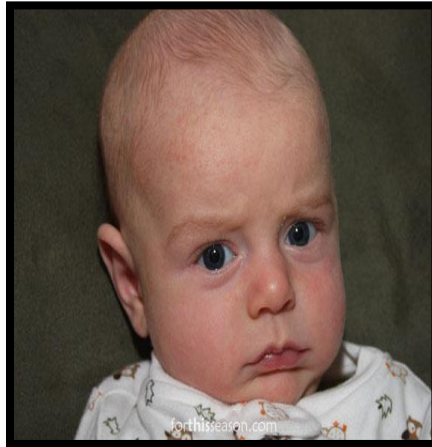


# Management of food allergy

By: Dr Moghtaderi



## **Practical management of food allergy**

**Lack of definite therapy**

**Education and avoidance of offending food allergen  
( mistake for small amount)**

**Treatment of symptoms following accidental  
ingestion**

**Substitution of food allergens**



## **Challenge for food avoidance**

- Food is necessary for individuals**
- Safe meals in setting such as schools, restaurant , ..**
- Cross reaction for food allergens**
- Exposure to food allergens in occupational setting**
- Non ingestion exposure by inhalation, skin contact**
- Multiple food**



# **Milk Allergy in breast fed infants**

**Advice breast feeding mother to exclude all cow's milk foods (important to explain)**

**To serum albumin to meat**

**Take Ca& vit D by mother (nut, broccoli, sesame, fig, ...)**

# Cow's milk allergy in formula

- Extensively or partial hydrolysed
- Amino acid – based formula
- Soya formula



# Cow's milk allergy

Hypo allergen formula not for confirmed CMA  
No lactose free formula



# Cow's milk allergy

AAFs are recommended as the first-line substitute formula:

Anaphylaxis

food protein-induced enterocolitis syndrome

allergic eosinophilic esophagitis

milk-induced chronic pulmonary disease

Severe atopic eczema



# Cow's milk allergy

**Soya formula**

**Cheaper**

**Cross reaction to birch**

**> 1% of infant with CMA is allergic to soya**

**-Soya after 6 months**

**-IgE mediate best tolerate soya**

**-If no response to soya, Ehf or aminoacid formula**

**-Phytoestrogen and fertility**





# Cow's milk allergy

Donkeys' milk

Camels' milk

Horses, milk

No goat- no sheep



## Emergency treatment

Severe life threatening reactions may occur : a generalized allergic reaction affecting more than one organ system can be identified as anaphylaxis. For example, a child with urticaria and vomiting

Dosing of available epinephrine auto-injectors

Brand:	AdrenaClick® & (generic)	Auvi-Q®	EpiPen®
Dose:	0.15 mg (for kids <25kg)		0.3 mg (for kids >25kg)

> Ensure child has 2 auto-injectors accessible at all times

# Epinephrine

**1/1000 or 1mg/cc in allergic reaction**

**1/10,000 or 1mg/ 10 cc**



## Dosing of available epinephrine auto-injectors

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> Ensure child has 2 auto-injectors accessible at all times



**Prescription of epinephrine if a child has any one of the following:**

**Asthma and IgE mediated food allergy**

**Peanut or nut allergy**

**History of severe reaction or anaphylaxis**

**-Teaching**



## **Tolerance to cows milk**

- Elimination diet at least one year and re-evaluation every 6- months**
- Good tolerance: 50% by 1 year, 75% by 3 years,90% by 6 years. Only 5% continue adulthood**

## Children with food allergy needs to regular follow up

- ❖ CMA resolve in majority of infants , **reintroduction with less allergenic form at home or hospital**
- ❖ Gastric acidity Using omeprazole decreased acidity cause high absorption of antigen
- ❖ Adult milk allergy is more severe



# Immunotherapy for Milk

Day	Milk dilution	Dose (mL)	Challenge (% milk protein)
1	1/10	0.1	
8		0.2	
15		0.4	
22		0.8	
29		0.1	
36		0.2	
43		0.4	
50	Undiluted	0.8	
57		1	
64		2	
71		4	11 g baked goods (1.2% w/w)
78		10	15 g cold meat (2% w/w)
85		15	40 g milk chocolate (0.6% w/w)
92		20	
99		25	
106		30	
113		40	
120		50	
127		60	66 mL liquid fermented milk (3% w/W)
135		70	
142		80	
149		100	100 g yogurt (3.3% w/w)
156		120	75 g cream cheese (5.3% w/w)
163		150	
170		180	
177		210	
185		240	25 g goat and ewe's cheese (30% w/w protein)



**1. Which is suitable in a child with CMA ?**

- A. Extensively hydrolyzed formula**
- B. Continue breast feeding**
- C. Soya based formula**
- D. Low fat milk**



## Treatment for Egg Allergy

Avoidance of egg (attention to label)

Education on avoidance ( such as custard, mayonnaise, soup, cookie )

Label with lecithin, albumin, globulin,....

Yolk or White (avoid both), Epinephrine in restaurant....



## **Cross reaction with hen egg**

**Serologic and clinical cross-reactivity with other bird eggs (turkey, duck, goose, seagull, and quail) have been reported**

**A minority of patients with allergy to egg are reactive to chicken meat**

**Chicken serum albumin (Gal d 5) is responsible for this cross-reactivity**

## **Treatment for Egg Allergy**

**Several studies have found that the majority of egg allergic individuals can tolerate extensively heated or baked egg, is difficult????**

**Several studies for starting egg in 4-6 months of age**

**The results suggest that ingestion of extensively heated egg by tolerant children might hasten the development of tolerance to unheated egg**

## Egg Allergy in Medication

Two other areas of concern:

propofol

intralipid

use of egg lysozyme, an enzyme found in egg white

There are case reports of anaphylaxis to these products



## Egg Allergy in vaccination

Influenza vaccine  
(with caution)

Yellow fever (not)

MMR  
(fibroblast embryo)



## **Natural Course of Egg Allergy**

**Tolerance by the majority of children with egg allergy 66% by 5 years old.**

**Prognostic indicators for the development of tolerance to egg:**

**lower level of egg-specific IgE**

**earlier age at diagnosis**

**milder symptoms**

**smaller skin test wheal sizes**

**tolerance to extensively heated egg**

## Immunotherapy of Egg Allergy

Week	Outpatient allergy clinic	Home
1 (day 1)	1 mg, 3 mg, 9 mg, 18 mg	–
1 (day 2)	30 mg	30 mg
2	60 mg (6 cc dilution 1 g in 100 cc)	60 mg
3	90 mg (9 cc dilution 1 g in 100 cc)	90 mg
4	150 mg (15 cc dilution 1 g in 100 cc)	150 mg
5	250 mg (1 cc dilution 1 g in 4 cc)	250 mg
6	500 mg (2 cc dilution 1 g in 4 cc)	500 mg
7	1000 mg (4 cc dilution 1 g in 4 cc)	1000 mg
8	1500 mg (6 cc dilution 3 g in 12 cc)	1500 mg
9	2500 mg (10 cc dilution 3 g in 12 cc)	2500 mg
10	4500 mg (18 cc dilution 6 g in 24 cc)	4500 mg
11	6000 mg (24 cc dilution 6 g in 24 cc)	6000 mg
12	8000 mg (32 cc dilution 10 g in 40 cc)	8000 mg
13	10,000 mg (10 cc dilution 10 g in 40 cc)	
	1 egg	2 eggs/week

The 32 patients included in the control Group (B) had been diagnosed of egg allergy at a mean age of 11.4 months (range 4–24 months). Nine out of 32 patients had an anaphylactic reaction during the open oral challenge test.

patients had follow-ups at the clinic 6 and 12 months after achieving tolerance.

An open oral challenge with raw egg white was performed in patients in Group A at least 6 months after finishing





# PEANUT ALLERGY INSIGHT REPORT



## **Tolerance to nuts and fish**

**Peanuts are common allergen after 4 years old**

**Tolerance to peanut in 20% of children and to tree nuts till 9% (similar to fish)**

## **Treatment for Peanut Allergy**

**No denature with heating**

**Avoidance is the mainstay of treatment**

**Immunotherapy as oral or epicutaneous or newly with plasmid DNA coding food allergen**



## **Treatment of Wheat Allergy**

### **Wheat-dependent exercise-induced anaphylaxis (WDEIA)**

- Rare**
- Anaphylactic reactions that range from urticaria to respiratory, gastrointestinal or cardiovascular symptoms that occur 1 to 4 hours after the ingestion of wheat, followed by physical exercise (such as celery, wheat, shellfish, grapes, and nuts)**

# SEA FOOD ALLERGY

**Persistent**



## **Assessment for Food Allergy**

**Because outgrow of food allergy, children should be re-evaluated**

**Combined oral immunotherapy with **omalizumab** for safety**

**Regular ingestion of extensively heated milk and egg accelerate resolution**



