

# CESPER 2024

**Strategie di riconoscimento e gestione del bambino con allergia alimentare nel primo anno di vita: dai lattini da utilizzare agli alimenti da eliminare**

Stefania Zanconato  
UOSD Pneumologia e Allergologia  
Dipartimento Salute Donna e Bambino  
Azienda Ospedale Università di Padova



1

Food hypersensitivity

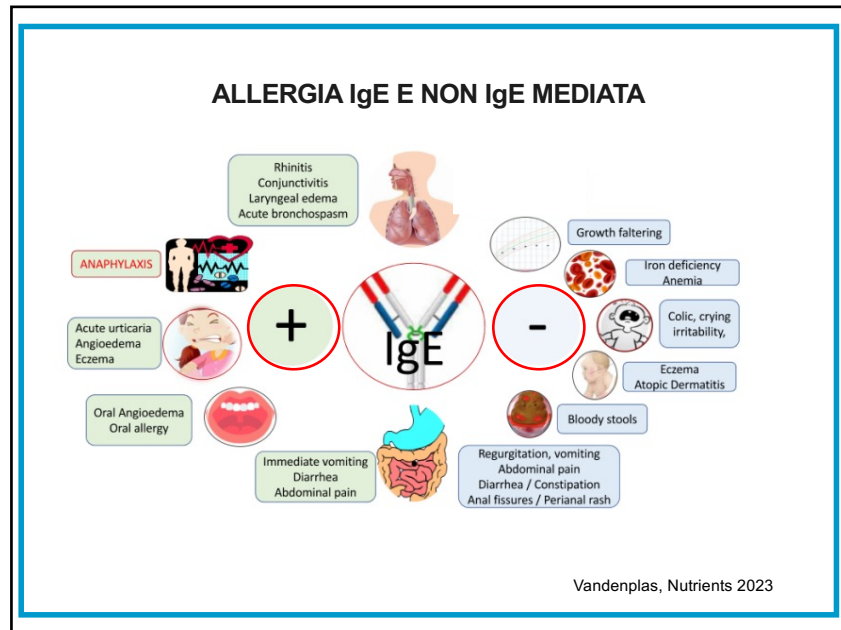
**FOOD ALLERGY**   **FOOD INTOLERANCE**  
Immunological mechanism   Non immunological mechanism

- IgE mediated
- non IgE mediated
- IgE and non-IgE mediated
- cell mediated

Santos, Allergy 2023

2

# CESPER 2024



3

**Food allergy has increased from 2.6% in the early 2000s to 3.5% in the period 2012-2021**

4

# CESPER 2024

**Food allergy** has increased **from 2.6%** in the early 2000s **to 3.5%** in the period 2012-2021

**NON ESISTE UN  
SINGOLO TEST DI LABORATORIO  
DIAGNOSTICO DI  
ALLERGIA ALIMENTARE**



5

## **DIAGNOSI ALLERGOLOGICA**

- Anamnesi
- Tests allergologici
  - prick test
  - IgE seriche specifiche
- Trial con dieta di eliminazione (allergia non IgE-mediata)
- Challenge con alimenti (gold standard)

6

# CESPER 2024

An algorithm for the diagnosis and management of IgE-mediated food allergy, 2024 update

Arguably, the most important single “test” for diagnosing a food allergy is the **clinical history**

For foods that the patient is **consuming regularly**, allergy testing should **not be conducted**



Santos, Allergy 2024

7

**Il valore predittivo positivo dei prick test e delle IgE per alimenti è basso (< 50%).**

Santos, Allergy 2024

**Tests allergologici positivi**



**Non significano sempre reazione clinica**

8

# CESPER 2024

**SENSIBILIZZAZIONE  
E  
ALLERGIA**

9

**IgE per latte 5.92 kU/L**

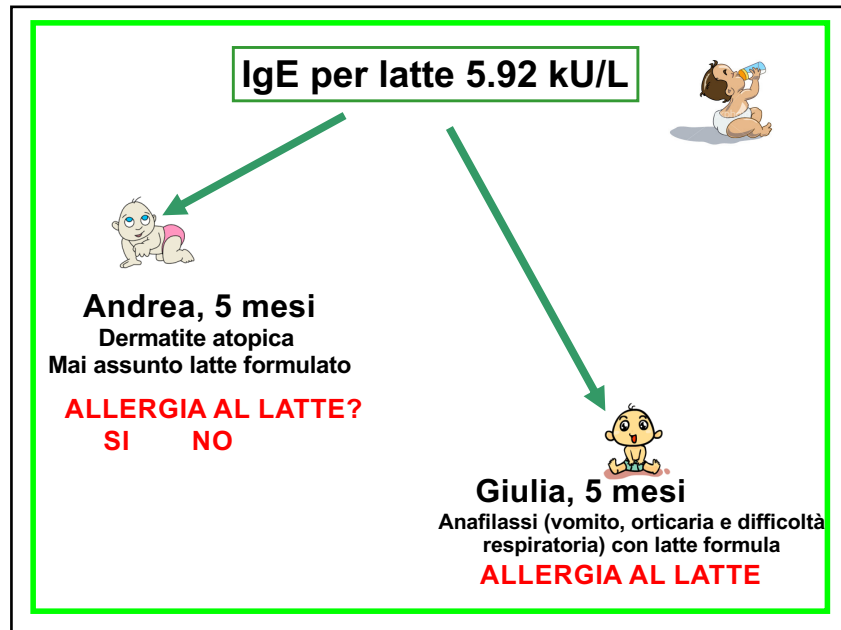


**Giulia, 5 mesi**  
Anafilassi (vomito, orticaria e difficoltà  
respiratoria) con latte formula

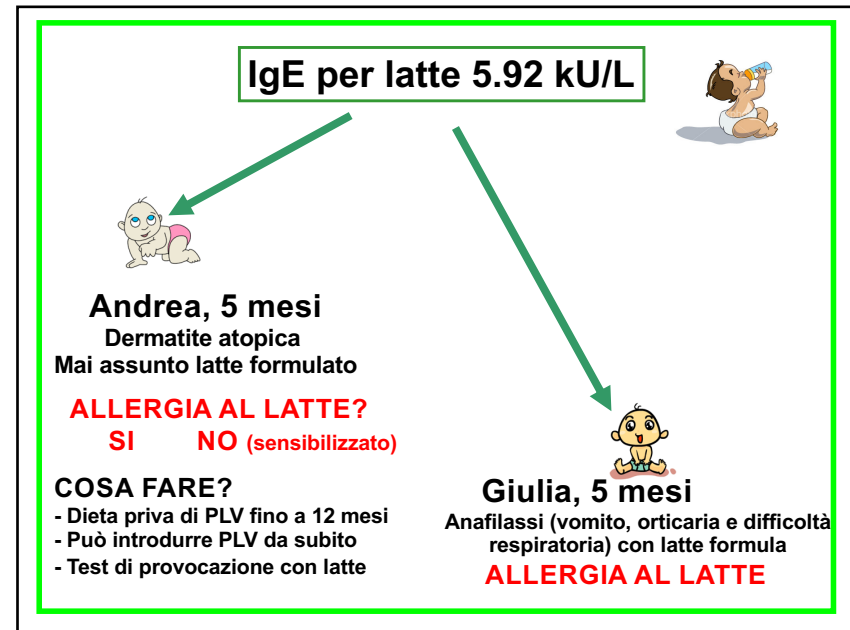
**ALLERGIA AL LATTE**

10

# CESPER 2024

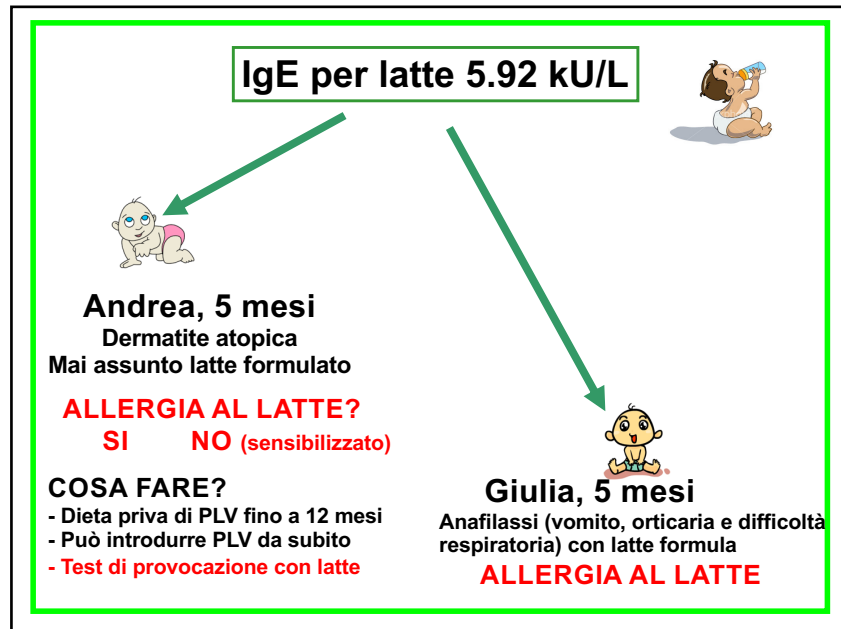


11



12

# CESPER 2024



13

**I tests allergologici vanno sempre interpretati in base alla **storia clinica** del paziente**

**Il challenge con alimento rimane il gold standard nella diagnosi di allergia alimentare**

14

# CESPER 2024

**Un ridotto numero di alimenti è responsabile di oltre il 90% delle reazioni allergiche nel bambino**



Santos, Allergy 2023

15



**“THE BIG 8”**



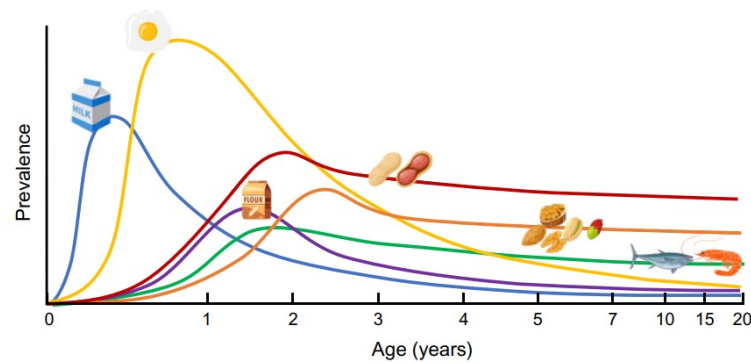
**latte, uovo, soia, grano,  
arachide, frutta secca, pesce,  
crostacei**

16



# CESPER 2024

Relative prevalence of common food allergies at different ages



Lee, Curr Allergy Asthma Rep 2024

17

EAAI guidelines on the diagnosis of IgE-mediated food allergy

**Recommendation 2:**

**In pazienti con una storia di sospetta allergia IgE mediata i prick test e/o il dosaggio delle IgE specifiche sono i test di prima linea nel work up diagnostico**

Vari fattori specifici del paziente vanno tenuti in considerazione, per esempio nei bambini piccoli bassi livelli di IgEs possono corrispondere a una probabilità maggiore di allergia



Santos, Allergy 2023

18

# CESPER 2024

EAACI guidelines on the diagnosis of IgE-mediated food allergy

## Recommendation 3:

In pazienti con una storia di sospetta allergia IgE mediata ad **arachide, nocciola o anacardio**, le IgE specifiche per **Ara h 2, Cor a 14 e Ana o3**, rispettivamente, sono raccomandate oltre ai prick test e alle IgE per estratto, a ulteriore supporto della diagnosi di allergia alimentare

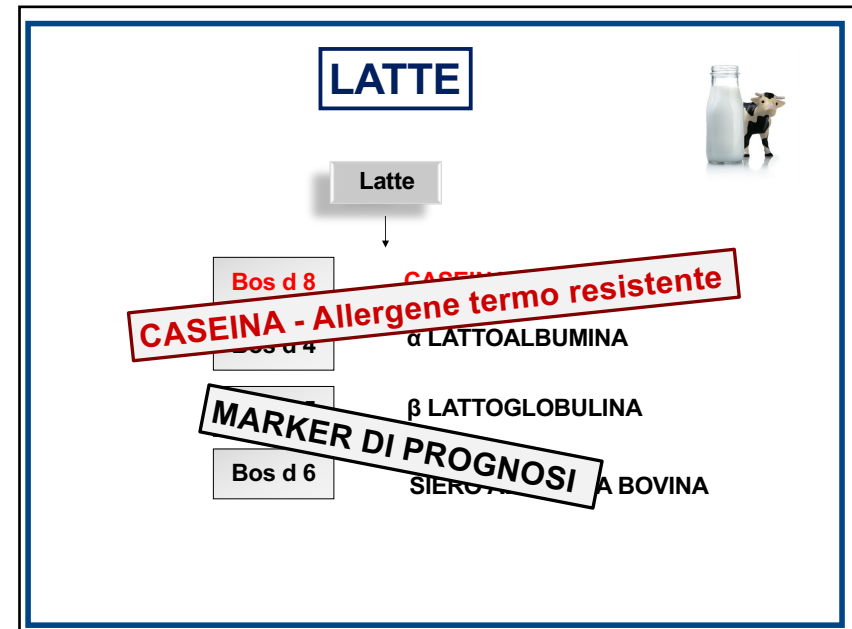
Soprattutto se

- storia non chiara
- prick test o IgEs per estratto non dirimenti
- pazienti con pollinosi



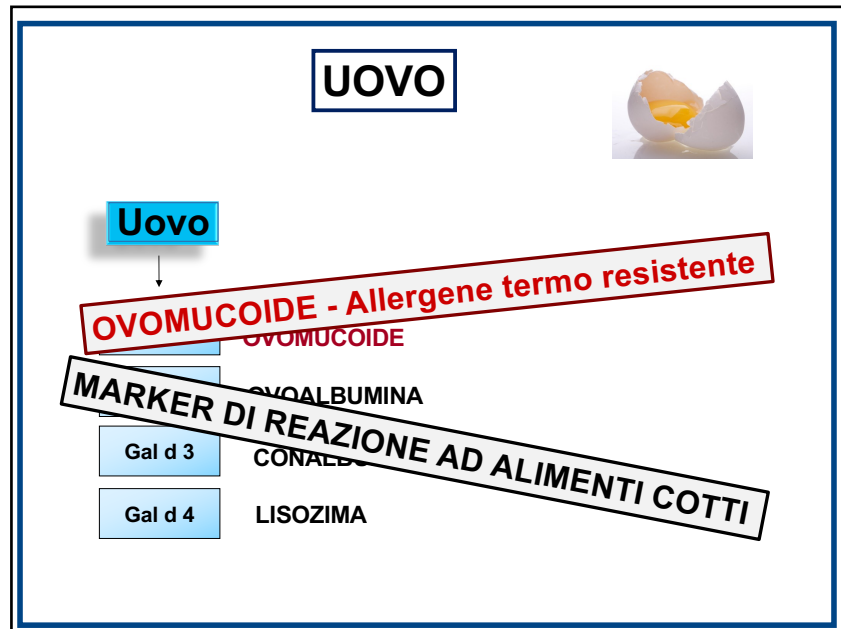
Santos, Allergy 2023

19

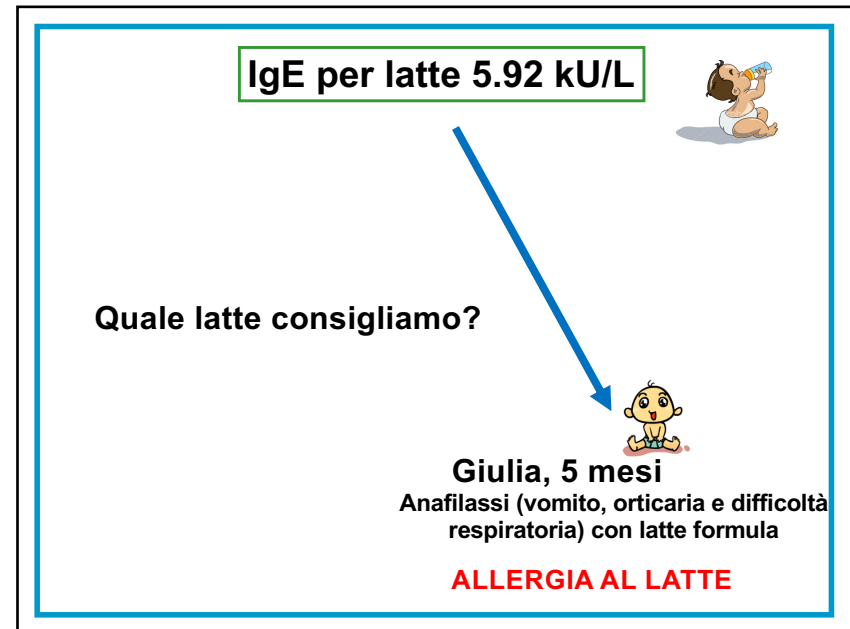


20

# CESPER 2024



21



22

# CESPER 2024

## Quale latte nel bambino con allergia IgE mediata alle PLV?



### LATTE MATERNO (no dieta materna)

- Idrolisato estensivo PLV o in alternativa
- Formula a base di riso idrolizzato
- Formula a base di aminoacidi se reazione grave o no risposta a idrolisato estensivo
- Latte a base di proteine della soia (> 6mesi)



Vandenplas JPGN 2024

23

## World Allergy Organization (WAO) Diagnosis and Rationale for Action against Cow's Milk Allergy (DRACMA) guideline update



### LATTE MATERNO (no dieta materna)

#### Prima opzione

- Idrolisato estensivo PLV o
- Formula a base di riso idrolizzato



#### Seconda opzione

- Formula a base di aminoacidi

#### Terza opzione

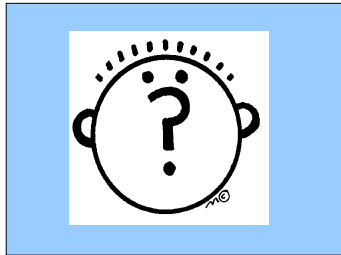
- Latte a base di proteine della soia (> 6 mesi)

Bognanni, WAO Journal 2024;17:100888

24

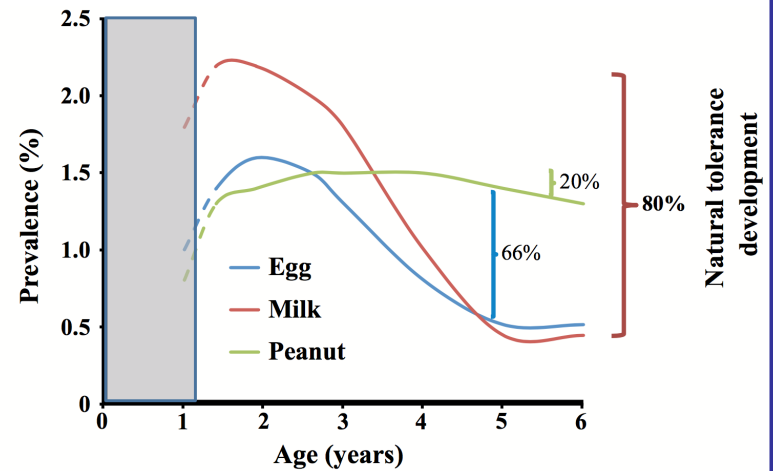
# CESPER 2024

Qual è l'evoluzione  
dell'allergia alimentare IgE  
mediata?



25

## SVILUPPO DI TOLLERANZA



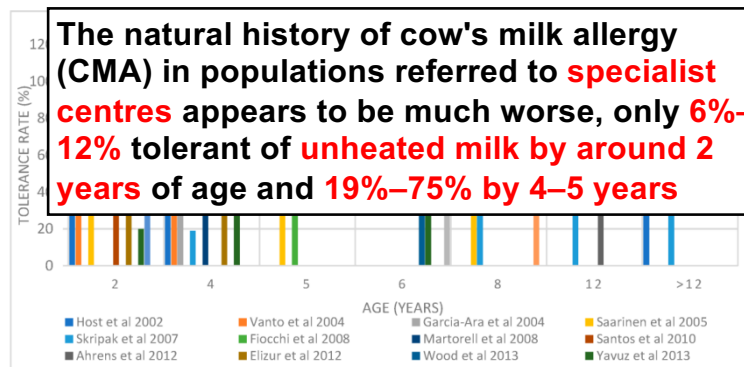
Allergy 2016;71:1393

26

# CESPER 2024

## Natural history of food allergy

The natural history of cow's milk allergy (CMA) in populations referred to **specialist centres** appears to be much worse, only **6%–12% tolerant of unheated milk by around 2 years of age** and **19%–75% by 4–5 years**



Cronin, Nutrients 2023;15:1397

27

## ALLERGIA ALIMENTARE IgE MEDIATA

### COSA FARE?



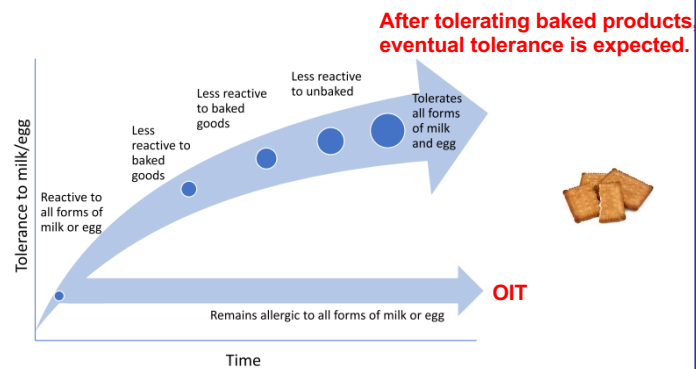
1. Food avoidance
2. Introduction to baked milk or egg using the milk/egg ladder
3. OIT protocols  $\pm$  biologic treatment

28

# CESPER 2024

## NATURAL HISTORY OF 2 PHENOTYPES OF MILK AND EGG ALLERGY

Most children will outgrow allergy.  
Some will remain to have allergy to all forms.

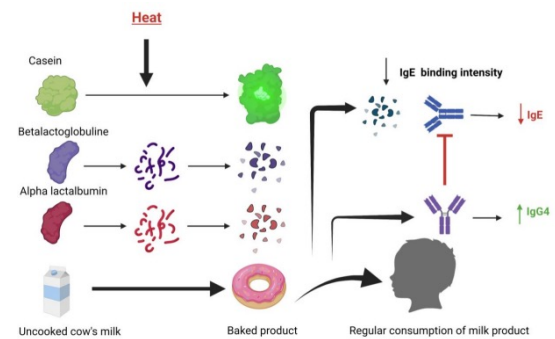


Upton, Ann Allergy Asthma Immunol 2024;132:328

29

Baked milk ingestion has been found to hasten the resolution of milk and egg allergy in children with tolerance to baked milk or egg

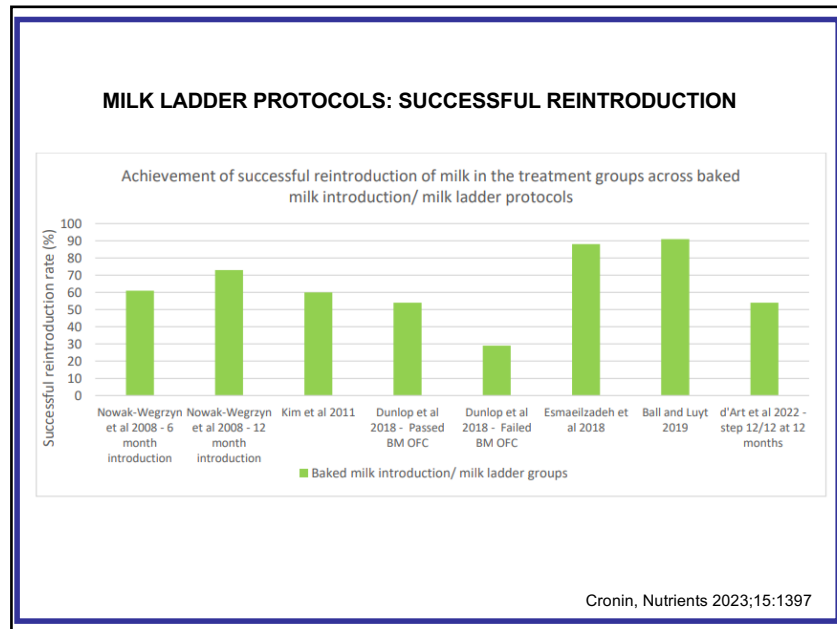
## The mechanism of the baked milk ladder



Cronin, Nutrients 2023;15:1397

30

# CESPER 2024



31

### LADDER PROTOCOLS: PER QUALI PAZIENTI?

Milk and egg ladders are largely nonstandardized

Published guidelines have recommended restricting home introduction of baked milk, to infants with **mild cutaneous reactions** only and those who have **not experienced a reaction in the past 6 months**

Recent studies suggested that young children with milk and egg allergy can be **introduced to BAKED MILK and BAKED EGG at home and progress safely**. This approach, if considered, needs **careful selection** and education of patients and a recognition that there is a risk of allergic reaction.

Upton, Ann Allergy Asthma Immunol 2024;132:328

32



# CESPER 2024

Safety considerations for patient-managed home-based dietary progression of baked milk or baked egg (ladder-type approach) considering age, reactivity to baked forms, family dynamics, and comorbidities.

Lower risk		Not recommended for self-managed home-based approaches
Young age (pre-school)		Elementary school aged and older
Tolerant/non-reactive to baked forms	Reactive to baked forms or unknown	Severe reaction to baked form
Compliant		Non-compliance /significant anxiety
No asthma, or very well controlled asthma		Uncontrolled asthma
Informed consent		Concerns about understanding

Experience with baked diets in older BM-/BE-reactive children reveals a higher rate of allergic reactions and dropouts

**START EARLY AFTER DIAGNOSIS !!**

Upton, Ann Allergy Asthma Immunol 2024;132:328

33



## Patient-specific factors for home challenge using a milk ladder



- **Non-IgE-mediated** allergy (excluding FPIES)
- **IgE-mediated** with prior **mild, non-anaphylactic reactions**
- **Non-asthmatic** is ideal, with **stable, treated asthmatics** potentially suitable
- **Willing and prepared patients and families** with **no language or comprehension barriers**
- **Families ideally have ready access to emergency services**
- **High previous reaction threshold**
- **Low skin prick test wheal or serum specific-IgE levels**
- **Younger patients** (e.g. preschool) are preferred, though not without risk

Vandenpals, JPGN 2024;78:386

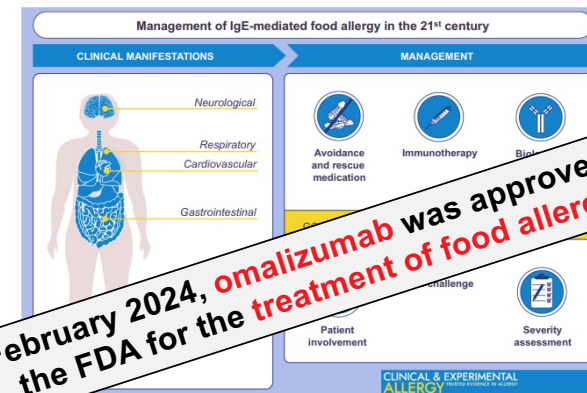
34

# CESPER 2024

## ALLERGIA ALIMENTARE NUOVE TERAPIE?



35



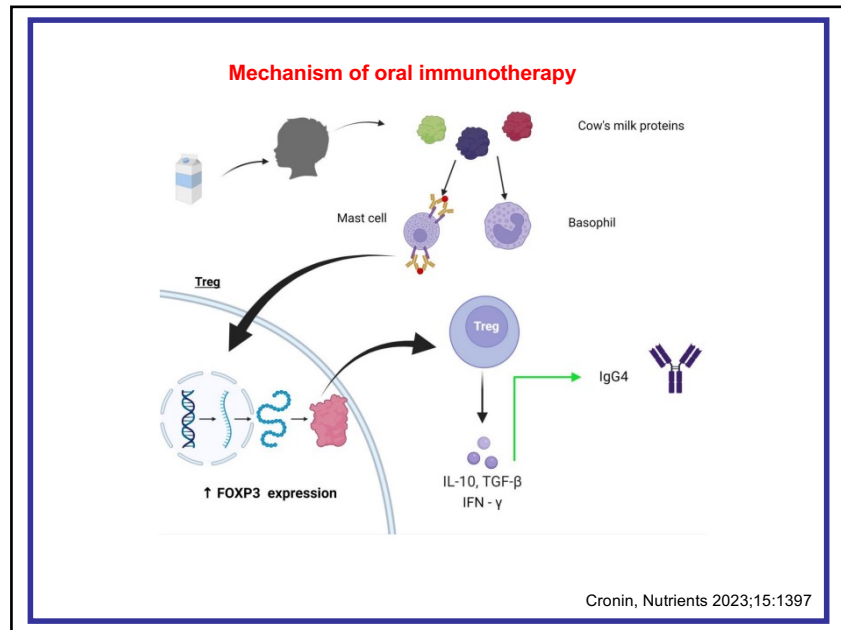
**In February 2024, omalizumab was approved by the FDA for the treatment of food allergy**

- **Oral immunotherapy is the first treatment** recommended for the active management of food allergy.
- Increasing data support **biologics as promising therapeutic options** as monotherapy or combined with immunotherapy.

Cafarotti, Clin Exp Allergy. 2023;53:25

36

# CESPER 2024



37

## EAACI Guidelines on allergen immunotherapy: IgE-mediated food allergy

[Allergy](#)

OIT can be recommended as a treatment option to **increase the threshold** of reaction while on OIT in children with persistent **cow's milk, hen's egg and peanut allergy**, from around 4-5 years of age

A recommendation **cannot** currently be made for OIT as a treatment option to achieve **post-discontinuation effectiveness**

OIT for food allergy should only be undertaken in highly specialized clinical centers

Pajno, Allergy 2018

38

# CESPER 2024

## Managing food allergy: GA<sup>2</sup>LEN guideline 2022

WORLD ALLERGY ORGANIZATION JOURNAL

### Allergen immunotherapy

The GA<sup>2</sup>LEN Task Force **recommends** offering **peanut oral immunotherapy** under specialist supervision with standardized evidence-based protocols using peanut products (or licensed pharmaceutical products, where appropriate), to selected children (aged 4+ years) with clinically diagnosed, severe, IgE-mediated, peanut allergy to increase the amount of peanut tolerated while on therapy.

High



The GA<sup>2</sup>LEN Task Force **suggests** offering **peanut epicutaneous immunotherapy** under specialist supervision using licensed pharmaceutical products if they become available to selected children aged 4-11 years with clinically diagnosed, severe, IgE-mediated, peanut allergy to increase the amount of peanut tolerated while on therapy.

Moderate



The GA<sup>2</sup>LEN Task Force **suggests** offering **oral immunotherapy** under specialist supervision with standardized evidence-based protocols using food products to selected children (aged 4+ years) with clinically diagnosed persistent severe IgE-mediated **hen's egg or cow's milk allergy** to increase the amount of allergen tolerated while on therapy.

Moderate



WAO Journal 2022

39

## Palforzia (immunoterapia orale per arachide)

Palforzia è un medicinale a base di polvere sgrassata di arachide, disponibile in polvere e bustine, per il trattamento dell'allergia alle arachidi in bambini e adolescenti **da 4 a 17 anni**

Palforzia è **autorizzato** in tutta Europa, in USA, UK e Svizzera



40

# CESPER 2024

## ALLERGIA ALIMENTARE MANIFESTAZIONI CLINICHE

### -Reazioni immediate

- IgE mediate

### -Reazioni tardive

- non IgE mediate

41

## Sintomatologia non IgE mediata

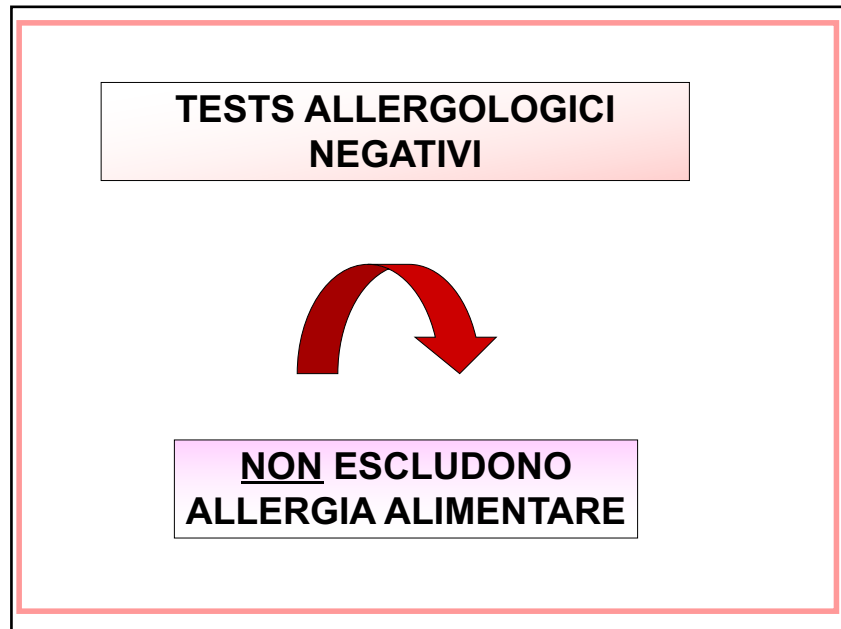
### SINTOMATOLOGIA GASTROINTESTINALE

(diarrea, scarsa crescita,  
dolori addominali, etc...)

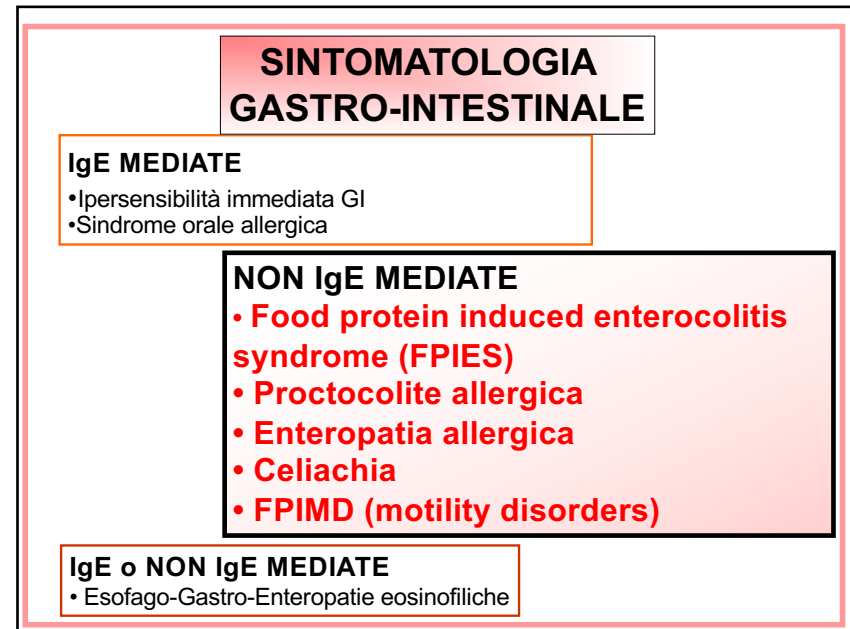


42

# CESPER 2024



43



44

# CESPER 2024

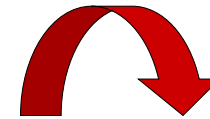
## Luca, 2 mesi

Nato a termine, PN 3280 g, perinatalità nella norma  
Crescita regolare (peso 5360 g)  
Allattato al seno  
Da circa 20 giorni presenta feci con sangue al giorno con presenza di muco e sangue  
Ha eseguito  
**Coprocoltura** negativa per virus e batteri  
**IgE specifiche** per latte negative

**Quale diagnosi?**

45

## PROCTOCOLITE ALLERGICA



- Lattante primi mesi di vita (di solito 3-6 settimane) con sangue e muco nelle feci e diarrea non importante
- Crescita regolare.
- 60% allattati al seno

46

# CESPER 2024

## PROCTOCOLITE ALLERGICA



- No anemia significativa
- DD: ragadi, polipi, MICI, diarrea infettiva
- **Prognosi:** la maggior parte dei bambini guarisce tra 9 e 12 mesi di età

47

## Gaia, 10 mesi

Nata a termine, PN 3410 g, perinatalità nella norma  
Crescita regolare fino a 6 mesi, poi depressione della  
curva ponderale (dal 75° percentile al 10°)  
Allattata al seno fino a 6 mesi, poi supplemento di latte  
formulato  
Da circa 8 mesi presenta 6-7 scariche al giorno  
semiliquide, non sangue, saltuari vomiti

**Quale diagnosi?**

Ha eseguito:

- Ac anti-peptidi deamidati della gliadina (IgG) neg
- Ac anti-transglutaminasi (IgA) neg
- Coprocultura negativa per virus e batteri
- Emocromo: Hb 8.2 g/dl, MCV 68 fl
- Albumina: 23 g/L
- IgE per alimenti: **negative**



48



# CESPER 2024

**ENTEROPATIA ALLERGICA**



- Lattante con malassorbimento (piccolo intestino)
- Diarrea non ematica spt dopo introduzione di latte
- 50% vomito, scarsa crescita
- Anemia e segni di malassorbimento

49

**Giorgio, 6 mesi**


Negli ultimi 20 giorni episodi di vomito e diarrea  
vomitando e diarrea. Pure a digiuno.  
disidratazione. Pure a digiuno.  
- crema di latte  
- crema di latte  
- crema di latte

**Quale diagnosi?**

**FPIES (food protein induced enterocolitis syndrome)**

**RISO**


risultati negative per gli alimenti assunti



50


# CESPER 2024

**Food Protein Induced Enterocolitis Syndrome  
FPIES**



**ACUTA (vari cibi)**

- Vomito dopo 1-4 ore dall'ingestione del cibo senza sintomi IgE mediati
- Pallore, letargia



51


**International consensus guidelines for the diagnosis and management of food protein-induced enterocolitis syndrome: Executive summary—Workgroup Report of the Adverse Reactions to Foods Committee, American Academy of Allergy, Asthma & Immunology**

**CRITERIO MAGGIORE:**

- Vomito in 1-4 ore dopo l'ingestione dell'alimento senza sintomi IgE-mediati

**CRITERI MINORI:**

- Altri episodi di vomito dopo l'ingestione dello stesso alimento
- Vomito ripetitivo 1-4 ore dopo l'ingestione di un alimento diverso
- Letargia durante gli episodi
- Pallore importante durante gli episodi
- Necessità di accesso al Pronto Soccorso
- Necessità di fluidi ev
- Diarrea nelle 24 ore successive



**DIAGNOSI:** criterio maggiore e  $\geq 3$  criteri minori; se un solo episodio, si raccomanda un test di provocazione

Norwak-Wegrzyn, JACI Pract 2020

52

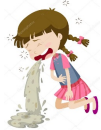
# CESPER 2024

## Food protein induced enterocolitis syndrome

Una FPIES acuta va trattata come un'emergenza medica, nel 15% dei casi vi può essere uno shock ipovolemico

**Terapia: fluidi, cortisone, ondansetron**

**Epinephrine autoinjectors** are not routinely recommended for FPIES



Anvari, Allergol Int 2024

53

## Food protein induced enterocolitis syndrome

### **DIAGNOSI DIFFERENZIALE**


**Gastroenterite infettiva**  
**Sepsi**  
**Anafilassi**  
**Invaginazione intestinale**  
**Stenosi del piloro**  
**Disordini metabolici**

Anvari, Allergol Int 2024

54

# CESPER 2024

Food Protein Induced Enterocolitis Syndrome  
FPIES



**CRONICA (latte in lattante)**

- Vomiti ripetuti
- Diarrea
- Scarsa crescita
- Anemia
- Aumento GB, acidosi metabolica, metaHb

55

**FOOD PROTEIN-INDUCED ALLERGIC PROCTOCOLITIS (FPIAP)**  
Caratterizzata da feci con **striature ematiche** in un lattante in buone condizioni generali; primi mesi di vita

**FOOD PROTEIN-INDUCED ENTEROCOLITIS (FPIES)**  
C  
e a  
ali

- **Età** primi due anni di vita
- Il **latte** è l'alimento più coinvolto
- Test allergologici **negativi**

**FOOD PROTEIN-INDUCED ENTEROPATHY (FPE)**  
Si manifesta in un lattante con **diarrea cronica**, vomito, sintomi di **malassorbimento**, anemia e ipoprotidemia

56

# CESPER 2024

**Food protein-induced enterocolitis syndrome** *ADULTO???*

Latte      Pollo      Frutta


Soia      Pesce      Riso

- 60% of infants react to a single food
- 30% react to 2 to 3 foods
- 10% react to multiple foods

Anvari, Allergol Int 2024

57

The **prevalence** of non IgE GI food allergy remains largely unknown



Anvari, Allergol Int 2024

58

# CESPER 2024

## DIAGNOSI

Diagnosi clinica (pensarci!!!)



TESTS ALLERGOLOGICI NON AIUTANO

Anamnesi positiva per segni e sintomi specifici con miglioramento dopo l'eliminazione dell'alimento sospetto

59

## NON IgE gastrointestinal allergy MANAGEMENT

Eliminare dalla dieta il cibo o i cibi scatenanti la reazione

Almeno 2-4 settimane di dieta per valutare la risposta



Se non risposta pensare a diagnosi alternative



Novak-Wegrzyn, JACI Pract 2020;8:24

60

# CESPER 2024

## NON IgE gastrointestinal allergy MANAGEMENT

### COW'S MILK

Utilizzare **formule ipoallergeniche** in  
lattanti alimentati con formula o che non  
possono essere più allattati al seno



61

## Quale latte nel bambino con allergia non IgE mediata alle PLV?

World Allergy Organization (WAO) Diagnosis  
and Rationale for Action against Cow's Milk  
Allergy (DRACMA) guideline update



### Prima opzione

- Idrolisato estensivo PLV o
- Formula a base di riso idrolizzato

### Seconda opzione

- Formula a base di aminoacidi



### Terza opzione

- Latte a base di proteine della soia (> 6 mesi)



Bognanni, WAO Journal 2024;17:100888

62

# CESPER 2024

Quale latte nel bambino con allergia non IgE mediata alle PLV?



- **Idrolisato estensivo PLV** o in alternativa
- Formula a base di **riso idrolizzato**
- Formula a **base di aminoacidi** se no risposta a idrolisato estensivo



Vandenplas JPGN 2024

63

## Breast-feeding mothers

### To eat or not to eat?



64



# CESPER 2024

## Breast-feeding mothers

To eat or not to eat?



Cosa stava assumendo il bambino quando ha reagito?



Latte formulato o latte materno?



65

Diagnosis and management of Non-IgE gastrointestinal allergies in breastfed infants—An EAACI Position Paper

### BREAST-FED INFANTS

FPIES



Molto raramente sintomi durante l'allattamento al seno

**Non raccomandare di routine alla mamma una dieta di eliminazione del cibo in causa se il bambino cresce bene ed è asintomatico**


Meyer, Allergy 2020;75:14

66

# CESPER 2024

**BREAST-FED INFANTS**

**Allergic proctocolitis**



Spesso sintomi durante l'allattamento al seno

Vandenplas JPGN 2024


67

**BREAST-FED INFANTS**

ESPGHAN

**WAIT AND SEE** 1 mese

**Allergic proctocolitis**



Spesso sintomi durante l'allattamento al seno

Le mamme nutrici dovrebbero essere incoraggiate **a continuare ad allattare senza modificare la dieta**

Vandenplas JPGN 2024

68

# CESPER 2024

**BREAST-FED INFANTS**

ESPGHAN

**Allergic proctocolitis**

Se persistenza di sintomi rilevanti



69

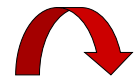
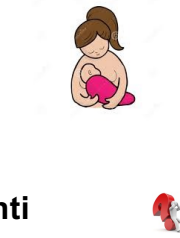
**BREAST-FED INFANTS**

ESPGHAN

**Allergic proctocolitis**

Se persistenza di sintomi rilevanti

**Eliminare PLV dalla dieta materna**





Vandenplas JPGN 2024

70

# CESPER 2024


**BOTTLE-FED INFANTS**

 **Allergic proctocolitis**



**Whether a diagnostic elimination diet should be started in formula fed infants is debated**


**If a 2 to 4 weeks diagnostic elimination diet was started, reintroduction of CM is recommended**



Vandenplas JPGN 2024

71

**PROGNOSI**



**Proctocolite** risoluzione entro 1 anno  
**Enteropatia** risoluzione 1-2 anni (a volte più prolungata)  
**FPIES** risoluzione variabile

**ORAL FOOD CHALLENGE**

**Proctocolite a domicilio**  
**Enteropatia a domicilio** → **Follow-up 15 gg**  
**FPIES in ospedale**

Novak-Wegrzyn, JACI Pract 2020;8:24

72

# CESPER 2024

**Allergia non IgE-mediata**

**Prodotti**  **o tollerati?**



73


**Tolerability of baked milk consumption in children with food protein-induced enterocolitis syndrome**

**BAKED MILK AND FPIES**

11 bambini


Age at baked OFC

Failed Passed



**Baked milk consumption is well tolerated by most children aged older than 1 year with FPIES to milk.**

The reevaluation period for baked milk consumption may be shorter than previously recommended for non baked milk



Faitelson, JACI Pract 2023;11:329



74

# CESPER 2024



75

**OTHER SYMPTOMS?**



It has been suggested that **colic, gastroesophageal reflux and constipation** might be caused by food allergy in small subset of patients

Additional evidence is required to support a causal relationship for food allergy in patients with these disorders

76

# CESPER 2024

## FUNCTIONAL GASTROINTESTINAL DISORDERS AND COW'S MILK ALLERGY



The array of symptoms that could be suggestive of a **non-IgE CMA is broad and non-specific** and there is likely to be significant **over-diagnosis of non-IgE-CMA** given the lack of practical gold standards.

The prevalence of **FGIDs in infants is estimated to be around 25%** and is significantly higher than that of CMA.

**Regurgitation, constipation, dyschezia and colic or distress** are normal phenomena in healthy infants



Vandenplas JPGN 2024

## The Cow's Milk-Related Symptom Score (CoMiSS™): A Useful Awareness Tool

25 original studies,  
1 pooled analysis of three studies  
2 reviews on CoMiSS

**CoMiS Score**

Crying	≤1 h/day	0
	1 to 1.5 h/day	1
	1.5 to 2 h/day	2
	2 to 3 h/day	3
	3 to 4 h/day	4
	4 to 5 h/day	5
Regurgitation	≥5 h/day	6
	0 to 2 episodes/day	0
	≥3 to ≤5 of small volume	1
	>5 episodes of >1 coffee spoon	2
	>5 episodes of ± half of the feed in <half of the feedings	3
	Continuous regurgitations of small volume >30 min after each feeding	4
Regurgitation of half to complete volume of a feeding in at least half of the feedings	5	
Regurgitation of the "complete feeding" after each feeding	6	

The **Cow's Milk-related Symptom Score (CoMiSS™)** was developed as a clinical tool aimed at increasing the awareness of health care professionals for the presence and intensity of **clinical manifestations possibly related to cow's milk (CM) intake**.

Bajerova, Nutrients 2022;14:2059

# CESPER 2024

Stools (Bristol scale)	
Type 1 and 2 (hard stools)	4
Type 3 and 4 (normal stools)	0
Type 5 (soft stools)	2
Type 6 (liquid stools, if unrelated to infection)	4
Type 7 (watery stools)	6

Skin Symptom	absent	mild	moderate	severe	
	eczema	0	1	2	3
Respiratory symptoms	No respiratory symptoms	0	1	2	3
	Slight symptoms	1	2	3	
	Mild symptoms	2			
	Severe symptoms	3			

**USEFUL, BUT NOT DIAGNOSTIC!**

Infants exhibiting symptoms possibly related to CM, present with a higher median CoMiSS than apparently healthy infants.

The decrease of CoMiSS during a CM elimination diet was also predictive of a reaction to an oral food challenge to diagnose CMA

79

### Navigating the Cow's Milk Allergy Journey: From Diagnosis to Nutritional Optimisation

The potential role of CoMiSSTM in distinguishing between cow's milk allergy and disorders of gut-brain interaction

A CoMiSSTM score < 6 should be considered as normal, a score  $\geq 10$  is highly suggestive for CMA, and a score between 6-9 could indicate the presence of a DGBI

The CoMiSSTM tool may have an additional role in helping clinicians make the difficult differential diagnosis between CMA and DGBIs

Staiano, ESPGHAN congress 2024

80



# CESPER 2024

## Assessment of Evidence About Common Infant Symptoms and Cow's Milk Allergy

“Seven of nine guidelines suggested including milder symptoms as indication of **non-IgE cow's milk allergy**, such as **regurgitating milk, crying and rashes**”

..... but many of these symptoms are present **normally** in babies, and will get better with time”



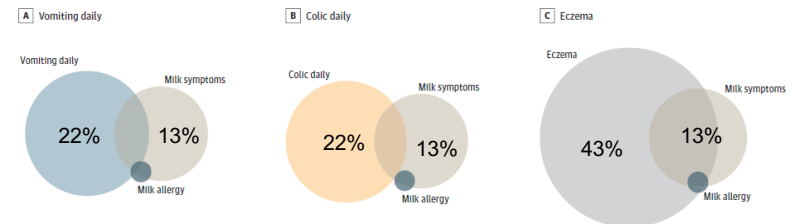
Munblit, JAMA Pediatr 2020

81

## Assessment of Evidence About Common Infant Symptoms and Cow's Milk Allergy

**650 infants at high risk of food allergy, exclusively breastfed for at least 3 months**

### Overlap between common infant symptoms and cow's milk allergy



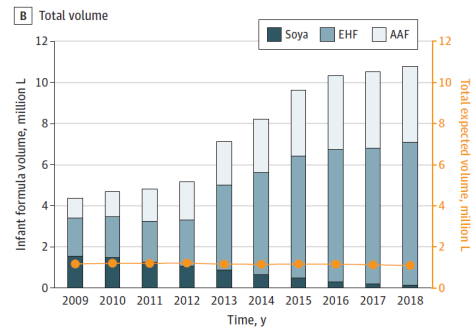
**Non-IgE cow's milk allergy affects less than 1% of infants whereas troublesome vomiting, crying or eczema each affect 15-20% of babies**

Munblit, JAMA Pediatr 2020

82

# CESPER 2024

## Prescriptions for specialized formula in England



Recommendations to manage common infant symptoms as CMA are **not evidence based**, especially in breastfed infants who are not directly consuming cow's milk. Such recommendations **may cause harm** by undermining confidence in breastfeeding.

Munblit, JAMA Pediatr 2020



## Allergia non IgE mediata

### DERMATITE ATOPICA



# CESPER 2024

## DERMATITE ATOPICA E ALLERGIA ALIMENTARE



85

American Academy  
of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN™

## Atopic Dermatitis: Skin-Directed Management

The relationship **between AD and food allergy** is complex and overemphasized. More than **90%** of parents incorrectly **believe that food allergy is the main cause of their child's skin disease**

The focus on food allergy can result in **elimination diets**, potential nutritional concerns and **misdirection of treatment** away from the skin



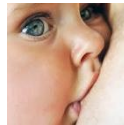
Tollefson, Pediatrics 2014;134:e1735

86

# CESPER 2024

**Atopic dermatitis and disease severity are the main risk factors for food sensitization in exclusively breastfed infants**

619 bambini 3 mesi di età allattati al seno



Bambini con dermatite atopica:  
- probabilità molto maggiore di sensibilizzazione ad alimenti (OR 6.18)

Importante correlazione tra **gravità DA e sensibilizzazione ad alimenti** (OR 3.91 per SCORAD < 20, **OR 25.60 per SCORAD 20**)

Flohr, J Invest Dermatol 2013

87

**Which infants with eczema are at risk of food allergy?  
Results from a population-based cohort**

Health Nut Study

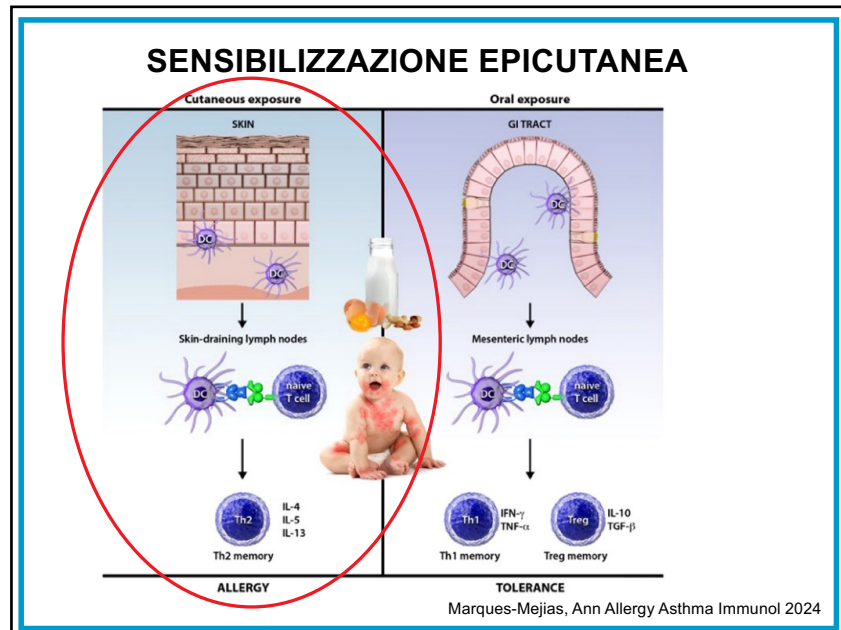
**The risk of food allergy was greatest in children with **early onset** and **severe eczema****



Martin, Clin Exp Allergy 2015

88

# CESPER 2024




89

## DERMATITE ATOPICA E DIETA

**WHO,  
WHEN,  
HOW???**

90

# CESPER 2024





**Emma 7 mesi**


**Dermatite atopica**

**Orticaria dopo ingestione di uovo alla coque**  
**Orticaria dopo ingestione di yogurt**

Prick test:  
**positivo** per caseina (3 mm), alfatattoalbumina (4 mm)  
albume (3 mm),  
**negativo** per merluzzo, frumento, soia e arachide



91

**Riccardo 10 mesi** 

Dermatite atopica dall'età di due mesi, assume latte formulato, ha introdotto tutti gli alimenti

Esame di **Prick test positivo in bambino che assume l' alimento**

Prick test:  
**pos** **Cosa fare? Dieta libera !!!** **albumina (4 mm)**

92

# CESPER 2024

## Riccardo 10 mesi



Dermatite atopica dall'età di due mesi, assume latte formulato, ha introdotto tutti gli alimenti nella dieta

Esame obiettivo: dermatite atopica agli arti

Prick test o IgE specifiche?



93

## Atopic dermatitis and its relation to food allergy

Graham, François, Eigenmann, Philippe A



Bambino con reazione immediata ad alimenti:

**tests allergologici, poi dieta mirata**

Curr Opin Allergy Clin Immunol 2020

94

# CESPER 2024

## Atopic dermatitis and its relation to food allergy

Graham, François, Eigenmann, Philippe A



Bambino con reazione immediata ad alimenti: **tests allergologici, poi dieta mirata**

Bambino piccolo che non assume ancora gli alimenti: **tests allergologici se dermatite moderata-grave**

Curr Opin Allergy Clin Immunol 2020

95

## Atopic dermatitis and its relation to food allergy

Graham, François, Eigenmann, Philippe A



Bambino con reazione immediata ad alimenti: **tests allergologici, poi dieta mirata**

Bambino piccolo che non assume ancora gli alimenti: **tests allergologici se dermatite moderata-grave**

Bambino che già assume alimenti:  
**in genere no prick test, no dieta**  
(dieta solo in pochissimi casi di dermatite grave che non risponde alle cure topiche, dopo TPO e avere informato la famiglia degli scarsi benefici e dei possibili rischi della dieta)

Curr Opin Allergy Clin Immunol 2020

96



# CESPER 2024

INTERVENTI NUTRIZIONALI E PREVENZIONE DELLA PATOLOGIA ALLERGICA

ESPOSIZIONE PRECOCE AD ALIMENTI



CAMBIA LA PROBABILITA' DI SVILUPPARE ALLERGIA?

97

## Prevention of food allergy

It is clear that the paradigm has shifted from recommending avoidance of common food allergens in infancy, to consideration of **early consumption strategies to prevent allergy development.**



Du Toit, J Allergy Clin Immunol 2016;137:998

98

# CESPER 2024

The Effects of Early Nutritional Interventions on the Development of Atopic Disease in Infants and Children: The Role of Maternal Dietary Restriction, Breastfeeding, Hydrolyzed Formulas, and Timing of Introduction of Allergenic Complementary Foods



American Academy of Pediatrics

- There is no evidence that delaying the introduction of **allergenic foods beyond 4 to 6 months** prevents atopic disease
- There is now evidence that the **early introduction of infant-safe forms of peanuts** reduces the risk for peanut allergies. Data are less clear for introduction of eggs



Greer, Pediatrics 2019

99

EAACI guideline: Preventing the development of food allergy in infants and young children (2020 update)



EAACI

- The EAACI Task Force suggests **introducing well-cooked hen's egg, but not raw egg** into infant diet as part of complementary feeding to prevent egg allergy
- In population with high prevalence of peanut allergy, the EAACI Task Force suggests **introducing peanuts into the infant diet** in an age-appropriate form

Halken, Pediatr Allergy Immunol 2021

100

# CESPER 2024

World Health Organization (WHO) guideline on the complementary feeding of infants and young children aged 6–23 months 2023: A multisociety response

ESPGHAN, EAP,  
EAACI, NASPGHAN

We suggest the following recommendations regarding the age at introducing complementary foods:

- **Exclusive or full breastfeeding should be promoted for at least 4 months**, and exclusive or predominant breastfeeding for approximately 6 months is considered a desirable goal.



J Pediatr Gastroenterol Nutr. 2024;79:181–188

101

World Health Organization (WHO) guideline on the complementary feeding of infants and young children aged 6–23 months 2023: A multisociety response

ESPGHAN, EAP,  
EAACI, NASPGHAN

We suggest the following recommendations regarding the age at introducing complementary foods:

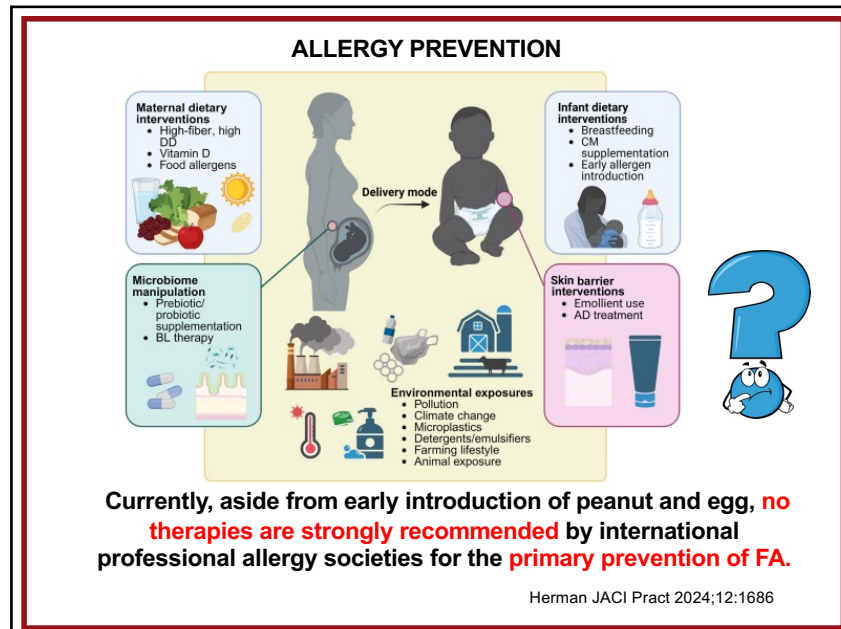
- **Exclusive or full breastfeeding should be promoted for at least 4 months**, and exclusive or predominant breastfeeding for approximately 6 months is considered a desirable goal.
- In populations affected by food allergy, **complementary foods with high allergenic potential (e.g., wellcooked egg or peanut)** may be introduced in **an age appropriate form when CF is commenced any time from 4 months**



J Pediatr Gastroenterol Nutr. 2024;79:181–188

102

# CESPER 2024



103

**Prevention of peanut and egg allergy has entered mainstream practice**

**What about the other foods?**

**Perhaps the best recommendation might be the common-sense approach:**

**“When your infant is ready, **introduce foods according to what the family eats**, regardless of whether the food is considered to be a common food allergen”**

*Suitability for Practice*

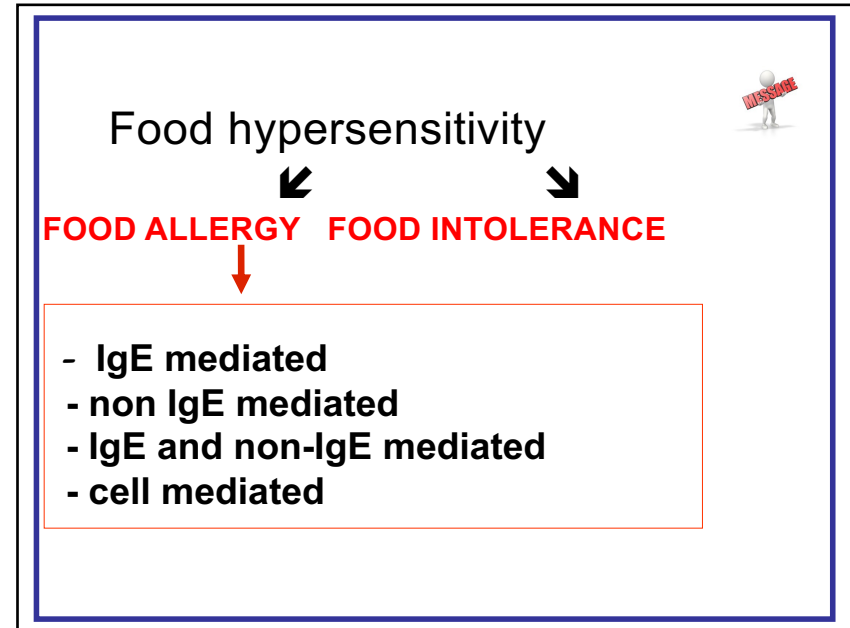
Bird JACI 2019;143:545

104

# CESPER 2024



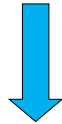
105



106

# CESPER 2024

**Tests allergologici positivi**



**Non significano sempre  
reazione clinica**

**I tests allergologici vanno  
sempre interpretati in base alla storia  
clinica del paziente**

107

**ALLERGIA ALIMENTARE IgE MEDIATA**


**COSA FARE?**



1. Food avoidance
2. Introduction to baked milk or egg using the milk/egg ladder
3. OIT protocols  $\pm$  biologic treatment

108

# CESPER 2024

**SINTOMATOLOGIA GASTRO-INTESTINALE** 

**IgE MEDIATE**

- Ipersensibilità immediata GI
- Sindrome orale allergica

**NON IgE MEDIATE**

- **Food protein induced enterocolitis syndrome (FPIES)**
- **Proctocolite allergica**
- **Enteropatia allergica**
- **Celiachia**
- **FPIMD (motility disorders)**

**IgE o NON IgE MEDIATE**

- Esofago-Gastro-Enteropatie eosinofiliche

109

**DIAGNOSI** 

**Diagnosi clinica (pensarci!!!)** 

**TESTS ALLERGOLOGICI NON AIUTANO**

**Anamnesi positiva per segni e sintomi specifici con miglioramento dopo l'eliminazione dell'alimento sospetto**

110

# CESPER 2024

**Regurgitation, constipation, dyschezia and colic or distress** are normal phenomena in healthy infants

The array of symptoms that could be suggestive of a **non-IgE CMA is broad and non-specific** and there is likely to be significant **over-diagnosis of non-IgE-CMA** given the lack of practical gold standards.



111

ALLERGIA ALIMENTARE ↔ DERMATITE ATOPICA



Nella dermatite atopica l'allergia alimentare è più importante nel bambino **piccolo** e con **dermatite moderata-grave**.



**Non prescrivere diete di esclusione solo sulla base di tests allergologici positivi**



112

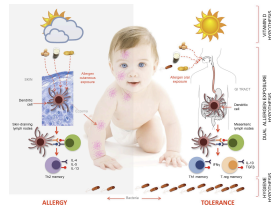


# CESPER 2024

## Prevention of food allergy



The paradigm has shifted from recommending avoidance of common food allergens in infancy, to consideration of **early consumption strategies to prevent allergy development.**



113

Grazie per  
l'attenzione!



114