens cause a particular allergy. Testing typically involves injecting a small amount of the allergen under the skin by scratching or puncturing the skin and watching the skin for a reaction.

Allergy Treatment or Immunotherapy is the treatment of allergies in which increasing amounts of allergic extract are injected until the patient becomes tolerant of the allergens. Based on a review of the medical literature and the position statements of scientific organizations in the field of allergy and immunology, BCBSVT considers the specific allergy testing and treatment described below medically necessary in accordance with the selection criteria noted.

Policy

BCBSVT will provide benefits for Allergy Testing when it is determined to be medically necessary when the medical criteria and guidelines below are met.

When a service may be considered medically necessary

BCBSVT considers the following allergy tests **medically necessary**:

1. Epicutaneous (scratch, prick, or puncture) or Intradermal (Intracutaneous) allergy testing for diagnosing immunoglobulin E (IgE) mediated reactions to any of the following:
   - Inhalants

- Foods
- Hymenoptera (stinging insects)
- Specific drugs (penicillins and macromolecular agents).

2. Patch Testing for diagnosing contact allergic dermatitis and certain drug–induced cutaneous reactions. Photo Patch Testing for diagnosing photoallergy or photosensitization (e.g., photo- allergic contact dermatitis).

3. Ingestion (Oral) Double Blind Challenge test to diagnose suspected IgE-mediated hypersensitivity, when history and physical findings are suggestive of hypersensitivity, but skin testing is negative or equivocal.

4. Drug provocation/challenge test to diagnose suspected IgE-mediated hypersensitivity when all of the following are met:

    - History of allergy to a particular drug
    - Treatment with that drug class is essential
    - There is no effective alternative drug available.

5. Bronchial Challenge Test testing with methacholine, histamine, or antigens in defining asthma or airway hyperactivity when any of the following apply:

    - To identify causative or provocative occupational or other allergens for which skin testing is not reliable
    - To confirm diagnosis of asthma when the patient is symptomatic but has abnormal pulmonary function test results and no response to a bronchodilator
    - To evaluate new allergens or to substantiate the role of allergens in patients with significant symptoms.
    - Evaluation of occupational asthma.

6. Exercise Challenge Testing for exercise-induced bronchospasm.

7. Skin Endpoint Titration (SET) for determining the starting dose for immunotherapy for members highly allergic to an inhalant allergy or Hymenoptera venom allergy (stinging insects).

    NOTE: SET is not appropriate for routine testing.

8. Allergen-specific IgE immunoassays such as radioallergosorbent testing (RAST), multiple radioallergosorbent (MAST), paper radioimmunosorbent test (PRIST), radioimmunosorbent test (RIST), fluorescent allergosorbent (FAST), modified RAST (MRT), VAST, Enzyme Linked Immunoassay (ELISA) or ImmunoCAP when percutaneous testing of IgE-mediated allergies cannot be done for inhalant or food allergy due to any of the following reasons:

- Testing of patients with severe dermatographism, ichthyosis, or generalized atopic dermatitis.
- Testing in patients who have been receiving long-acting antihistamines, tricyclic antidepressants, or medications that may put the patient at undue risk if they are discontinued
- Testing of uncooperative patients with mental or physical impairments
- Testing of infants and children who will not tolerate skin testing, or when severe reaction to skin testing is a concern
- Serial testing of children with documented food allergies to assess whether an oral food challenge may occur
- As adjunctive laboratory tests for disease activity of allergic bronchopulmonary aspergillosis and certain parasitic diseases
- The evaluation of cross-reactivity between insect venoms
- When clinical history suggests an unusually greater risk of anaphylaxis from skin testing than usual (e.g., when an unusual allergen is not available as a licensed skin test extract
- Direct skin testing is inconclusive

Note: Intradermal skin tests, rather than in vitro tests, should generally be used for the definitive diagnosis of anaphylactic sensitivities to stinging insects and drugs.

9. Lymphocyte transformation test in any of the following:

- In the medical surveillance of beryllium sensitivity and chronic beryllium disease (CBD)
- Evaluation of persons suspected of having congenital or acquired immunodeficiency diseases affecting cell-mediated immunity.
- To predict allograft compatibility in the transplant setting.

Note: Lymphocyte transformation tests for evaluation of persons with allergies or other hypersensitivities are considered experimental and investigational.

10. Total Serum IgE for diagnostic evaluation in members with known or suspected:

- Allergic bronchopulmonary aspergillosis (ABPA)
- Certain stages of HIV infection
- Drug-induced interstitial nephritis
- Eczema and the hyper-IgE syndrome (dermatitis and recurrent pyogenic infections),
- Graft versus host disease

- Immune deficiency diseases such as Hyper- IgE syndrome, Wiskott-Aldrich syndrome, and IgE Myeloma

When a service is considered not medically necessary

Routine allergy re-testing that will not change clinical management is considered **not medically necessary.**

When a service is considered investigational

BCBSVT considers the following allergy tests unproven and therefore **investigational**. (This list may not be all-inclusive):

- Advanced cell test (ACT) qualitative antibody testing- ELISA methodology
- Adrenal stress index
- Antigen leukocyte cellular antibody test (ALCAT)
- Applied kinesiology (allergy testing through muscle relaxation)
- Candida hypersensitivity test
- Chemical analysis of body tissues, such as hair
- Circulating immune complexes to foods
- Conjunctival challenge test
- Cytotoxic food test (i.e.: Bryan's Test, Metabolic Intolerance test)
- Electrodermal diagnostic testing (VEGA test)
- Electrodermal acupuncture
- Food immune complex assay (FICA)
- Leukocyte Histamine Release Test (LHRT)
- Mediator release test (MRT)
- Nasal challenge test
- Passive transfer or P-X (Prausnitz-Kustner) test
- Provocation-neutralization tests (subcutaneous or sublingual)
- Pulse test or Reaginic pulse test (Reaginic Pulse test that measures the increase of pulse rates after ingestion of a suspected allergic food substance)
- Rebuck Skin Window test
- SAGE test for food delayed hypersensitivity
- Saliva testing
- Serum IgG Antibodies (measurement of circulating allergen-specific IgG or IgG4 antibodies)
- Serum immunoglobulins, complement and lymphocyte subsets
- Skin titration (Rinkel method)
- Urine autoinjection (autogenous urine immunization)
- Laboratory tests designed to affirm the diagnosis of idiopathic environmental intolerance
- Treatments 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)

Policy Guidelines

Background

Environmental illness refers to a physiologic reaction that is triggered by an exogenous agent, which can be ingested, inhaled, or exposed through direct contact with skin. The physiologic reaction can be an immunologic response or a non-immunologic response. An adverse physiologic reaction to exogenous antigens has been proposed to play a causative role in a wide variety of illnesses, including allergies, gastrointestinal (GI) tract disorders such as irritable bowel syndrome, eczema, chronic fatigue, and migraine headache.

Food allergy is the most well-defined type of environmental illness and is estimated to affect 8% of children. In most cases, true food allergy is characterized by a classic immunologic response, i.e., an immunoglobulin E–mediated reaction in response to a specific protein allergen. Reactions can range from mild symptoms to life -threatening anaphylaxis. Current guidelines for the diagnosis and management of food allergies have been developed by NIAID.

Food intolerance is a broader term that overlaps with food allergy but is less well-defined. Food intolerance refers to physiologic reactions that are triggered by a particular food, but which are not immune-mediated. It is hypothesized that physiologic reactions to food may manifest as a range of nonspecific symptoms, such as GI complaints, headache, fatigue, and musculoskeletal complaints and that these symptoms may become chronic with repeated exposure. An example of food intolerance, distinguished from a true food allergy, is lactose intolerance, in which dairy products incite non-immunologic reaction that can lead to a constellation of GI symptoms. Treatment of environmental illness primarily involves avoidance of the inciting agent. Acute allergic reactions are treated in the same way as other types of allergies with antihistamines, steroids, and supportive measures. In cases of severe allergy where an agent cannot be definitively avoided, patients can carry and self- administer auto-injectable epinephrine when needed. Prophylactic antihistamines can also be used to prevent or lessen reactions. Allergy immunotherapy may be appropriate for selected allergens.

For patients with food intolerance that is not allergic in nature, identification of the inciting agent(s) can be difficult because the symptoms are chronic in nature. Use of an elimination diet is considered the best way to identify intolerant agents. In an elimination diet, one specific food or food group is eliminated from the diet for a specified period of time and symptoms observed. Following the elimination period, a re-challenge can be performed to ascertain whether symptoms return. Elimination diets often need to be done sequentially with a large number of items, so that the process can be lengthy and cumbersome.

Regulatory status

In April 2014, FDA approved the first sublingual allergen extract tablets for treatment

of pollen-induced allergic rhinitis with or without conjunctivitis.

On April 1, FDA approved Oralair® allergen extract (Stallergenes S.A., Antony, France) for patients 10 to 65 years of age. Oralair® contains freeze-dried pollen allergen extracts of 5 grasses: Kentucky Blue Grass, Orchard, Perennial Rye, Sweet Vernal, and Timothy.

On April 11, FDA approved Grastek® Timothy grass pollen (*Phleum pretense*) allergen extract (Merck, Whitehouse Station, NJ) for patients 5 to 65 years of age. Grastek® is marketed in Europe as Grazax®.

On April 17, FDA approved Ragwitek® short ragweed pollen allergen extract (Merck, Whitehouse Station, NJ) for patients 18 to 65 years of age.

In March 2017, FDA approved Odactra® (Merck) dust mite allergen extract for patients 18-65 years of age.

Reference Resources

1. BlueCross BlueShield Association Medical Policy Reference Manual 2.01.93 - Antigen Leukocyte Antibody Test. Last reviewed: November 2021. Accessed January 2022.
2. BlueCross BlueShield Association Medical Policy Reference Manual 2.01.17 - Sublingual Immunotherapy as A Technique of Allergen Specific Therapy. Last reviewed November 2021. Accessed January 2022.
3. UpToDate: Overview of In Vitro Allergy Tests. Krzysztof Kowal, MD, PhD and Lawrence DuBuske, MD. Literature review current through December 2021. Assessed January 2022.
4. Kelso JM. Unproven Diagnostic Tests for Adverse Reactions to Foods. J Allergy Clin Immunol Pract. 2018 Mar-Apr;6(2):362-365. doi: 10.1016/j.jaip.2017.08.021. PMID: 29524991.
5. Bernstein IL, Li JT, Bernstein DI, Hamilton R, Spector SL, Tan R, Sicherer S, Golden DB, Khan DA, Nicklas RA, Portnoy JM, Blessing-Moore J, Cox L, Lang DM, Oppenheimer J, Randolph CC, Schuller DE, Tilles SA, Wallace DV, Levetin E, Weber R; American Academy of Allergy, Asthma and Immunology; American College of Allergy, Asthma and Immunology. Allergy diagnostic testing: an updated practice parameter. Ann Allergy Asthma Immunol. 2008 Mar;100(3 Suppl 3):S1-148. doi: 10.1016/s1081-1206(10)60305-5. PMID: 18431959.

Document Precedence

Blue Cross and Blue Shield of Vermont (BCBSVT) Medical Policies are developed to provide clinical guidance and are based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. The applicable group/individual contract and member certificate language, or employer's benefit plan if an ASO group, determines benefits that are in effect at the time of service. Since medical practices and knowledge are constantly evolving, BCBSVT reserves the right to review and revise its medical policies periodically. To the extent that there may be any conflict between medical policy and contract/employer benefit plan language, the member's

contract/employer benefit plan language takes precedence.

Audit Information

BCBSVT reserves the right to conduct audits on any provider and/or facility to ensure compliance with the guidelines stated in the medical policy. If an audit identifies instances of non-compliance with this medical policy, BCBSVT reserves the right to recoup all non-compliant payments.

Administrative and Contractual Guidance

Benefit Determination Guidance

Benefits are subject to all terms, limitations and conditions of the subscriber contract.

NEHP/ABNE members may have different benefits for services listed in this policy. To confirm benefits, please contact the customer service department at the member's health plan.

Federal Employee Program (FEP): Members may have different benefits that apply. For further information please contact FEP customer service or refer to the FEP Service Benefit Plan Brochure. It is important to verify the member's benefits prior to providing the service to determine if benefits are available or if there is a specific exclusion in the member's benefit.

Coverage varies according to the member's group or individual contract. Not all groups are required to follow the Vermont legislative mandates. Member Contract language takes precedence over medical policy when there is a conflict.

If the member receives benefits through an Administrative Services only (ASO) group, benefits may vary or not apply. To verify benefit information, please refer to the member's employer benefit plan documents or contact the customer service department. Language in the employer benefit plan documents takes precedence over medical policy when there is a conflict.

Policy Implementation/Update information

09/2016	New Policy
12/2017	Reviewed policy statements remain unchanged.
01/2019	Updated to include sublingual therapy for dust mites. Otherwise policy statements remain unchanged.
01/2020	Policy reviewed no changes to policy statements. Updated references.
02/2021	Policy reviewed. Not medically necessary allergy tests reclassified as investigational. Updated references.

01/2022	Policy reviewed. References updated. Minor formatting changes. Removed criteria for sublingual immunotherapy for treatment of allergies- see Pharmacy Policy for current criteria.
05/2022	Input from third party. Language clarification of 10. Removed "parasitic diseases." Now reads "Immune deficiency diseases such as Hyper- IgE syndrome, Wiskott-Aldrich syndrome, and IgE Myeloma.
09/2023	Archive corporate medical policy. This medical policy has been replaced with new policy: Allergy Testing, Including Selected Blood, Serum and Cellular Testing and Toxicity Testing

Eligible providers

Qualified healthcare professionals practicing within the scope of their license(s).

Approved by BCBSVT Medical Directors Date Approved

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