

# Paradise Pediatrics

3400 Bee Ridge Road Suite 120 Sarasota, FL 34239

Phone: (941) 924-9900 Fax: (941) 924-9919

## DOSING CHART FOR IMMUNOTHERAPY

---

**Allergy Immunotherapy:** A long-term treatment for allergies that works by changing how a patient's immune system responds to allergens. Immunotherapy builds up a patient's tolerance to their allergies and helps to lessen allergic reactions and allergy-related symptoms including nasal congestion, cough, itchy/red eyes, etc.

Immunotherapy works by building up a tolerance to the patient's allergies by slowly introducing their immune system to the allergens in small and slow quantities. Over time, immunotherapy allows the immune system to no longer react as harshly to the allergens and gives the patient's some relief of their symptoms

### Immunotherapy Process:

- Build-up doses consist of 5 separate allergen vials (silver, green, blue, yellow, and red) are used with varying degrees of dilutant mixed in each bottle
- At every visit the patient gets either 1-3 subcutaneous injections to their right and/or left arms depending on their unique allergy profile using a 1ml allergy syringe (needle 27G x 3/8)
- Patients need to get their vitals taken before every immunotherapy injection to monitor for any changes in their health status over the course of therapy
- The dosage of the injection depends on the patient and their reactions to previous immunotherapy injections
  - Must always measure the injection site after giving the immunotherapy shot to measure their response to the therapy and also ensure that the patient is safe and can handle going onto the next dose

### Measuring reactions:

- Must measure the immunotherapy injection site **30 minutes after** the initial injection and calculate the total size of the localized reaction (measure from the largest point)
  - If the reaction is smaller than 10mm, can increase the dose by 0.10ml for the next injection
  - If the reaction is larger than 10mm, can increase the dose by 0.05ml for the next injection
  - If the reaction is larger than 35mm, repeat the current dose
  - If the reaction is larger than 50mm, go down to the previous dose

**Missed Doses:** *Calculate the dose to give based off the interval since the last injection was given*

- 8 days= Continue build-up dose
- 9-13 days= Repeat previous dose
- 14-21 days= Reduce previous dose by 25%
- 21-28 days= Reduce previous dose by 50%
- More than 28 days= Repeat build-up vial from start

## **First Vial- *Silver Vial* (1:10,000 Units (v/v))**

### **Delivered Volume for silver vial**

- 1<sup>st</sup> immunotherapy injection volume: 0.05ml
  - If 0mm-10mm reaction, can increase by 0.10ml for next injection
  - If reaction is >10mm, increase the injection only to 0.05ml with each injection
  - If reaction is >35mm, repeat the previous dose
- 2-7 days later can increase the dose if reaction is within normal ranges. Will increase to 0.10ml
  - Will then increase to 0.20ml, then next visit at 0.30ml, then 0.40ml, and the last dose at 0.50ml
- If the reaction is more than 10mm, then the next dose will only increase by 0.05.
  - The dosing is: 0.05ml, 0.10ml, 0.15ml, 0.20ml, 0.25ml, 0.30ml, 0.35ml, 0.40ml, 0.45ml, 0.50ml
- If the reaction is more than 35mm, then the dose has to be repeated. May increase the time spent to get through the vial if more than one dose is repeated
- Once the last dose of 0.50ml is given and the reaction is within normal ranges, then the patient will move onto the next green vial

## **Second Vial- *Green Vial* (1:1,000 Units (v/v))**

### **Delivered Volume for green vial**

- 1<sup>st</sup> immunotherapy injection volume: 0.05ml
  - If 0mm-10mm reaction, can increase by 0.10ml for next injection
  - If reaction is >10mm, increase the injection only to 0.05 ml with each injection
  - If reaction is >35mm, repeat the dose
- 2-7 days later can increase the dose if reaction is within normal ranges, will increase to 0.10ml
  - Will then increase to 0.20ml, then next visit at 0.30ml, then 0.40ml, and the last dose at 0.50ml
- If the reaction is more than 10mm, then the next dose will only increase by 0.05.
  - The dosing is: 0.05ml, 0.10ml, 0.15ml, 0.20ml, 0.25ml, 0.30ml, 0.35ml, 0.40ml, 0.45ml, 0.50ml
- If the reaction is more than 35mm, then the dose has to be repeated. May increase the time spent to get through the vial
- Once given the last dose of 0.50ml and the reaction is within normal ranges, then the patient will move onto the next blue vial

## **Third Vial- *Blue Vial* (1:100 Units (v/v))**

### **Delivered Volume for blue vial**

- 1<sup>st</sup> immunotherapy injection volume: 0.05ml
  - If 0mm-10mm reaction, can increase by 0.10ml for next injection
  - If reaction is >10mm, increase the injection only to 0.05ml with each injection
  - If reaction is >35mm, repeat the previous dose
- 2-7 days later can increase the dose if reaction is within normal ranges. Will increase to 0.10ml
  - Will then increase to 0.20ml, then next visit at 0.30ml, then 0.40ml, and the last dose at 0.50ml
- If the reaction is more than 10mm, then the next dose will only increase by 0.05.
  - The dosing is: 0.05ml, 0.10ml, 0.15ml, 0.20ml, 0.25ml, 0.30ml, 0.35ml, 0.40ml, 0.45ml, 0.50ml
- If the reaction is more than 35mm, then the dose has to be repeated. May increase the time spent to get through the vial if more than one dose is repeated
- Once the last dose of 0.50ml is given and the reaction is within normal ranges, then the patient will move onto the next yellow vial

## **Fourth Vial- Yellow Vial (1:10 Units (v/v))**

### **Delivered Volume for yellow vial**

1. 1<sup>st</sup> immunotherapy injection volume: 0.05ml
  - a. If 0mm-10mm reaction, can increase by 0.10ml for next injection
  - b. If reaction is >10mm, increase the injection only to 0.05ml with each injection
  - c. If reaction is >35mm, repeat the previous dose
2. 2-7 days later can increase the dose if reaction is within normal ranges. Will increase to 0.10ml
  - a. Will then increase to 0.20ml, then next visit at 0.30ml, then 0.40ml, and the last dose at 0.50ml
3. If the reaction is more than 10mm, then the next dose will only increase by 0.05.
  - a. The dosing is: 0.05ml, 0.10ml, 0.15ml, 0.20ml, 0.25ml, 0.30ml, 0.35ml, 0.40ml, 0.45ml, 0.50ml
4. If the reaction is more than 35mm, then the dose has to be repeated. May increase the time spent to get through the vial if more than one dose is repeated
5. Once the last dose of 0.50ml is given and the reaction is within normal ranges, then the patient will move onto the next red vial

## **Fifth Vial- Red Vial (1:1 Units (v/v))**

### **Delivered Volume for red vial**

1. 1<sup>st</sup> immunotherapy injection volume: 0.05ml
  - a. If 0mm-10mm reaction, can increase by 0.10ml for next injection
  - b. If reaction is >10mm, increase the injection only to 0.05ml with each injection
  - c. If reaction is >35mm, repeat the previous dose
2. 2-7 days later can increase the dose if reaction is within normal ranges. Will increase to 0.10ml
  - a. Will then increase to 0.20ml, then next visit at 0.30ml, then 0.40ml, and the last dose at 0.50ml
3. If the reaction is more than 10mm, then the next dose will only increase by 0.05.
  - a. The dosing is: 0.05ml, 0.10ml, 0.15ml, 0.20ml, 0.25ml, 0.30ml, 0.35ml, 0.40ml, 0.45ml, 0.50ml
4. If the reaction is more than 35mm, then the dose has to be repeated. May increase the time spent to get through the vial if more than one dose is repeated (due to the potency of the red vial, more doses get repeated on this vial than the others)
5. Once the last dose of 0.50ml is given and the reaction is within normal ranges, then the patient will now be on maintenance

## **MAINTENANCE- Fifth Vial- Red Vial (1:1 Units (v/v))**

- When a patient gets through all the vials and gets finishes the red vial at 0.50ml, then they have reached *maintenance*. Maintenance means the patient has completed therapy and will now go onto maintaining their therapy to **ONCE A MONTH**
- Maintenance Red vial dose is 0.50ml each time the patient comes in each month
  - Needs to be seen for injection every 4-6 weeks.
  - If next dose has been longer than 4-6 weeks then must drop down dose to 0.35ml. Must return in 10 days and then can go back up to 0.50ml and monthly visits after completing
- For remixing of red vial (as is most potent after remixing and cause increased reactions), the following key is used:
  - Start at 0.25ml, return 10 days later if reaction is normal
  - Give 0.35ml, return 10 days later if reaction is normal
  - Given 0.50ml, then may go back to monthly again

Vial	Dosing	Reaction
1- Silver (1:10,000)	0.05ml 0.10ml (if no reaction go to 0.20ml) 0.15ml 0.20ml (if no reaction go to 0.30ml) 0.25ml 0.30ml (if no reaction go to 0.40ml) 0.35ml 0.40ml (if no reaction go to 0.50ml) 0.45ml 0.50ml (if no reaction go to next vial)	<ul style="list-style-type: none"> <li>• 0mm-10mm reaction: increase by 0.10ml</li> <li>• 10mm-35mm: increase by 0.05ml</li> <li>• 35mm-50mm: repeat the current dose</li> <li>• &gt;50mm: go down to the previous dose</li> </ul>
2- Green (1:1,000)	0.05ml 0.10ml (if no reaction go to 0.20ml) 0.15ml 0.20ml (if no reaction go to 0.30ml) 0.25ml 0.30ml (if no reaction go to 0.40ml) 0.35ml 0.40ml (if no reaction go to 0.50ml) 0.45ml 0.50ml (if no reaction go to next vial)	<ul style="list-style-type: none"> <li>• 0mm-10mm reaction: increase by 0.10ml</li> <li>• 10mm-35mm: increase by 0.05ml</li> <li>• 35mm-50mm: repeat the current dose</li> <li>• &gt;50mm: go down to the previous dose</li> </ul>
3- Blue (1:100)	0.05ml 0.10ml (if no reaction go to 0.20ml) 0.15ml 0.20ml (if no reaction go to 0.30ml) 0.25ml 0.30ml (if no reaction go to 0.40ml) 0.35ml 0.40ml (if no reaction go to 0.50ml) 0.45ml 0.50ml (if no reaction go to next vial)	<ul style="list-style-type: none"> <li>• 0mm-10mm reaction: increase by 0.10ml</li> <li>• 10mm-35mm: increase by 0.05ml</li> <li>• 35mm-50mm: repeat the current dose</li> <li>• &gt;50mm: go down to the previous dose</li> </ul>
4- Yellow (1:10)	0.05ml 0.10ml (if no reaction go to 0.20ml) 0.15ml 0.20ml (if no reaction go to 0.30ml) 0.25ml 0.30ml (if no reaction go to 0.40ml) 0.35ml 0.40ml (if no reaction go to 0.50ml) 0.45ml 0.50ml (if no reaction go to next vial)	<ul style="list-style-type: none"> <li>• 0mm-10mm reaction: increase by 0.10ml</li> <li>• 10mm-35mm: increase by 0.05ml</li> <li>• 35mm-50mm: repeat the current dose</li> <li>• &gt;50mm: go down to the previous dose</li> </ul>
5- Red (1:1)	0.05ml 0.10ml (if no reaction go to 0.20ml) 0.15ml 0.20ml (if no reaction go to 0.30ml) 0.25ml 0.30ml (if no reaction go to 0.40ml) 0.35ml 0.40ml (if no reaction go to 0.50ml) 0.45ml 0.50ml (if no reaction go to maintenance)	<ul style="list-style-type: none"> <li>• 0mm-10mm reaction: increase by 0.10ml</li> <li>• 10mm-35mm: increase by 0.05ml</li> <li>• 35mm-50mm: repeat the current dose</li> <li>• &gt;50mm: go down to the previous dose</li> </ul>
Maintenance Red (1:1)	Repeat 0.50ml every month If new vial: <ul style="list-style-type: none"> <li>• Start at 0.25ml, return 10 days later if reaction is normal</li> <li>• Give 0.35ml, return 10 days later if reaction is normal</li> <li>• Given 0.50ml, then may go back to monthly again</li> </ul>	<ul style="list-style-type: none"> <li>• If greater than 50mm: decrease to 0.35ml, go up to 0.50ml in 10 days</li> </ul>

