

DallasAllergyImmunology

GUIDELINES FOR INJECTION OF ALLERGEN EXTRACTS (ALLERGY SHOTS)

A. GENERAL PREPARATORY MEASURES

1. A copy of the **Informed Consent** and the **Consent to Receive Allergy Shots at an Outside Medical Facility** signed by the parent/guardian and patient (if 12 years of age or older) should be in the patient's medical chart.
2. Treatments should be administered under the direct supervision of a licensed physician.
3. Epinephrine (1:1,000) should be available for use in the clinic in case of anaphylaxis.
4. Extracts should be stored in a refrigerator (4°C). Do not administer extract beyond the expiration date. If extract appears cloudy or becomes frozen, notify allergist.

B. PRECAUTIONARY MEASURES AT EACH INJECTION

The following issues should be addressed each visit prior to administering injections:

1. Note and record any delayed local or systemic reactions occurring after the last shot(s).
2. If the patient has asthma, ask about any cough or wheezing in the past week and record best of 3 peak flow (PF) attempts.
3. Inquire about any new medications, particularly **beta blockers** contained in many anti-hypertensive medications and some medications for migraines and glaucoma - see **Medications to Avoid During Immunotherapy**.
4. Allergy shots should not be given under the following circumstances:
 - a. Patient had a delayed systemic reaction after last shot(s) - **CONSULT ALLERGIST TO DISCUSS HOW TO PROCEED.**
 - b. Patient with active flare of asthma or PF <80% of personal best PF (PBPF) - Hold shots until PF's return to >80% PBPF. Treat asthma flare per patient's **Asthma Action Plan**.
 - c. Patient is taking a **beta blocker** medication - **CONSULT ALLERGIST TO DISCUSS HOW TO PROCEED.**
5. The following conditions are **not** contraindications to giving allergen I.T. injections:
 - a. low grade fever
 - b. mild viral illness
 - c. hay fever symptoms

C. SHOT SCHEDULE

Consult attached **Allergen Immunotherapy Administration Guidelines** to determine correct concentration, dosage and **GUIDELINES FOR MISSED DOSES**. If progress cannot be made in the **ESCALATION SCHEDULE**, refer the patient to our office for re-evaluation. Patient should bring refrigerated allergen extract and an updated copy of the **Allergy Shot Administration Record** to this appointment.

D. SHOT ADMINISTRATION

1. Double check extract vials with patient's **Allergy Shot Administration Record** to ensure giving the correct concentration and dosage of the right extract to the right patient.
2. Record date, time, peak flows (for patients with asthma), treatment set, vial, concentration, and dose administered in the **Allergy Shot Administration Record**.
3. Do **not** shake extract.
4. Use a 1cc hubless safety syringe with a 27gauge, 1/2" needle (Becton-Dickinson #305950). 1 or 2% lidocaine 0.05 ml may be drawn up in the syringe *prior to* drawing the extract dose.
5. Give injections subcutaneously to the posterolateral aspect of the middle upper arm (below deltoid).
6. Always pull back plunger prior to administering extract in order to avoid intravenous delivery.
7. When two different extracts are given at the same visit, inject the pollen extract (Set A) into the right arm and environmental extract (Set B) into the left arm.
8. Avoid massaging injection site(s) to lessen unduly rapid absorption of the allergen.

9. Patient is to remain in the office within view of staff and with a physician available on premises for 30 MINUTES AFTER INJECTION(S) in order to be observed and treated for possible early allergic reaction.

10. Following the 30 minute observation period:

- a. repeat peak flows – **NOTIFY PHYSICIAN IF THE PEAK FLOW DROPS MORE THAN 10% FROM BASELINE.**
- b. measure and score any local reactions
- c. note any dosage adjustments for the next injections

E. GRADING & MANAGEMENT OF LOCAL REACTIONS

1. Measure and record diameter of any local induration (swelling) of the injection site(s) observed at the end of the 30 minute waiting period and adjust schedule accordingly:

<u>INDURATION</u>	<u>GRADE</u>	<u>ACTION</u>
<25mm	"A"	Advance according to schedule
25-50mm	"B"	Repeat same dosage
>50mm	"C"	Reduce by one dosage step

2. Apply ice pack to painful large local reactions. Use oral antihistamines and/or topical hydrocortisone at physician's discretion for relief of itching.

3. Tips for preventing large local reactions:

- a. Patient may take oral antihistamine 1-2 hours before allergy shots.
- b. Nurse may wipe needle with alcohol (and allow to dry briefly) immediately prior to giving shot(s).

F. MANAGEMENT OF SEVERE SYSTEMIC REACTIONS / ANAPHYLAXIS

1. Notify on-site physician for immediate evaluation and treatment if any of the following signs or symptoms are observed:

- **Skin:** generalized itching, flushing, hives, pallor, cyanosis, perspiration
- **Resp:** complaints of difficulty swallowing, throat fullness, chest tightness, difficulty breathing, cough, wheezing
- **GI:** complaints of abdominal pain, cramping, nausea, or vomiting
- **Neuro:** lightheadedness, dizziness, fainting, collapse.

2. Record assessments and treatments on **Allergy Shot Reaction Flow Sheet.**

3. Administer **Epinephrine (1:1,000)** promptly for anaphylaxis.

- a. Give 0.01cc/kg to maximum of 0.3cc aqueous epinephrine (1:1,000) intramuscularly. This dose may be repeated at 5-10 minute intervals as needed.
- b. Inject an additional 0.1cc of 1:1,000 epinephrine directly into the site of allergen injection and place a tourniquet above the injection site to retard allergen absorption.

4. Treat bronchospasm with nebulized bronchodilators. Administer O₂ for respiratory distress.

5. Administer IV fluids (isotonic crystalloid or colloid) at 30-50cc/kg/hr to treat circulator collapse.

G. MANAGEMENT OF MILD SYSTEMIC REACTIONS

For systemic reactions limited to mild hay fever symptoms or mild wheezing:

1. Notify on-site physician for evaluation.
2. Treat symptoms with oral antihistamines and/or inhaled bronchodilators as appropriate.
3. Extend observation period to one hour for patients with wheezing and follow guidelines on patient's **Asthma Action Plan.**

IMPORTANT: For any systemic reactions, questions regarding proper administration of allergy shots or clarification of these instructions, consult allergist to discuss how to proceed.