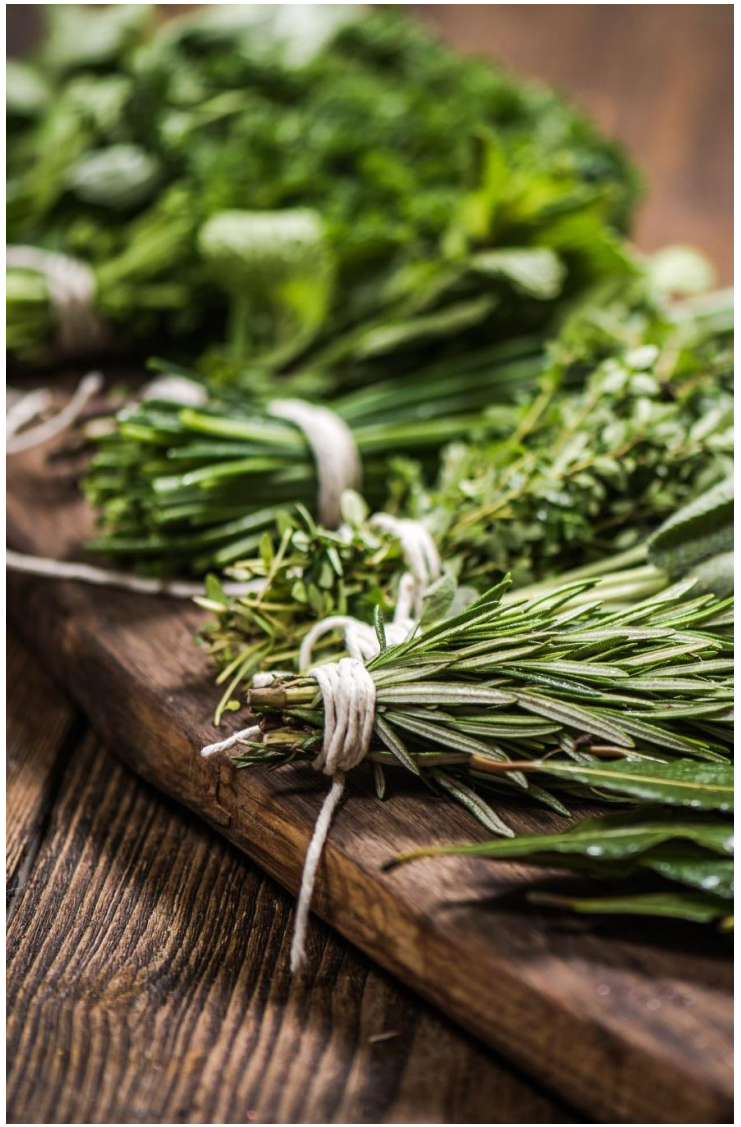
Recipes for success: Foods at Home

Douglas H jones, MD, FACAAI, FAAAAI

Fast Annual meeting

19 June 2021



General concepts

Safety

- As OIT expands, we can't afford bad outcomes

Quality

- Do not lower our standards to the misnomer "Grocery Store" allergists

Efficacy

- Integrity of food protein and dose
- **Compliance:**
  - What exactly are we asking them to do, and will they do it?

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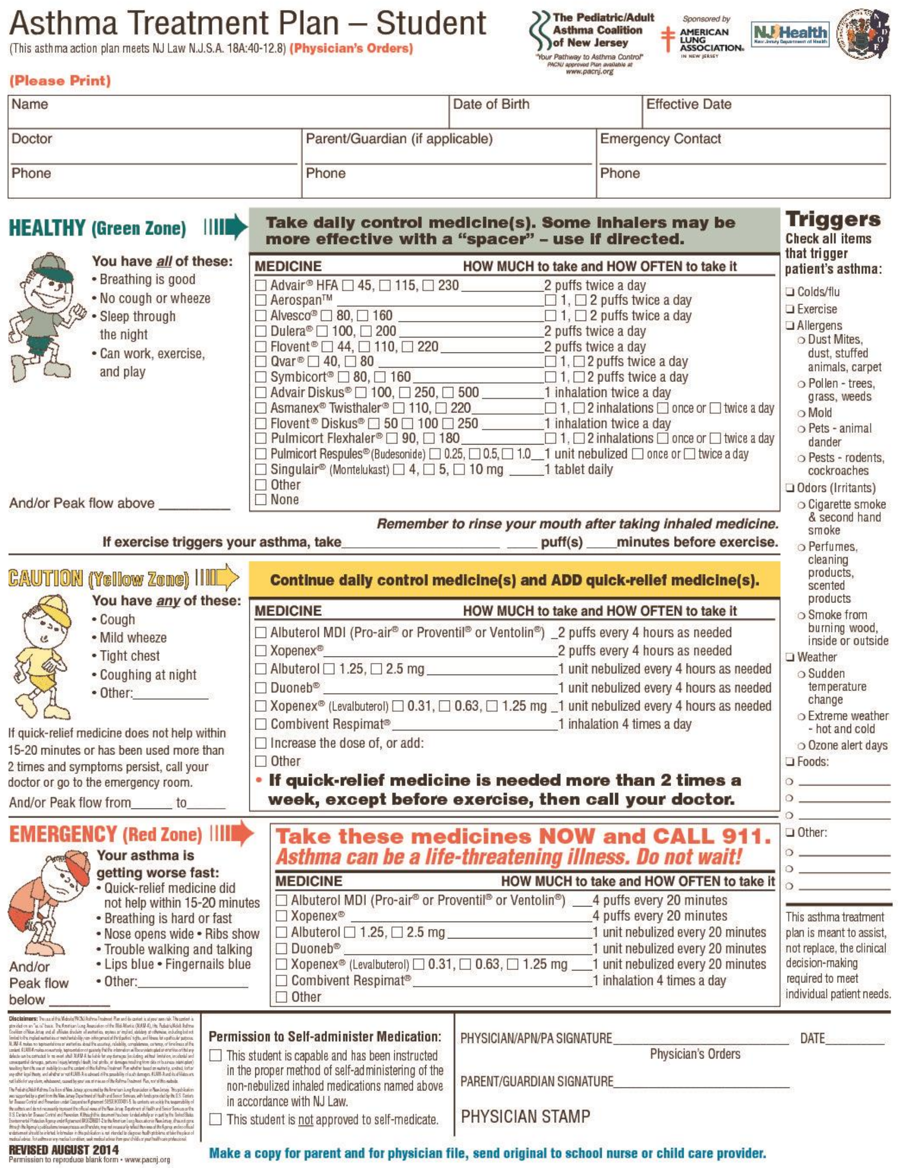
REVIEW ARTICLE

Do Written Asthma Action Plans Improve Outcomes?

John M. Kelso, MD

With appropriate management, children with asthma should expect few symptoms, no limits on activity, rare exacerbations, and normal lung function. Appropriate education of parents and other caregivers of children with asthma has clearly been shown to help achieve these goals. Although recommended in asthma guidelines, providing written asthma action plans does not improve outcomes beyond asthma education alone.



Asthma Treatment Plan – Student

(This asthma action plan meets NJ Law N.J.S.A. 18A:40-12.8) **(Physician's Orders)**

The Pediatric/Adult Asthma Coalition of New Jersey — "Your Pathway to Asthma Control" — Sponsored by AMERICAN LUNG ASSOCIATION IN NEW JERSEY — NJ Health

(Please Print)

Name	Date of Birth	Effective Date
Doctor / Phone	Parent/Guardian (if applicable) / Phone	Emergency Contact / Phone

HEALTHY (Green Zone)

You have *all* of these:
- Breathing is good
- No cough or wheeze
- Sleep through the night
- Can work, exercise, and play

And/or Peak flow above ________

Take daily control medicine(s). Some inhalers may be more effective with a "spacer" – use if directed.

MEDICINE	HOW MUCH to take and HOW OFTEN to take it
☐ Advair® HFA ☐ 45, ☐ 115, ☐ 230	2 puffs twice a day
☐ Aerospan™	☐ 1, ☐ 2 puffs twice a day
☐ Alvesco® ☐ 80, ☐ 160	☐ 1, ☐ 2 puffs twice a day
☐ Dulera® ☐ 100, ☐ 200	2 puffs twice a day
☐ Flovent® ☐ 44, ☐ 110, ☐ 220	2 puffs twice a day
☐ Qvar® ☐ 40, ☐ 80	☐ 1, ☐ 2 puffs twice a day
☐ Symbicort® ☐ 80, ☐ 160	☐ 1, ☐ 2 puffs twice a day
☐ Advair Diskus® ☐ 100, ☐ 250, ☐ 500	1 inhalation twice a day
☐ Asmanex® Twisthaler® ☐ 110, ☐ 220	☐ 1, ☐ 2 inhalations ☐ once or ☐ twice a day
☐ Flovent® Diskus® ☐ 50 ☐ 100 ☐ 250	1 inhalation twice a day
☐ Pulmicort Flexhaler® ☐ 90, ☐ 180	☐ 1, ☐ 2 inhalations ☐ once or ☐ twice a day
☐ Pulmicort Respules® (Budesonide) ☐ 0.25, ☐ 0.5, ☐ 1.0	1 unit nebulized ☐ once or ☐ twice a day
☐ Singulair® (Montelukast) ☐ 4, ☐ 5, ☐ 10 mg	1 tablet daily
☐ Other	
☐ None	

Remember to rinse your mouth after taking inhaled medicine.

If exercise triggers your asthma, take__________ ____ puff(s) ____minutes before exercise.

CAUTION (Yellow Zone)

You have *any* of these:
- Cough
- Mild wheeze
- Tight chest
- Coughing at night
- Other:__________

If quick-relief medicine does not help within 15-20 minutes or has been used more than 2 times and symptoms persist, call your doctor or go to the emergency room.

And/or Peak flow from______ to______

Continue daily control medicine(s) and ADD quick-relief medicine(s).

MEDICINE	HOW MUCH to take and HOW OFTEN to take it
☐ Albuterol MDI (Pro-air® or Proventil® or Ventolin®)	2 puffs every 4 hours as needed
☐ Xopenex®	2 puffs every 4 hours as needed
☐ Albuterol ☐ 1.25, ☐ 2.5 mg	1 unit nebulized every 4 hours as needed
☐ Duoneb®	1 unit nebulized every 4 hours as needed
☐ Xopenex® (Levalbuterol) ☐ 0.31, ☐ 0.63, ☐ 1.25 mg	1 unit nebulized every 4 hours as needed
☐ Combivent Respimat®	1 inhalation 4 times a day
☐ Increase the dose of, or add:	
☐ Other	

- **If quick-relief medicine is needed more than 2 times a week, except before exercise, then call your doctor.**

EMERGENCY (Red Zone)

Your asthma is getting worse fast:
- Quick-relief medicine did not help within 15-20 minutes
- Breathing is hard or fast
- Nose opens wide • Ribs show
- Trouble walking and talking
- Lips blue • Fingernails blue
- Other:__________

And/or Peak flow below ________

Take these medicines NOW and CALL 911.
Asthma can be a life-threatening illness. Do not wait!

MEDICINE	HOW MUCH to take and HOW OFTEN to take it
☐ Albuterol MDI (Pro-air® or Proventil® or Ventolin®)	4 puffs every 20 minutes
☐ Xopenex®	4 puffs every 20 minutes
☐ Albuterol ☐ 1.25, ☐ 2.5 mg	1 unit nebulized every 20 minutes
☐ Duoneb®	1 unit nebulized every 20 minutes
☐ Xopenex® (Levalbuterol) ☐ 0.31, ☐ 0.63, ☐ 1.25 mg	1 unit nebulized every 20 minutes
☐ Combivent Respimat®	1 inhalation 4 times a day
☐ Other	

Triggers
Check all items that trigger patient's asthma:
- ❑ Colds/flu
- ❑ Exercise
- ❑ Allergens
  - ❍ Dust Mites, dust, stuffed animals, carpet
  - ❍ Pollen - trees, grass, weeds
  - ❍ Mold
  - ❍ Pets - animal dander
  - ❍ Pests - rodents, cockroaches
- ❑ Odors (Irritants)
  - ❍ Cigarette smoke & second hand smoke
  - ❍ Perfumes, cleaning products, scented products
  - ❍ Smoke from burning wood, inside or outside
- ❑ Weather
  - ❍ Sudden temperature change
  - ❍ Extreme weather - hot and cold
  - ❍ Ozone alert days
- ❑ Foods:
  - ❍ __________
  - ❍ __________
  - ❍ __________
- ❑ Other:
  - ❍ __________
  - ❍ __________
  - ❍ __________

This asthma treatment plan is meant to assist, not replace, the clinical decision-making required to meet individual patient needs.

Permission to Self-administer Medication:
☐ This student is capable and has been instructed in the proper method of self-administering of the non-nebulized inhaled medications named above in accordance with NJ Law.
☐ This student is not approved to self-medicate.

PHYSICIAN/APN/PA SIGNATURE__________ DATE________
Physician's Orders

PARENT/GUARDIAN SIGNATURE__________

PHYSICIAN STAMP

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Make a copy for parent and for physician file, send original to school nurse or child care provider.

Psychological Bulletin
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Dietary Variety, Energy Regulation, and Obesity

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University at Buffalo

Increased variety in the food supply may contribute to the development and maintenance of obesity. Thirty-nine studies examining dietary variety, energy intake, and body composition are reviewed. Animal and human studies show that food consumption increases when there is more variety in a meal or diet and that greater dietary variety is associated with increased body weight and fat. A hypothesized mechanism for these findings is *sensory-specific satiety*, a phenomenon demonstrating greater reductions in hedonic ratings or intake of foods consumed compared with foods not consumed. Nineteen studies documenting change in preference, intake, and hedonic ratings of food after a food has been eaten to satiation in animals and humans are reviewed, and the theory of sensory-specific satiety is examined. The review concludes with the relevance of oral habituation theory as a unifying construct for the effects of variety and sensory-specific satiety, clinical implications of dietary variety and sensory-specific satiety on energy regulation, and suggestions for future research.

Juggling and Balancing act: Safety, Quality, and Efficacy especially with compliance

Safety

- Intact food proteins
- Most allergenic forms
- Little alteration
- What's proven?
- Caution about sugar and calories

Nutrition Facts

Serving Size 32g
Servings Per Container 57

Amount Per Serving	
Calories 190	Calories From Fat 130
	% Daily Value *
Total Fat 16g	25%
Saturated Fat 3g	16%
Trans Fat	0%
Cholesterol 0mg	0%
Sodium 150mg	6%
Total Carbohydrates 7g	2%
Dietary Fiber 2g	9%
Soluble Fiber	
Sugars 3g	0%
Protein 8g	0%

Vitamin A	0%	Vitamin C	0%
Calcium	0%	Iron	4%
Thiamin	0%	Riboflavin	2%
Niacin	20%	Vitamin B6	0%
Phosphorus	0%	Zinc	0%

* Percent Daily values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Measuring both food and protein amounts

Why is this important?

Protein content is the unifying factor as we convert from various food forms

We also must know how much to give them based off the protein content

Check labels every time

Each time a package of food is received, labels must be checked and verified as manufactures change contents and processes and do not need to report

Protein content per serving size is subject to change.

This is particularly important for patient and your nurses to check each time foods are received

Each time you add a product or food, labels must be checked and product vetted

Each time a patient requests a certain food product, be mindful of the homework you must do

Know your products

Make sure you have a process built in to have time and costs accounted for

This allows you to sustain, and also offer more services to your patients

As you add foods, this adds time, COST, and complexity, but also opportunity

This is the juggling and balancing act

Number of products/services provided vs opportunities and compliance

Time, risk, and cost associated with it--caution not to lower standards

Common food forms

Liquids

- Straight products like milks or LEW
- Suspensions made with flours
- Extracts from manufacturers (e.g. Greer)

Capsules

- Find a compounding pharmacy
- Use caution with your pharmacy as others will try to steal the formulations from the pharmacy

Purees/flours (mixed in a vehicle)

Straight foods

Caution to confections or coated/altered products

- Be mindful of sugar and calories that are added into these products
- Caution with standards especially since pharmaceutical products available
- Difficult, in general, to get accurate information from manufacturers. How reliable is it?
- Even when you do, they can change formulations without notification or labeling changes (cost/benefit ratio again)
- Particularly important in build-up phase and early in maintenance

Charts and foods

For your reference

Almond

- **Silk Pure Almond Milk OR Almond Breeze Almond Milk (Blue Diamond)**
  - 240ml almond milk = 1g protein 1ml almond milk = 4.17mg protein Used for almond milk dilutions Silk uses toasted almonds
- **Elmhurst Almond Milk**
  - 240ml = 5g protein
    1ml almond milk = 20.83mg protein Uses raw almonds
- **Wonderful Almonds brand almonds**
  - Average nut weight = 1.07g 30g of almonds = 7g protein
    1 nut has 250mg protein
- **Dilutions**
  - 0.25ml of almond milk in 9.75 ml water = 100mcg/ml almond milk solution (104mcg/ml) 1ml of 100mcg/ml solution in 9ml of water = 10mcg/ml almond milk solution (10.4mcg/ml) 1ml of 10mcg/ml solution in 9ml of water = 1 mcg/ml almond milk solution (1.04mcg/ml)

Almond Maintenance

- Almond maintenance dose is **2 grams of almond protein once daily,** which is equivalent to about 8.6 grams of almonds
- Almonds
  - "Wonderful Almonds" brand is not cross contaminated with peanuts or other tree nuts.
- Almond Butter:
  - 2 tsp of Barney Butter Almond Butter – Smooth. This product is not cross contaminated with peanut or other tree nuts. It may be found at Sprouts, Tom Thumb, or www.barneybutter.com
- Almond Milk:
  - 480 ml (16 oz) of almond milk
  - Use Silk Pure Almond Milk OR Almond Breeze Almond Milk (Blue Diamond)
  - Elmhurst Almond Milk:
    - 96ml of Elmhurst Almond Milk. **Other brands may not be substituted**

Cashew maintenance

- Cashew maintenance dose is **2 grams of cashew protein once daily,** which is equivalent to about 8 cashews or 11 grams of cashews
- "Sunshine Nut Company" brand cashews are not cross contaminated with peanuts or other tree nuts. These cashews are roasted in sunflower oil. Purchase at www.sunshinenuts.com.
- Cashew Butter:
  - 2 tsp of Artisana Raw Organic Cashew Butter. This product is made in a facility that processes tree nuts but not peanuts, dairy, soy or gluten. It may be purchased at Sprouts, Central Market, Whole foods, or www.artisanafoods.com.
- Cashew Flour:
  - 10 grams of cashew flour. Purchase at www.nuts.com. Elmhurst Cashew Milk: • 120ml of Elmhurst Cashew Milk. **Other brands may not be substituted**

Brazil nut

- **Brazil Nut Flour**
  - Purchase from www.sincerelynuts.com
    Processed in facility with other tree nuts, peanuts, wheat, soy, milk.
    100g flour = 14.3g protein
    14.3% protein (1 : 0.143)
- **Brazil Nut Butter**
  - Dastony Brazil Nut Butter
    Contains Brazil nuts only. Organic, raw, stone ground Brazil nuts.
    Purchase at www.dastony.com.
    28g butter = 4 g protein
    14.3% protein (1 : 0.143)
- **Brazil Nuts**
  - USDA nutrient database
    100g Brazil nuts = 14.3g protein 14.3% protein
    Brazil nut average weight 4-5g.
- **Brazil Nut Flour Dilutions**
  - Day 1:
    2mg/ml: 40mg Brazil nut flour in 20ml water 200mcg/ml: 2ml 2mg/ml solution in 18 ml water 20mcg/ml: 2ml 200mcg/ml solution in 18 ml water Follow up dosing:
    30mg/ml: 4.5g Brazil nut flour in 150 ml water

Hazelnut

- Hazelnut Flour/Meal
  Purchase from Bob's Red Mill (www.bobsredmill.com/hazelnut-flour-meal.html) 28g flour= 4g protein therefore **7mg flour = 1 mg protein**
- Hazelnuts
  Purchase from Holmquist Hazelnut Orchards, LLC (www.holmquisthazelnuts.com) Dry Roasted Hazelnuts
  USDA data: 100g hazelnuts = 15.03 g protein
  1 hazelnut contains approximately 200mg of protein
- Elmhurst Hazelnut Milk 240ml = 4g protein
  1ml milk = 16.67g protein Uses raw hazelnuts
- Hazelnut Flour Dilutions
  15mg/ml = 1.5g flour in 100ml water
  1.5mg/ml = 2ml of 15mg/ml solution in 18 ml water 150mcg/ml = 2 ml of 1.5mg/ml solution in 18 ml water 15mcg/ml = 2 ml of 150mcg/ml solution in 18 ml water
- Hazelnut Butter
- Fastachi Roasted Hazelnut Butter. This is a crunchy butter than contains only roasted hazelnuts. www.fastachi.com.
- 6 tsp = 5 grams protein
  1 tsp = 0.833 grams protein
  Recommend 2 tsp for maintenance dosing

Hazelnut maintenance

- Hazelnut maintenance dose is **1.6 grams of hazelnut protein once daily**, which is equivalent to about 8 hazelnuts
- Dosing options include:
  - Hazelnuts
  - Hazelnut Butter:
    - 2 tsp of Fastachi Roasted Hazelnut Butter. This is a crunchy hazelnut butter than contains only roasted hazelnuts. www.fastachi.com.
- Hazelnut Flour:
  - 11 grams of hazelnut flour. Purchase from Bob's Red Mill www.bobsredmill.com/hazelnut-flour-meal.html
- Elmhurst Hazelnut Milk:
  - 96ml of Elmhurst Hazelnut Milk. **Other brands may not be substituted**

Macadamia

- USDA Nutrient Database 100g nuts = 7.79g protein 7.79% protein (1 : 0.0779)1 macadamia nut kernel = 2.58 grams total weight=0.204g protein = 204mg protein
- Macadamia nut without peanut or other tree nut contamination: Hamakua Macadamia Nut Company: www.hawnnut.com.
- **Macadamia Nut Flour**
  - Purchase from www.sincerelynuts.com
    100g flour = 7.9g protein
    7.9% protein (1 : 0.079)
    Processed in the same facility as peanuts, tree nuts, wheat, milk and soy products.
- **Macadamia Nut Butter**
  - Wilderness Poets Raw Macadamia Nut Butter
  - https://wildernesspoets.com/products/macadamia-butter
  - 28g butter = 4 g protein, 14.3% protein (1:0.143)
- **Macadamia Nut Flour Dilutions**
  - 30mg/ml = 3g macadamia nut flour in 100ml water 3mg/ml = 2ml of 30mg/ml solution in 18 ml water 300mcg/ml = 2ml of 3mg/ml solution in 18 ml water 30mcg/ml = 2ml of 300mg/ml solution in 18ml water

Peanut

- Peanuts are made up of 22-30% protein. 26% is used for these conversions.
  The average peanut weighs 950mg; therefore the average peanut contains 250mg of protein.
- Peanut flour:
  28% fat light peanut flour purchased at Byrd Mill. www.byrdmill.com There are 9g of peanut protein in 22g (1/4 cup) of peanut flour.
  50mg peanut flour contains 20.5mg of peanut protein.
  100mg flour◊41mg protein
  250 mg flour◊102 mg protein
  500 mg flour◊204 mg protein
- 1/2 tsp unpacked peanut flour = 1 peanut
  Patients may dose with measured peanut flour when the 4 peanut equivalent dose is reached.
- Peanut butter:
  If the label reads: 2T = 8 g protein, then 1 tsp of peanut butter = 5.33 peanuts If the label reads: 2T = 7 g protein, then 1 tsp of peanut butter = 4.67 peanuts
- Jif and Santa Cruz Organic peanut butters are safe for patients who are allergic to tree nuts. 1 tsp of peanut butter = 5 peanuts.
- Peanut Butter & Co makes flavored peanut butters. They may be purchased at Kroger, Super Target, or online at www.ilovepeanutbutter.com for $5-6. For the following flavored peanut butters: 1 tsp of peanut butter = 4 peanuts.
  Cinnamon Raisin Swirl (peanut butter with cinnamon and raisins)
- White Chocolate Wonderful (peanut butter with white chocolate) Dark Chocolate Dream (peanut butter with dark chocolate)
  The Bee's Knees (peanut butter with honey)
  Might Maple (peanut butter with maple syrup)
- (Note that Peanut Butter & Co unflavored peanut butters are dosed 1 tsp of peanut butter = 5 peanuts)
- Americasbestnutco.com for Honey Line or Sea Salt Peanuts. NOT cross contaminated with tree nuts for maintenance dosing.

Peanut

- Powdered Peanut Butter
  PB2 Powdered Peanut Butter may be purchased at Central Market and Kroger.
  Plain 2T powder = 5g protein
  2 1/2 tsp of powder should be used for maintenance dosing.
  Chocolate 2T (12g) = 4g protein
  1T = 3 tsp = 2g protein for maintenance dose
  Processes pecan in same facility.
- Tru-Nut Powdered Peanut Butter (plain or flavored): Tree nut free.
  2T (12g) = 5g protein.
  41.7% protein
- 2 1⁄2 tsp powder used for maintenance dosing. No tree nut cross contamination.
- Jif Peanut Powder:
  3T=8g protein
  1 tsp = 889mg protein
  2 1/4 tsp maintenance dose
- Skippy Natural Peanut Butter Spread with Honey (Creamy or Super Chunk): 2T (32g) = 6g protein
  1⁄4 tsp = 1 peanut = 250mg protein
  2 tsp maintenance dose
- Bamba
  According to LEAP: 17g Bamba contains 2g peanut protein Bamba is 11.76% peanut protein
  No tree nut cross contamination.

Peanut

- Peanuts:
  - Any type of roasted peanut may be used. Peanuts should not be covered with any type of coating that will increase the weight of the nut.
- Peanut Butter:
  - Flavored Peanut Butter & Company peanut butter. Available in most grocery stores or at www.ilovepeanutbutter.com. Flavors include white chocolate, dark chocolate, honey, maple, and cinnamon raisin.
- Peanut Flour:
  - 28% fat light peanut flour may be purchased from Byrd Mill. www.byrdmill.com Powdered Peanut Butter:
- TruNut powdered peanut butter
- PB2 powdered peanut butter
- Mighty Nut powdered peanut butter
- Bamba peanut snack:
  - This product may be cross contaminated with soy and wheat.
- Candies:
  - Peanut M&Ms

Peanut recipes for dosing variety

- Peanut butter (may mix with powdered sugar) or peanuts folded into melted semisweet chocolate then transferred to cupcake liners in a muffin pan and kept in the fridge provides delicious home made peanut butter cups with the correct dose that are always ready to be eaten.

- Ground peanuts or peanut butter in a chocolate milk shake, pudding, or cake icing.

- Peanut Brittle:
  Caramelize sugar (use enough sugar to cover the bottom of the pan and cook over very low heat, stirring frequently until sugar has turned a light brown, then pour over peanuts before it has time to harden) and pour over number of peanuts needed for dosing, let harden and remove from wax paper, muffin tin or ramekin. May add chocolate or carob chips, coconut, etc. to peanuts before adding caramelized sugar for a different flavor.
  Alternative:
  Brush inside of pan with vegetable oil. put in 3 cups sugar and 1 1/2 cups water. Cook over high heat stirring occasionally with wooden spoon until mixture boils. Stop stirring, cover and cook for 3 minutes. Uncover, reduce heat to medium, and cook until sugar is light amber color. Pour over peanuts in individual muffin cups or ramekins. Recipe offers alternatives: butter muffin tin, ramekins, or use silicone baking mat to keep cooked sugar from sticking.

- Homemade Peanut Butter Cups
  - Melt chocolate- Chocolate chips melted in the microwave for about 1 1⁄2 minutes works great.
  - Pour spoonful of chocolate in each silicone baking cup. Then, pinch the sides at the bottom to coat the insides with chocolate to form the sides of the peanut butter cup. Work your way around the outside to cover the inside with chocolate 1⁄2 inch or so up the sides.
  - Freeze the bottom chocolate layer- It only takes a few minutes to harden the chocolate, and doing so makes the next step easier.
  - Use the measuring spoon to measure the appropriate dose of peanut butter. Use a wet knife (keep a small cup of water nearby to dip the knife) to smooth the peanut butter in the measuring spoon to get an accurate measurement.
  - Wet the knife again and scrape the peanut butter out of the spoon. The water makes the peanut butter slide out easily - the texture becomes more like a soft Tootsie Roll.
  - After you've added the dose amount, spread the peanut butter out with the wet knife.
  - Coat the top with melted chocolate (you may need to reheat the chocolate to make it spread easier). You can use the spoon to lightly spread the chocolate, then gently shake it to smooth.
  - Refrigerate and remove the peanut butter cups from the silicone cups.

Peanut maintenance non tree nut allergy

- Maintenance dose is **2 grams of peanut protein once daily,** which is equivalent to about 8 peanuts or 7.6 grams of shelled peanuts
- 7.6 grams of Honey Line or Sea Salt Peanuts from www.americasbestnutco.com.
- Peanut Butter:
  - 2 tsp of flavored or unflavored Peanut Butter & Company peanut butter. Available in most grocery stores or at www.ilovepeanutbutter.com. Flavors include white chocolate, dark chocolate, honey, maple, and cinnamon raisin.
  - 2 tsp of Santa Cruz Organic or Jif peanut butters. Peanut Flour:
- 4 tsp of 28% fat light peanut flour
- 5 grams of 12% fat light peanut flour
- Purchase at Byrd Mill. www.byrdmill.com
- Powdered Peanut Butter:
  - 2 1⁄2 tsp of TruNut powdered peanut butter Bamba peanut snack:
- 10 g or approximately 1⁄2 of a 1 oz bag of Bamba. This product may be cross contaminated with soy and wheat.

Peanut maintenance tree nut allergy

- Maintenance dose is **2 grams of peanut protein once daily**, which is equivalent to about 8 peanuts.
- Dosing options include:
  - Peanuts 7.6 grams of shelled peanuts
  - 7.6 grams of Honey Line or Sea Salt Peanuts from www.americasbestnutco.com.
- Peanut Butter:
  - 2 tsp of flavored or unflavored Peanut Butter & Company peanut butter. Available in most grocery stores or at www.ilovepeanutbutter.com. Flavors include white chocolate, dark chocolate, honey, maple, and cinnamon raisin.
- 2 tsp of Santa Cruz Organic or Jif peanut butters. Peanut Flour:
  - 4 tsp of 28% fat light peanut flour
  - 5 grams of 12% fat light peanut flour
  - Purchase at Byrd Mill. www.byrdmill.com
- Powdered Peanut Butter:
  - 2 1⁄2 tsp of TruNut powdered peanut butter Bamba peanut snack:
- 10 g or approximately 1⁄2 of a 1 oz bag of Bamba. This product may be cross contaminated with soy and wheat.

PEANUT

Peanut type	Approximate equivalent amount							Oral challenge	Maintenance
Cocktail peanuts	1	2	3	4	6	9	12	24	8
Planters peanuts	1.25	2.5	4	5	7.5	11.25	15	30	10
28%Byrd mill flour	0.5 tsp	1 tsp	1.5 tsp	2 tsp	3 tsp	4.5 tsp	6 tsp	12 tsp	4 tsp
TruNut, PB2 powders	1/3 tsp	2/3 tsp	1 tsp	1.25 tsp	2 tsp	3 tsp	3.75 tsp	7.5 tsp	2.5 tsp
Peanut butter	¼ tsp	½ tsp	¾ tsp	1 tsp	1 ½ tsp	2 ¼ tsp	3 tsp	6 tsp	2 tsp
Peanut M&Ms	2	3	5	7	11	16	21	42	14

Walnut

½ walnut weighs 2.025g and contains 0.308g protein (300mg used for calculations). USDA Nutritional Database.
Walnut Meal
Purchased from nuts.com

30g meal (1.10z) = 5g protein 1g meal = 167mg protein (1:6)

Elmhurst Walnut Milk 240ml = 3g protein
1ml milk = 12.5mg protein Uses raw walnuts

Walnut Butter
Fastachi Raw Walnut Butter. www.fastachi.com Contains raw walnuts only.
2T (32g) butter = 5g protein
6.4g butter = 1 g protein
1 tsp = 0.83 grams protein
2 ½ tsp for maintenance dose

Walnut maintenance

- Walnut maintenance dose is **2.1 grams of walnut protein once daily**, which is equivalent to about 3 1⁄2 walnuts or. 14 grams of walnuts
- Walnut Butter:
  - 2 1⁄2 tsp (14 grams) of Fastachi Walnut Butter. This butter than contains only raw walnuts. www.fastachi.com. Try adding honey and cinnamon for added flavor.
- Walnut Meal:
  - 13 grams of walnut meal. Purchase from www.nuts.com. Elmhurst Walnut Milk:
- 180ml of Elmhurst Walnut Milk. **Other brands may not be substituted**

Chick pea

- **Bush's Best Garbanzo Beans (Chickpeas)**
- 1 chickpea average weight =1.15g
  1/2 cup = 75 g
  (Nutritional info on can says 1/2 cup = 130 g. Our measured weights are much closer to the USDA weights, so I used the USDA protein weight)
- USDA data: **1boiled chickpea = 102 mg protein** 1 cup = 164 g
- **Bob's Red Mill Garbanzo Bean Flour**
- stone ground from raw beans
  30g flour = 6 g protein
  1 g flour = 200 mg protein
  manufactured in facility with tree nuts and soy
- **Dilutions**
  - 10mg/ml: 500mg chickpea flour in 50 ml water 1mg/ml: 2 ml 10mg/ml solution in 18 ml water 100mcg/ml: 2 ml 1mg/ml solution in 18 ml water 10mcg/ml: 2 ml 100mcg/ml solution in 18 ml water

Chick pea maintenance

- Chickpea maintenance dose is **1.6 grams of chickpea protein once daily**, which is equivalent to about 16 chickpeas or 18 grams of chickpeas
- Chickpea (Garbanzo Bean) flour:
- 8 grams of chickpea flour
- Garbanzo Bean Flour may be purchased from Bob's Red Mill. www.bobsredmill.com.
- This product is stone ground from raw beans and is manufactured in facility with tree nuts and soy.

coconut

- http://www.bobsredmill.com/organic-coconut-flour.html
- Processed in facility with soy and tree nuts. Contains organic coconut only.
  2T (14g) = 2 grams protein
  1: 0.143 (14.3% protein)
- **Shredded Coconut**
- Bob's Red Mill Shredded Unsweetened Coconut Let's Do….Organic Shredded Coconut
  Great Value (Walmart) Sweetened Coconut Flakes All contain 6.67g protein per 100g coconut. 1:0.0667 (6.67% protein)
- 1T shredded coconut weighs 5 grams per USDA nutrient database
- **Coconut Flour Dilutions**
- 7mg/ml: 350mg coconut flour in 50 ml water 700mcg/ml: 2ml of 7mg/ml solution in 18 ml water 70mcg/ml: 2ml 700mcg/ml solution in 18 ml water 7mcg/ml: 2ml 70mcg/ml solution in 18 ml water
- Bob's Red Mill Organic Coconut Flour

Liquid egg whites

- Brands:
  All Whites 100% Liquid Egg Whites Egglands' Best Liquid Egg Whites
- Products are pasteurized and may be eaten raw.
- 3T liquid egg whites = 46g = 5 grams of protein = 1 large egg 1 T = 1667 mg protein
  1 tsp = 556 mg protein
  1ml liquid egg white = 111 mg protein
- 1mg/ml dilution:
  1ml liquid egg white in 110 ml water
- 100mcg/ml dilution:
  1ml of 1mg/ml solution in 9 ml water

Liquid egg whites maintenance

- Egg maintenance dose is **5 grams of egg white protein once daily**, which is equivalent to about 1 egg or 45 ml (3 tablespoons) of liquid egg white
- Use "All Whites 100% Liquid Egg Whites" or "Egglands' Best Liquid Egg Whites"
- Egg White Powder:
  - 3 tsp (1T) of egg white powder purchased from www.barryfarm.com.
- "1 egg" equivalent of egg white powder per package instructions

Milk maintenance

- Your milk maintenance dose is **8 grams of milk protein once daily**. Dosing options include:
- Milk:
  - 240 ml (8 oz) of milk
  - You may dose with whole or 2% milk
- DO NOT MAKE MILK DILUTIONS USING MILK THAT IS WITHIN 10 DAYS OF THE EXPIRATION DATE ON THE CARTON. CHECK MILK FOR FRESHNESS BEFORE MIXING ANY DILUTION. USE ONLY ORGANIC OR IRRADIATED WHOLE MILK.
- **0.1mg/ml (100mcg/ml) Dilution:** take 10ml of the 1mg/ml solution and add 90ml distilled water
- **1mg/ml Dilution**: take 3ml whole organic milk and add 97ml distilled water
- **33.3mg/ml Whole Milk** will be used after the 1mg/ml dilution. When instructed by physician – whole milk may be purchased by parents provided they buy Horizon Organic Whole milk.
- **Flavoring options**:
  Chocolate or strawberry syrup, or other flavoring specifically designed for milk. Avoid adding Kool-Aide which may cause the milk to curdle.

Sesame

- **Sesame OIT Conversions**
  - Use Max Sesame Tahini Spread for dilutions and dosing throughout schedule. Unhulled sesame tahini. Kosher. Made in Israel. Sold on Amazon.
    2T tahini = 28 g tahini = 5 g protein
    5.6 g tahini = 1 g protein
  - 1/4 tsp tahini = 207mg protein
  - Nuts.com organic unhulled sesame seeds
    9g seeds = 1.6 g protein
    5.6 g seeds = 1g protein
    Same ratio as tahini so can use these weights for either tahini or seeds in dosing. Note this product produced in same facility as tree nuts, peanut, and milk.
- **Sesame OIT Dilutions**
  - Use Max Sesame Tahini
    50mg/ml dilution: 3.5g tahini in 70ml water
    Day 1 dilutions:
    5mg/ml dilution: 50mg tahini in 10ml water
    500mcg/ml dilution: 5ml of 5mg/ml solution in 45 ml water
    50mcg/ml dilution: 5ml of 500mcg/ml solution in 45 ml water
    5mcg/ml dilution: 5ml of 50mcg/ml solution in 45 ml water

Sesame maintenance

- Sesame maintenance dose is **1 gram of sesame protein once daily or** 5.6 grams of unhulled sesame seeds.
- Purchase at www.nuts.com. Note this product produced in same facility as tree nuts, peanut, and milk.
- Tahini:
- 1 1/4 tsp Max Sesame Tahini Spread. This tahini is preferred because it uses unhulled sesame seeds. Product is Kosher, made in Israel, and may be purchased on Amazon.
- Sesame seed Flour:
- 1 tsp of Kevala Organic Sesame Flour. This flour is preferred because it uses unhulled sesame seeds. Purchase at www.kevala.net.

Soy

- **Soybean** data on USDA website:
  1 cup soybeans = 180g = 22.23g protein.
  100g soybeans = 12.35g protein
  Soybean is 12% protein.
  This is for boiled soybeans, edible portion only.
  Just over 1/3 cup used for maintenance dose.
  Other sites say that soybeans are about 36% protein.
  (1 cup = 186g = 68g protein)

Soy maintenance

- Your soy maintenance dose is **8 grams of soy protein once daily**. Dosing options include:
- Soy Milk:
- 240 ml (8 oz) of milk
- Original Silk Soy Milk
- Soybeans:
- • Approximately 1/3 cup of boiled soybeans (edible portion only).

Sunflower

- Organic Roasted Sunflower Seed Flour
- Purchase at www.eatseed.com. 28 g flour = 5 g protein (5.6 : 1)
  17.9% protein
- Sunflower Seeds
  Per USDA Nutrient Database 100g hulled dry roasted sunflower seeds = 19.33g protein. 19% protein. (1: 0.19)
- Sunbutter
  100g sunbutter = 22 g protein 22% protein
- **Sunflower OIT Dilutions**
- Use Organic Roasted Sunflower Seed Flour
  50mg/ml dilution: 3.5g sunflower flour in 70ml water
  Day 1 dilutions:
  5mg/ml dilution: 50mg sunflower in 10ml water
  500mcg/ml dilution: 5ml of 5mg/ml solution in 45 ml water
  50mcg/ml dilution: 5ml of 500mcg/ml solution in 45 ml water
  5mcg/ml dilution: 5ml of 50mcg/ml solution in 45 ml water

Wheat

- **Wheat flour**
- 1mg wheat flour = 0.133mg protein 7.5:1 ratio
- **Nature's Own 100% Whole Wheat bread**
- 100g bread = 15.38g protein (6.5:1) (USDA) 1 slice = 26g total weight = 4g protein

Wheat maintenance

- Your wheat maintenance dose is **5 grams of wheat protein once daily**. Dosing options include:
- Bread:
  - 1 slice of whole wheat bread