

Food Allergen Challenge Protocol Dosage Guide

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Muffin

Food amount	mg baked milk protein	mg baked egg protein
1/16 muffin	60mg	62mg
1/8 muffin	120mg	125mg
1/4 muffin	240mg	250mg
remainder of muffin	270mg	312mg
Total	930mg	1000mg

Cooked Egg (1 large (~50 g) egg)

Food amount	g of cooked egg
Touch lip	Touch lip
1/8 teaspoon	0.6 g
1/4 teaspoon	1.25 g
1/2 teaspoon	2.5 g
1 teaspoon	5 g
2 teaspoon	10 g
Rest of egg (~2 & 2/3 teaspoon)	13.1 g
6 1/2	32 g of cooked egg

*equivalent to 45 g of uncooked egg white and yolk

Cow's Milk

Time	ml milk
0	0.1ml (not to touch outside lip)
20 min	1ml
40 min	5ml
60 min	15ml
80 min	40ml
100 min	100ml
Daily total	~160 ml

Soy Milk

Time	ml milk
0	0.1ml (not to touch outside lip)
20 min	1 ml
40 min	5 ml
60 min	15 ml
80 min	40 ml
100 min	100 ml
Daily total	~160 ml

Tree Nuts (mixed nuts)

Time	WEIGHT OF EACH CRUSHED NUT You must multiply by total number of nuts being challenged*
0	Smear inside lip (not to touch outside lip)
20 min	40mg of each nut
40 min	120mg of each nut
60 min	400mg of each nut
80 min	1200mg (1.2g) of each nut
100 min	4000mg (4.0g) of each nut
120 min	12000mg (12.0g) of each nut
Daily total	17.8g of each nut

Single Nut

Crushed Nut in grams	Grams of protein (where approximately 25% of crushed nut/meal weight is protein)	Time	Crushed nut weight
40mg	10mg	0 min	40mg
120mg	30mg	20 min	120mg
400mg	100mg	40 min	400mg
1200mg (1.2g)	300mg	60 min	1200mg (1.2g)
4000mg (4g)	1000mg(1g)	80 min	4000mg (4.0g)
12000mg (12g)	3000mg(3g)	100 min	12000mg (12.0g)
		Daily total	17.76g

Peanut Butter

Equivalency of Peanut butter to	(Oil) Roasted Peanuts	Time	Peanut butter
1/8 teaspoon	0.625 gm	0	Smear inside lip (not to touch outside lip)
1/4 teaspoon	1.25 gm	20 min	1/8 teaspoon
1/2 teaspoon	2.5 gm	40 min	1/4 teaspoon
1 teaspoon	5 gm	60 min	1/2 teaspoon
		80 min	1 teaspoon (minimum last dose to call challenge negative)
		100 min	2 teaspoon (if tolerated)
		Daily total	1 7/8 teaspoons

Wheat (plain wheat flour)

TIME	ml wheat in milk or juice	g of wheat
0	Touch lip	Touch lip
20 min	1 ml	0.3 g
40 min	2 ml	0.6 g
60 min	5 ml	1.5 g
80 min	10 ml	3.0 g
100 min	20 ml	6.0 g
120 min	42 ml	12.6 g
Total volume/g	80 ml	24 g

Generic (single food)

Dose schedule	Weight food protein	Total weight of challenge food (mg)	Time	Food protein (mg)
1st	10mg	10mg x 100/known % protein of food*	20 min	10mg
2nd	30mg	30mg x 100/known % protein of food	40 min	30mg
3rd	100mg	100mg x 100/known % protein of food	60 min	100mg
4th	300mg	300mg x 100/known % protein of food	80 min	300mg
5th	1000mg	1000mg x 100/known % protein of food	100 min	1000mg (1g)
final	3000mg	3000mg x 100/known % protein of food	120 min	3000mg (3g)
			Cumulative total	4.44g

Additional information for tree nut and peanut challenges – Table 1 of 3

Crushed Nut in grams	Grams of protein (approximately 25% of crushed nut/meal weight is protein)
40mg	10mg
120mg	30mg
400mg	100mg
1200mg (1.2g)	300mg
4000mg (4g)	1000mg(1g)
12000mg (12g)	3000mg(3g)

Additional information for tree nut and peanut challenges – Table 2 of 3

NUT	% Nut protein of total weight	Average weight of <u>ONE</u> single NUT	Average Protein content <u>ONE</u> single NUT	Average number of nuts for protein cumulative total of 4 grams
Almond (blanched)	31	1 gram	300mg	13
Hazelnut	15*	1.4 grams	200mg	20
Cashew (dry roasted)	21	1.4 grams	300mg	13
Pistachio	21	0.6 grams	125mg	30
Walnut halve (dry)roasted)	25	3 grams	750mg	5
Pecan kernel (halve)	10*	1.5grams	150mg	25***
Brazil	14*	5 grams	700mg	6
Macadamia	10*	2.5 grams	250mg	16***
Peanut (raw)	25	1 gram gram	250mg	16
Nutella paste	1.5**/***	NA		
Peanut butter	25	NA		
Defatted peanut flour	50	N/A		

Additional information for tree nut and peanut challenges – Table 3 of 3

1 level 5 ml teaspoon	Average total weight in 1 <u>level teaspoon</u>	Average total mg nut protein in 1 <u>level teaspoon</u>	Estimated total number of teaspoons for cumulative OFC protein dose 4g
Almond meal	4 grams	1200mg	4 teaspoons
Hazelnut meal	4 grams	600mg	7 teaspoons
Nutella paste	7.5-10 grams	200mg	20 teaspoons***
Peanut butter	10 grams	2500mg	2 teaspoons
Chopped/crushed walnuts (1teaspoon)	2 -2.5 grams	550mg	6.5 teaspoons
Chopped/crushed cashews	2.5-3grams	700mg	5.5 teaspoons
Chopped macadamia	3 grams	300mg	13 teaspoons***
Chopped pecan	2.5 grams	250mg	16 teaspoons***
Chopped pistachio	3 grams	600mg	6.5 teaspoons

* These nuts have significantly less than 25% protein

** Nutella has 7.3% protein, but this includes milk solids.

*** This is a larger amount than a standard serving size and lower total protein cumulative dose for challenge may be reasonable.

ASCIA Food Allergen Challenge Protocols have been developed to standardise protocols used by clinical immunology and allergy specialists in Australia and New Zealand. However, ASCIA takes no responsibility for any adverse outcomes that may occur using these protocols. It is important to note that food challenges:

- Are primarily used to determine if positive food allergy tests are associated with current clinical allergy.
- Should only be undertaken for patients who have been carefully selected by clinical immunology and allergy specialists or appropriately qualified and experienced medical practitioners in consultation with clinical immunology and allergy specialists.
- May provoke an allergic reaction in sensitised individuals and should therefore only be performed under medical supervision with immediate access to emergency treatment for anaphylaxis.

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