

Corporate Medical Policy

Allergy Immunotherapy (Desensitization)

File Name:	allergy_immunotherapy
Origination:	7/1979
Last CAP Review:	11/2019
Next CAP Review:	11/2020
Last Review:	11/2019

Description of Procedure or Service

Allergy immunotherapy (a.k.a., desensitization, hyposensitization, allergy injection therapy, or "allergy shots"), is an effective treatment for allergic rhinitis, allergic asthma, atopic dermatitis and Hymenoptera sensitivity. Immunotherapy is indicated in patients whose triggering allergens have been determined by appropriate skin or in vitro testing. The goal is to reduce the allergy patient's sensitivity when exposed to the offending allergen in the future. Treatment begins with low doses to prevent severe reactions. Gradually the doses are increased and are given once or twice a week until the body becomes tolerant of the allergen. After the maintenance dose is achieved, the interval between injections may range between two and six weeks. Immunotherapy may be administered continuously for several years.

*****Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

Related Policies:

Allergy Skin and Challenge Testing

Policy

BCBSNC will provide coverage for Allergy Immunotherapy when it is determined to be medically necessary because the medical criteria and guidelines shown below are met.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When Allergy Immunotherapy is covered

- A. Allergy Immunotherapy by subcutaneous injection is covered for patients with demonstrated hypersensitivity and/or severe and debilitating symptoms that cannot be adequately managed by medications or avoidance of the allergen. Injections of airborne or insect venom allergens should be prepared for the patient individually.
- B. Rapid desensitization, also called Rush Immunotherapy, or acute immunotherapy, is covered for the following indications when administered per the American College of Allergy, Asthma & Immunology practice parameters and by a board certified allergist or provider with additional training or certification in rush immunotherapy:

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- Allergy to a particular drug that cannot be treated effectively with alternative medications. [Although not considered allergy immunotherapy, drug desensitization is considered medically necessary when there is no alternative medication or therapy available to treat a life-threatening condition. Desensitization is an immunologic method that allows allergic patients to receive the sensitizing drug safely. Drug desensitization involves the rapid administration of incremental doses of a specific drug for patients with IgE antibodies to the drug that cannot be treated effectively with alternative medications. Drug desensitization is covered only when no alternative drug is available for therapy and the risk of continued administration of the offending drug may be less than the risk to life posed by the underlying disease.]; **OR**
- Insect sting (e.g., wasps, hornets, bees, fire ants) hypersensitivity (hymenoptera); **OR**
- Moderate to severe allergic rhinitis requiring treatment during or immediately before the season of the affecting allergy.

When Allergy Immunotherapy is not covered

- A. Allergy Immunotherapy is not covered for the following indications because it is considered investigational:
- 1) Chronic urticaria;
 - 2) Angioedema;
 - 3) Food allergy;
 - 4) Migraine headaches;
 - 5) Non-allergic vasomotor rhinitis;
 - 6) Intrinsic (non-allergic) asthma.
- B. The following allergy treatments are not covered because they are considered investigational including, but not limited to:
- 1) Provocative and neutralization therapy for food allergies, by sublingual, intradermal, and subcutaneous routes. Provocative and neutralization therapy involves administering neutralizing doses rather than standard doses of allergens either under the tongue or into the skin;
 - 2) Sublingual immunotherapy (SLIT) except for the following FDA approved products: Oralair®, Grastek®, Ragwitek®, and Odactra. Please see BCBSNC Pharmacy website for more information. <http://www.bcbsnc.com/content/services/formulary/drug-search.htm>
 - 3) Urine autoinjections (autogenous urine immunization) - (a substance from the urine is injected into the skin);
 - 4) Repository emulsion therapy;
 - 5) Low dose immunotherapy also known as the "Rinkel" technique;
 - 6) Enzyme-Potentiated Desensitization;
 - 7) Acupuncture for allergies;

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- 8) Homeopathy for allergies;
- 9) Rhinophototherapy.
- 10). Oral mucosal immunotherapy, including Allerdent® compounded toothpaste.

Subcutaneous immunotherapy performed in the home setting is considered investigational.

Policy Guidelines

Allergen proof supplies, such as mattresses, mattress casings, pillows, pillow casings, and other supplies that are commonly used in the management of allergy patients are not covered. These supplies can be used for non-medical purposes, and are considered personal convenience items. Please refer to the Member's Benefit Booklet for availability of benefits regarding items used for non-medical purposes or personal convenience.

Evidence-based clinical practice guidelines support the use of allergy immunotherapy for the management of allergic rhinitis, atopic dermatitis, allergic asthma, and Hymenoptera sensitivity (Hymenoptera sensitivity is an allergic reaction to venom of stinging insects such as wasps, hornets, bees, and fire ants.).

There is no published scientific evidence that immunotherapy is useful in treating food allergy, migraine headaches, vasomotor rhinitis, intrinsic (non-allergic) asthma, or chronic urticaria. In addition, there is little evidence that immunotherapy benefits angioedema.

The major risk factor of allergy immunotherapy is anaphylaxis. Immunotherapy should be administered under the supervision of an appropriately trained physician who can recognize early signs and symptoms of anaphylaxis and administer emergency medications if needed.

Candidates for immunotherapy are patients whose symptoms are not controlled adequately by medications and avoidance measures or those experiencing unacceptable adverse effects of medications or who wish to reduce the long-term use of medications. Immunotherapy is recommended for patients with a history of a systemic reaction to Hymenoptera stings who demonstrate Hymenoptera-specific IgE antibodies. There is evidence that venom immunotherapy (VIT) might be effective in reducing large local reactions (LLRs) that might cause significant morbidity and impair quality of life. Rush immunotherapy is an accelerated immunotherapy build-up schedule that entails administering incremental doses of allergen at intervals varying between 15 and 60 minutes over 1 to 3 days until the target therapeutic dose is achieved. Rush immunotherapy schedules for inhalant allergens can be associated with a greater risk of systemic reactions, particularly in high-risk patients (eg, those with markedly positive prick/puncture or in vitro IgE test responses), and premedication primarily with antihistamines and corticosteroids appears to reduce the risk associated with rush immunotherapy. However, rush protocols for administration of stinging Hymenoptera VIT have not been associated with a similarly high incidence of systemic reactions.

The advantage of rush immunotherapy is that the therapeutic maintenance dose is achieved with fewer office visits in a shorter period of time. However, there is an increased risk of local and systemic reactions. The systemic reaction rate with rush immunotherapy schedules ranged from 15% to 100% of patients who did not receive premedication to 3% to 79% of premedicated patients in 1 review. In one double-blind, placebo-controlled study comparing the effect of premedication before rush immunotherapy, systemic reactions were experienced by 27% by premedicated versus 73% of placebo-premedicated patients. Most reactions to rush immunotherapy are not severe, and the most common systemic reaction is usually flushing. Systemic reactions with rush schedules have been reported to occur up to 2 hours after the final injection. For that reason, subjects receiving rush immunotherapy should remain under a physician's supervision for a longer waiting period than the usual 30 minutes recommended for conventional schedules (eg, 1.5-3 hours after allergen immunotherapy extract administration during rush immunotherapy).

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The most recent guidelines addressing allergy immunotherapy from the Joint Task Force on Practice Parameters, American Academy of Allergy, Asthma and Immunology, American College of Allergy, Asthma and Immunology, Joint Council of Allergy, Asthma and Immunology, state:

“Immunotherapy should be administered in a setting that permits the prompt recognition and management of adverse reactions. The preferred location for such administration is the prescribing physician's office. However, patients can receive immunotherapy injections at another health care facility if the physician and staff at that location are trained and equipped to recognize and manage immunotherapy reactions, particularly anaphylaxis. Patients should wait at the physician's office/medical clinic for at least 30 minutes after the immunotherapy injection or injections so that reactions can be recognized and treated promptly if they occur.”

Allerdent® is a new method of oral mucosal immunotherapy (OMIT) that delivers allergenic extracts to the tolerogenic oropharyngeal mucosa in the form of a compounded non-food based toothpaste, as a vehicle to treat seasonal allergic rhinitis. This glycerin-based fluoride toothpaste is formulated to specifically incorporate allergenic extracts and maintain their stability for at least 12 months at room temperature (Belvidere Labs, Highland Park, NJ).

There are insufficient data to construct a chain of evidence that oral mucosal immunotherapy, specifically Allerdent® compounded toothpaste, would lead to improved health outcomes for patients compared with alternative approaches to allergy immunotherapy. The evidence that is available consists of case reports and a published pilot study. Due to the lack of strong scientific evidence to support health outcomes for Allerdent® compounded toothpaste, the evidence is insufficient to determine the effects of the technology on health outcomes.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable service codes: 30999, 86003, 86005, 95115, 95117, 95120, 95125, 95130, 95131, 95132, 95133, 95134, 95144, 95145, 95146, 95147, 95148, 95149, 95165, 95170, 95180, 95199, J7999

Per unit reimbursement for allergy immunotherapy is based on the number of dosages prepared and intended for administration. Allergy immunotherapy is limited to 180 units for the first year of therapy during escalation, and 120 units for yearly maintenance therapy thereafter.

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

BCBSA Medical Policy Reference Manual - 12/95

Medical Policy Advisory Group review - 3/99

Specialty Matched Consultant Advisory Panel - 7/00

Specialty Matched Consultant Advisory Panel - 8/00

Medical Policy Advisory Group review - 10/2000

Specialty Matched Consultant Advisory Panel - 7/2002

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BCBSA Medical Policy Reference Manual, 2.01.17; 4/29/03

Specialty Matched Consultant Advisory Panel - 7/2004

BCBSA Technology Evaluation Center. (2003, June). Sublingual immunotherapy for adults. Retrieved 5/23/2006 from http://www.bcbsa.com/tec/vol18/18_04.html

BCBSA Technology Evaluation Center. (2002, July). Serial endpoint testing for the diagnosis and treatment of allergic disorders. Retrieved 5/23/2006 from http://www.bcbsa.com/tec/vol17/17_06.html

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 6/27/05.

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.23, 6/27/05.
Allergen immunotherapy: A practice parameter. American Academy of Allergy, Asthma and Immunology. [1996 (revised 2003)].

Specialty Matched Consultant Advisory Panel - 7/2006

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.23, 10/10/06

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 4/9/08

Institute for Clinical Systems Improvement (ICSI). Health care guideline: diagnosis and treatment of respiratory illness in children and adults. Bloomington, MN: ICSI; January 2008. Retrieved 5/27/08 from http://www.icsi.org/repiratory_illness_in_children_and_adults_guideline_/respiratory_illness_in_chi dren_and_adults_guidelines_13116.html

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 3/11/10

Specialty Matched Consultant Advisory Panel review 11/2010

Joint Task Force on Practice Parameters, American Academy of Allergy, Asthma and Immunology, American College of Allergy, Asthma and Immunology, Joint Council of Allergy, Asthma and Immunology. Allergen immunotherapy: a practice parameter second update. Retrieved on April 7, 2011 from <http://www.guideline.gov/content.aspx?id=13113>

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 3/10/11

Specialty Matched Consultant Advisory Panel review 11/2011

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 3/8/12

Kim EH, Bird JA, Kulis M, et al. Sublingual immunotherapy for peanut allergy: Clinical and immunologic evidence of desensitization. *J Allergy Clin Immunol*. 2011;127(3):640-646. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3052379/>

de Bot CM, Moed H, Berger MY, et al. Sublingual immunotherapy not effective in house dust mite-allergic children in primary care. *Pediatr Allergy Immunol*. 2011 Oct 21. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2577674/>

Cox L, Nelson H, Lockey R, Calabria C, et al. Allergen immunotherapy: a practice parameter third update. *J Allergy Clin Immunol*. 2011 Jan;127(1 Suppl):S1-55. Epub 2010 Dec 3. Retrieved from

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<http://www.guideline.gov/content.aspx?id=37691&search=allergen+immunotherapy%3a+a+practice+parameter+third+update>

Specialty Matched Consultant Advisory Panel review 11/2012

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 3/14/13

Agency for Healthcare Research and Quality (AHRQ). Comparative Effectiveness Review Number 111. Allergen-Specific Immunotherapy for the Treatment of Allergic Rhinoconjunctivitis and/or Asthma. March 2013. Retrieved from <http://effectivehealthcare.ahrq.gov/ehc/products/270/1427/Allergy-Asthma-Immunotherapy-130319.pdf>

National Institutes of Health (NIH). Clinical trial #NCT01335139. Long-Term Effects of Sublingual Grass Therapy. Retrieved from <http://www.clinicaltrials.gov/ct2/show/NCT01335139?term=NCT01335139&rank=1>

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 5/9/13

Cox L, Aaronson D, Casale TB, Honsinger R, Weber R. Allergy immunotherapy safety: Location matters! J Allergy Clin Immunol: In Practice 2013;1:455-7. <http://dx.doi.org/10.1016/j.jaip.2013.08.001>.

Specialty Matched Consultant Advisory Panel review 11/2014

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 5/22/14

Cox L, Nelson H, Lockey R, et al. Allergen immunotherapy: A practice parameter third update. J Allergy Clin Immunol. 2011;127(1 Suppl):S1-S55.

Specialty Matched Consultant Advisory Panel review 11/2015

Medical Director review 11/2015

Joint Task Force on Practice Parameters, American Academy of Allergy, Asthma and Immunology, American College of Allergy, Asthma and Immunology, Joint Council of Allergy, Asthma and Immunology. Allergen immunotherapy: a practice parameter third update. Retrieved on December 17, 2015 from <https://www.aaaai.org/practice-resources/Statements-and-Practice-Parameters/Practice-parameters-and-other-guidelines-page>

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 4/2015

Specialty Matched Consultant Advisory Panel review 11/2016

Medical Director review 11/2016

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 10/2016

Specialty Matched Consultant Advisory Panel review 11/2017

Medical Director review 11/2017

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 10/2017

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Reisacher WR, et al. Oral mucosal immunotherapy for allergic rhinitis: A pilot study. *Allergy Rhinol (Providence)*. 2016 Spring; 7(1): e21-e28.

Allovate Therapeutics, LLC. <https://allovate.com>, accessed May 2018.

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.17, 10/2018

Specialty Matched Consultant Advisory Panel review 11/2018

Medical Director review 11/2018

Specialty Matched Consultant Advisory Panel review 11/2019

Medical Director review 11/2019

Policy Implementation/Update Information

7/79	Original policy
6/83	Revised: Experimental/Investigative for the Rinkel Method
7/87	Evaluated: Investigational for the Rinkel Method and Provocation and Neutralization
8/88	Reviewed: Investigational for Provocation and Neutralization therapy, urine auto injections, repository emulsion therapy, and Rinkel therapy
7/96	Revised: National Association reviewed 12/95. Added Sublingual to list of investigational
3/99	Revised: Added "Rush" or "Cluster" immunotherapy will be reviewed on an Individual Consideration (I.C.) basis. Reaffirmed based on Medical Policy Advisory Group.
7/99	Reformatted, Medical Term Definitions added.
7/00	Reviewed by Specialty Matched Consultant Advisory Panel. No changes to policy
9/00	System coding changes.
10/00	Reviewed by Specialty Matched Consultant Advisory Panel. Added the word "adequately" to criteria for When Allergy Immunotherapy is covered. Medical Policy Advisory Group review. No further changes to policy. Approve.
10/02	Specialty Matched Consultant Advisory Panel review 7/18/02. Under when allergy immunotherapy is covered, added specific instances when "Rush" or "Cluster" Immunotherapy may be approved rather than on an individual consideration basis. System coding changes.
12/03	Benefits Application and Billing/Coding Sections updated for consistency.
10/14/04	Specialty Matched Consultant Advisory Panel review 7/23/04. No changes to criteria. Sources added.
1/3/07	Description section revised. Under "When Covered", second paragraph now reads: "Rapid desensitization (a.k.a., Rush Immunotherapy or Cluster Immunotherapy) is covered for patients with Hymenoptera sensitivity (e.g., wasps, hornets, bees, fire ants) (a.k.a., Stinging insect hypersensitivity)."; third paragraph (previously second bullet), now reads "Although not considered allergy immunotherapy, drug desensitization is considered

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medically necessary when there is no alternative medication or therapy available to treat a life-threatening condition....." Further explanation re: drug desensitization follows. "When not Covered" section, now has two main topics: Allergy Immunotherapy and allergy treatments. Allergy Immunotherapy is not covered for the following indications because it is considered investigational: Chronic urticaria, Atopic dermatitis, Angioedema, Food allergy, Migraine headaches, Non-allergic vasomotor rhinitis, Intrinsic (non-allergic) asthma; Allergy treatments non covered because they are considered investigational treatments now lists the 5 bullets that were previously under Allergy immunotherapy not covered. The fifth bullet now reads "Low dose immunotherapy also known as the "Rinkel" technique also known as serial dilution endpoint titration therapy for ragweed pollen hay fever; Also added the following as investigational allergy treatments: Enzyme-Potentiated Desensitization, Acupuncture for allergies, Homeopathy for allergies and Rhinophototherapy. Under "Policy Guidelines" added "Evidence-based clinical practice guidelines support the use of allergy immunotherapy for the management of allergic rhinitis, allergic asthma and stinging insect hypersensitivity." New 2007 CPT code 0168T added to Billing/Coding section. Reference sources and definitions added. Notification given 1/3/07. Effective date 3/12/07. (pmo)

- 8/25/08 Guidelines section reformatted into numbered lists. Deleted the following statements from Item C of the "When Allergy Immunotherapy is covered" section: The most common drug associated with allergies is penicillin. Other drugs commonly found to cause reactions are sulfa drugs, barbiturates, anticonvulsants, insulin, and iodine (found in many X-ray contrast dyes). References updated. Specialty Matched Consultant Panel review 7/14/08. No change to policy statement. (adn)
- 6/22/10 Policy Number(s) removed. (amw)
- 12/21/10 Description section updated. Re-numbered the "When Allergy Immunotherapy is not Covered" section. References updated. Policy Guidelines updated. Specialty Matched Consultant Advisory Panel review 11/2010. (mco)
- 5/24/11 References updated. No changes to policy statements. (mco)
- 12/20/11 Specialty Matched Consultant Advisory Panel review. No changes to Policy Statements. Deleted code 0168T, and added 30999 to "Billing/Coding" section. (mco)
- 5/1/12 References updated. No changes to policy statements. (mco)
- 1/15/13 Specialty Matched Consultant Advisory Panel review 12/2012. Deleted "Atopic dermatitis" from the "When not Covered" section. Policy Guidelines updated. References updated. (mco)
- 5/14/13 References updated. No changes to Policy Statements. (mco)
- 6/11/13 References updated. No changes to Policy Statements. (mco)
- 12/10/13 Specialty Matched Consultant Advisory Panel
- 5/27/14 Policy Guidelines updated. References updated. Added the following statement to the "When not Covered" section: "Subcutaneous immunotherapy performed in the home setting is considered investigational." Added the following statement to the Billing/Coding section: "Per unit reimbursement for allergy immunotherapy is based on the number of dosages prepared and intended for administration. Allergy immunotherapy is limited to 180 units for the first year of therapy during escalation, and 120 units for yearly maintenance therapy thereafter." Medical Director review 5/2014. Policy noticed

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on May 27, 2014 for effective date July 29, 2014. Added information regarding FDA approved sublingual immunotherapy products: Oralair®, Grastek®, and Ragwitek® and reference to BCBSNC Pharmacy website. (mco)

- 9/30/14 Policy Guidelines updated. Medical Director review 9/2014. No changes to Policy Statements. (mco)
- 12/9/14 Related Policy added. Specialty Matched Consultant Advisory Panel review 11/2014. Medical Director review. (td)
- 10/30/15 When Covered statement updated to include additional indication for rush immunotherapy: “Moderate to severe allergic rhinitis requiring treatment during or immediately before the season of the affecting allergy”. Policy Guidelines section updated. References updated. (td)
- 4/1/16 Description section updated. Specialty Matched Consultant Advisory Panel review 11/18/2015. Medical Director review 11/2015. (td)
- 12/30/16 References updated. Specialty Matched Consultant Advisory Panel review 11/2016. Medical Director review 11/2016. (jd)
- 12/15/17 Referenced updated. Specialty Matched Consultant Advisory Panel review 11/2017 Medical Director review 11/2017. (jd)
- 5/25/18 Added item 10, “Oral mucosal immunotherapy, including Allerdent ® compounded toothpaste” to section: When Allergy Immunotherapy is not covered. Policy guidelines and references updated. Medical Director review. (jd)
- 12/14/18 When Not Covered section, item B2 – added Odactra as an FDA approved product. References updated. Specialty Matched Consultant Advisory Panel review 11/2018. Medical Director review 11/2018. (jd)
- 12/10/19 Updated Related Policies section. Specialty Matched Consultant Advisory Panel review 11/2019. Medical Director review 11/2019. (jd)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.