

FOOD ORAL IMMUNOTHERAPY

Oral Immunotherapy (OIT) is a medical treatment for food allergies. It should always be supervised by board certified allergists. The procedure involves giving increasing doses of the food to which you or your child is allergic in order to achieve a state of immunologic tolerance (desensitization). The immune system is re-trained to handle and not react to food proteins/allergens through regular eating of small amounts of food. Currently, this is not considered the standard of care- Strict avoidance of the food allergen is recommended.

If you choose to undergo OIT to foods, you will be given tiny amounts of the food in increasing doses. The first day will start with a minute amount of allergen either in a single dose or with increasing doses spaced out every 20 minutes over several hours. You will be sent home with the last tolerated dose to be taken EVERY day at home. You return to the office in 1-2 weeks to increase the dose under observation of a medical provider. Usually it's a minimum of 7 at-home doses without significant adverse effects before the dose is increased in the office.

Goals: Each patient's goal may be different. For some patients, the goal is to freely eat the food without any limitation as part of the normal diet. For other patients, the goal may be to get to a safe amount so that accidental ingestion does not trigger a severe allergic reaction. The goal is to be at maintenance dosing at about 6 months but this varies with each patient. For example, some patients may want to be able to eat a peanut butter sandwich. Others have no interest in doing that but may want to be able to tolerate 1-2 peanuts so they do not have to worry about accidental exposure. Success rates for food OIT are about 80%.

Long term commitment: It is very important that you commit to eating the food daily and continue to do so after completing the program. There is evidence that some patients are at risk for life threatening reactions if they stop having the food regularly. If not given daily it should be taken regularly about 3-5 times a week in a normal diet.

Risks/Adverse effects: The major risks are life threatening anaphylaxis and death. The other significant adverse effect that has been reported in 2-4% of patients is eosinophilic esophagitis (EoE). EoE is inflammation of the tube connecting the mouth to the stomach(esophagus). Symptoms are pain or difficulty swallowing, heartburn and food getting stuck. The condition may or may not be reversible and can require medication and surgery for treatment. Patients with allergies and asthma are generally at increased risk for this condition. It develops spontaneously in patients who do not undergo OIT as well.

Important precautions and conditions: Ideally the doses of food OIT should be given at the same time every day. If you miss more than one dose you should call the office for instructions on dosing. The patient should not exercise for at least 2 hours after the OIT food dose. That means avoiding activity that increases the heart rate or increases body temperature. **Have epinephrine available at all times!!** You should call if there are any signs of reaction. Give EpiPen or Auvi-Q right away if there are signs of a severe reaction: sneezing, wheezing, cough, shortness of breath, swelling of the mouth or throat, change in voice quality, vomiting or sudden quietness which may suggest signs of passing out or shock. If there is a single episode of vomiting while or immediately after taking the dose and there are NO other problems, you may observe without treatment but if any other symptoms develop along with vomiting, administer epinephrine immediately and go to the ER if epinephrine is given. Similarly, if there are just a few hives, observe or give an antihistamine -cetirizine or diphenhydramine.

Contraindications: We do not do OIT with patients who already have EOE (eosinophilic esophagitis) or uncontrolled asthma (asthma must be brought under control before OIT begins). Patients must be in general good health and up to date with required vaccinations.

Charge: this procedure is billed separately and you will need to arrange for payment in full with our division

Strauss Allergy and Asthma Food Oral Immunotherapy FAQs Once Daily Dosing

1. Q. How long will the entire process take?
A. Each patient is different. The range is 6-12 months for goal dose.
2. Q. Should routine allergy medications be stopped before the first day procedure?
A. No. Patients should take all routine medications as they normally would during OIT.
3. Q. How often can the dose be increased?
A. There is usually a minimum of 7 days between dose increases (after 7 daily doses given), but some patients may decide to go longer between dose increases if they so choose.
4. Q. What time of day should home doses be given?
A. Doses should be given 21-27 hours apart.
5. Q. What if my child does not get immunizations or is behind on scheduled immunizations, can he/she start the OIT program?
A. No. Your child must be up-to-date on all scheduled immunizations before starting any of the oral immunotherapy programs.
6. Q. How long should my child stay awake after the dose is given?
A. Children should be observed for at least one hour after the dose is given. They should not be allowed to sleep during this time.
7. Q. What about home dosing on the day of the office visit for dose increase?
A. Ideally, there should be at least 21 hours and no more than 27 hours between doses. NEVER increase the dose at home. If the up-dose office visit is scheduled more than 27 hours since the last dose, give one additional dose about 12 hours before the scheduled Up dose visit.
8. Q. If there is a reaction at home, what should I do?
A. Treat the reaction the same way you would any food reaction; antihistamine if

there is just rash/hives, Epi-pen or Auvi-Q if there are other symptoms of anaphylaxis. If there are only mild hives or oral itch, DO NOT give antihistamine for the first hour to see if the reaction progresses. If the hives/oral itch are increasing, give antihistamine. Call us after the appropriate immediate intervention. We will give instructions on future dosing.

9. Q. What if we are flying when the dose is due?
A. Do not administer the dose less than one hour before boarding and do not administer the dose while flying.
10. Q. At what point can we supply our own food?
A. You will be instructed on what foods to bring. For liquid doses, bring a drink you or your child would like to mix/mask the taste.
11. Q. Does the food solution need refrigeration?
A. There are no preservatives in the food solution. It MUST be kept cold.
12. Q. What do I do if refrigeration is not maintained or if it smells or tastes different?
A. If the sample sits out for more than 30 minutes or if it appears to have spoiled, the solution must be replaced. Please call the office.
13. Q. What if I or my child is sick and can't take the doses on schedule?
A. If there is a gap of more than 48 hours between doses, call before giving the next dose. If it is less than 27 hours, pick up on the standard dosing schedule.
14. Q. What about masking the taste of the food solution?
A. Taste is personal; experiment. Try drink powder (Kool-Aide, Crystal Light), Gatorade, chocolate or another beverage. The food powder or small solution volumes could be mixed with a small amount of a semi-solid food such as apple sauce or mashed potato. Try to give the dose in one bite to ensure that the entire dose of oral immunotherapy mixture is taken. If the total amount gets too large, it will be hard to get it all down.
15. Q. When can foods containing the allergenic food be introduced into the regular diet?
A. Foods containing the allergenic food may be introduced into the diet at the end of the entire oral immunotherapy escalation process or as instructed by your physician.
16. Q. What is the goal of this process?
A. The number one goal is safety; to allow the patient to ingest the allergenic food and foods that contain the allergenic food without thinking about it.
17. Q. What is the follow up schedule when maintenance dosing is reached?
A. When the full dose has been reached, there is a follow-up at 1 month (usually with labs) and then every 6 months.
18. Q. With once daily dosing, is the time of day that the dose is given important?
A. Time of day is not important but the amount of time between doses is important. We have achieved a delicate balance that depends on a certain amount of the allergenic protein being in their system at all times. You should try to give the once a day dose at the same time every day (21-27 hours between doses).
19. Q. Does my child need to avoid exercise during the oral immunotherapy process?

- A. Exercise should be avoided for at least two hours after dosing and doses should not be given immediately following exercise. Exercise around the time of dosing increases the chance of a reaction. Exercise restriction applies to both escalation and maintenance dosing.
20. Q. Can two oral immunotherapy foods, one on maintenance dose and one on increasing dose be given at the same time?
A. Yes.
21. Q. How much of the allergenic food can/must my child eat during the maintenance phase of the oral immunotherapy process?
A. In most cases the food may be freely added to the diet after reaching the maintenance phase of Food OIT treatment. If the time comes when the frequency of the maintenance dose changes, we will let you know. Until then, the patient should continue the daily maintenance dose as directed.
22. Q. If my child is allergic to multiple foods will completing OIT for one food help treat other food allergies?
A. Each Food OIT Program is food specific. Completing one program does not treat other food allergies. Ask your provider for more specific information for treating multiple food allergies.
23. Q. How soon after completion of the oral immunotherapy process can a second oral immunotherapy program be performed for another food?
A. Your child may begin a second oral immunotherapy program after he/she has been stable on a maintenance dose for one month.
24. Q. How is the oral immunotherapy program billed and what does it cost?
A. This program will not be billed to your insurance company and you must pay the cost out of pocket. Ask about our current price for the procedure which includes all food oral immunotherapy visits. You will be billed separately through insurance for routine office visits related to other allergic conditions and asthma.

Food Oral Immunotherapy Do's and Don'ts

DO

- Give the dose after having at least a snack.
- Keep liquids refrigerated.
- Give escalation doses 21-27 hours apart.
- Call the office if a dose is missed. Do not give the next dose before getting instructions from our office.
- Call if there are any signs of reaction.
- Give EpiPen or Auvi-Q right away if there are signs of a severe reaction: sneezing, wheezing, cough, shortness of breath, swelling of the mouth or throat, change in voice quality, vomiting or sudden quietness. If there is a single episode of vomiting while or immediately after taking the dose and there are NO other problems, you may observe without treatment but if any other symptoms develop, administer epinephrine immediately.
- Go to the ER right away if epinephrine is given.
- Call before the next dose if there is a new illness.

- Have epinephrine available at all times!!
- Let us know by phone about minor problems that occur more than once.
- Keep track of your doses remaining so that you don't run out unexpectedly.
- Call right away for extra dosing solution if the supply is low or if an appointment must be rescheduled.

DON'T • Don't give the dose on an empty stomach.

- Don't exercise for at least 2 hours after the OIT dose. No activity that increases the heart rate or increases body temperature including hot showers.
- Don't give an escalation dose without calling the office first if it has been more than 24 hours since the last dose.
- Don't come for a dose increase if there is an active illness or asthma flare. Call to reschedule after the illness has resolved.
- Don't treat a mild reaction (a few hives, mouth itch, mild abdominal pain) that resolves within 1 hour.