

Nutrizione

Pillola di EBM

Alimentazione Complementare

C'è una relazione (certa) fra qualità/quantità dei singoli alimenti assunti nel primo anno di vita e sviluppo futuro di Obesità?"

Marcello Bergamini

20 giugno 2015

Voce narrante: Maria Carmen Verga

 Provincia Religiosa di San Pietro
dell'Ordine Ospedaliero di San Giovanni di Dio
Ospedale "Sacro Cuore di Gesù", Fatebenefratelli
UOC PEDIATRIA-NEONATOLOGIA-UTIN

JOURNAL CLUB of Pediatrics in Benevento

incontri monotematici
ospedale - territorio
per la elaborazione
di linee guida comuni

Febbraio
Dicembre **2015**



Centro Congressi
Ospedale Sacro Cuore di Gesù
Fatebenefratelli, Benevento

Responsabili Scientifici:
Iride Dello Iacono
Maria Carmen Verga



Premessa 0

Questa Pillola di EBM è un regalo di Marcello Bergamini,



che, molto interessato all'argomento e da sempre ammiratore di Margherita Caroli,



si è posto una domanda.

Poichè è un grande esperto di EBM, ha anche provveduto a darsi la risposta



Premesse I

- **Sempre più spesso, su riviste e ai congressi, viene rimarcata la potenziale nocività di una errata composizione della dieta nell'AC, con particolare riguardo al carico proteico eccessivo come causa principalmente di Obesità nell'infanzia e nell'età adulta, ma anche di Ipertensione, Sindrome Metabolica, IDD;**

- **al congresso FIMP di Salerno in novembre 2013 e a Benevento nel 2014, la dr.ssa Caroli mi ha convinto del fatto che se una famiglia si affida alle ricette proposte dai sostenitori dello svezzamento semilibero o del cosiddetto Autosvezzamento, inevitabilmente incorre nel rischio di fornire al bambino un'alimentazione troppo ricca di Proteine (oltre che di sale) e poco ricca di Carboidrati e Lipidi**



In particolare queste due slides, dalle quali si evidenzia:

- 1. l'introduzione di più della metà dell'apporto proteico giornaliero attraverso una singola «merendina»**
- 2. la percentuale di calorie e quella di proteine che devono essere fornite dall'Alimentazione Complementare su totale di una giornata**

MERENDE e COLAZIONI

Queste ricette sono adatte dal punto di vista nutrizionale sia per la colazione che per la merenda. Ve ne sono di dolci e di salate, incluse le mousse salate che a nostro avviso sono un'alternativa gustosa a classici quali pane e marmellata, pane e olio d'oliva, pane e burro

MOUSSE SALATE al cucchiaino Al Prosciutto

150 gr di prosciutto cotto, 100 gr di ricotta/robiola/caprino/altro formaggio spalmabile, 1 pizzico di sale

Alimento	Pg	Lg	Na mg	kcal
Prosciutto cotto 150g	29.7	22	1089	322
Robiola 100g	20	27.7		338
Un pizzico di sale				39
Totale	49.7	49.7		699
Porz. Lattante 1/8 (30g)	6.2	6.2	136	87.4

8 mesi

Peso 7.9-8.6 Kg:Kcal 679/die;P 11.2g/die

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Assunzioni raccomandate, quantità medie fornite dal latte materno e quantità necessarie dagli alimenti complementari

	6 – 8 mesi				9-11 mesi			
	AR	LM	AC	AC%	AR	LM	AC	AC%
Energia(Kcal/d)	682	486	196	29	830	375	455	55
Proteine (g/d)	9.1	7.2	1.9	21	9.6	5.6	4	42
Ferro (mg/d)	7	0.2	6.8	97	7	0.2	6.8	97
Calcio (mg/d)	525	193	332	63	525	148	377	72

AR = Assunzioni raccomandate LM = Quantità fornite dal latte materno

AC = Quantità necessarie dagli Alimenti Complementari

AC % = % fornite da alimenti complementari

Dewey, Ped. Clin. N. Am. 2001

(Feeding and nutrition of infants and young children. Guidelines for the WHO European Region 2000)

Slide di Margherita Caroli. Benevento. Ottobre 2014

Assunzioni raccomandate, quantità medie fornite dal latte materno e quantità necessarie dagli alimenti complementari

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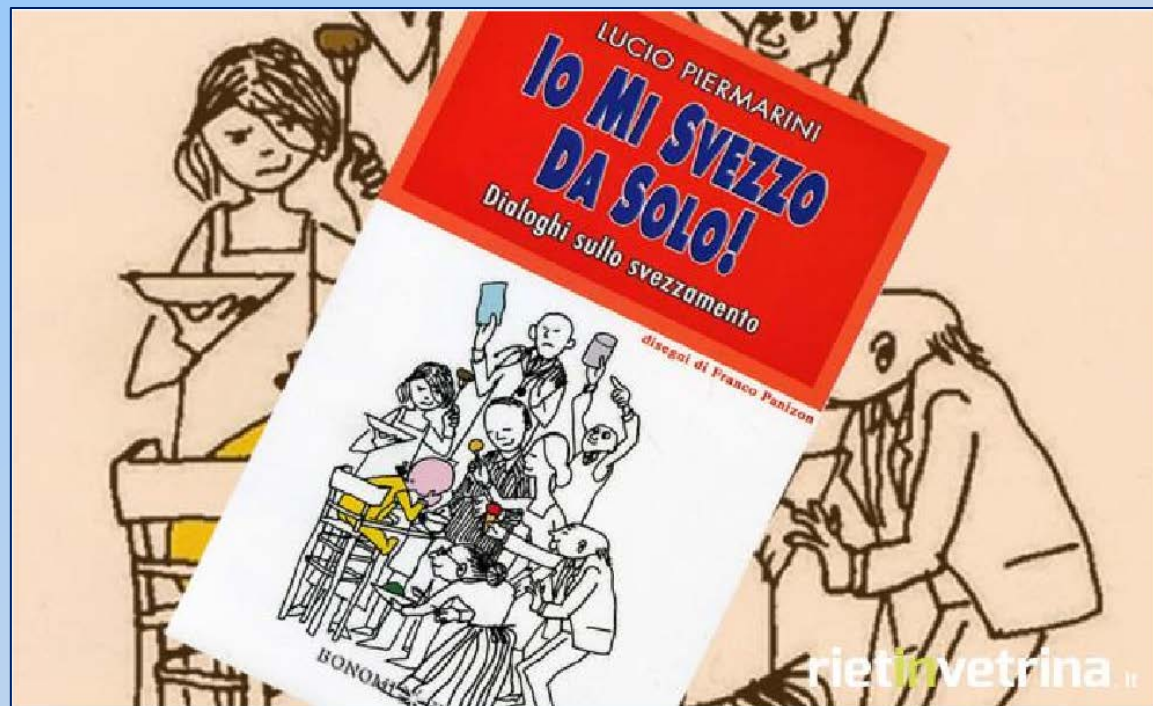
Dewey, Ped. Clin. N. Am. 2001

(Feeding and nutrition of infants and young children. Guidelines for the WHO European Region 2000)

Slide di Margherita Caroli. Benevento. Ottobre 2014

Premesse II

- Le famiglie salutiste che si presentano in studio con la convinzione di poter svezzare liberamente il figlio o la figlia sono sempre più numerose, molte meno, per fortuna, quelle che si presentano con il libro di Lucio Piermarini sotto il braccio!



Premesse III

- **Non ho mai consegnato fogli prestampati per lo svezzamento e con il passare degli anni sono sempre più possibilista in tema di introduzioni alimentari**
- **mi mantengo rigido sull'epoca di inizio, mai prima del sesto mese nel lattante senza problemi**
- **ma temo che l'allarme sulle conseguenze dannose di un atteggiamento nutrizionale teoricamente sbagliato, non poggi su basi scientifiche incontestabili ...**
- **... perché solo basandomi su dati incontestabili potrei negare alle famiglie la libertà di svezzare il loro bambino «come gli pare».**

... e finalmente il PICO di oggi:

P. In un bambino di 4-6 mesi sano nato a termine
(**Popolazione**) ...

I. ... l'introduzione di determinati cibi semisolidi
(**Intervento**) ...

C. ... rispetto all'introduzione di altri cibi semisolidi,
(**Confronto**) ...

O. ... può modificare il metabolismo fino ad indurre
stati patologici documentabili a medio e lungo termine
quali, in particolare, l'Obesità, Ipertensione arteriosa,
Sindrome Metabolica, etc. (**Outcome**)??

Si parte alla ricerca delle linee guida ...

Searching

BD Generali

- [MEDLINE PubMed](#) Strategie di ricerca
- [EMBASE](#)
- [OVID](#) (accesso a BD multiple)

BD Specialistiche

- [ACUBASE Pro](#)
- [CAM](#)
- [CancerLit](#)
- [CINAHL](#)
- [CLIP Database](#)
- [DIRLINE](#)
- [Drug Promotion Database](#)
- [ERIC](#)
- [HerbMed](#)
- [HSRR](#)
- [LOCATOR_{plus}](#)
- [OMIM](#)
- [OTseeker](#)
- [PEDro](#)
- [POPLINE](#)
- [TOXNET](#)

BD di Revisioni Sistematiche

- [Cochrane Library](#)
- [CDSR - Cochrane Database of Systematic Reviews](#) (abstract revisioni e titoli protocolli)

BD di Linee Guida

- [Sistema Nazionale Linee Guida](#)
- [National Guideline Clearinghouse](#)
- [CMA Infobase](#)
- [National Clinical Guideline Center](#)
- [SIGN](#)
- [Clinical Practice Guidelines Portal](#)
- [NZ Guidelines Group](#)
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BD di Analisi Economiche

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BD di Indicatori

- [National Quality Measures Clearinghouse](#)

Praticamente nulla .. (??)

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Guideline
Review
Customize ...

Text availability
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Full text

Publication dates clear
5 years
10 years
Custom range...

Species clear
Humans
Other Animals

Clear all
Show additional filters

Results: 1 to 20 of 102 << First < Prev Page 1 of 6 Next > Last >>

Filters activated: Guideline, published in the last 10 years, Humans. [Clear all](#) to show 43259 items.

- [\[Breastfeeding: health benefits for child and mother\]](#)
- 1. Comité de nutrition de la Société française de pédiatrie, Turck D, Vidailhet M, Bocquet A, Bresson JL, Briend A, Chouraqui JP, Darmaun D, Dupont C, Frelut ML, Girardet JP, Goulet O, Hankard R, Rieu D, Simeoni U. Arch Pediatr. 2013 Nov;20 Suppl 2:S29-48. doi: 10.1016/S0929-693X(13)72251-6. French. PMID: 25063312 [Similar articles](#)
- [ABM clinical protocol #4: Mastitis, revised March 2014.](#)
- 2. Amir LH; Academy of Breastfeeding Medicine Protocol Committee. Breastfeed Med. 2014 Jun;9(5):239-43. doi: 10.1089/bfm.2014.9984. PMID: 24911394 **Free PMC Article** [Similar articles](#)

Praticamente nulla .. (??)

Ma il **Complementary Feeding** è un argomento di interesse “globale”

A screenshot of the PubMed website showing search results for 'complementary feeding'. The search bar contains the text 'complementary feeding' and the search button is labeled 'Search'. The results are sorted by 'Most Recent' and show 118 results. The first three results are listed:

- Care of young children with diabetes in the child care setting: a position statement of the American Diabetes Association.**
Siminerio LM, Albanese-O'Neill A, Chiang JL, Hathaway K, Jackson CC, Weissberg-Benchell J, Wright JL, Yatvin AL, Deeb LC; American Diabetes Association. *Diabetes Care.* 2014 Oct;37(10):2834-42. doi: 10.2337/dc14-1676. No abstract available. PMID: 25249671 [Similar articles](#)
- Breastfeeding: health benefits for child and mother.**
Comité de nutrition de la Société française de pédiatrie, Turck D, Vidallhet M, Bocquet A, Bresson JL, Briand A, Chouraqui JP, Darmaun D, Dupont C, Frelut ML, Girardet JP, Goulet O, Hankard R, Rieu D, Simeoni U. *Arch Pediatr.* 2013 Nov;20 Suppl 2:S29-48. doi: 10.1016/S0929-693X(13)72251-6. French. PMID: 25063312 [Similar articles](#)
- ABM clinical protocol #4: Mastitis, revised March 2014.**
Amir LH; Academy of Breastfeeding Medicine Protocol Committee. *Breastfeed Med.* 2014 Jun;9(5):239-43. doi: 10.1089/bfm.2014.9984. PMID: 24911394 Free PMC Article [Similar articles](#)

A screenshot of a Google search for 'complementary feeding'. The search bar contains the text 'complementary feeding' and the search button is labeled 'GO'. The search results are displayed in a list:

- complementary feeding
- complementary feeding
- complementary feeding **guidelines**
- complementary feeding **for infants 6 to 12 months**
- complementary feeding **recommendations**

Below the search results, there is a button labeled 'Ulteriori informazioni' and a link 'Premi Invio per cercare'.

A screenshot of the National Guideline Clearinghouse website. The page title is 'National Guideline Clearinghouse' and the subtitle is 'U.S. Department of Health & Human Services Agency for Healthcare Research and Quality Advancing Excellence in Health Care'. The search bar contains the text 'complementary feeding' and the search button is labeled 'GO'. The search results are displayed in a list:

- complementary feeding
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- complementary feeding **guidelines**
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The page also features a sidebar with navigation links such as 'Home', 'Guidelines', 'Expert Commentaries', 'Guideline Syntheses', 'Guideline Matrix', 'Guideline Resources', 'Compare Guidelines', 'FAQ', 'Submit Guidelines', 'About', and 'My NGC'. There is also a 'Sign In to My NGC' section on the right side of the page.

Documenti di indirizzo si possono trovare anche sui siti ufficiali delle organizzazioni internazionali



complementary feeding guidelines



Web Immagini Shopping Video Notizie Altro ▾ Strumenti di ricerca

Circa 235.000 risultati (0,38 secondi)

Articoli accademici per complementary feeding guidelines

- The start healthy **feeding guidelines** for infants and ... - **Butte** - Citato da 119
- ... on technical issues concerning **complementary feeding** ... - **Dewey** - Citato da 459
- ... intervention delays early **complementary feeding** ... - **Black** - Citato da 106



WHO | Complementary feeding

www.who.int/nutrition/.../complementary_feeding/... ▾ Traduci questa pagina
Guidelines for appropriate feeding are included as part of the Infant and Young Child Feeding counselling course, the Complementary feeding counselling ...
Hai visitato questa pagina in data 03/06/15

[PDF] guiding principles for complementary feeding of the ...

www.who.int/nutrition/.../guiding_principles_com... ▾ Traduci questa pagina
breastfeeding and complementary feeding practices, coupled with high rates of infectious dis- eases, are the ... Some of the feeding guidelines are based more.

GUIDING PRINCIPLES FOR COMPLEMENTARY
FEEDING OF THE BREASTFED CHILD

WHO 2004

A. Guideline: Practice responsive feeding, applying the principles of psycho-social care (Engle et al., 2000; Pelto et al., 2002).

Specifically:

- a) feed infants directly and assist older children when they feed themselves, being sensitive to their hunger and satiety cues;
- b) feed slowly and patiently, and encourage children to eat, but do not force them;
- c) if children refuse many foods, experiment with different food combinations, tastes, textures and methods of encouragement;
- d) minimize distractions during meals if the child loses interest easily;
- e) remember that feeding times are periods of learning and love - talk to children during feeding, with eye to eye contact

B. Scientific rationale: There is increasing recognition that **optimal complementary feeding depends not only on what is fed, but also on how, when, where, and by whom the child is fed** (Pelto et al., 2002).

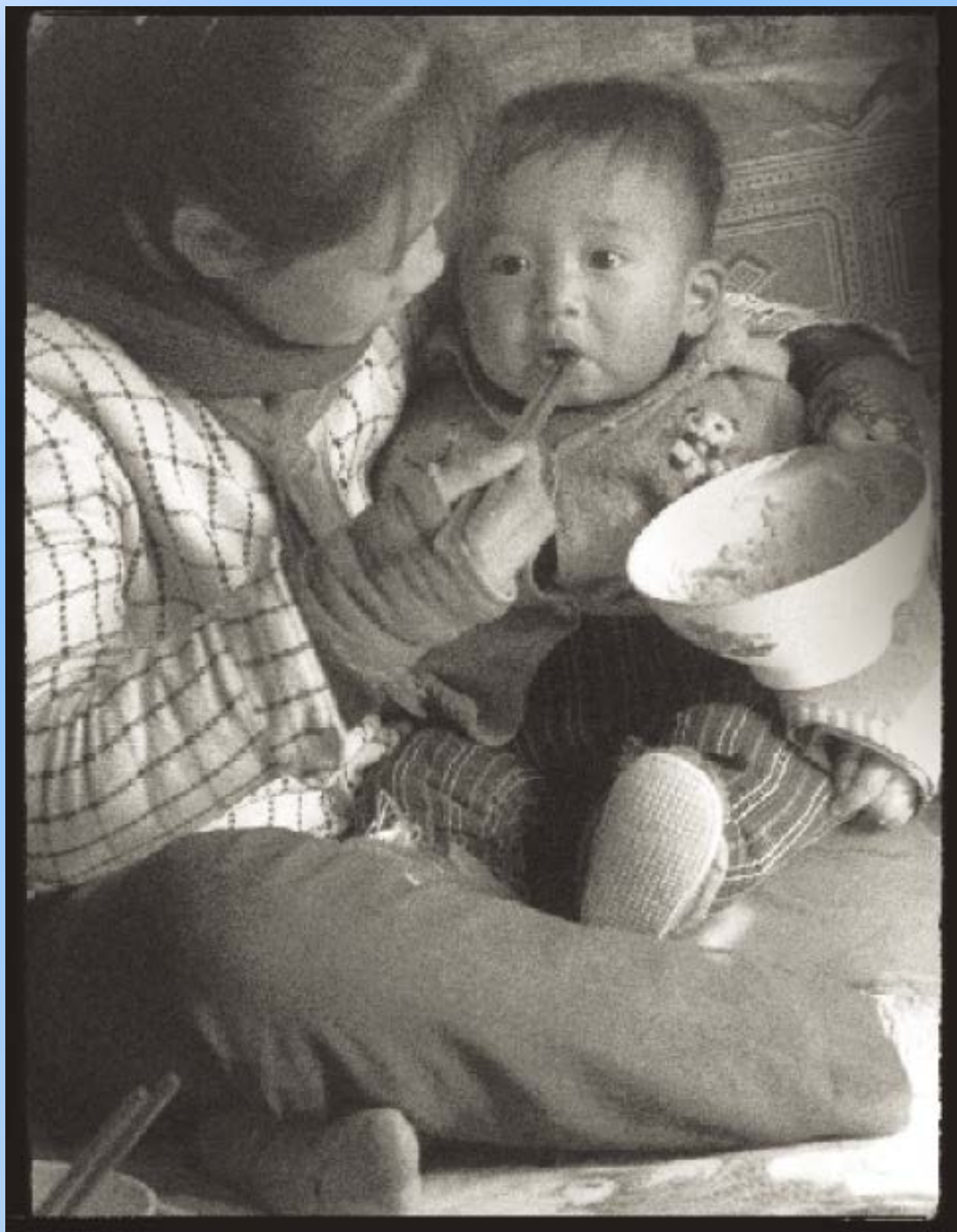
The evidence to date on **the impact of feeding behaviors on dietary intake and child health is sparse, however ...**

NUTRIENT CONTENT OF COMPLEMENTARY FOODS

WHO 2004

A. Guideline: Feed a variety of foods to ensure that nutrient needs are met. Meat, poultry, fish or eggs should be eaten daily, or as often as possible. Vegetarian diets cannot meet nutrient needs at this age unless nutrient supplements or fortified products are used (see #9 below). Vitamin A-rich fruits and vegetables should be eaten daily. Provide diets with adequate fat content (see Table 3).

Because there is **so much variability** in complementary food diets in different parts of the world, it is not feasible to provide global dietary “prescriptions” that would guarantee adequate intake of all essential nutrients. **It is preferable to develop population-specific dietary guidelines for complementary foods based on the food composition of locally available foods.**



http://www.espghan.org/guidelines/

ESPGHAN: Guidelines

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complementary feeding

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Guidelines

ESPGHAN issues a range of guidelines throughout paediatric gastroenterology, hepatology and nutrition. These guidelines are published through JPGN and you can find them using the menus above.

If you have any questions on the guidelines, please send these to info@espghan.org

< Back

GUIDELINE

Role of Dietary Factors and Food Habits in the Development of Childhood Obesity: A Commentary by the ESPGHAN Committee on Nutrition

J Pediatr Gastroenterol Nutr. 2011; 52(6): 662-9

ESPGHAN Committee on Nutrition: Complementary Feeding: A Commentary by the ESPGHAN Committee on Nutrition.

J Pediatr Gastroenterol Nutr. 2008; 46: 99-110.

Role of Dietary Factors and Food Habits in the Development of Childhood Obesity: A Commentary by the ESPGHAN Committee on Nutrition

*ESPGHAN Committee on Nutrition: ^{*3}Carlo Agostoni, [†]Christian Braegger, [‡]Tamas Decsi, [§]Sanja Kolacek, ^{||3}Berthold Koletzko, [¶]Walter Mihatsch, [#]Luis A. Moreno, ^{**}John Puntis, ^{††1}Raanan Shamir, ^{‡‡}Hania Szajewska, ^{§§2}Dominique Turck, and ^{||||}Johannes van Goudoever*

Raccomandazioni sull'alimentazione dei bambini di età > 2 anni

This Comment aims to provide a state-of-the-art summary on the role of nutrition-related factors that may contribute to the development of obesity in children ages 2 to 18 years. This Comment also provides recommendations on

Medical Position Paper

Complementary Feeding: A Commentary by the ESPGHAN
Committee on Nutrition

ESPGHAN Committee on Nutrition: *Carlo Agostoni, †Tamas Decsi, ‡Mary Fewtrell,
§Olivier Goulet, ¶Sanja Kolacek, ||¹Berthold Koletzko, **³Kim Fleischer Michaelsen,
††Luis Moreno, ‡‡John Puntis, §§Jacques Rigo, ¶¶Raanan Shamir, |||²Hania Szajewska,
***Dominique Turck, and †††Johannes van Goudoever

San Paolo Hospital, University of Milano, Milano, Italy, †Department of Paediatrics, University of Pecs, Hungary, ‡Institute of Child Health, London, UK, §Hôpital Necker Enfants-Malades, University of Paris Descartes, Paris, France, ¶Children's Hospital, Zagreb Medical University, Croatia, ||Dr von Hauner Children's Hospital, University of Munich, Germany, **Department of Human Nutrition, University of Copenhagen, Denmark, ††Escuela Universitaria de Ciencias de la Salud, Universidad de Zaragoza, Zaragoza, Spain, ‡‡Leeds General Infirmary, Leeds, UK, §§CHR Citadelle, University of Liege, Liege, Belgium, ¶¶Meyer Children's Hospital of Haifa, Ruth and Bruce Rappaport School of Medicine, Technion, Haifa, Israel, |||Medical University of Warsaw, Poland, *University of Lille, Lille, France, and †††Erasmus MC/Sophia Children's Hospital, Rotterdam, The Netherlands*

EFFECTS OF COMPLEMENTARY FEEDING

Growth

EFFECTS OF COMPLEMENTARY FEEDING

Growth

- Several studies of infants and preschool children have investigated associations between fat intake and weight gain or body mass index and have been unable to demonstrate any relationship (36–38). **No studies have, to our knowledge, examined this issue in the complementary feeding period**
- **There are few data on the effects of specific complementary foods on growth**, although Morgan et al (43) reported from an observational study in term infants that the consumption of greater amounts of meat was associated with faster weight gain during the first year
- Despite theoretical concerns about the potential effects of different aspects of complementary feeding on later obesity risk, **the available evidence is not persuasive.**

SCIENTIFIC OPINION

**Scientific Opinion on the appropriate age for introduction of
complementary feeding of infants¹**

EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA)^{2, 3}

European Food Safety Authority (EFSA), Parma, Italy

Si occupa dei problemi legati a crescita e salute futura, ma soltanto nell'ottica dell'epoca di introduzione dei vari alimenti

This Provisional PDF corresponds to the article as it appeared upon acceptance. Fully formatted PDF and full text (HTML) versions will be made available soon.

Recommendations on complementary feeding for healthy, full-term infants

Italian Journal of Pediatrics (2015) 41:36

doi:10.1186/s13052-015-0143-5

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The term *Metabolic Syndrome* (MS) refers to a clinical condition at increased cardiovascular risk due to the presence of multiple factors, such as visceral obesity, dyslipidemia, a state of insulin resistance and arterial hypertension. Although some observational studies suggested that an early introduction of complementary food might increase the risk of overweight/obesity, with a lower risk for breast-fed as opposed to formula-fed infants [37], there is no evidence that the age of introduction of complementary foods has an effect on the risk of developing obesity [38], type 2 diabetes, coronary disease and hypertension [39].

The data available in literature suggest that, between 6 and 24 months of age, a protein intake of more than 15% of total energy can lead, in some subjects, to early adiposity rebound phenomena, thus favoring the development of future obesity. Accordingly, an excess protein would stimulate the secretion of insulin and IGF1, responsible both for adipogenesis and the differentiation of adipocytes [40]. Nevertheless, the relation between protein intake during weaning and later risk of hypertension and cardiovascular disease, is still unclear [41]. Energy remains in any case a main determinant for fat deposition. In general, substituting hypercaloric and high-protein foods with foods having a lower energy density (cereal, fruit and vegetables) may be a possible approach to reduce the risk of obesity [42].

No association has been found between a high intake of fats with weaning and obesity in the following ages; on the contrary, Rolland Cachera identified in a hyperproteic and hypolipidic pattern of infants living in developed countries a possible contributing factor of early adiposity rebound [43]. Therefore, together with a reduction of proteins, an increase in the percentage of fats in the diet should be considered as an important step in the prevention of a condition of overweight [44].

Si fa riferimento soltanto ad una Review non-sistematica (40) e non a Revisioni Sistematiche o ad RCT che, come vedremo, attualmente esistono

The term *Metabolic Syndrome* (MS) refers to a cluster of risk factors that increase the risk of cardiovascular disease and risk due to the presence of multiple factors, such as insulin resistance and arterial hypertension. Although it is known that an early introduction of complementary feeding in overweight/obesity, with a lower risk for hypertension, there is no evidence that the age of introduction of complementary feeding is a risk factor for the risk of developing obesity [38], type 2 diabetes, coronary disease and hypertension [39].

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Alla ricerca delle Revisioni Sistematiche

((weaning) OR (complementary feeding)) OR
(supplementary foo) AND ((obesity) OR (body composition))

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Review

✓ Systematic Reviews

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Abstract
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Full text

Publication dates
5 years
✓ 10 years

Species
✓ Humans
Other Animals

Results: 1 to 20 of 73 <<First <Prev Page of 4 Next > Last >>

Filters activated: Systematic Reviews, published in the last 10 years, Humans. [Clear all](#) to show 3741 items.

[\[Breastfeeding: health benefits for child and mother\].](#)

1. Comité de nutrition de la Société française de pédiatrie, Turck D, Vidailhet M, Bocquet A, Bresson JL, Briend A, Chouraqui JP, Darmaun D, Dupont C, Frelut ML, Girardet JP, Goulet O, Hankard R, Rieu D, Simeoni U. Arch Pediatr. 2013 Nov;20 Suppl 2:S29-48. doi: 10.1016/S0929-693X(13)72251-6. French.
PMID: 25063312
[Similar articles](#)

[Complementary feeding and obesity risk.](#)

2. Grote V, Theurich M. Curr Opin Clin Nutr Metab Care. 2014 May;17(3):273-7. doi: 10.1097/MCO.0000000000000054. Review.
PMID: 24613861
[Similar articles](#)

[Behavior modification techniques used to prevent gestational diabetes: a systematic review of the literature.](#)

3. Skouteris H, Morris H, Nagle C, Nankervis A. Curr Diab Rep. 2014 Apr;14(4):480. doi: 10.1007/s11892-014-0480-6. Review.
PMID: 24554382
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Alla ricerca delle Revisioni Sistematiche

((weaning) OR (complementary feeding)) OR (supplementary food)) AND ((obesity) OR (body composition))

The image shows a screenshot of a PubMed search results page. At the top, the PubMed logo and search bar are visible. The search query is: ((weaning) OR (complementary feeding)) OR (supplementary food)) AND ((obesity) OR (body composition)). The search results show 73 items, with 4 relevant and 2 pertinent. A blue callout box is overlaid on the page, containing the text: "Di 73 items ... 4 sono rilevanti e 2 pertinenti".

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[Breastfeeding: health benefits for child and mother].

1. Comité de nutrition de la Société française de pédiatrie, Tu ... et A, Bresson JL, Briend A, Chouraqui JP, Darmaun D, Dupont C, Frelut ML, Girarde ... Rieu D, Simeoni U. Arch Pediatr. 2013 Nov;20 Suppl 2:S29-48. doi: 10.1016/S0929-693

Behavior modification techniques used to prevent gestational diabetes: a **systematic** review of the literature.

3. Skouteris H, Morris H, Nagle C, Nankervis A. Curr Diab Rep. 2014 Apr;14(4):480. doi: 10.1007/s11892-014-0480-6. Review. PMID: 24554382
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PEDIATRIC REVIEW

The types of food introduced during complementary feeding and risk of childhood obesity: a systematic review

J Pearce and SC Langley-Evans

We conducted a systematic review of the literature that investigated the relationship between the types of food consumed by infants during the complementary feeding period and overweight or obesity during childhood. Electronic databases were searched from inception until June 2012

Punteggio AMSTAR = 8 su 10 applicabili

- Manca l'elenco dei lavori esclusi (solo la motivazione, per gruppi)
- Manca la verifica dei possibili bias di pubblicazione
- I risultati non sono stati accorpati in Metanalisi per eccessiva eterogeneità

PEDIATRIC REVIEW

The types of food introduced during complementary feeding and risk of childhood obesity: a systematic review

J Pearce and SC Langlely-Evans

Relazione tra il tipo di alimenti consumati nel periodo d'introduzione dell'AC e sovrappeso/obesità nell'infanzia. Nessun intervento programmato, solo studi di Coorte o Cross-sectional

We conducted a systematic review of the literature that investigated the relationship between the types of food consumed by infants during the complementary feeding period and overweight or obesity during childhood. Electronic databases were searched from inception until June 2012

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Table 2: AMSTAR is a measurement tool created to assess the methodological quality of systematic reviews.

<p>1. Was an 'a priori' design provided? The research question and inclusion criteria should be established before the conduct of the review.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>2. Was there duplicate study selection and data extraction? There should be at least two independent data extractors and a consensus procedure for disagreements should be in place.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>3. Was a comprehensive literature search performed? At least two electronic sources should be searched. The report must include years and databases used (e.g. Central, EMBASE, and MEDLINE). Key words and/or MESH terms must be stated and where feasible the search strategy should be provided. All searches should be supplemented by consulting current contents, reviews, textbooks, specialized registers, or experts in the particular field of study, and by reviewing the references in the studies found.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>4. Was the status of publication (i.e. grey literature) used as an inclusion criterion? The authors should state that they searched for reports regardless of their publication type. The authors should state whether or not they excluded any reports (from the systematic review), based on their publication status, language etc.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>5. Was a list of studies (included and excluded) provided? A list of included and excluded studies should be provided.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>6. Were the characteristics of the included studies provided? In an aggregated form such as a table, data from the original studies should be provided on the participants, interventions and outcomes. The ranges of characteristics in all the studies analyzed e.g. age, race, sex, relevant socioeconomic data, disease status, duration, severity, or other diseases should be reported.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>7. Was the scientific quality of the included studies assessed and documented? 'A priori' methods of assessment should be provided (e.g., for effectiveness studies if the author(s) chose to include only randomized, double-blind, placebo controlled studies, or allocation concealment as inclusion criteria); for other types of studies alternative items will be relevant.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>8. Was the scientific quality of the included studies used appropriately in formulating conclusions? The results of the methodological rigor and scientific quality should be considered in the analysis and the conclusions of the review, and explicitly stated in formulating recommendations.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>9. Were the methods used to combine the findings of studies appropriate? For the pooled results, a test should be done to ensure the studies were combinable, to assess their homogeneity (i.e. Chi-squared test for homogeneity, I^2). If heterogeneity exists a random effects model should be used and/or the clinical appropriateness of combining should be taken into consideration (i.e. is it sensible to combine?).</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>10. Was the likelihood of publication bias assessed? An assessment of publication bias should include a combination of graphical aids (e.g., funnel plot, other available tests) and/or statistical tests (e.g., Egger regression test).</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
<p>11. Was the conflict of interest stated? Potential sources of support should be clearly acknowledged in both the systematic review and the included studies.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable

Qualità dei lavori mediamente buona valutata con la Scala Newcastle- Ottawa

Table 3. Summary of the associations between the types of food introduced during the complementary feeding period and the risk of childhood overweight or obesity and study scores (*) for three quality criteria

Reference	Adjusted association with weight gain diet/score	Adapted Newcastle-Ottawa scale		
		Selection (maximum 3*)	Comparability (maximum 4*)	Assessment (maximum 3*)
<i>Macronutrients</i>				
Gunnarsdottir and Thorsdottir ¹⁹	↔ +	***		***
Gunther et al. ²⁰	↔ ↔	***	***	**
Gunther et al. ²¹	+ +	***	***	**
Hoppe et al. ²²	↔	***	**	**
Ong et al. ²³	↔ +	***	***	***
<i>Food type/group</i>				
Kanoa et al. ²⁶	↔	**		***
Santos et al. ²⁷	↔	***	***	**
Schack-Nielsen et al. ²⁸	+ ↔	**	****	**
Simon et al. ²⁹	↔	***	****	***
<i>Dietary guidelines</i>				
Robinson et al. ²⁵	↔ +	***	***	**

+ , association between the exposure and BMI/%BF; ↔ , no significant association; multiple annotations reflect differing associations within the paper, for example, for different types of food or different age groups.

Associazioni positive 1: BMI o % BF

Macronutrient intake (5/10 studi, tutti di Coorte)

Alto intake di proteine a 12 mesi e % BF a 7 anni

❖ ... in one study (**Gunther 07/85**) higher protein intake at 12 months was associated with a higher % BF **A 7 ANNI** before adjustment for age, sex, energy intake and baseline anthropometrics.

Differenti tipi di proteine a 12 mesi e % BF a 7 anni

❖ **Gunther et al.21 (07/86)** investigated the effect of different types of protein (total, animal, dairy, meat or cereal protein) and found that infants in the highest tertiles of animal protein intake (as % total energy intake) at 12 months had a higher %BF >>> **A 7 ANNI**

Più alto tertile di intake proteico a 12 mesi e % BF a 7 anni

... whereas those in the highest tertiles of total, animal or dairy protein at the age of 12 months had a higher BMI z-score **A 7 ANNI**

Intake proteico % a 2, 4, 9 e 12 mesi

- ❖ **Gunnarsdottir and Thorsdottir¹⁹** found that **protein intake (as % total energy intake) consumed by boys at 2, 4, 9 and 12 months was positively associated with BMI at the age of 6 years, although no effect was observed in girls**

Formula o allattamento misto

- ❖ **Ong et al.²³** found that **amongst formula or mixed-fed (but not breast-fed) infants, each 420 kJ per day increase in energy intake at 4 months old led to a 25% increase in the risk of being overweight or obese at 5 years old.²³**

Dopo aggiustamento per fattori confondenti

After adjustment for confounding variables, two studies (Gunter 07/85 e Hoppe) found that there was no significant effect of high total protein intake at 6, 9 or 12 months on childhood BMI or %BF 20,22

**Immagini interessanti
da alcuni lavori**

PAPER

Relationship between growth and feeding in infancy and body mass index at the age of 6 years

I Gunnarsdottir* and I Thorsdottir

Per quartili di intake proteico (% E) a 9 e 12 mesi

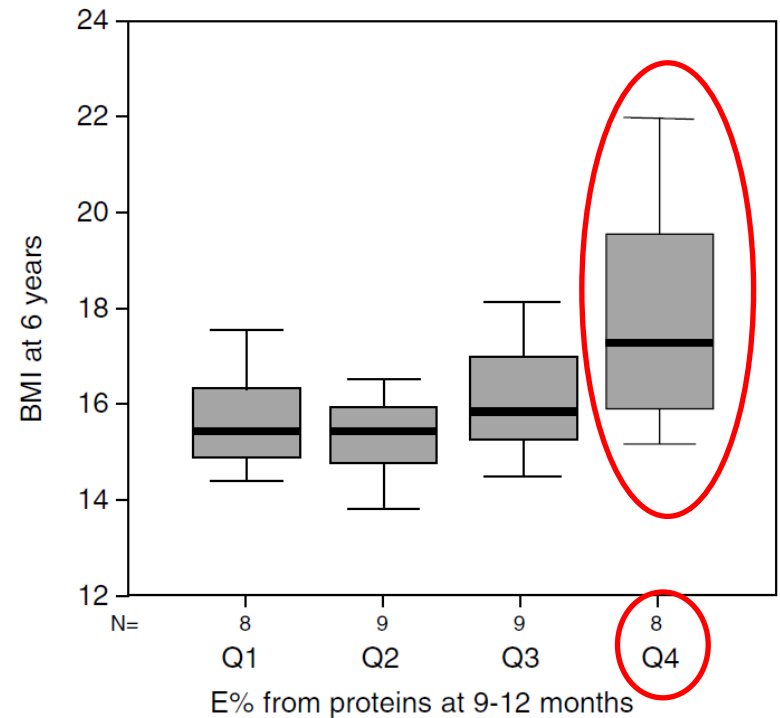
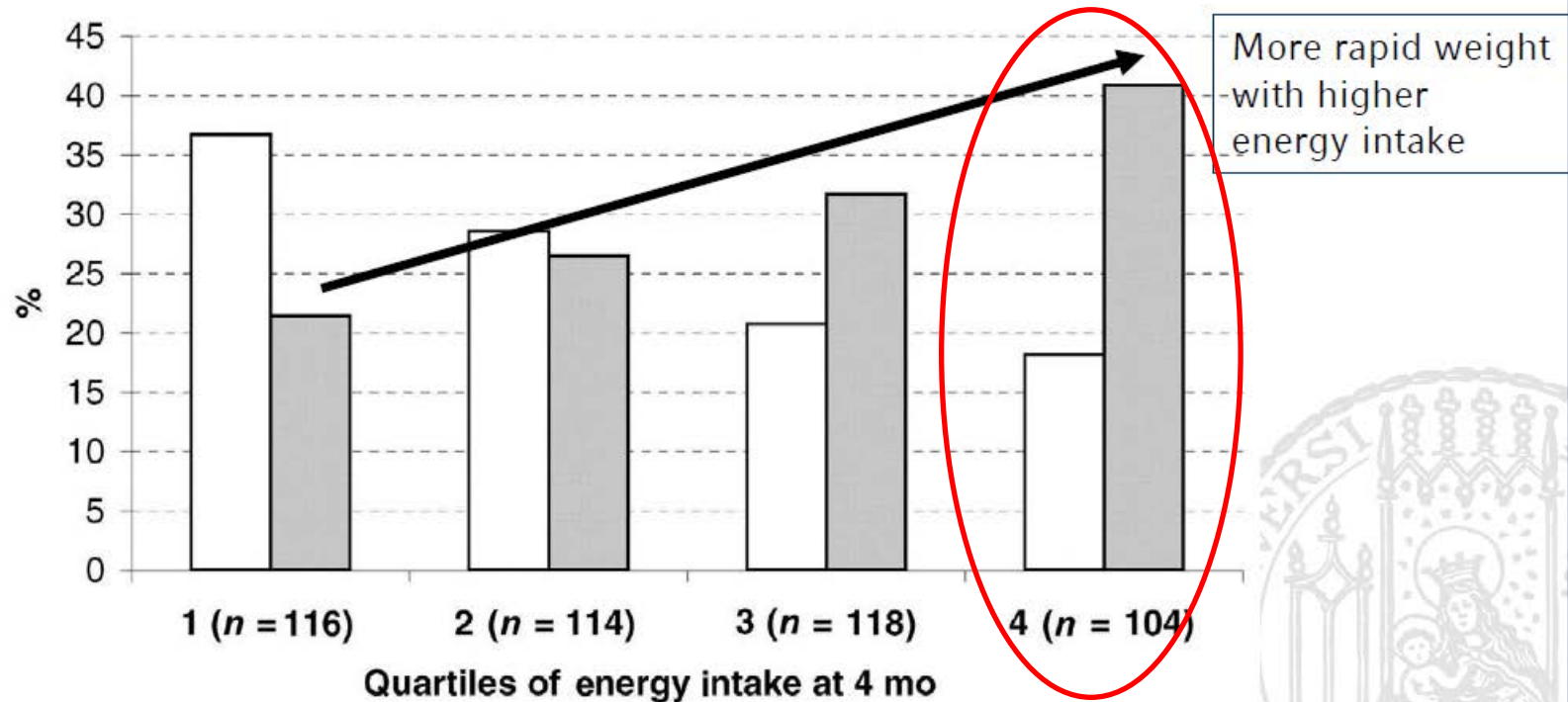


Figure 1 BMI of 6-y-old boys by quartiles (Q1 = lowest, Q4 = highest) of protein intake (E%) at the ages of 9 and 12 months. Energy intake was not different between groups.

% bambini con bassa o alta velocità di incremento ponderale per quartile di intake energetico a 4 mesi

Energy intake and early weight gain

Percentages of infants who showed rapid (■) or slower (□) weight gain between 0 and 2 years, by quartiles of dietary energy intake at age 4 months, in formula- or mixed-fed infants ($P < .0001$ for trend).



Associazioni 2: Tipo/gruppo di alimenti

Cibi solidi

- ❖ Schack-Nielsen et al. : incluso ma si occupa in realtà dell'epoca di introduzione
 - **inverse association with BMI z scores at both 10 and 11 years of age**, after adjusting for confounding variables.

Cereali ispessenti

- ❖ Santos et al. : **no association between the use of milk thickeners (corn, rice or cassava flour added to cow's milk) during infancy and weight-for-age or weight-for-height at 4 years of age**
 - ... although **increases in weight-for-age and length-for-age z-scores** were observed when the infants were 12 months old.

No associazione per timing/gruppi di alimenti

- ❖ Kanoa et al. 26 found **no association between the time at which seven different food groups were introduced during the weaning period and overweight at 5 years of age**
- ❖ Simon et al. 29 found **no association between any of a list of 19 different foods/food groups** given during infancy and childhood BMI.

Associazioni 3

➤ Aderenza alle LG sull'alimentazione
(maggiore aderenza = migliore apporto di vegetali =
maggiore International Guideline Score [IGS])

Nessuna associazione tra IGS e BMI e massa grassa, solo con la massa magra (ma la massa magra non è l'outcome del nostro CAT)

Robinson 2009

No association was found between IGS and either BMI, fat mass or fat-mass index ...

❖ *... but there was a positive association between increasing infant guideline score, and both lean mass and lean mass index amongst 4 year old children.*

Dalla RS di Pearce

- **risultati provenienti da studi di Coorte o Cross-Sectional di discreta qualità metodologica**
- **rilevazioni ottenute con questionari, registrazioni di intake alimentari o con interviste**
- **risultati espressi solo con il ‘P statistico’**
- **le associazioni rilevanti sono solo quelle per le variabili relative alla quantità o alla qualità delle proteine (animali e latte) * ...**
- **... proteine *globalmente* introdotte durante il periodo dell’AC, sia con il latte che con i cibi solidi ***



OPEN ACCESS

Systematic review and meta-analyses of risk factors for childhood overweight identifiable during infancy

Stephen Franklin Weng,¹ Sarah A Redsell,² Judy A Swift,³ Min Yang,⁴
Cristine P Glazebrook⁵

Objective To determine **risk factors** for childhood overweight that can be identified during the first year of life **to facilitate early identification and targeted intervention**.

Punteggio AMSTAR = 9 su 11 applicabili

- Manca l'elenco dei lavori esclusi (non dettagliato, nonostante la pubblicazione di un' Appendice on-line)
- Manca una dichiarazione sulla Letteratura Grigia



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- Manca una dichiarazione sulla Letteratura Grigia

Non strettamente in relazione agli aspetti dietetici e/o nutrizionali

Unici risultati parzialmente
attinenti al quesito clinico**Table 1** Key characteristics of included studies

Category	No. of studies
Risk factors	
Strong association	
Maternal pre-pregnancy overweight	3
High infant birth weight	7
Rapid weight gain	6
Maternal smoking in pregnancy*	7
Moderate association	
Ever breastfeeding in infants aged less than 1 year	10
Early introduction of solid foods	4
Mixed evidence	
Longer duration of breastfeeding	5
Maternal marital status at birth	3
Parity	3
Socioeconomic status at birth	2
No association	
Maternal age at birth	4
Maternal education at birth	2
Maternal depression	2
Infant ethnicity	3
Inconclusive evidence	
Delivery type	1
Maternal postpartum weight loss	1
Gestational weight gain	1
Infant temperament	1

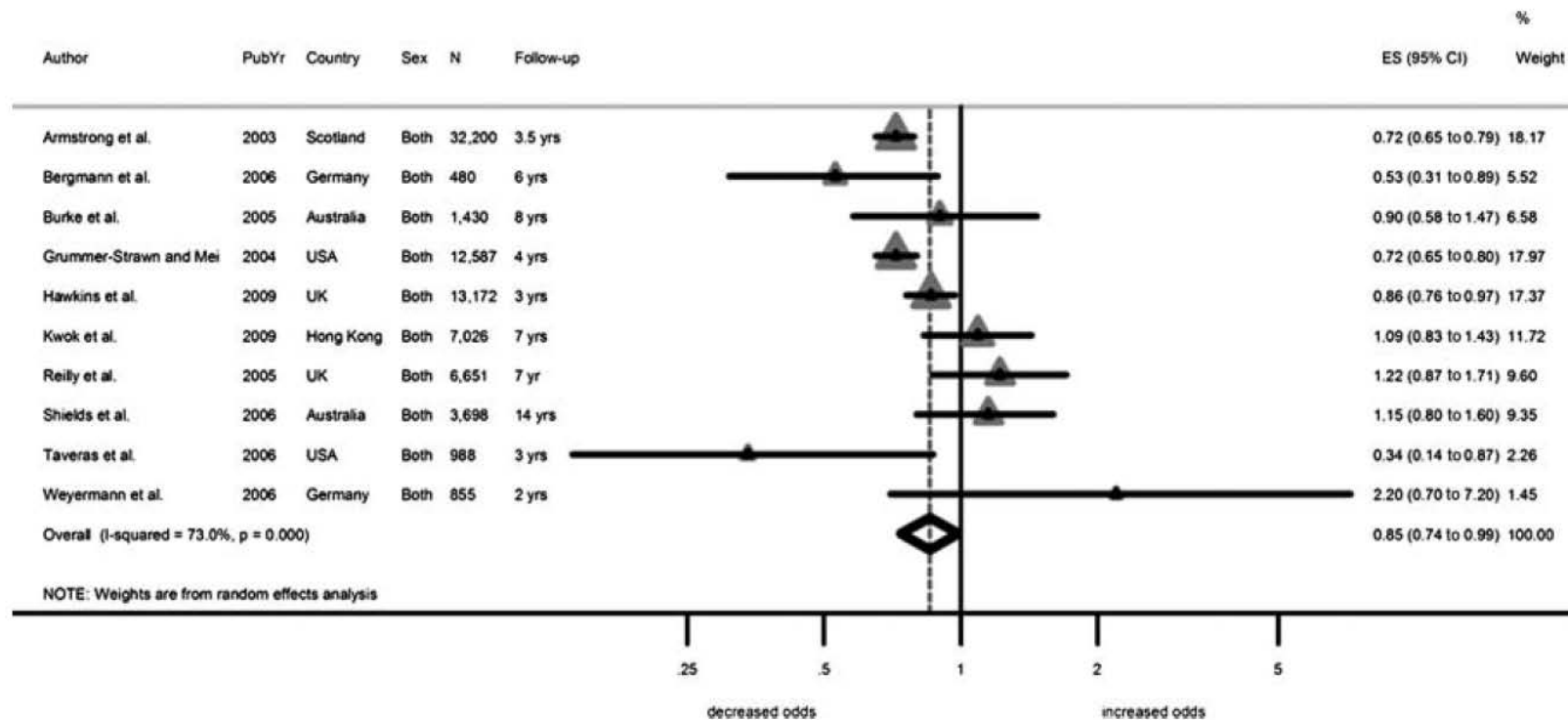


Figure 3 Pooled adjusted OR for childhood overweight from random effects meta-analysis of 10 studies.^{26 27 33 36 39 46 52-55}. ever breastfed compared with never breastfed. ES, effect size.

Follow-up da 2 a 14 anni

Odds Ratio (OR) = **0.85 [IC95% 0.74-0.99]**

ai limiti della significatività statistica

STRINGA per i lavori originali (Clinical Trials) dal Giugno 2012

The screenshot shows a PubMed search interface. At the top, the search query is: ((weaning) OR (complementary feeding) OR (supplementary food)) AND Clinical Trial. The search results are displayed on page 1 of 4, showing 1 to 20 of 78 results. Two results are visible:

- Effects of animal source food and micronutrient fortification in complementary food products on body composition, iron status, and linear growth: a randomized trial in Cambodia.**
Skau JK, Touch B, Chhoun C, Chea M, Unni US, Makurat J, Filteau S, Wieringa FT, Dijkhuizen MA, Ritz C, Wells JC, Berger J, Friis H, Michaelsen KF, Roos N.
Am J Clin Nutr. 2015 Apr;101(4):742-51. doi: 10.3945/ajcn.114.084889. Epub 2015 Jan 28.
PMID: 25833972
[Similar articles](#)
- Origins of food reinforcement in infants.**
Kong KL, Feda DM, Eiden RD, Epstein LH.
Am J Clin Nutr. 2015 Mar;101(3):515-22. doi: 10.3945/ajcn.114.093237. Epub 2015 Jan 14.
PMID: 25733636
[Similar articles](#)

Filters activated: Clinical Trial, Publication date from 2012/06/01 to 2015/12/31, Humans. [Clear all](#) to show 3741 items.

78 items di cui 5 rilevanti

- ❖ 2 parzialmente pertinenti (Daniels 2014 e Tang 2014)
- ❖ 1 potenzialmente interessante, ma con intervento sul LA (Weber 2014)

Outcomes of an Early Feeding Practices Intervention to Prevent Childhood Obesity

AUTHORS: Lynne Allison Daniels, PhD,^{a,b,c} Kimberley Margaret Mallan, PhD,^{a,b} Jan Maree Nicholson, PhD,^{d,e,f} Diana Battistutta, PhD,^a and Anthea Magarey, PhD^{c,b}

^aInstitute of Health and Biomedical Innovation, ^bSchool of Exercise and Nutrition Sciences, and ^fCentre for Learning Innovation, Queensland University of Technology, Queensland, Australia; ^cDepartment of Nutrition and Dietetics, Flinders University, Adelaide, South Australia, Australia; ^dParenting Research Centre, Melbourne, Victoria, Australia; and ^eMurdoch Childrens Research Institute, Melbourne, Victoria, Australia

KEY WORDS

childhood obesity, feeding practices, infant, randomized controlled trial

ABBREVIATIONS



WHAT'S KNOWN ON THIS SUBJECT: About one in five 2-year-olds are overweight, with potential adverse outcomes. Early feeding practices lay the foundation for food preferences and eating behavior and may contribute to future obesity risk. High-quality obesity prevention trials commencing in infancy are rare.



WHAT THIS STUDY ADDS: In this large randomized controlled trial, anticipatory guidance on the “when, what, and how” of complementary feeding was associated with increased maternal “protective” feeding practices. Differences in anthropometric indicators were in the expected direction but did not achieve statistical significance.

Disegno di studio e scopo

- ❖ Primipare randomizzate a ricevere “*guide anticipatorie*” al 4 mese di vita del bambino (6 sessioni), oppure a ricevere aiuti al bisogno “**cure standard**”.
- ❖ Ipotesi secondaria (quella che ci interessa): diminuzione degli **indicatori antropometrici per l’Obesità**, determinati a 2 anni di vita
- ❖ *Ipotesi primaria: sviluppo di preferenze alimentari verso alimenti «sani» oltre che di stili di nutrimento «responsivi» che favoriscono la autoregolazione da parte del bambino*

TABLE 4 Child-Feeding Practices at Follow-up Visits of Mothers Enrolled in the NOURISH Trial

Maternal Feeding Practices ^a	Control (<i>n</i> = 245)	Intervention (<i>n</i> = 222)	<i>P</i>
CFQ			
Perceived responsibility (3 items, $\alpha = 0.80$); for example, How often are you responsible for deciding if your child has eaten the right kind of foods?	4.4 \pm 0.5	4.3 \pm 0.6	.61
Concern child is overweight (3 items, $\alpha = 0.76$); for example, How concerned are you about your child eating too much when you are not around her?	1.3 \pm 0.6	1.2 \pm 0.4	.016
Controlling feeding practices^b			<.001
Restriction (8 items, $\alpha = 0.75$); for example, I have to be sure my child does not eat too many sweets	3.0 \pm 0.7	2.9 \pm 0.8	.055
Pressure to eat (4 items, $\alpha = 0.77$); for example, If my child says "I am not hungry" I try to get her to eat anyway	2.3 \pm 1.0	1.8 \pm 0.9	<.001
Monitoring (3 items, $\alpha = 0.93$); for example, How much do you keep track of the snack foods that your child eats?	4.3 \pm 0.9	4.3 \pm 1.0	.76
PFSQ			
Instrumental feeding (4 items, $\alpha = 0.77$); for example, I reward my child with something to eat when she is well behaved	1.6 \pm 0.5	1.4 \pm 0.5	<.001
Encouragement (8 items, $\alpha = 0.75$); for example, I praise my child if she eats what I give her	4.0 \pm 0.5	3.9 \pm 0.5	.005
Emotional feeding (5 items, $\alpha = 0.81$); for example, I give my child something to eat to make him feel better when he is upset	1.6 \pm 0.5	1.5 \pm 0.5	.039
Control over eating (10 items, $\alpha = 0.72$); for example, I let my child decide when he would like to have his meal	3.9 \pm 0.4	4.0 \pm 0.4	.56

Mean child age overall was 24.1 \pm 0.7 months; 52% were female. *n* values given in parentheses indicate missing data; α is Cronbach's α . CFQ²⁰ response options: perceived responsibility and monitoring, 1 = never to 5 = always; pressure and restriction, 1 = disagree to 5 = agree; concern, 1 = unconcerned to 5 = very concerned. PFSQ²¹ response options: 1 = never to 5 = always.

^a Continuous variables based independent samples *t*tests; mean \pm SD reported.

^b Between-group difference on related constructs tested via multivariate analysis of variance, $F_{(3,463)} = 9.023$, $P < .001$, $\eta_p^2 = 0.055$.

Differenze ss nei comportamenti

Differenze NON ss nei parametri antropometrici

TABLE 6 Anthropometric Data at Birth, Baseline, and Follow-up for Children Enrolled in the NOURISH Trial

Variable	Baseline		Difference		Follow-up		Difference	
	Control	Intervention	Intervention – Control		Control	Intervention	Intervention – Control	
	Mean ± SD		Mean (SE)	P	Mean ± SD		Mean (SE)	P
<i>N</i>	346	352			279	251		
Age, mo	4.3 ± 1.0	4.3 ± 1.0	–0.01 (0.07)	.89	24.1 ± 0.8	24.1 ± 0.6	–0.06 (0.06)	.33
Weight, kg	6.84 ± 0.96	6.83 ± 1.01	–0.01 (0.07)	.93	12.94 ± 1.55	12.78 ± 1.56	–0.16 (0.14)	.23
Weight z score	–0.03 ± 0.91	–0.04 ± 0.93	–0.01 (0.07)	.95	0.69 ± 0.91	0.58 ± 0.98	–0.11 (0.08)	.20
<i>N</i>	345	349			274	246		
Length/height (cm)	64.06 ± 3.04	64.26 ± 3.15	0.20 (0.24)	.39	87.35 ± 3.24	87.20 ± 3.16	–0.15 (0.28)	.60
Length/height z score	0.27 ± 0.95	0.39 ± 0.98	0.11 (0.07)	.12	0.27 ± 0.99	0.24 ± 0.96	–0.02 (0.09)	.78
BMI	16.61 ± 1.48	16.46 ± 1.48	–0.15 (0.11)	.17	16.94 ± 1.49	16.74 ± 1.43	–0.20 (0.13)	.12
BMI z score	–0.26 ± 0.98	–0.36 ± 0.98	–0.10 (0.07)	.18	0.75 ± 0.98	0.61 ± 1.01	–0.14 (0.09)	.10

P value for test of difference between conditions using independent sample *t* test; mean difference (intervention – control) and SE of difference reported. Weight available at baseline for *n* = 696; recumbent length available at baseline for *n* = 694; female 51%. Weight available at follow-up for: *n* = 530/541 retained; standing height available at follow up for *n* = 520/541 retained; female 51%.

Perdita al follow-up del 22%

RESULTS: Retention at follow-up was 78%. M

High protein intake from meat as complementary food increases growth but not adiposity in breastfed infants: a randomized trial¹⁻⁴

Minghua Tang and Nancy F Krebs

Am J Clin Nutr 2014;100:1322–8.

Analisi secondaria di uno studio su 42 bambini allattati al seno, randomizzati a 6 mesi in 2 gruppi:

Meat

Un pasto di carne /die = 8 gr proteine/die

Cereal

1-2 porzioni di cereali addizionati con Fe e Zn

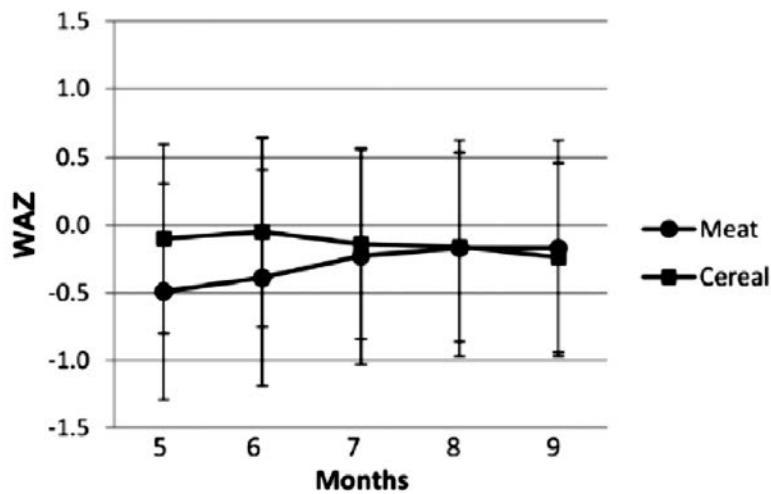
AR proteine a 6 mesi (gr/die) LM 7.2 AC= 1.9

6 mesi

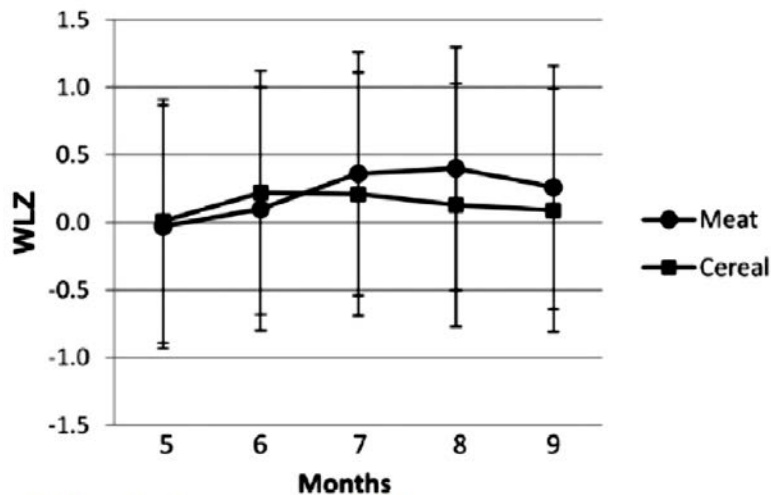
9 mesi

Carbohydrate (g/d) ²				
Meat	19 ± 24 ^a	30 ± 29 ^b	52 ± 32 ^c	56 ± 33 ^c
Cereal	19 ± 15 ^a	31 ± 23 ^b	31 ± 23 ^c	56 ± 18 ^c
Protein (g/d) ⁵				
Meat	7.8 ± 6.8 ^a	15.3 ± 13.0 ^b	24.3 ± 11.6 ^c	24.2 ± 10.4 ^c
Cereal	2.4 ± 2.0 ^a	3.7 ± 3.1 ^b	7.3 ± 4.6 ^c	8.8 ± 3.2 ^c
Protein (g · kg ⁻¹ · d ⁻¹) ⁵				
Meat	1.12 ± 1.10 ^a	2.00 ± 1.66 ^b	3.07 ± 1.61 ^c	2.96 ± 1.34 ^c
Cereal	0.32 ± 0.26 ^a	0.47 ± 0.37 ^b	0.92 ± 0.54 ^c	1.08 ± 0.42 ^c
Fat (g/d) ²				
Meat	7.2 ± 8.3 ^a	11.3 ± 10.5 ^a	14.7 ± 9.4 ^b	14.2 ± 7.8 ^b
Cereal	5.0 ± 6.0 ^a	6.0 ± 8.3 ^a	9.2 ± 11.3 ^b	8.4 ± 5.7 ^b

¹ All values are means ± SDs. Meat group: *n* = 14; Cereal group: *n* = 28. A repeated-measures ANOVA was used to test the effect of group and time. Cereal group, lower-protein group; Meat group, higher-protein group.



Nessuna differenza
a 9 mesi !



Minore rischio per
gli allattati al seno?

FIG **Conclusion:** In breastfed infants, higher protein intake from meats was associated with greater linear growth and weight gain but without excessive gain in adiposity, suggesting that potential risks of high protein intake may differ between breastfed and formula-fed infants and by the source of protein. *Am J Clin Nutr* 2014;100:1322-8.

The CHOP Study (Childhood Obesity Study)

Lower protein content in infant formula reduces BMI and obesity risk at school age: follow-up of a randomized trial¹⁻⁵

Martina Weber, Veit Grote, Ricardo Closa-Monasterolo, Joaquín Escribano, Jean-Paul Langhendries, Elena Dain, Marcello Giovannini, Elvira Verduci, Dariusz Gruszfeld, Piotr Socha, and Berthold Koletzko for The European Childhood Obesity Trial Study Group

Am J Clin Nutr 2014;99:1041–51.

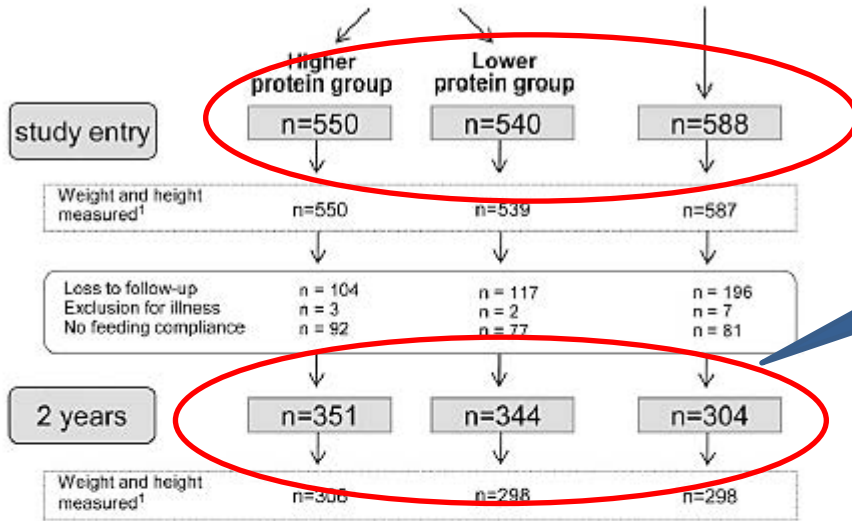
- **Due gruppi di lattanti randomizzati a ricevere, a partire dal terzo mese di vita, formula a basso oppure ad elevato contenuto proteico, fino all'età di un anno**
- **Un gruppo di controllo a LM esclusivo**
- **Alimentazione complementare libera dai 4 mesi**

WEBER ET AL

Intervention groups formula-fed Observational group breastfed

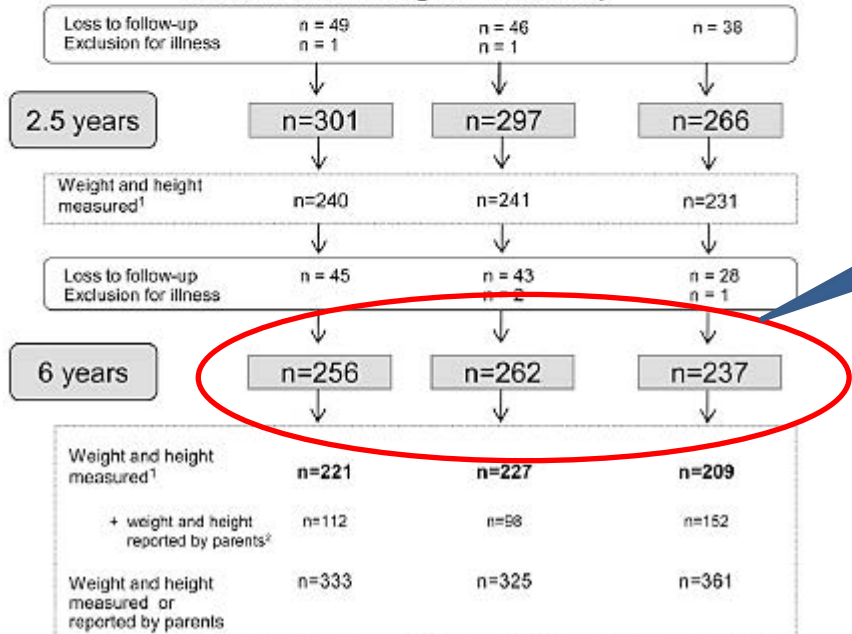
Già a 2 anni perdita al follow-up ~ 30!

Original study



Recruitment for long-term follow-up

Long-term follow-up



A 6 anni perdita al follow-up > 50!

¹height and weight measured at the study center by study personnel, BMI calculated

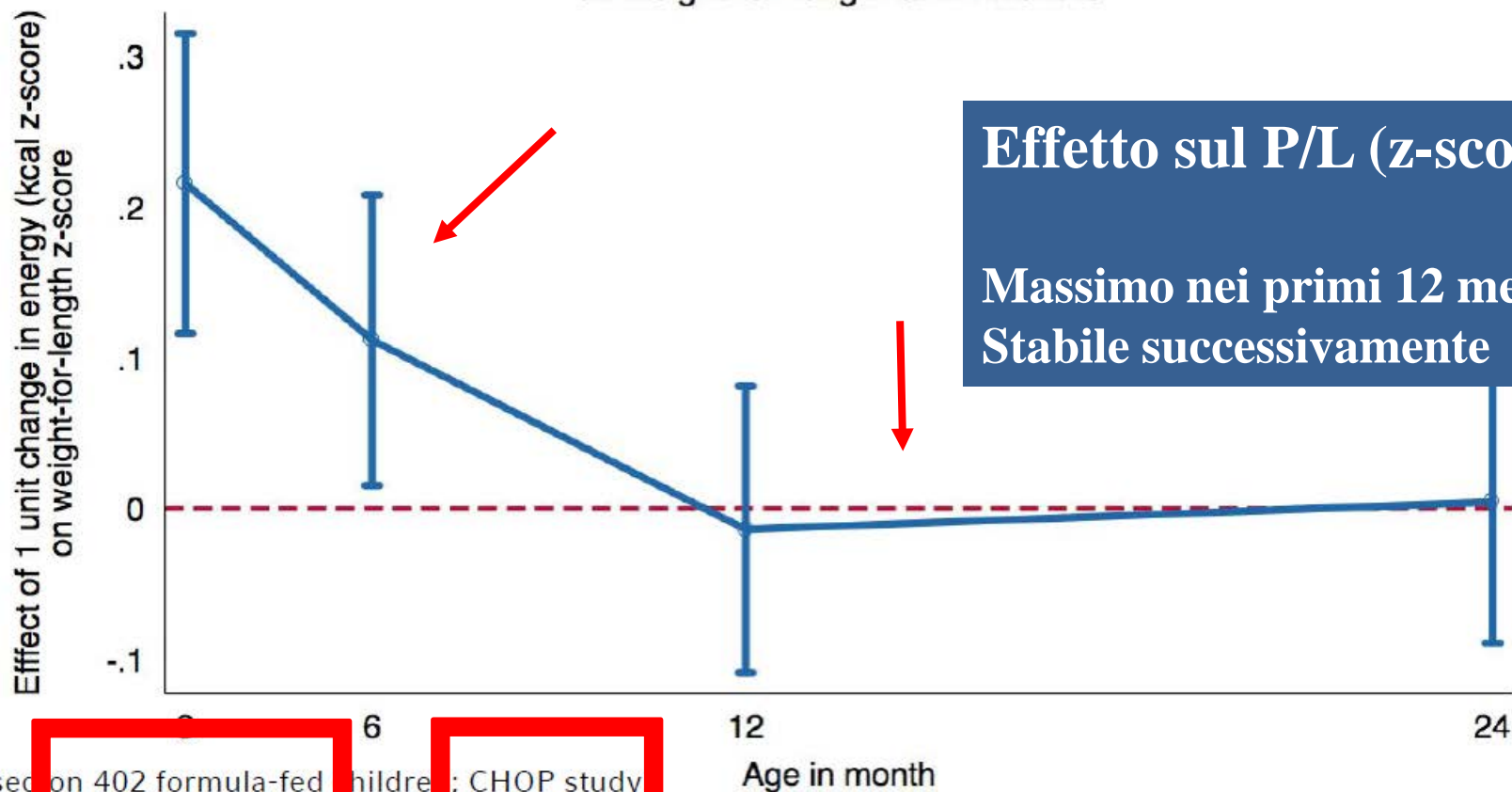
²height and weight as reported by parents collected by telephone interview, BMI calculated

Intake energetico (z-score)

Bambini allattati con formula

Energy intake and early weight gain

Life course plot of the effect of energy intake (z-score) on weight-for-length at 24 months



Effetto sul P/L (z-score)

**Massimo nei primi 12 mesi.
Stabile successivamente**

Based on 402 formula-fed children; CHOP study



CHOP Study

Dati preliminari del 2009. A 24 mesi.

Lower protein in infant formula is associated with lower weight up to age 2 y: a randomized clinical trial¹⁻⁴

Am J Clin Nutr 2009;89:1836-45.

Berthold Koletzko, Rüdiger von Kries, Ricardo Closa, Joaquín Escribano, Silvia Scaglioni, Marcello Giovannini, Jeannette Beyer, Hans Demmelmair, Dariusz Gruszfeld, Anna Dobrzanska, Anne Sengier, Jean-Paul Langhendries, Marie-Francoise Rolland Cachera, and Veit Grote for the European Childhood Obesity Trial Study Group

Differenze significative (** $p < 0.01$) nello Z-score di P/L e BMI a 24 mesi

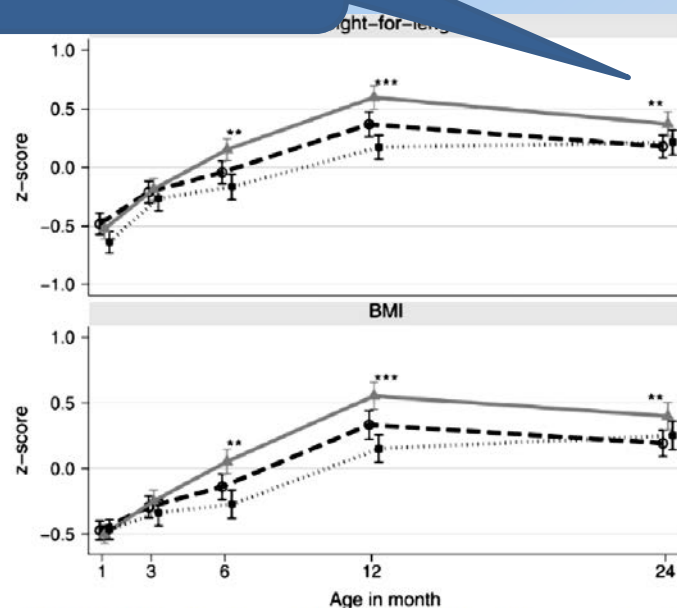
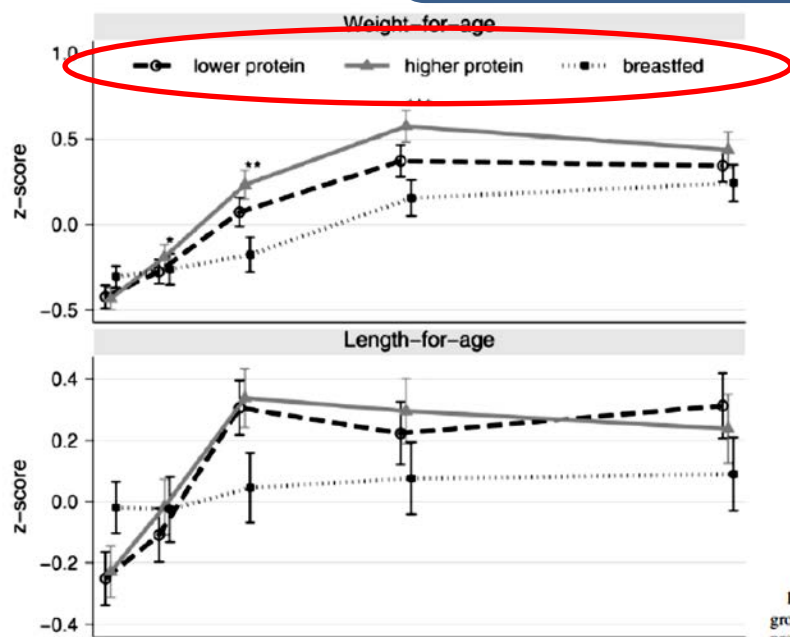
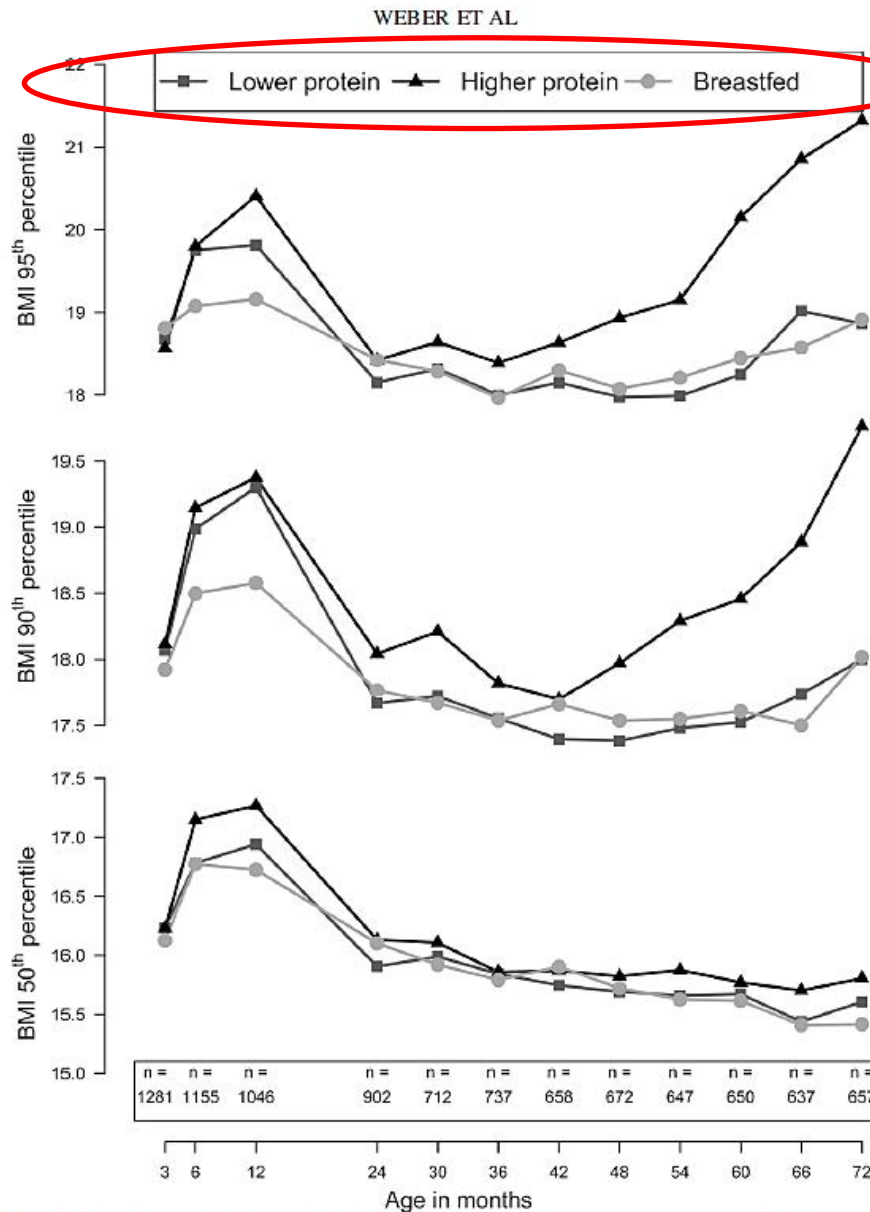


FIGURE 3. Mean z scores (with 95% CIs) for length, weight, weight-for-length, and BMI in the lower-protein ($n = 540$) and higher-protein ($n = 550$) groups and in the breastfed ($n = 588$) children at baseline (0-8 wk of age) and at 3, 6, 12, and 24 mo of age. * ** ***Significantly different from the lower-protein group (ANOVA adjusted for baseline value): * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

CHOP Study Dati conclusivi del 2014



Intake proteico

% di bambini nei 3 gruppi in relazione al pc di BMI (ss solo per il 95 pc)

A 6 anni

FIGURE 2. Median and 90th and 95th percentiles of BMI by study group from 3 mo to 6 y of age and the number of children.

Conclusioni

- ❖ La letteratura scientifica è molto più ricca di lavori che hanno studiato l'influenza del timing di introduzione alimentare sul rischio di Obesità futura, piuttosto che l'influenza dei diversi tipi di alimenti
- ❖ L'unica Revisione Sistemática pertinente trovata contiene alcuni lavori, metodologicamente deboli, i cui risultati sembrano indirizzare verso un'associazione fra l'introduzione di elevate quantità di proteine, soprattutto latte, ed un più elevato rischio di sovrappeso e obesità nell'infanzia; il carico proteico in questi lavori non era però differenziato in base alla fonte (latte o cibi semisolidi)

- ❖ I risultati di un importante e recente trial randomizzato con follow-up fino ai 6 anni (CHOP Study), vanno nella medesima direzione, ma la diversità dell'apporto proteico era qui determinata dalle proteine contenute nel latte e non dai cibi semisolidi
- ❖ E' possibile che la carne, importante fonte di proteine animali nel periodo dell'AC, influisca in modo differente sul rischio di obesità dei lattanti, minore se al seno esclusivo, maggiore negli allattati artificialmente
- ❖ E' possibile che la somministrazione alle mamme di *guide anticipatorie* sulla corretta Alimentazione Complementare, determini un miglioramento delle future abitudini alimentari dei bambini

❖ Deciderò di lasciare libere le famiglie di svezzare i loro figli come meglio credono rispettando le abitudini familiari e culturali, non regolamentando in modo preciso la qualità dei cibi ma, d'ora in avanti, effettuerò ad ogni visita di controllo dai 6 ai 24 mesi di vita un'attenta indagine alimentare valutando in particolar modo l'intake proteico, l'intake proteico in rapporto all'intake calorico totale della giornata, l'intake di proteine proveniente dai prodotti lattei.

Grazie

