Allergen immunotherapy injections are prescribed for patients with allergic rhinitis (hay fever), allergic asthma or life threatening reactions to insect stings. Immunotherapy is the only medical treatment that could potentially modify allergic disease. Some studies have shown that it may have a preventive role in allergic children, possibly preventing asthma from developing in some patients with allergic rhinitis. Immunotherapy would be considered for individuals, who have moderate or severe symptoms not adequately controlled by environmental control measures and/or medications.

**Effectiveness:** Allergen immunotherapy (allergy shots) may "turn down" or reduce allergic reactions to common allergens including pollens, molds, animal dander and dust mites. They induce ‘immune tolerance’ of one’s allergens. In most cases, the initial 3 to 12 month course of allergy shots is likely to gradually decrease sensitivity to airborne allergens and continuation of injections leads to further improvement. The injections diminish allergy sensitivities, resulting in fewer symptoms and use of fewer medications. It is important to maintain shots at the proper time intervals; missing your shots for a short time may be acceptable but some adjustment in the dose may be necessary for long lapses in injections. Please contact us if you miss receiving your injections for longer than what is recommended for your current vial.

**How long are allergy shots given?** There are generally 2 phases to immunotherapy: a Build-up (B.U.P) phase and a maintenance (M.P.) phase

- **Build-up phase:** involves receiving injections with increasing amounts of the allergens. The frequency of injections during this phase generally ranges from 1 to 2 times a week, though more rapid build-up schedules are sometimes used. The duration of this phase depends on the frequency of the injections but generally ranges from 2 to 4 months.

- **Maintenance phase:** This phase begins when the effective therapeutic dose is reached. The effective therapeutic dose is based on recommendations from a national collaborative committee called the Joint Task Force for Practice Parameters: Allergen Immunotherapy: A Practice Parameter and was determined after review of a number of published studies on immunotherapy. The effective maintenance dose may be individualized for a particular person based on their degree of sensitivity (how ‘allergic they are’ to the allergens in their shot prescription) and their response to the build-up phase. Once the target maintenance dose is reached, the intervals between the allergy injections will be increased. The intervals between maintenance immunotherapy injections generally ranges from every 2 to every 4 weeks but should be individualized to provide the best combination of effectiveness and safety for each person. **Shorter intervals between allergy injections may lead to fewer reactions and greater benefit in some people.** Some individuals may tolerate intervals longer than four weeks between injections.

**What are reactions to allergy shots?** It is possible to have an allergic reaction to the allergy injection itself. Most common reactions are local (swelling or hives at the injection site). Systemic reactions may include combinations of nasal drainage, itching, red eye, watering of eyes, sneezing, hives, flushing/redness of skin, lightheadedness, and/or asthma-like symptoms. Rarely, life threatening reactions do occur. Some conditions can make allergic reactions to
the injections more likely: heavy natural exposure to pollen during a pollen season and exercise immediately after an injection. Serious systemic reactions can occur in patients with asthma that is not well controlled. Therefore, if you have noted worsening of your asthma symptoms, notify your nurse or physician before receiving your scheduled injections. Reactions to injections can occur even in the absence of these conditions.

To help minimize allergy shot reactions, we recommend that you (or your child) take your allergy medications prior to, but within 12-18 hours of their anticipated shot injection time. Localized reactions can feel like mild bee stings. Analgesics or Anti-inflammatory medications (e.g. Acetaminophen, Ibuprofen, Naproxen, etc) can be used to help reduce discomfort from the allergy shot injections. Ice additionally, can be applied to the affected area to reduce discomfort. Epinephrine pens are sometimes used in the course of allergy immunotherapy. Prescribing them for you is not always necessary clinically based upon best practice guidelines. However, should you desire a prescription at any time during your therapy, please ask your nurse and/or provider. We routinely will prescribe one for any patient who has a history of systemic reactions to prior immunotherapy, or if one has a systemic reaction at our clinic.

Please inform the nursing staff if you have been diagnosed with a new medical condition or prescribed any new medications since your last visit. If any symptoms occur immediately or within hours of your injection, please inform the nurse before you receive your next injection.

Below are some additional questions commonly asked:

1. **If my skin tests are positive, do I have to go on Allergy shots?** No. The decision to go on allergy shots rests solely with the patient or parent. We will certainly provide a discussion, recommendation and resources so an ‘educated choice’ can be reached. Allergy shots are the only truly preventive allergic therapy available. Medications mask symptoms, but ‘shots’ reduce one’s exaggerated allergic immune responses.

2. **If I am pregnant, can I go on allergy shots?** Allergy shot patients who find out they are pregnant can if desired, remain on allergy shots, however we will not increase their doses from current levels. Pregnant women not already on shots will not be started until after their pregnancies end.

3. **How are allergy shots administered?** We inject shots in the upper outer arms just under the skin (subcutaneously). The shot ‘schedules’ will likely vary from one individual to another, as will the number of injections at each ‘session’ (1 or 2). We will ‘build up’ the doses of allergens usually over several weeks to reach a set maintenance dose which is then administered about once a month.

4. **Can I give myself (or child) the Allergy shots at home?** No. For safety reasons, best practices in Allergy discourage allowing patients or parents to administer shots away from a facility capable of promptly recognizing and treating allergic reactions. Safety and Adherence to accepted “evidence-based” medical standards are our priorities while you are under our care.

5. **How long does one stay on shots?** Current Board-Certified Allergist Practice Parameter guidelines recommend shots to be continued for 3 to 5 years on the maintenance dose. Some patients will opt to remain on shots longer. Starting shots does not obligate someone to 3-5 years of treatments, but the longer courses will provide a longer lasting effect in symptom reduction. Shot schedules will vary somewhat, but generally will be 1-2 times per week for 6-18 weeks of build-up doses, then once every 2-4 weeks thereafter for maintenance doses.

6. **If I go on shots can I stop my allergy medications?** While shots usually help greatly reduce or prevent allergic reactions to allergens, there are no guarantees symptoms will be gone for the rest of one’s life. Thus, patients may have to use allergy medications, albeit at reduced frequencies/doses, or without resorting to combination therapy. Most shot patients will notice an improvement in symptom control within 3-9 months. Pollen allergic patients likely will notice improvement by their next ‘pollen season’.

7. **If I go on shots do I have to carry around an epinephrine ‘pen’?** The decision to prescribe an epinephrine pen is done on a case-by-case basis. Allergy guidelines do not currently mandate their prescribing in all cases.

8. **Do I have to make an appointment to get allergy shots?** For your convenience we are able to accommodate walk-in shot patients. We do prefer one make an appointment for their shot to lessen one’s wait time. Walk-in
patients will still need to check-in at the front desk. Plan for a near 30 minute observation period after your shot(s) is (are) administered. Typically shot patients do not see a provider, unless they book an appointment with the provider, or the nurse require their assistance.

9. Our current shot schedule is:
   - Mon/Tue/Thur/Fri – 8:00-11:15 and 1:00-4:00
   - Wed – Most days we will do shots; Call ahead if you desire a Wednesday shot injection to confirm that we are doing them on Wednesday.
   *We do recommend leaving a message (615.278.7600) that you plan to come into the office, so we can expedite your shot session, and if necessary contact you should we have an unexpected closure of the clinic (i.e. due to staff illness or emergency, etc.).

10. How do I pay for ‘shots’? Most insurance policies provide allergy benefits, though benefits vary based on each policy. Please inquire with your insurance if you are considering shots.

11. Do you offer “Allergy drops”? Not at this time. Allergy drops or sublingual (“under the tongue”) allergy ‘drops’ are currently under research investigation, and seem to hold ‘promise’ with regard to safety and clinical effectiveness. However, they require daily or twice dosing, and optimum ‘doses’ are not well known, but are thought to exceed 300-700 times the dose of traditional injections to attain clinical effectiveness. Additionally, insurances do not currently cover ‘Allergy drops’. This fact and the number of required doses may preclude patients from seeking this type of therapy due to cost.

12. If I want myself or my child to go on shots, but I live far away, can we get the shots elsewhere? Absolutely, one can get shots at various Primary Care clinics or equivalent ones nearby your home or work or school provided they are comfortable doing so. Please discuss with us, and your desired ‘shot clinic’. We will make every effort to support you in this matter.

13. What are some resources to review before or after seeing our Allergy provider(s)? The AAAAI.org, ACAAI.org and FoodAllergy.org are excellent resources for reviewing information on allergic conditions, medications or ‘shots’ (a.k.a. Immunotherapy). Weather.com also provides region-specific updates on pollen or mold counts. Plants.USDA.gov has pictures and shows regional and national plants

Bottom line is that we want you (or your child) to have as convenient and safe allergy shot therapy as possible with maximum reduction of symptoms and need for allergy medications in the future!

MMC Allergy Staff