



**Possibilità di
prevenzione mediante
formule
ipoallergeniche**

Alessandro Fiocchi
Caserta, 13 settembre 2012

XXIV Congresso Nazionale
Società Italiana di Pediatria
Preventiva e Sociale

**BAMBINI
DI VETRO**

12 - 15
Settembre
2012
Grand Hotel
Vanvitelli
Caserta

 SIPPS
Società Affiliata alla SIP





Matteo. Andrea.

Al seno
Familiarità per allergie bilaterale
Criceto
Pastori maremmani
Fumo paterno

Ipogalattia.

Che tipo di latte consigliare?

Cortesia dr.ssa Simona Barni



Hypoallergenic formulae

Food allergies are still on the rise

Prohibitionistic approach

HA formulae in Italy

Are HA formulae effective?

Are systematic reviews & GL positive?

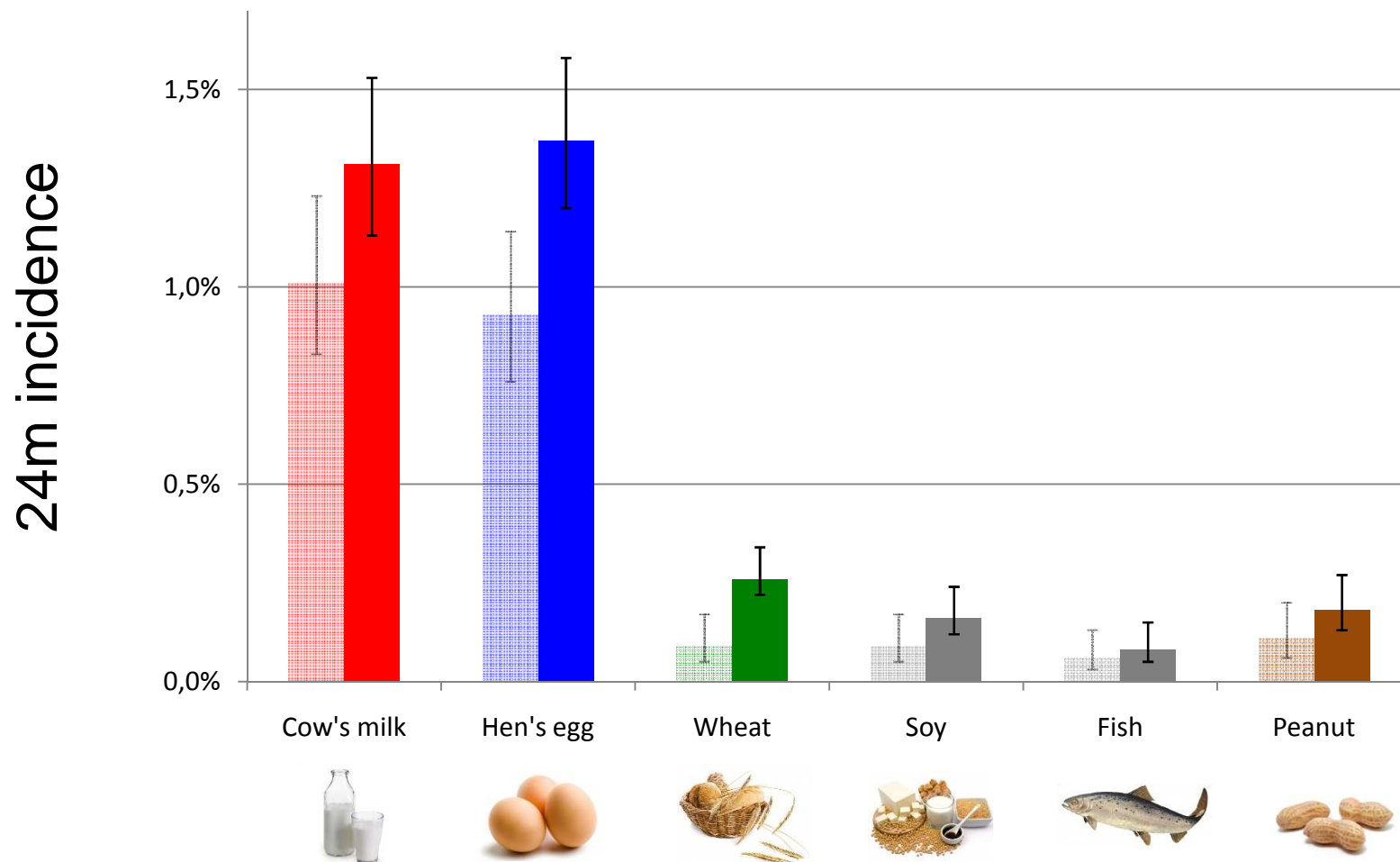
Is food allergy prevention worthwhile?

Is CMA prevention worthwhile?

Concluding remarks

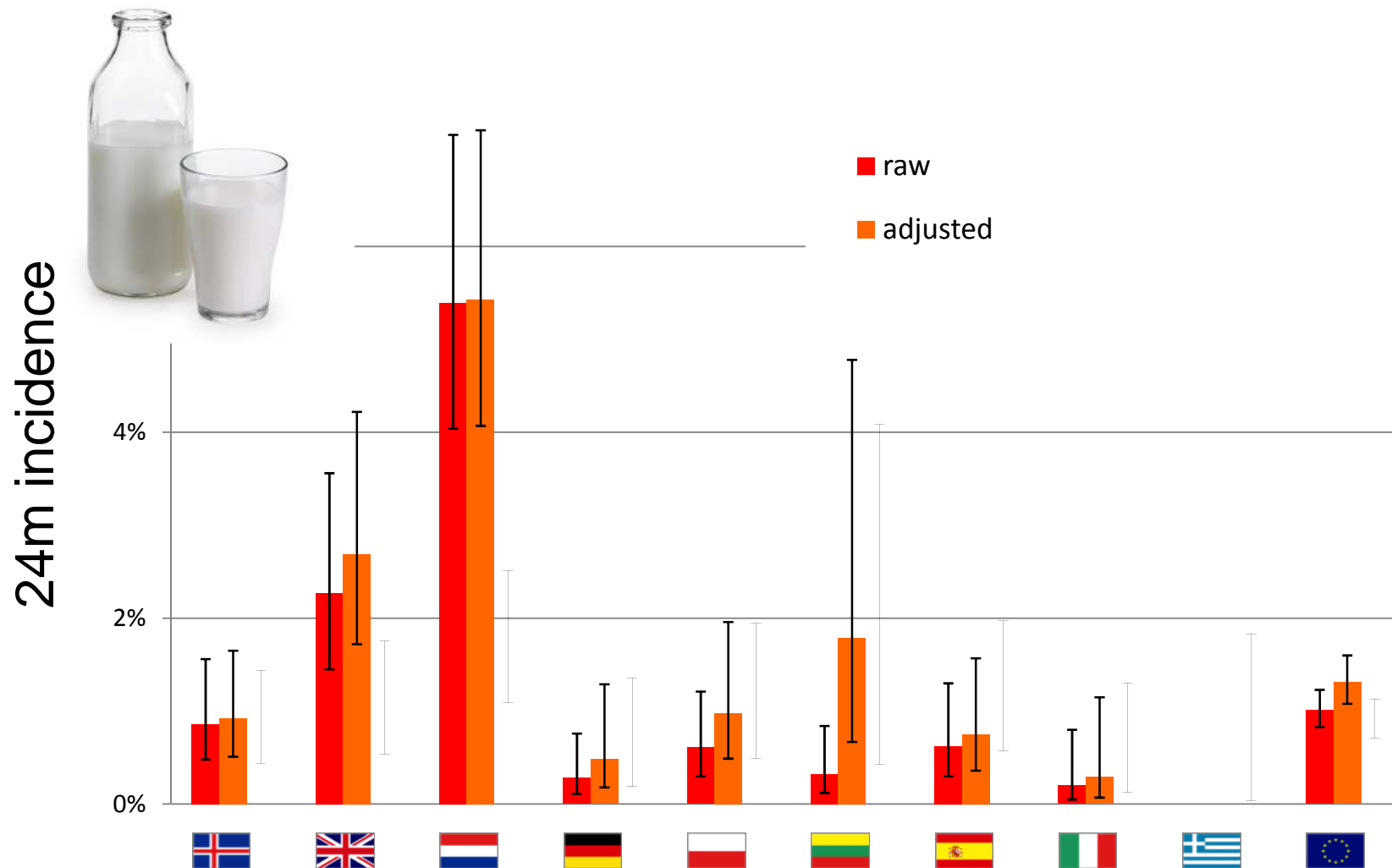


Food items implied in food allergy in Europe





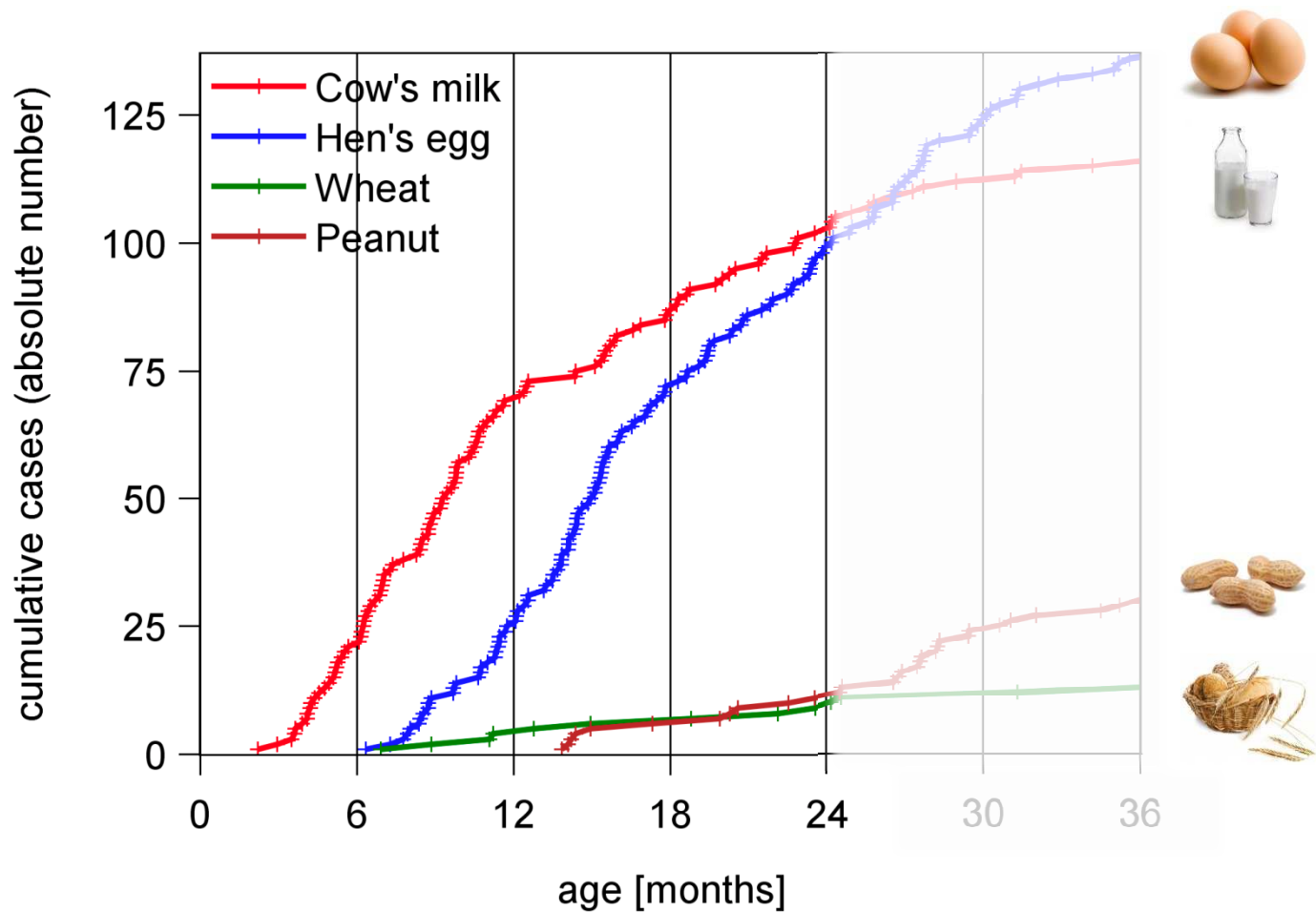
Cow's milk



McBride D. The EuroPrevall birth cohort study on food allergy: baseline characteristics of 12,000 newborns and their families from nine European countries. *Pediatr Allergy Immunol.* 2011 Dec 23 - Epub ahead of print



Food allergy: age at diagnosis



unadjusted, stratified by food item (all 9 centres, n=12,049)



The second wave

Respiratory allergy in westernized countries plateaued at the beginning of this century

Warner JO. Anaphylaxis: the latest allergy epidemic. *Pediatr Allergy Immunol* 2007;18:1-2.

2nd wave emerged in the last 10-15 years

Prescott SL. Food Allergy: riding the second wave of the allergy epidemic. *Pediatr Allergy Immunol* 2011;22:155-60.

Particularly in preschool children....

Sicherer SH. Epidemiology of food allergy. *J Allergy Clin Immunol* 2011;127:594-602

... and in countries where respiratory allergy had increased, e.g. UK, Australia and U.S.



Over 10% with challenge-proven food allergy!

Reactions on challenge:

- egg: 9%
- peanut: 3%
- other: 2%



More than 1 in 10 of all 1 year olds in Australia have clinical food allergy

Osborne NJ. Prevalence of challenge-proven IgE-mediated food allergy using population-based sampling and predetermined challenge criteria in infants. *J Allergy Clin Immunol* 2011;127:668-76



Significant rates of food allergy *prior* to starting foods at 4-6 months

DB-RCTs: early egg feeding



(n=1512)

- RCTs: start egg/placebo at 4-6 months
- **22% reaction rate** at randomization (*prior* to the intervention)
- **1.2% anaphylaxis** Rx adrenaline
- On 'first' known oral exposure to 'egg'

much earlier allergen exposure:
pregnancy, lactation, transcutaneous....



Hypoallergenic formulae

Food allergies are still on the rise

Prohibitionistic approach

HA formulae in Italy

Are HA formulae effective?

Are systematic reviews & GL positive?

Is food allergy prevention worthwhile?

Is CMA prevention worthwhile?

Concluding remarks

CME review article

Supported by a grant from AstraZeneca LP

Primary dietary prevention of food allergy

Alessandro Fiocchi, MD*; Alberto Martelli, MD*; Anna De Chiara, MD*; Guido Moro, MD†; Amiel Warm, MD†; and Luigi Terracciano, MD*

Objective: To present research and clinical evidence on the use of primary dietary prevention in food allergy management.

Data Sources: We conducted MEDLINE searches for pertinent articles published between January 1986 and October 2001 with use of the following keywords or phrases: *prevention and diet and allergy*, *food allergy and prevention*, and *dietary prevention and food allergy or allergens*. Also included are information and commentary reflecting the authors' cumulative clinical experience in an allergy unit of a city hospital.

Results: We define as "proactive" those strategies centered on "success factors," such as the early postnatal environment, prolonged breast-feeding, and use of formula and probiotic supplementation, in contrast to earlier "prohibitionist" approaches to prevention of food allergy. These two approaches are not antagonistic and may even be synergistic. We introduce this distinction in light of epidemiologic evidence and out of concern about compliance and the quality of life for patients.

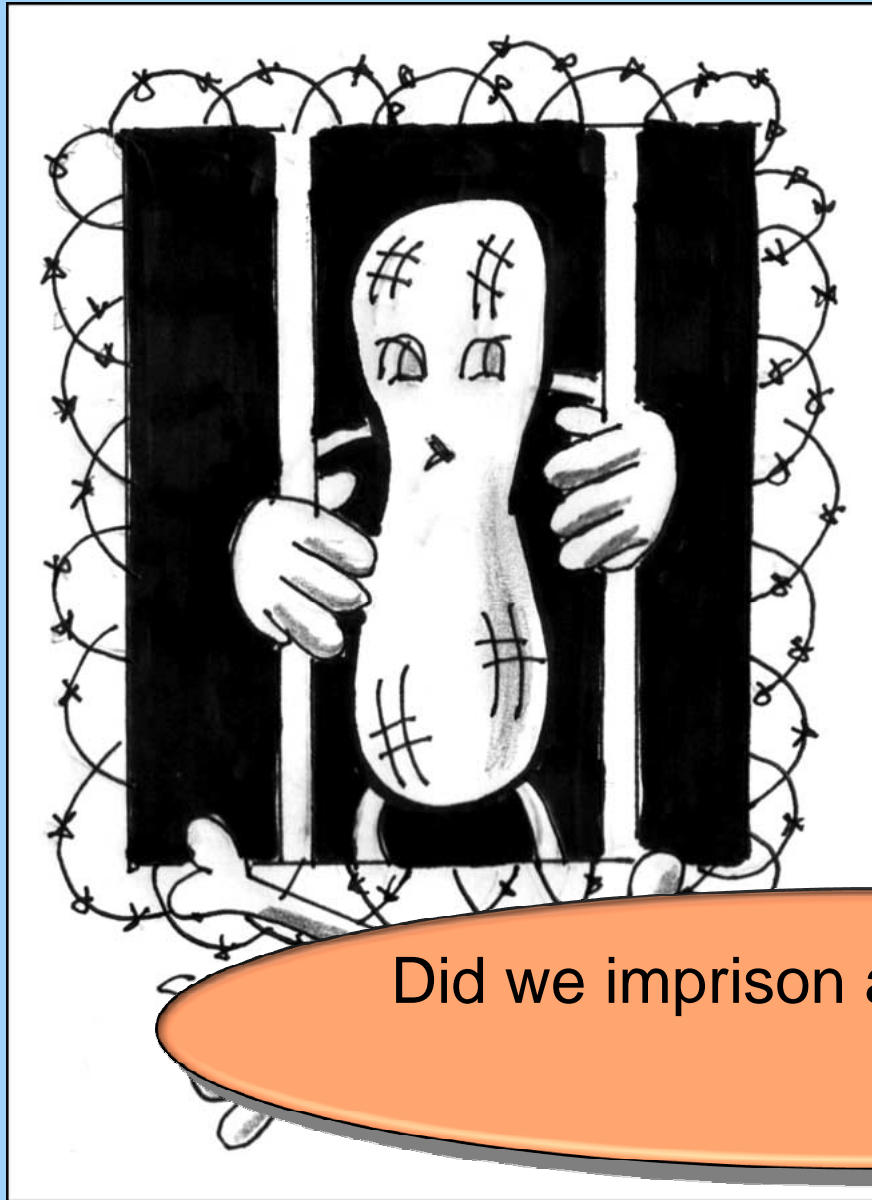
Conclusions: Inasmuch as nutritional and immune maturation are implicated, the prohibitionist measures that are most effective in primary prevention of food allergy are exclusive breast-feeding for at least 6 months (for lifelong immunity and other benefits), delayed (after the sixth month) introduction of solid foods, and on-indication use of "hypoallergenic" formulas. Whether proactive strategies can be contemplated remains a debatable issue. Evidence for and against the scientific use of probiotics as well as microbiologic, epidemiologic, and clinical data are discussed. Review of published epidemiologic studies and randomized clinical trials is essential before planning dietary intervention or prevention.

Ann Allergy Asthma Immunol. 2003;91:3-13.



The first culprit

- Allergens: exposure is necessary for sensitisation.
- Allergens have been demonised and ostracized



Did we imprison an innocent?

Prescott S, Fiocchi A. Avoidance or exposure to foods in prevention and treatment of food allergy? *Curr Opin Allergy Clin Immunol* 2010,10:258–66



The prohibitionist approach

1 NON SARAI CONCEPITO

2 QUALORA CONCEPITO, TUA MADRE NON FUMERA'

3 DURANTE LA GRAVIDANZA, TUA MADRE DIGIUNERA`

4 NON TI NUTRIRAI MEDIANTE LA PLACENTA

5 QUALORA TU NASCA, NON FARLO IN PRIMAVERA NE` IN AUTUNNO

6 DOPO NATO, NON MANGERAI

7 QUALORA MANGI, EVITERAI LATTE, UOVO, GRANO, PESCE, ARACHIDI, FRUTTA SECCA, ed in generale OGNI COSA COMESTIBILE

8 QUALORA MANGI, NON RESPIRERAI

9 QUALORA RESPIRI, NON FARLO IN CITTA`, NE` IN CAMPAGNA

10 QUALORA TU SIA SOPRAVVISSUTO.... LA TUA PROBABILITA` DI NON SVILUPPARE ALLERGIA E` ALMENO DEL 35%!



Hypoallergenic formulae

Food allergies are still on the rise

Prohibitionistic approach

HA formulae in Italy

Are HA formulae effective?

Are systematic reviews & GL positive?

Is food allergy prevention worthwhile?

Is CMA prevention worthwhile?

Concluding remarks



Aptamil HA 1 (Milupa)

Aptamil HA 2 (Milupa)

Humana HA 1 (Humana)

Humana HA 2 (Humana)

Mellin HA (Mellin)

Mellin Ipo (Mellin) liquido

Nativà HA 1 (Guigoz)

Nativà HA 2 (Guigoz)

Nidina HA 1 (Nestlè)

Nidina HA 2 (Nestlè)

Nutrilon pepti 1 (Nutricia)

Nutrilon pepti 2 (Nutricia)

Plasmon HA (Plada)

Similac RA (Abbott)

Vivena HA (Dieterba)

Vivena 2 HA (Dieterba)



Nan HA (Nidina active Excel)

Manufacturer	Nestlé SA, Vevey, CH
Labelled for	Reduction of the risk of CMA
Protein source	Whey
Technological process	Hydrolysis
Carbohydrate source	Lactose
Lipid source	Vegetable oils
Price in € per litre	5 €
kCal/L	670



Nutramigen 1 LGG Lipil

Manufacturer	Mead Johnson Nutrilon srl
Labelled for	hypoallergenic infant formula for term infants who are sensitive to the intact proteins in cow's milk and soy formulas, as well as other foods.
Protein source	Casein
Technological process	Enzymatic hydrolysis
Carbohydrate source	86% corn syrup solids, 14% modified corn starch
Lipid source	44% palm oil, 19.5% soy oil, 19.5% coconut oil, 14.5% sunflower oil, 2.5% Lipil

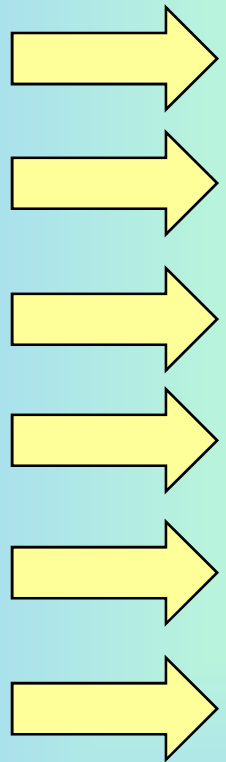


Hypolac

Manufacturer	Lactalis
Labelled for	infants and children with known allergies to cow's milk protein and soy - infants and young children with lactose intolerance. From the first week of life.
Protein source	whey
Technological process	Enzymatic hydrolysis



Palatability of formulae - total



Cow's milk	11.90
Starting formula	9.88
Partial hydrolysate	9.54
Soy formula	8.44
Hydrolysed rice formula	7.94
Hydrolysed soy formula	7.62
Whey hydrolysate	6.38
Casein hydrolysate	5.74

Pedrosa M, Palatability of hydrolysates and other substitution formulas for cow's milk-allergic children: a comparative study of taste, smell, and texture evaluated by healthy volunteers. *J Investig Allergol Clin Immunol.* 2006;16:351-6



Growth pattern of healthy infants fed Nutramigen

Children fed Nutramigen thinner.

Taste?

Hydrolised proteins satiate > whole proteins?

AA satiate > whole proteins?

Mennella JA. Differential satiation among healthy infants fed hydrolysed or cow-milk formulas. Pediatrics. 2011;127



Hypoallergenic formulae

Food allergies are still on the rise

Prohibitionistic approach

HA formulae in Italy

Are HA formulae effective?

Are GL positive?

Is food allergy prevention worthwhile?

Is CMA prevention worthwhile?

Concluding remarks



Cochrane review: formulas containing hydrolysed protein for prevention of allergy and food intolerance in infants

Results

Eighteen trials

Meta-analysis of 4 studies (386 infants) → reduction in allergy incidence in infancy.

One study → reduction in allergy incidence in childhood

Reductions found:

- asthma prevalence in childhood
- eczema incidence in infancy
- eczema prevalence in childhood
- food allergy prevalence in childhood
- CMA incidence in infancy



Cochrane review: formulas containing hydrolysed protein for prevention of allergy and food intolerance in infants

Conclusions

No hydrolysed formula for the prevention of allergy in preference to exclusive breast feeding.

Hydrolysed compared to a cow's milk formula reduces infant and childhood allergy and infant CMA.

Extensive vs. partially hydrolysed formula?

Effects beyond five years?

Costs?

Compliance?

Osborn D, Sinn J. Formulas containing hydrolysed protein for prevention of allergy and food intolerance in infants. Cochrane Database Syst Rev. 2007;4:CD003664



ERROR: ioerror
OFFENDING COMMAND: image
STACK: