

ALLERGEN IMMUNOTHERAPY

Treatment Handbook

(for non-allergist offices)

The information contained in this Handbook is intended to provide general information regarding the administration of extract immunotherapy in a non-allergist setting. We have provided guidelines regarding the recognition and treatment of shot reactions. These are not standing orders. If you have any questions, please call our office.



ALLERGY  PARTNERS[®]

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The information and instructions within are for use with Allergy Partners-specific treatment protocols and may not be applicable for other treatment plans or patients. This handbook is not intended to be a substitute for clinical advice. If you have questions, please contact our local offices.

We reserve the right to change/update the content in this handbook at any time. Please contact our local offices for the most up-to-date version.

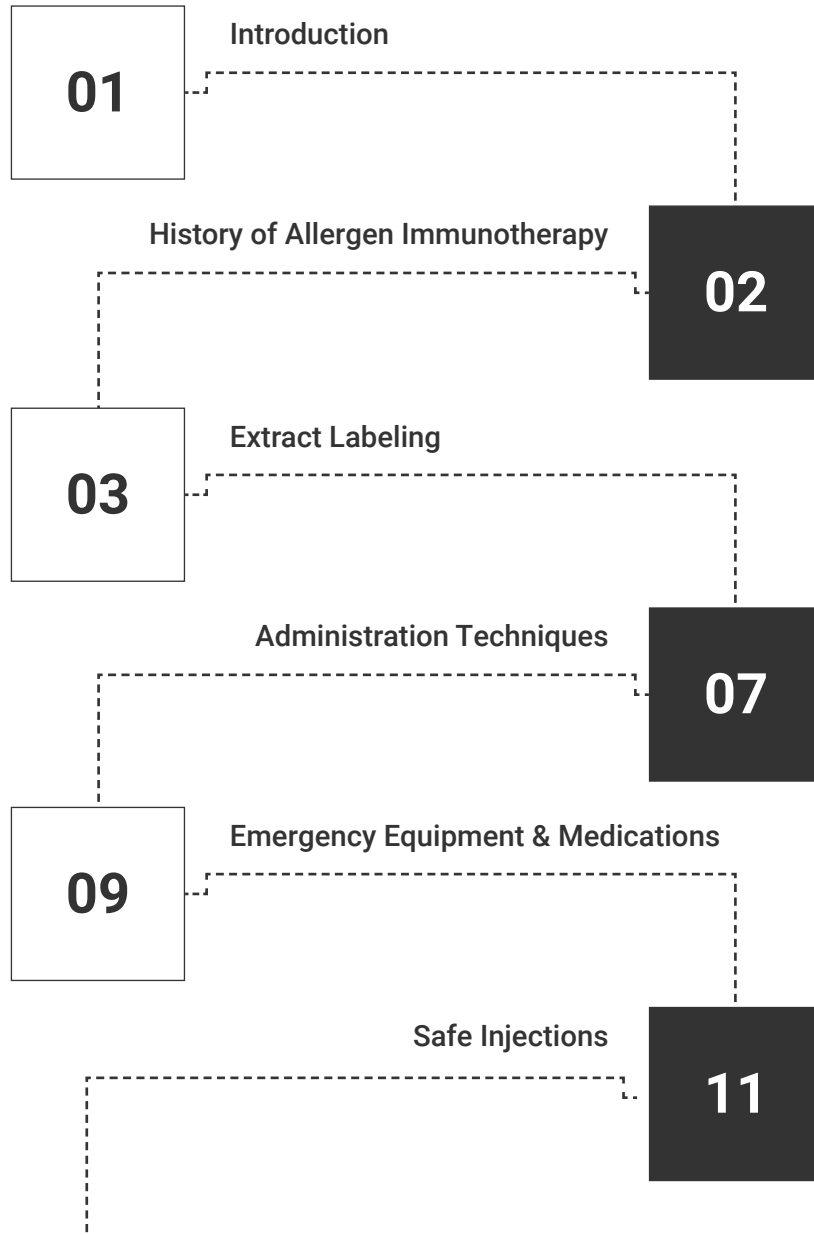
ALLERGEN IMMUNOTHERAPY

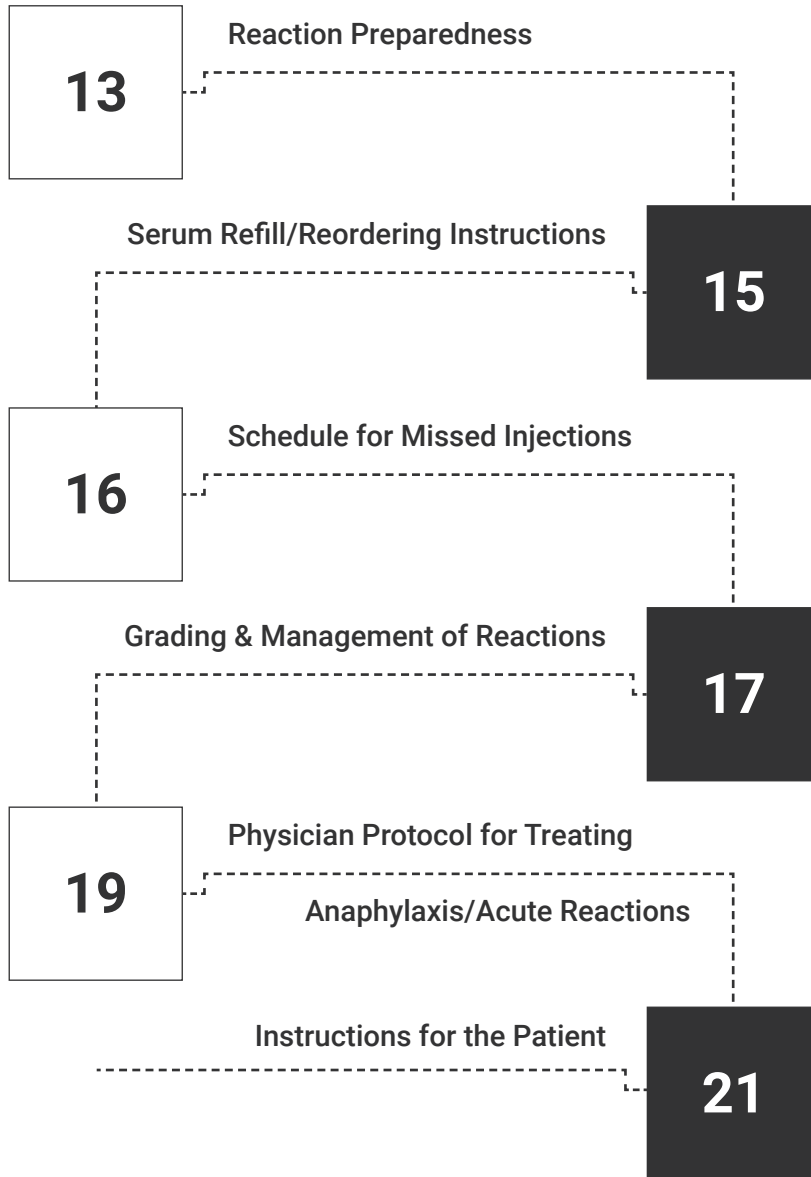
For non-allergist offices

3rd Edition

Allergy Partners
2024

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Introduction



Thank you for administering immunotherapy in your office. At Allergy Partners, quality patient care and outcomes is our goal, and we appreciate your assistance in helping to care for our patients. To aid you, we have designed this Allergen Immunotherapy Treatment Handbook to help you provide the safest, most effective allergen immunotherapy treatments.

Allergen immunotherapy is a method by which the immune response of atopic individuals can be altered to reduce their sensitivity to allergens. Studies have confirmed the efficacy of immunotherapy for the treatment of allergic rhinoconjunctivitis, hymenoptera venom hypersensitivity, and allergic asthma. Immunotherapy involves the administration of subcutaneous injections of gradually increasing doses of antigens (allergenic extracts). In general, higher doses offer the greatest protection. For immunotherapy to be successful, extracts must be handled properly and administered correctly. In addition, it is vital to ensure the patients' understanding of the risks involved and their compliance with the treatment program.

We hope this information is useful. If you have any questions, or if we can be of any further assistance, please do not hesitate to contact our local office.

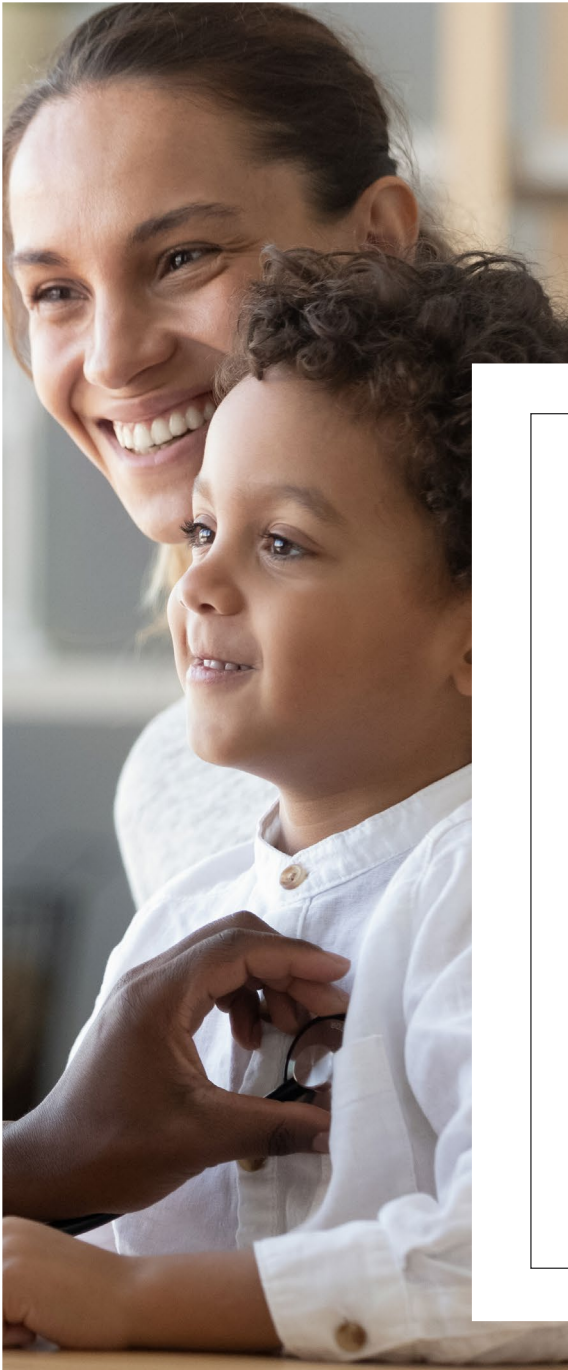
Sincerely,
Allergy Partners, PLLC

130+
ALLERGISTS

Largest
SINGLE-SPECIALTY,
MULTI-STATE PRACTICE

Specialty
ALLERGY, ASTHMA &
IMMUNOLOGY

Experience
ESTABLISHED IN 1987



History of Allergen Immunotherapy

Allergen-specific immunotherapy (hyposensitization) was first introduced in 1911. A large body of evidence supports the efficacy of specific allergen immunotherapy for allergic rhinitis and asthma. The effectiveness of immunotherapy is equivalent to inhaled steroids and superior to antihistamines, leukotriene receptor antagonists, and cromolyn.

Immunotherapy also offers the patient the potential of “disease modifying” treatment and improved quality of life. In addition, allergen immunotherapy can prevent progression of diseases.

First, immunotherapy has been shown to prevent new sensitizations. New sensitization occurs in about 25% of patients receiving immunotherapy. However, between 67% to 75% of patients without immunotherapy develop additional sensitivities. Immunotherapy may reduce progression to asthma in patients who only have allergic rhinitis. Studies have shown that patients receiving immunotherapy reduce their risk of developing asthma by nearly two thirds.

Probably the most important benefit of immunotherapy to our patients is improvement in their “quality of life.” Studies evaluating immunotherapy for rhinoconjunctivitis by means of quality of life questionnaires have shown statistical improvement in scores related to activities, nasal symptoms (pruritis/sneezing, rhinorrhea, postnasal drip, and nasal blockage) and emotions. These findings may also occur with reduced medication use.



Extract Labeling

Allergy Partners labels all allergen extract in accordance with the 2010 Allergen Immunotherapy Practice Parameter published by the Joint Task Force on Practice Parameters, representing the American Academy of Allergy, Asthma & Immunology (AAAAI) and the American College of Allergy, Asthma & Immunology (ACAAI). Under this convention, the most concentrated extract is labeled 1:1. The other vials are labeled as 10-fold dilutions of the most concentrated (1:1) vial. As more dilute vials may undergo more rapid degradation of allergen, these vials have shorter expiration dates than more concentrated vials.

1:1

MOST
CONCENTRATED
EXTRACT

1:10,000

LEAST
CONCENTRATED
EXTRACT



**Silver
Vial**



STRENGTH
1:10,000

EXP.
3 MONTHS



**Green
Vial**



STRENGTH
1:1,000

EXP.
6 MONTHS



**Blue
Vial**



STRENGTH
1:100

EXP.
6 MONTHS



**Yellow
Vial**



STRENGTH
1:10

EXP.
12 MONTHS



**Red
Vial**



STRENGTH
1:1

EXP.
12 MONTHS

Venoms buildup may start below 1mcg and please note expiration date on label.

Bee Sting Extract

Allergen extracts for bee sting anaphylaxis are labeled differently. Please take care to note these important differences. Delete sentence of Honey Bee, Yellow Jacket, White Faced Hornet, Yellow Faced Hornet and Wasp.

Mixed Vespid



Green

STRENGTH
3 mcg/mL
EXPIRES
2 MONTHS



Blue

STRENGTH
30 mcg/mL
EXPIRES
2 MONTHS



Silver

STRENGTH
300 mcg/mL
EXPIRES
12 MONTHS

White Faced Hornet and Yellow Faced Hornet



Green

STRENGTH
1 mcg/mL
EXPIRES
2 MONTHS



Blue

STRENGTH
10 mcg/mL
EXPIRES
2 MONTHS



Silver

STRENGTH
100 mcg/mL
EXPIRES
6 MONTHS

Yellow Jacket, Honeybee and Wasp



Green

STRENGTH
1 mcg/mL
EXPIRES
2 MONTHS



Blue

STRENGTH
10 mcg/mL
EXPIRES
2 MONTHS



Silver

STRENGTH
100 mcg/mL
EXPIRES
12 MONTHS



Storage of Allergen Immunotherapy Mixes

KEEP REFRIGERATED.

Allergy vaccines lose potency over time and lose potency more quickly if not refrigerated. However, freezing will destroy the allergen. Please do not let vaccine freeze. Vaccine should be stored between 2°-8° C (or 35.6°-46.4° F).

If you have any questions about the labeling system, please do not hesitate to call our office.

ALLERGY PARTNERS, PLLC
ALLERGEN, ANA A
DOB: 8/17/2006
DDOCTO: SS201000001
MIX 1: G,T,W
1:1 [19990018]
EXP:10-1-2021



STORE AT 2-8°C



Administration Techniques

Syringe gauge & needle

Immunotherapy should be given with a 26 or 27 gauge safety syringe with a 3/8 or 1/2 inch needle. Safety syringes designed specifically for immunotherapy are available from medical supply companies.

Air in the syringe

There should be no air in the hub of the syringe. Air can be expelled by flicking the syringe with a finger while holding the syringe with the needle end up.

Location of injection

The immunotherapy injection usually is given in the posterior portion of the middle third of the upper arm. This location tends to have a greater amount of subcutaneous tissue than adjacent areas. Before the injection is given, the skin should be wiped with an alcohol swab. This does not sterilize the area, but it does remove gross contamination from the skin surface.

Immunotherapy injections must be given SUBCUTANEOUSLY. DO NOT GIVE INTRAMUSCULARLY. Subcutaneous injections result in the formation of a reservoir of vaccine that is slowly absorbed. Intramuscular injections may allow absorption that is too rapid which could lead to a systemic reaction. The skin should be pinched and lifted off the muscles to avoid intramuscular or intravenous injection and to increase access to the subcutaneous tissues.



Plunger Depression Rate

The plunger should be depressed at a rate that does not result in wheal formation or excessive pain. Immediately after removal of the needle, mild pressure should be applied to the injection site for approximately 15 seconds. This reduces the chance of leakage of the vaccine, which could result in a local reaction.

Observation Period



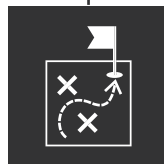
30 Minutes

Check the injection site after at least a 30 minute waiting period and document any reaction on the injection record.



Continuation of treatment

Instruct patient about his/her next scheduled injection.



Follow up

Encourage compliance.

Emergency Equipment & Medications

Adequate equipment and medications should be immediately available to treat anaphylaxis, if it should occur. This should include at least the following equipment and reagents:



Stethoscope



Sphygmomanometer



Tourniquets



Syringes



Hypodermic needles



Large bore needles



Epinephrine 1:1,000



Oxygen



Equipment for administering IV fluids



Oral airway



Antihistamine for injection



Corticosteroid for IV injection



Safe Injections

Prior to Administration:

Be sure a physician or mid-level provider is in the office and follow all protocols listed below

Correct Patient



+
The clinical staff member will verify the patient name on the encounter form or on the sign-in sheet with the shot record(s) and with the vial(s).

+
The clinical staff member will call the patient to the shot room by using first and last names, regardless of how familiar the clinical staff member is with the patient.

+
The clinical staff member will have the patient (or parent/caregiver) visually confirm:

- The name on the vaccine vial(s);
- The name on the shot record(s); and
- The date of birth on the shot record.

+
In addition, the office should consider having a picture of the patient on the shot record(s).

Correct Dose



+
The clinical staff member will carefully verify the correct dose for the patient.

+
The clinical staff member who draws up the injection must be the one who administers the injection.

+
The clinical staff member shall prepare only one patient's extract at a time.

+
The clinical staff member shall put the vials of vaccine in a separate area, preferably back in the refrigerator, immediately after use. This ensures that the vaccine is not used for the wrong patient.

+
The clinical staff member will ask the patient if they had a reaction after the previous injection and record any reaction on the shot record.

+
The clinical staff member will record on the shot record the date, concentration, dose, and in which arm (L or R) the shot or shots were given.



Other Risk Factors

Beta-blocker

If the patient is on a beta-blocker, do not give the shots until the patient is cleared by the allergist.

Pregnancy

If the patient is pregnant, please contact the allergist. Allergy vaccine can be continued during pregnancy but the dose may need to be adjusted.

Wait time

The office should take steps to ensure that patients adhere to at least a 30 minute wait time after receiving an allergy injection. If a longer wait is required, indicate the longer wait on the shot record.

Severe reactions

The shot record should indicate whether the patient has risk factors for severe reactions to allergy shots. These risk factors include asthma, beta-blocker use, and previous systemic reaction to an allergy injection.

Different dosage

If a maintenance dose different from the usual is chosen, the clinical staff member should indicate this dose on the shot record.

Peak flow

If peak flow is to be measured, the minimal peak flow will be indicated on the shot record.

Reactions

Be prepared for a reaction

S T E P
01

Provider

Is a physician or mid-level provider in the office?

S T E P
02

Competency

Is the physician competent in the technique of cardiopulmonary resuscitation?

S T E P
03

Epinephrine

Is injectable epinephrine available?

S T E P
04

Tourniquet

Is a tourniquet available?

S T E P
05

Open airway

Are provisions for maintaining an open airway in place?

S T E P
06

Medical Equipment

Are medical equipment and supplies for treatment of shock in place?

S T E P
07

Beta blocker

Is patient on a Beta Blocker? If so, do not give the shots until the patient is cleared by the allergist.

S T E P
08

Waiting time

Can the patient wait at least 30 minutes?

Asthma



If the patient is experiencing asthma symptoms, do not administer the shot. Also, if the patient continues to have asthma symptoms such that they cannot continue to receive shots, have the patient call our office to schedule an appointment to address the uncontrolled asthma.

If the patient is having acute upper respiratory symptoms or fever, do not give the shot. However, with resolving URI symptoms the patient can receive a shot. Antibiotics and prednisone are not necessarily reasons to withhold a shot. Withhold shots based on symptoms or the patient's peak flow.



Extract Orders

All extract orders are filled in our Asheville, North Carolina extract lab. The following information will assist us in making sure that each order is filled promptly and accurately.

REFILL(S)/REORDER(S) SHOULD BE PLACED WHEN THE MAINTENANCE VIAL (RED TOP) HAS APPROXIMATELY 1/3 OF THE EXTRACT REMAINING. Please allow 4 to 6 weeks to process the order.

To order a refill of your patient's allergy extract, please fill out the Reorder Form, have the patient sign the form, and FAX or mail the signed form with a copy of the shot records to the FAX number or address listed on the Reorder Form.

FAXING THE REQUIRED INFORMATION WILL ALLOW US TO FILL THE ORDER FASTER. NO REFILL ORDERS WILL BE TAKEN OVER THE PHONE.

Missed Injections

Schedule For Missed Injections For Buildup

Time since last injection:

2-14 days.....Continue increasing per schedule.

15-35 days.....Repeat last dose, then increase per schedule.

Over 35 days.....Reduce the dose by one (1) step for each week over five (5) weeks, then increase per schedule

Over 63 days.....Call the office for instructions.

Schedule For Missed Injections For Maintenance

Time since last injection:

0-35 days.....Continue the maintenance dose.

Over 35 days.....Reduce the dose by one step for each week over 5 weeks, then increase per schedule.

Over 91 days.....Call the office for instructions.

Time since last venom immunotherapy for stinging insects injection:

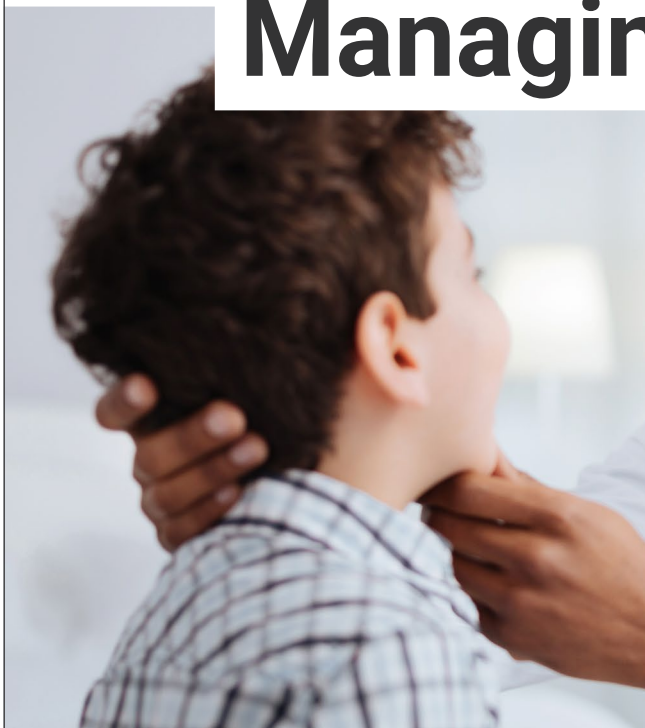
0-63 days.....Continue the maintenance dose.

Over 63 days.....Reduce the dose by one step for each week over 9 weeks, then increase per schedule.

Over 91 days.....Call the office for instructions.

PLEASE CALL THE OFFICE IF YOU HAVE ANY QUESTIONS ABOUT THE DOSAGE TO GIVE.

Managing Reactions



At the end of at least 30 minutes, check the injection site and record any local reaction in terms of swelling as indicated.

Treat any unusually large redness or swelling at the site of the injection with cold compresses and antihistamines. Contact the allergist office for repeated large local reactions and for large local reactions which last longer than 24 hours. Large local reactions (based on swelling only) require dosage adjustment. The dosage adjustment is the same whether the swelling starts while the patient is still in the office or after the patient has left the office.

Large local reactions are more common in patients receiving venom immunotherapy for stinging insects. We also tolerate larger local reactions in these patients. Always contact the allergist office prior to making any adjustment in the dose for patients on venom immunotherapy for stinging insects.

Reaction/Swelling

Management

+1

(less than 25mm)
quarter size

Proceed to next
scheduled dose.

+2

(25-30mm)

Repeat this dose on
subsequent weekly
injections until the
reaction decreases size,
then increase the dose as
scheduled.

+3

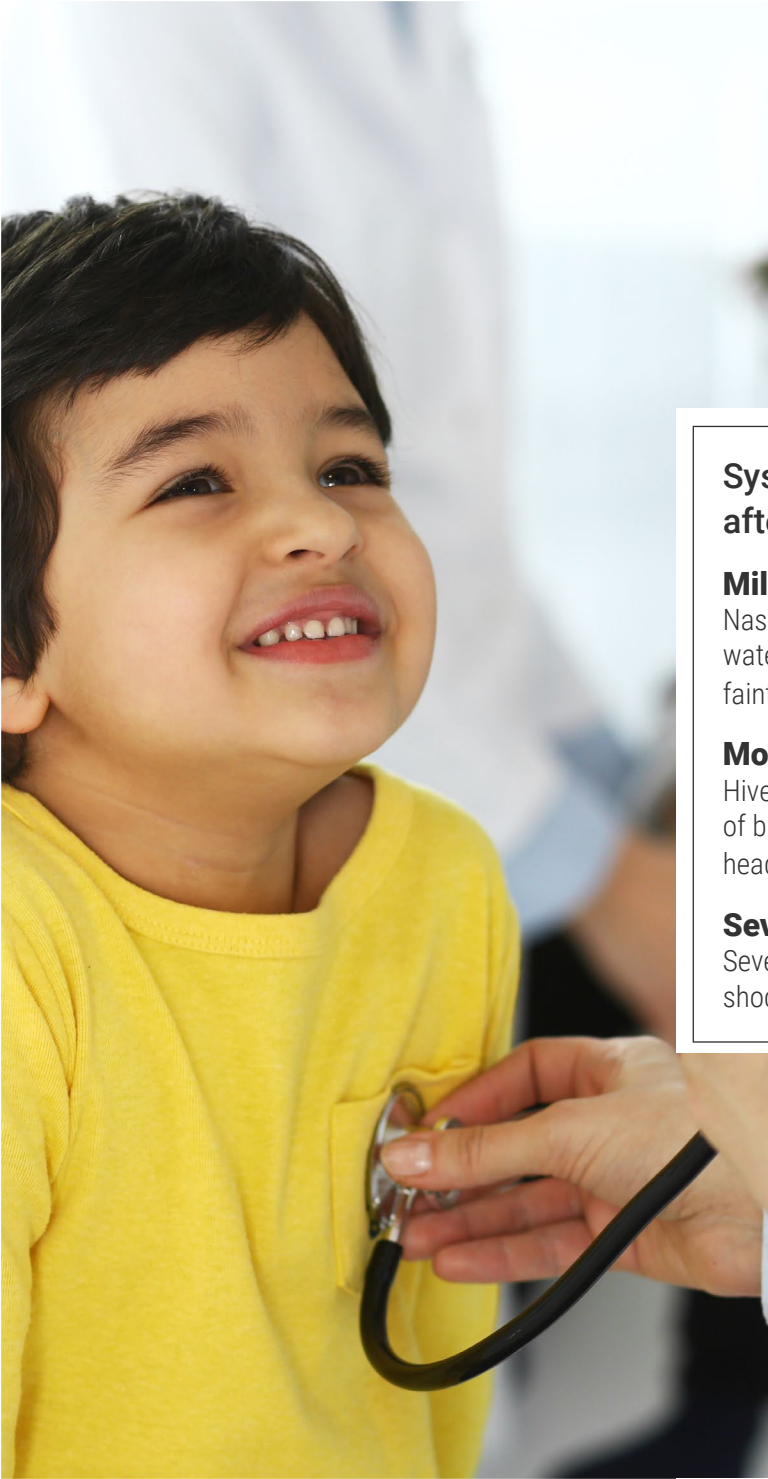
(greater than
30mm)
(50 cent piece
size)

Reduce the dose by two
(2) steps.
If no reaction, increase
the dosage as
scheduled.

+4

(a systemic
reaction)

If a systemic reaction
occurs, please contact
us for instructions before
administration of further
injections.

A young child with dark hair, wearing a bright yellow shirt, is smiling and looking upwards. A healthcare professional's hand is visible, holding a stethoscope against the child's chest. The background is blurred, showing other people in a clinical setting.

Treating Anaphylaxis/ Acute Systemic Reaction

Systemic reactions usually begin 5-20 minutes after the injection.

Mild

Nasal congestion; sneezing; itching of hands, feet, neck, or genitalia; watery eyes; flushing; hoarseness; mild cough; metallic taste; faintness.

Moderate

Hives; sweating; throat tightness; lump in throat; choking; shortness of breath; wheezing; chest tightness; nausea; abdominal cramps; headache.

Severe

Severe throat tightness; severe wheezing; tachycardia; hypotension; shock; fecal or urinary incontinence; feeling of doom.

1. Immediately

- a. One clinical staff member stays with patient
- b. One clinical staff member prepares medications
- c. Take vital signs every 5 minutes (P, BP, RR) until stable, then every 15 minutes
- d. Consider pulse oximeter and use of oxygen

For Treatment Procedure

2. For any systemic symptoms, always use epinephrine and benadryl.

Consider the other steps as indicated by the severity of the reaction.

- a. Epinephrine (1:1,000) IM (deltoid or thigh) every 5-15 minutes, maximum of 3 doses.
Adult - 0.3 - 0.5 ml
Child - 0.01 ml/kg, max of 0.3 ml
- b. Benadryl (diphenhydramine) PO, IM or IV (slowly over 5-10 minutes).
Adult - 25-50 mg
Child - 1-2 mg/kg, max of 50 mg
- c. Consider calling 911.
- d. Prednisone/Prednisolone - takes 4-6 hours to work.
- e. Nebulized albuterol 0.083% (consider adding nebulized Atrovent-ipratropium).
- f. Airway - consider oral airway or intubation.
- g. Oxygen (4-8 L/minute); consider pulse oximeter.
- h. Recumbent position, elevate legs.
- i. IV fluids.
- j. Tagament (cimetidine) IV (slowly over 5 minutes).
Adult - 300 mg (1 ampule)
Child - 4mg/kg, max of 300 mg
- k. Solumedrol IV or IM (alternative is Hydrocortisone).
Adult - 125 mg (1 ampule)
Child - 2 mg/kg, max of 125 mg
- l. Glucagon, SQ (if patient on beta-blocker).
Adult - 1 mg
Child - 0.5 mg
- m. V Epinephrine 1:10,000, if still hypotensive
Mix 1 ml of epinephrine 1:1,000 in 9 ml of bacteriostatic saline. Dose is 0.01 ml/kg of the 1:10,000 dilution. Can give every 10-20 minutes as needed. USE CAUTIOUSLY.

Observing the Patient

The patient should be observed for an appropriate period of time to make sure the reaction doesn't recur. This will usually be at least an hour after the reaction is controlled. Recurrent reactions (biphasic) are more likely to occur following anaphylaxis reactions, especially those involving hypotension. These biphasic reactions may occur up to 8 hours later. Consider emergency department management for these patients. We appreciate you helping us care for our patients by administering immunotherapy in your office.



NOTE: These are *not* standing orders. These are general guidelines that the treating physician may refer to if necessary. It is recognized that management may vary from this protocol depending on the individual situation, as no protocol can take into account all possible circumstances.

Instructions for the patient

+

There must be at least one day between shots.

+

During the buildup phase, the clinical staff member will adjust dose if time since last injection is greater than 35 days.

+

Patients must be observed for at least 30 minutes after allergy shot is given; then clinical staff member is to check your arm. Reactions can occur after an allergy shot.

Most reactions, however, occur within 30 minutes. Rarely, reactions can occur several hours after leaving the office. If this happens, immediately return to the doctor's office or go to an urgent care facility or emergency room.

+

If an antihistamine (such as Claritin, Alavert, Loratadine, Zyrtec, Allegra, Benadryl, diphenhydramine) has been recommended before injections, take it at least thirty minutes before your allergy shot to reduce the chance of reactions.

+

Continue all medications prescribed by your allergist while on allergy shots until further notice from your doctor. Relief from symptoms varies with each patient when beginning shots.

+

If you are experiencing asthma symptoms are present, do not get your shot. Also, if you continue to have asthma symptoms such that you cannot continue to receive shots, call our office to schedule an appointment to address the uncontrolled asthma.

+

If you are having acute upper respiratory symptoms with fever and/or wheezing, do not get your shot. However, with resolving URI (cold) symptoms you can receive a shot. Antibiotics and prednisone are not necessarily reasons to withhold your shot. Withhold your shots based on your symptoms or your peak flow.

+

Certain prescription medications for eye problems, headaches, heart disease, and blood pressure problems contain Beta-Blockers. Beta-Blockers may increase the sensitivity to allergens, increase risk of anaphylaxis, and decrease sensitivity to medications that are used to treat reactions. If you have been prescribed any such medication, it is **IMPORTANT** that you inform the clinical staff member **BEFORE** receiving any allergy injections.

+

Bruising sometimes happens and cannot be helped.

Remember

A shot reaction can occur at any dose. Therefore, you must always have the injection sites checked after at least 30 minutes by a clinical staff member. If you leave without being checked by the clinical staff member, you may not continue to receive additional injections. There can be no exceptions to this policy.

+

If swelling occurs at your shot site: apply ice, apply anti-itch cream (hydrocortisone or Benadryl) to the site, and take your antihistamine if has not been taken that day. Tell the clinical staff member before your next shot that swelling has occurred.

+

Expect itching, redness, and occasional mild swelling. This is normal.

+

If allergy shots are received twice a week, it takes approximately four months to reach maintenance dose, assuming the dose has not been adjusted due to reactions or time missed between shots. If shots are received once a week, it takes approximately six to eight months to reach maintenance. Maintenance refers to the maximum dose of allergy shots given every two to four weeks.

+

To insure optimal care, you should be seen at least annually at your allergist office.

+

If you become pregnant, please contact your allergist. Allergy vaccine can be continued during pregnancy but your dose may need to be adjusted.

We are the Nation's largest single-specialty allergy practice. The organization is dedicated to the diagnosis and treatment of asthma and allergic related diseases.

Years of training and experience allow the physicians of Allergy Partners to offer specialty care for a broad spectrum of disorders in the field of allergy, asthma, and clinical immunology. Our physicians are board-certified/board-eligible specialists who offer the latest advances in allergy and asthma care for children and adults.

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Evaluation & Treatment of:

Allergic Rhinitis | Asthma | Food Allergies | Eczema
Hives | Sinus Problems | Stinging Insect Allergies
Immune Deficiencies | Chronic Cough | Drug Allergies
Recurrent Infections | Eosinophilic Esophagitis

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