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# **Locating Evidence-Based Pediatric Nutrition Resources on the Web**

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# Objectives

- Describe web resources to use for evidence-based dietetics practice to improve patient care
- Identify web resources of interest to pediatric nutritionists
- Identify strategies to improve searching skills to find appropriate evidence on the web

# What is Evidence-Based Dietetics Practice?

Evidence-based dietetics practice is the **use of systematically reviewed scientific evidence** in making food and nutrition practice decisions by **integrating best available evidence with professional expertise and client values** to improve outcomes.

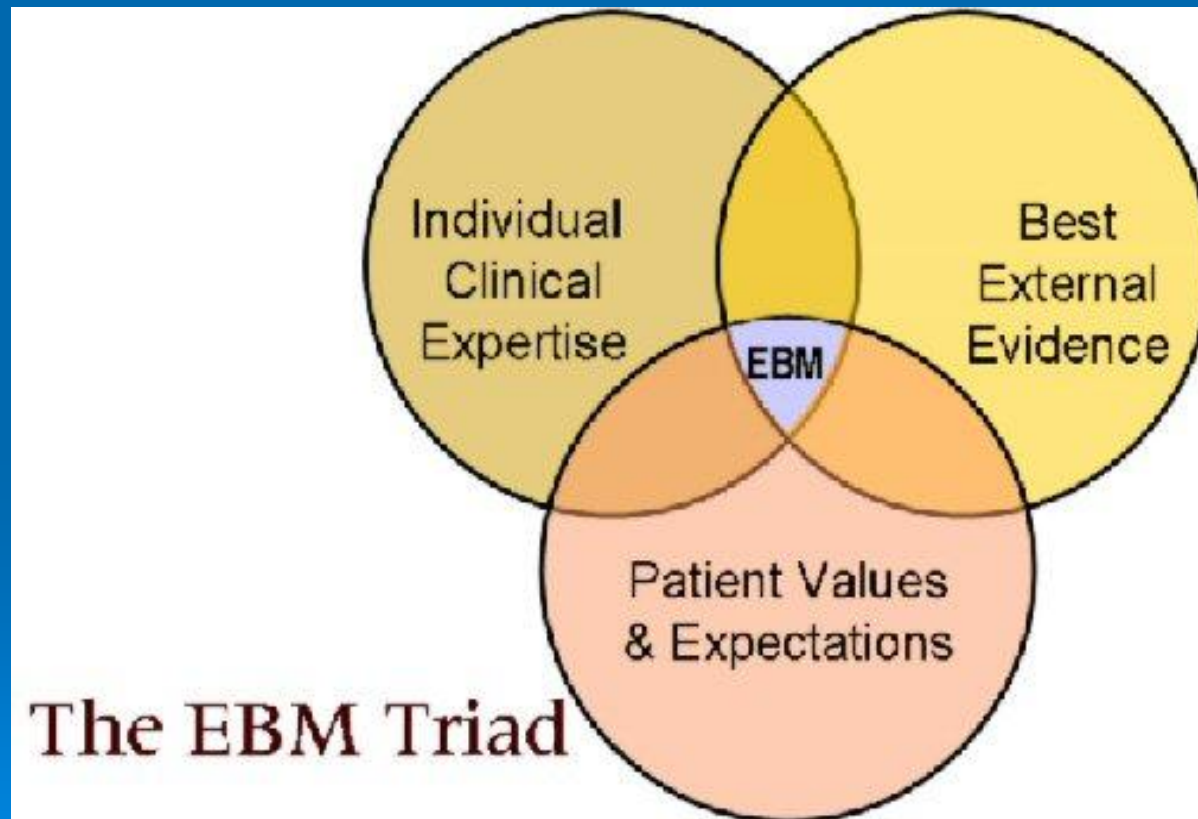
*Approved by ADA House of Delegates February 2006  
Updated by ADA 2007*

# ICDA Evidence-Based Working Group

Evidence-based dietetics practice is about asking questions, **systematically finding research evidence**, and assessing the validity, applicability and importance of that evidence. This evidence-based information is then **combined with the dietitian's expertise and judgment** and the **client's or community's unique values** and circumstances to guide decision-making in dietetics.

*Approved by the ICDA Board of Directors, November 13, 2010*

# Evidence-Based Practice



# What makes good evidence?

## Good

- Based on scientific research
- RCT
- Systematic review
- Meta-analysis
- Clinical guidelines

## Shoddy

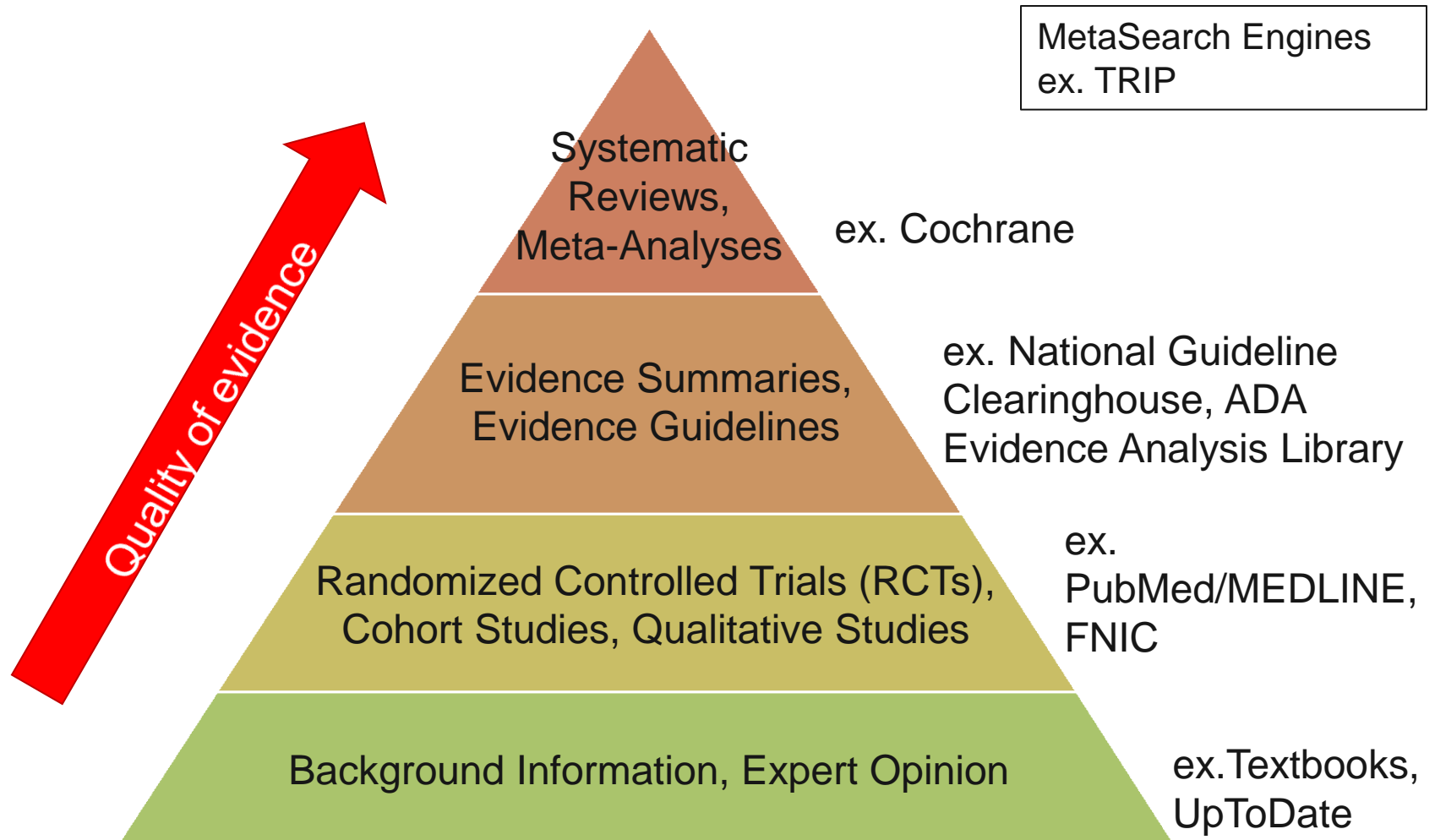
- Opinion
- Consensus
- Because it's been done this way for 100 years

# Chocolate Pyramid



Slide adapted from Edward G. Miner Library, University of Rochester School of Medicine and Dentistry

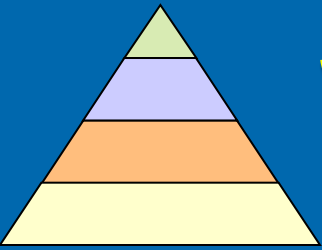
# Searching for Evidence Pyramid





***Search for the Best Evidence to  
answer Nutrition Questions***





# Search Databases Efficiently to Research Journal Articles

- PubMed [pubmed.gov](http://pubmed.gov)  
Search *PubMed* to find citations to evidence-based articles on nutrition
- FNIC (Food and Nutrition Information Center)  
[nal.usda.gov/fnic/databases.shtml](http://nal.usda.gov/fnic/databases.shtml)
- See Handout for additional databases  
[healthlinks.washington.edu/hsl/liaisons/schnall/pednutrition2011.doc](http://healthlinks.washington.edu/hsl/liaisons/schnall/pednutrition2011.doc)

# Search PubMed *pubmed.gov*

- PubMed includes MEDLINE and citations to biomedical journal articles, 1940's+
- Indexes 5,200 biomedical journals
- Covers all aspects of biosciences and healthcare
- 75%-80% of citations have abstracts
- Updated 5x/week
- Search with text words or MeSH (thesaurus) terms

# 2 PubMed Strategies for Finding Evidence-Based Citations

## 1. Use Limits: Publication Type of Article

- ◆ Randomized Controlled Trial
- ◆ Meta-Analysis
- ◆ Practice Guideline
- ◆ Clinical Trial
- ◆ Consensus Development Conference

## 2. Use Clinical Queries section

Search: PubMed

[Limits](#) [Advanced search](#) [Help](#)

**probiotics infant formula**

Search

Clear



## PubMed

Enter search terms

PubMed comprises more than 20 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.


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[Topic-Specific Queries](#)

### More Resources

[MeSH Database](#)

[Journals in NCBI Databases](#)

[Clinical Trials](#)

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[LinkOut](#)

**PubMed Strategy #1:  
Limit to RCTs under Type of Article**

**Limits**

**Dates**

Published in the Last: Any date

**Type of Article**

- Meta-Analysis
- Practice Guideline
- Randomized Controlled Trial
- Review

**Languages**

- English
- French
- German
- Italian
- Japanese

**Species**

- Humans
- Animals

**Gender**

- Male
- Female

**Subsets**

- Journal Groups**
- Core clinical journals
  - Dental journals
  - Nursing journals

**Ages**

- All Infant: birth-23 months
- All Child: 0-18 years
- All Adult: 19+ years
- Newborn: birth-1 month

# PubMed RCT Results

[A non-hydrolyzed, fermented milk formula reduces digestive and respiratory events in infants at high risk of allergy.](#)

Morisset M, Aubert-Jacquin C, Soulaines P, Moneret-Vautrin DA, Dupont C.

Eur J Clin Nutr. 2011 Feb;65(2):175-83. Epub 2010 Nov 17.

PMID: 21081959 [PubMed - indexed for MEDLINE]

[Related citations](#)

[Alpha-lactalbumin-enriched and probiotic-supplemented infant formula in infants with colic: growth and gastrointestinal tolerance.](#)

Dupont C, Rivero M, Grillon C, Belaroussi N, Kalindjian A, Marin V.

Eur J Clin Nutr. 2010 Jul;64(7):765-7. Epub 2010 Jun 2.

PMID: 20517331 [PubMed - indexed for MEDLINE]

[Related citations](#)

[Effects of probiotic and prebiotic on gastrointestinal motility in newborns.](#)

Indrio F, Riezzo G, Raimondi F, Bisceglia M, Cavallo L, Francavilla R.

J Physiol Pharmacol. 2009 Dec;60 Suppl 6:27-31.

PMID: 20224148 [PubMed - indexed for MEDLINE] **Free Article**

[Safety and tolerance of the human milk probiotic strain Lactobacillus salivarius CECT5713 in 6-month-old children.](#)

Maldonado J, Lara-Villoslada F, Sierra S, Sempere L, Gómez M, Rodriguez JM, Boza J, Xaus J, Olivares M.

Nutrition. 2010 Nov-Dec;26(11-12):1082-7. Epub 2009 Dec 16.

PMID: 20018483 [PubMed - indexed for MEDLINE]

[Tolerance and safety of Lactobacillus paracasei ssp. paracasei in combination with Bifidobacterium animalis ssp. lactis in a prebiotic-containing infant formula: a randomised controlled trial.](#)

Vlieger AM, Robroch A, van Buuren S, Kierns J, Rijkers G, Benninga MA, te Biesebeke R.

Br J Nutr. 2009 Sep;102(6):869-75. Epub 2009 Mar 31.

PMID: 19331702 [PubMed - indexed for MEDLINE]

[Related citations](#)

# PubMed Abstract

[Display Settings](#):  Abstract

[Send to](#):



[Nutrition](#). 2010 Nov-Dec;26(11-12):1082-7. Epub 2009 Dec 16.

## Safety and tolerance of the human milk probiotic strain *Lactobacillus salivarius* CECT5713 in 6-month-old children.

[Maldonado J](#), [Lara-Villoslada F](#), [Sierra S](#), [Sempere L](#), [Gómez M](#), [Rodríguez JM](#), [Boza J](#), [Xaus J](#), [Oliveras M](#).

Department of Pediatrics, Hospital Universitario San Cecilio, Granada, Spain.

### Abstract

**OBJECTIVE:** Intestinal microbiota plays an important role in the prevention of certain diseases during the pediatric years. Thus, there is an increasing interest in the addition of probiotics to infant formulas. The aim of this study was to evaluate the safety of a follow-on formula with *Lactobacillus salivarius* CECT5713 in 6-mo-old children.

**METHODS:** The antibiotic susceptibility of *L. salivarius* CECT5713 was analyzed by a dilution method. A double-blinded, randomized, placebo controlled study was performed. Children ( $n = 80$ ) were distributed in two groups and consumed the formula supplemented or not with probiotics ( $2 \times 10^6$  colony-forming units [cfu]/g) during 6 mo. Fecal samples were collected at enrollment, at 3 mo, and at the end of trial. Clinical and anthropometric evaluations were performed. Depending on the variable, one-way or two-way repeated measures analysis of variance were used for the statistical analysis.

**RESULTS:** The antibiotic susceptibility profile of the strain resulted as safe. No adverse effects associated with the consumption of the probiotic formula were reported. In addition, clinical parameters did not differ between groups. Consumption of the probiotic supplemented formula led to an increase in the fecal lactobacilli content ( $7.6 \pm 0.2$  versus  $7.9 \pm 0.1$  log cfu/g,  $P < 0.05$ ). *Lactobacillus salivarius* CECT5713 was detected in the feces of volunteers from the probiotic group. Probiotic consumption induced a significant increase in the fecal concentration of butyric acid at 6 mo.

**CONCLUSION:** Thus, a follow-on formula with *L. salivarius* CECT5713 is safe and well tolerated in 6-mo-old infants.

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PMID: 20018483 [PubMed - indexed for MEDLINE]

[Publication Types, MeSH Terms, Substances, Secondary Source ID](#)

[LinkOut - more resources](#)



### Related citations

Assessment of the safety, tolerance, and protective effect against diarrhea of infe [Am J Clin Nutr. 2008]

Intestinal and immunological effects of daily oral administration of *Lactobacillus* s; [Anaerobe. 2010]

*Lactobacillus salivarius* CECT 5713, a potential probiotic strain isolatec [Int J Food Microbiol. 2006]

**Review** In vitro selection criteria for probiotic bacteria of human origin: cor [Am J Clin Nutr. 2001]

**Review** Probiotics, prebiotics, and synbiotics. [Adv Biochem Eng Biotechnol. 2008]

[See reviews...](#)

[See all...](#)

### All links from this record

[Related Citations](#)

[Compound \(MeSH Keyword\)](#)

[Substance \(MeSH Keyword\)](#)

### Recent activity

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# Full text Article

Nutrition 26 (2010) 1082–1087



ELSEVIER

Contents lists available at ScienceDirect

Nutrition

Journal homepage: [www.nutritionjournal.com](http://www.nutritionjournal.com)



Applied nutritional investigation

## Safety and tolerance of the human milk probiotic strain *Lactobacillus salivarius* CECT5713 in 6-month-old children

José Maldonado Ph.D., M.D.<sup>a</sup>, Federico Lara-Villoslada Ph.D.<sup>b</sup>, Saleta Sierra Ph.D.<sup>b</sup>,  
Lluís Sempere M.Sc.<sup>b</sup>, Marta Gómez Ph.D.<sup>c</sup>, Juan Miguel Rodríguez Ph.D.<sup>c</sup>, Julio Boza Ph.D.<sup>b</sup>,  
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### ARTICLE INFO

**Article history:**  
Received 8 May 2009  
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**Keywords:**  
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Probiotics  
Intestinal function  
Follow-on formula  
Intestinal microbiota

### ABSTRACT

**Objective:** Intestinal microbiota plays an important role in the prevention of certain diseases during the pediatric years. Thus, there is an increasing interest in the addition of probiotics to infant formulas. The aim of this study was to evaluate the safety of a follow-on formula with *Lactobacillus salivarius* CECT5713 in 6-mo-old children.

**Methods:** The antibiotic susceptibility of *L. salivarius* CECT5713 was analyzed by a dilution method. A double-blinded, randomized, placebo-controlled study was performed. Children ( $n = 80$ ) were distributed in two groups and consumed the formula supplemented or not with probiotics ( $2 \times 10^6$  colony-forming units [cfu]/g) during 6 mo. Fecal samples were collected at enrollment, at 3 mo, and at the end of trial. Clinical and anthropometric evaluations were performed. Depending on the variable, one-way or two-way repeated measures analysis of variance were used for the statistical analysis.

**Results:** The antibiotic susceptibility profile of the strain resulted as safe. No adverse effects associated with the consumption of the probiotic formula were reported. In addition, clinical parameters did not differ between groups. Consumption of the probiotic supplemented formula led to an increase in the fecal lactobacilli content ( $7.6 \pm 0.2$  versus  $7.9 \pm 0.1$  log cfu/g,  $P < 0.05$ ). *Lactobacillus salivarius* CECT5713 was detected in the feces of volunteers from the probiotic group. Probiotic consumption induced a significant increase in the fecal concentration of butyric acid at 6 mo.

**Conclusion:** Thus, a follow-on formula with *L. salivarius* CECT5713 is safe and well tolerated in 6-mo-old infants.

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### Introduction

Human milk is a complex species-specific biological fluid adapted to perfectly satisfy the nutritional needs of the infant. Moreover, it has been demonstrated that breast milk confers protection against different diseases because the incidence of these disorders is lower in breast-fed than in formula-fed infants [1,2]. Different bioactive components of human milk, such as

immunoglobulins, oligosaccharides, immune cells, lactoferrin, lysozymes, etc., could be responsible for this beneficial effect.

In addition to these compounds, it has been demonstrated that human milk constitutes an excellent and continuous source of commensal bacteria for the infant gut [3,4]. These bacteria could play a key role in the initial establishment of the intestinal microbiota of breast-fed infants, which has been reported to be more favorable than that of formula-fed infants [5].

In recent years, there has been an increasing number of reports about the effect of probiotic bacteria in infants. Thus, it has been demonstrated that the use of probiotic compared with placebo reduces the risk of diarrhea lasting longer than 3 d [6]. Probiotics have also been demonstrated to be effective in the prevention of atopic dermatitis, reducing the risk to half compared with placebo [7]. Among bacteria isolated from

This work was supported by Párrica Biotech. Federico Lara-Villoslada received financial assistance from the Torres Quevedo Program of Spanish Ministry of Science and Technology.

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E-mail address: [olivares@parricabiotech.com](mailto:olivares@parricabiotech.com) (M. Olivares).

# PubMed Clinical Queries

Strategy #2: Clinical Queries – Link on Advanced Search or Home page

Search **infant formula probiotics**

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use [PubMed direct](#)

## Clinical Study Categories

Category:    
Scope:

### Results: 5 of 37

A non-hydrolyzed, fermented milk formula reduces digestive and respiratory events in infants at high risk of allergy.

[Eur J Clin Nutr. 2011]

Alpha-lac  
infants w

[A non-hydrolyzed, fermented milk formula reduces digestive and respiratory events in infants at high risk of allergy.](#)

Morisset M, Aubert-Jacquin C, Soulaines P, Moneret-Vautrin DA, Dupont C.

Eur J Clin Nutr. 2011 Feb;65(2):175-83. Epub 2010 Nov 17.

PMID: 21081959 [PubMed - indexed for MEDLINE]

Effects of

[A multicentric study of a lactose free formula supplemented with *Saccharomyces boulardii* in children with acute diarrhea].

[Arch Pediatr. 2010]

Effect of a new synbiotic mixture on atopic dermatitis in infants: a randomized-controlled trial.

[Clin Exp Allergy. 2010]

See all (37)

## Systematic Reviews

### Results: 3 of 3

Supplementation of infant formula with probiotics and/or prebiotics: a systematic review and comment by the ESPGHAN committee on nutrition.

[J Pediatr Gastroenterol Nutr. 2011]

infants: a pooled analysis

[Ann Nutr Metab. 2009]

systematic review of

Pediatr Adolesc Med. 2009]

See all (3)

[Filter](#) citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines. See [related sources](#).

# PubMed Dietary Supplement Subset

- Created by ODS and the National Library of Medicine (NLM)
- Succeeds *the International Bibliographic Information on Dietary Supplements (IBIDS)* database, 1999-2010
- Limits PubMed search results to citations from dietary supplement literature
- Includes vitamin, mineral, phytochemical, ergogenic, botanical, and herbal supplements in human nutrition and animal models

# PM Dietary Supplement Subset

Search: PubMed [Advanced search](#) [Help](#)

energy drink\* OR sports drink\*

## Limits

**Subsets**

Core clinical journals

Dental journals

Dietary Supplements

## Results

[Pediatrician-recommended use of sports drinks and dental caries in 3-year-old children.](#)

Kawashita Y, Fukuda H, Kawasaki K, Kitamura M, Hayashida H, Furugen R, Fukumoto E, Iijima Y, Saito T. Community Dent Health. 2011 Mar;28(1):29-33.

PMID: 21485231 [PubMed - indexed for MEDLINE]

[Related citations](#)

[Health effects of energy drinks on children, adolescents, and young adults.](#)

Seifert SM, Schaechter JL, Hershorin ER, Lipshultz SE.


Pediatrics. 2011 Mar;127(3):511-28. Epub 2011 Feb 14. Review.

PMID: 21321035 [PubMed - indexed for MEDLINE]

[Related citations](#)

## PubMed at the UW

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?holding=uw>

To watch the instructional video clips (see  VIDEO below) RealOne player is required ([download free player](#))

PubMed provides access to all of MEDLINE back to the mid-1960's and to additional life sciences journals. Updated daily.  VIDEO


## Basic Search Techniques VIDEO

### Step 1: Enter your terms

Search PubMed for

[Limits](#) [Preview/Index](#) [History](#) [Clipboard](#) [Details](#)

Type any key word or phrase into the search box as shown above.

Use an asterisk (\*) to retrieve variations on a word, e.g., *bacter\** retrieves *bacteria*, *bacterium*, *bacteriophage*, etc.  VIDEO

- **For a Subject Search:** Enter one or more words (e.g., *asthma drug therapy*) in the **query box** and click on **Go**. PubMed automatically combines (**ANDs**) terms together so that all terms or concepts are present and “translates” your words into MeSH terms.
- **For an Author Search:** Enter the author's name in the format of last name first followed by initials (e.g., *byrnes ca*).
- **For a Journal Search:** To retrieve articles from a specific journal use *PubMed's Journals Database* or *Single Citation Matcher* features (available from the left

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## Instructional Video Clips

- [Introduction](#) (1:54)
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- [Truncation](#) (0:15)
- [Limits](#) (3:14)
- [Viewing results](#) (2:28)
- [Connecting to fulltext](#) (3:44)
- [Printing and saving](#) (1:31)
- [Ordering articles](#) (2:13)
- [Documenting your search strategy](#) (0:31)
- [Related Articles](#) (0:50)
- [Clipboard](#) (1:42)
- [History](#) (2:12)
- [Single citation matcher](#) (0:30)
- [Clinical queries](#) (2:46)
- [MeSH Browser](#) (3:04)
- [Additional Help](#) (0:28)

# Obtaining E-Journals

- Check with your work or public library for access to full-text e-journals
- For UW Affiliates: use the Proxy service to access full-text e-journals from off-campus  
*[healthlinks.washington.edu/howto/connect](http://healthlinks.washington.edu/howto/connect)*

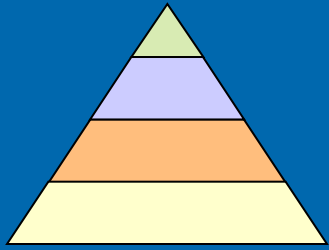
# Open Access and Free Journal Sites

- BioMed Central [biomedcentral.com](http://biomedcentral.com)
  - ◆ Independent publishing house providing free access to peer-reviewed biomedical research
  - ◆ Includes *BMC Pediatrics*, *Nutrition Journal*, etc.
- PubMed Central [pubmedcentral.gov](http://pubmedcentral.gov)
  - ◆ National Library of Medicine's free digital archive of biomedical and life sciences journal literature
- Free Medical Journals [freemedicaljournals.com](http://freemedicaljournals.com)
- Highwire Press [highwire.stanford.edu](http://highwire.stanford.edu)
  - ◆ Full-text to 1,500+ peer-reviewed scientific, medical and social science journals

# FNIC Databases

*[fnic.nal.usda.gov/fnic/databases](http://fnic.nal.usda.gov/fnic/databases)*

- Food Safety Education and Training Materials
- Food Safety Research Projects (FSRIO)
- Healthy Meals Resource System Education and Training Materials (HMRS)
- Native American Nutrition Education
- SNAP-Ed Connection Resource Finder
- WIC Works Education and Training Materials



# Textbooks

- Pediatric Nutrition Care Manual (\$) ADA 2011
- Pediatric Nutrition Handbook (\$) AAP 6<sup>th</sup> ed. 2009
- Merck Manual of Medical Information  
[merck.com/mmpe](http://merck.com/mmpe)
- eMedicine/Medscape [emedicine.medscape.com](http://emedicine.medscape.com)  
Open access clinical textbook containing chapters on diseases, practice guidelines and evidence-based content
- UptoDate (\$) [uptodate.com](http://uptodate.com)  
Concise comprehensive up-to-date reviews of clinical topics in multiple specialties

# Pediatric Nutrition Care Manual

- ADA Release date: May 2011
- Online access to **evidence**- and knowledge-based nutrition information
- Annual subscription
- Research- and evidence-based nutrition care information for more than 40 diseases, conditions, and topics
- Patient education handouts and calculators



## PNCM

<b>Normal Nutrition</b>	+
<b>Anemia</b>	+
<b>Behavioral Health</b>	+
<b>Burns</b>	
<b>Cardiac Conditions</b>	+
<b>Cleft Lip and Palate</b>	
<b>Critical Care</b>	
<b>Developmental Disabilities</b>	+
<b>Diabetes Mellitus</b>	+
<b>Disorders of Lipid Metabolism</b>	
<b>Epilepsy</b>	+
<b>Failure to Thrive</b>	
<b>Food Allergic Disorders</b>	+
<b>Gastrointestinal Diseases</b>	+
<b>Hepatic Diseases</b>	
<b>HIV/AIDS</b>	
<b>Inborn Errors of Metabolism</b>	+
<b>Oncology</b>	+
<b>Preterm Infants</b>	+

## Full-Term Infants: Issues to Consider: Reflux

Regurgitation is common in infants, occurring in nearly half of all 2- to 4-month old infants (Jadcherla, 2002; Vandenplas, 2009; Martin, 2002; Nelson, 1997, Bhatia & Parish). In an otherwise happy and growing infant, regurgitation is not considered problematic and resolves with time (Jadcherla, 2002; Vandenplas, 2009). In fact, reassurance and time are the primary interventions (Craig 2004, Hegar, 2008).

Therapeutic interventions, if warranted, include the following:

- Positioning
  - Supine posture, right lateral position, and infant car seat position (ie, upright position in a car seat) can make reflux worse (Jadcherla, 2002; Craig, 2004; Carroll, 2002)
  - Prone position with a 30° elevation and left lateral position are associated with lesser episodes of reflux (Jadcherla, 2002; Omari, 2008; Pediatric GE reflux Guidelines, 2001; Bhatia & Parish, 2009).
  - Use the prone position for sleep only in rare cases where the risk of death from complications of gastroesophageal reflux is greater than the risk of sudden infant death syndrome (SIDS). When prone positioning is necessary, risk of SIDS can be decreased by avoiding soft bedding (Pediatric GE Reflux Guidelines, 2001; Bhatia & Parish, 2009).
- Medical therapy: Side effects and lack of response are the main problems with the use of these agents (Craig, 2004; Bhatia & Parish, 2009)
  - Prokinetic agents such as bethanechol, metochlopramide, and cisapride
  - Acid suppression agents such as H2 blockers or proton pump inhibitors
  - Acid-neutralizing agents
    - Facilitate healing in the presence of esophagitis in older infants
    - Not routinely used in neonates because of constipation (calcium- and aluminium-containing antacids) or diarrhea (magnesium-containing antacids)
- Dietary changes
  - Lower volume with more frequent feedings (Jadcherla, 2002)
  - Minimizing and reviewing use of oral medications that are hyperosmolar (Jadcherla, 2002)
  - Reflux caused by a food allergy frequently responds to a hypoallergenic formula or a

## Nutritional Disorders

Search ?

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Sections

Symptoms

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### Sections

Cardiovascular Disorders

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Critical Care Medicine

Dermatologic Disorders

Ear, Nose, Throat, and Dental Disorders

Endocrine and Metabolic Disorders

Eye Disorders

Gastrointestinal Disorders

Genitourinary Disorders

Gynecology and Obstetrics

Hematology and Oncology

Hepatic and Biliary Disorders

Immunology; Allergic Disorders

Infectious Diseases

Injuries; Poisoning

Musculoskeletal and Connective Tissue Disorders

Neurologic Disorders

Nutritional Disorders

Pediatrics

### Mineral Deficiency and Toxicity

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- Nutritional Requirements
- Nutrition in Clinical Medicine

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- Nutritional Support for Dying or Severely Demented Patients
- Total Parenteral Nutrition (TPN)

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- Metabolic Syndrome

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- Essential Fatty Acid Deficiency
- Protein-Energy Undernutrition

### Vitamin Deficiency, Dependency, and Toxicity

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- Niacin
- Riboflavin
- Thiamin
- Vitamin A
- Vitamin B<sub>12</sub>
- Vitamin B<sub>6</sub>
- Vitamin C
- Vitamin D
- Vitamin E
- Vitamin K

SECTION Nutritional Disorders

SUBJECT Vitamin Deficiency, Dependency, and Toxicity

Vitamins may be fat soluble (vitamins A, D, E, and K) or water soluble (B vitamins and vitamin C). The B vitamins include biotin, folate, niacin, pantothenic acid, riboflavin (B<sub>2</sub>), thiamin (B<sub>1</sub>), B<sub>6</sub> (eg, pyridoxine), and B<sub>12</sub> (cobalamins). For dietary requirements, sources, functions, effects of deficiencies and toxicities, blood levels, and usual therapeutic dosages for vitamins, see Table 1: [Vitamin Deficiency, Dependency, and Toxicity: Recommended Daily Intakes for Vitamins\\*](#) and Table 2: [Vitamin Deficiency, Dependency, and Toxicity: Sources, Functions, and Effects of Vitamins](#).

Dietary requirements for vitamins (and other nutrients) are expressed as daily recommended intake (DRI). There are 3 types of DRI:

- **Recommended daily allowance (RDA):** RDAs are set to meet the needs of 97 to 98% of healthy people.
- **Adequate intake (AI):** When data to calculate an RDA are insufficient, AIs are based on observed or experimentally determined estimates of nutrient intake by healthy people.
- **Tolerable upper intake level (UL):** ULs are the largest amount that of a nutrient most adults can ingest daily without risk of adverse health effects.

In developed countries, vitamin deficiencies result mainly from poverty, food faddism, drugs (see [Nutrition: General Considerations: Nutrient-Drug Interactions](#) and Table 3: [Vitamin Deficiency, Dependency, and Toxicity: Potential Vitamin-Drug Interactions](#)), alcoholism, or prolonged and inadequately supplemented parenteral feeding. Mild vitamin deficiency is common among frail and institutionalized elderly people who have protein-

Table 1

[Recommended Daily Intakes for Vitamins\\*](#)

This table is presented as a PDF and requires the free Adobe PDF reader. [Get Adobe Reader](#)

Table 2

[Sources, Functions, and Effects of Vitamins](#)

This table is presented as a PDF and requires the free Adobe PDF reader. [Get Adobe Reader](#)

Table 3

### Potential Vitamin-Drug Interactions

Nutrient	Drug
Biotin	Antibiotics, anticonvulsants

# eMedicine/Medscape

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### Genetics of Phenylketonuria Treatment & Management

Author: Georgianne L Arnold, MD; Chief Editor: Bruce Buehler, MD [more...](#)

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#### Diet

The mainstay of the diet consists of phenylalanine restriction and supplementation of other essential amino acids, vitamins, minerals, and energy intake, using medical foods and low-protein foods.<sup>[1]</sup>

Aspartame must also be eliminated. Phenylalanine is one of the primary components of aspartame. It is found in many artificially sweetened foods and soft drinks, as well as some vitamins and medicines. A 12-oz can of aspartame-sweetened diet drink contains approximately 105 mg of phenylalanine (ie, 25-50% of the usual daily intake).

The age at which the diet may be discontinued is somewhat controversial. Most US facilities no longer recommend continuation of the diet at any age.

Most newborns with phenylketonuria require 40-60 mg phenylalanine to maintain normal growth. Breastfeeding is possible and should not be stopped unless instructed by a local health official or treatment facility. As growth slows, phenylalanine requirement falls, and most older children tolerate 200-400 mg/d.

Providing some natural phenylalanine is essential in the absence of a deficiency of this essential amino acid. The diet requires restriction of all high-protein foods, such as meat, dairy, nuts, and grains. Starches, including bread, potatoes, corn, and beans, are also restricted (a slice of bread or small order of fries contains approximately 120-150 mg phenylalanine).

Updated Feb 13, 2009

#### References

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2. Burton BK, Grange DK, Milanowski A, et al. The response of patients with phenylketonuria and elevated serum phenylalanine to treatment with oral sapropterin dihydrochloride (6R-tetrahydrobiopterin): a phase II, multicentre, open-label, screening study. *J Inherit Metab Dis*. Oct 2007;30(5):700-7. [Medline].
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## Vegetarian diets for children

## TOPIC OUTLINE

## INTRODUCTION

TYPES OF VEGETARIAN  
DIETSGROWTH OF  
VEGETARIAN CHILDRENNUTRITIONAL  
CONSIDERATIONS

- Eating disorders
- Energy
  - Implications
- Omega-3 fatty acids
  - Implications
- Protein
  - Amino acid composition
  - Digestibility
  - Implications
- Iron
- Implications
- Zinc
- Calcium
- Vitamin D
- Vitamin B12
- Fiber

SUMMARY AND  
RECOMMENDATIONS

## REFERENCES

## GRAPHICS

## Vegetarian diets for children

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Last literature review version 19.1: January 2011 | This topic last updated: December 2, 2010 (More)

**INTRODUCTION** — Vegetarian diets are becoming increasingly popular [1-6]. A poll conducted in the United States in 2006 estimated that 6.7 percent of Americans aged 18 and older do not eat meat, 2.3 percent do not eat meat, fish, or poultry, and 1.4 percent do not eat meat, fish, poultry, dairy products, or eggs [1]. Approximately 5 percent of individuals in the United Kingdom, Germany, and Australia describe themselves as vegetarians [7-9].

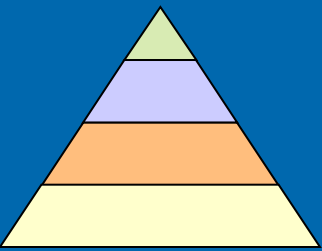
An increasing number of families are choosing to rear their children on a vegetarian eating style [10,11]. An estimated 8 percent of adolescents in the United Kingdom [12] and 6 percent of public middle- and high-school students surveyed in the midwestern United States [13] consume a vegetarian diet. A poll conducted in 2005 estimated that 6 percent of American youth aged 8 to 18 years do not eat meat, 3 percent do not eat meat, fish, or poultry, and 1 percent do not eat meat, fish, poultry, dairy or eggs [14].

Studies of vegetarian diets are complicated by variations in definitions for the term "vegetarian". Definitions range from whether the individual considers himself or herself as vegetarian ("self-defined" vegetarians), avoids meat only, or lives by the strict definition (never consuming meat, fish, and poultry). As an example, one review of dietary patterns and nutrient intakes of self-defined vegetarians (aged six years and older) found that patterns ranged from those who consumed reduced amounts of red meat but included poultry and fish, to those who excluded all animal foods [15].

Reasons for choosing a vegetarian diet are varied and include potential health benefits and sociopolitical, ecological, and ethical issues related to allocation of resources and animal rights [3,16-20]. Adolescents pose a particular challenge because it may be difficult to determine if an adolescent's choice to become a vegetarian is related to dietary restriction [21,22]. The types and composition of vegetarian diets also are varied and have important implications for the growth and development of children and adolescents.

The nutritional quality of vegetarian diets and strategies to prevent nutritional deficiencies while consuming vegetarian diets are reviewed here. Nutrition requirements, deficiencies, and supplementation of specific nutrients are discussed separately. (See appropriate topic reviews).

**TYPES OF VEGETARIAN DIETS** — Vegetarian diets vary according to the degree of avoidance of foods of animal origin [17]. According to the




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2. **WGO-OMGE practice guideline: celiac disease.** 2005 Feb (republished 2007). NGC:005089  
World Gastroenterology Organisation - Medical Specialty Society. [View all guidelines by the developer\(s\)](#)

3. **Guidelines for osteoporosis in inflammatory bowel disease and coeliac disease.** 2007 Jun. NGC:007149  
British Society of Gastroenterology - Medical Specialty Society. [View all guidelines by the developer\(s\)](#)

4. **AGA Institute medical position statement on the diagnosis and management of celiac disease.** 2006 Dec.  
NGC:005429  
American Gastroenterological Association Institute - Medical Specialty Society. [View all guidelines by the developer\(s\)](#)

5. **Celiac disease (CD). Evidence-based nutrition practice guideline.** 2009. NGC:007358  
American Dietetic Association - Professional Association. [View all guidelines by the developer\(s\)](#)

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## Guideline Title

**Celiac disease (CD). Evidence-based nutrition practice guideline.**

## Guideline Summary

## Bibliographic Source(s)

American Dietetic Association (ADA). Celiac disease (CD). Evidence based nutrition practice guideline. Chicago (IL): American Dietetic Association (ADA); 2009. Various p. [341 references]

Jump To

Guideline Classification

Related Content

- |  |   |
|--|---|
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| - Evidence Supporting the Recommendations                      | - Identifying Information and Availability                                  |
| - Benefits/Harms of Implementing the Guideline Recommendations | - Disclaimer  |
| - Contraindications  |   |

## Recommendations

### Major Recommendations

#### CD Assessment of Factors Affecting Quality of Life

##### **CD: Assess Factors Affecting Quality of Life**

The RD should assess the factors affecting the quality of life of individuals with CD when completing a comprehensive client history, which includes a medical history (e.g., gastrointestinal, immune, neurological and psychological) and social history (e.g., socioeconomic factors, religion, social and medical support and daily stress level). Individuals with CD may not attain the same level of quality of life as the general population, due to social inconveniences of following a gluten-free dietary pattern.

**Strong**, Imperative

##### **Recommendation Strength Rationale**

- Conclusion statements were **Grades I and II**

#### CD Bone Density Screening

##### **CD: Bone Density Screening**

The RD should recommend bone density screening for adults with CD within the first year. Clinical trials and cross-sectional studies have reported reduced bone mineral content and bone mineral density in untreated adults with CD.

**Strong**, Conditional

##### **Recommendation Strength Rationale**

- Conclusion statement was **Grade I**

# National Guideline Clearinghouse Guideline Comparison

## Guideline Comparison

<b>Guideline Title</b>	WGO-OMGE practice guideline: celiac disease.	AGA Institute medical position statement on the diagnosis and management of celiac disease.	Celiac disease (CD). Evidence-based nutrition practice guideline.
<b>Date Released</b>	2005 Feb (republished 2007)	2006 Dec	2009
<b>Guideline Developer(s)</b>	World Gastroenterology Organisation - Medical Specialty Society	American Gastroenterological Association Institute - Medical Specialty Society	American Dietetic Association - Professional Association
<b>Intended Users</b>	Dietitians Health Care Providers Nurses Physician Assistants Physicians	Dietitians Physicians	Advanced Practice Nurses Allied Health Personnel Dietitians Nurses Pharmacists Physician Assistants Physicians
<b>Methods Used to Collect/Select the Evidence</b>	Hand-searches of Published Literature (Primary Sources) Searches of Electronic Databases	Searches of Electronic Databases	Hand-searches of Published Literature (Primary Sources) Searches of Electronic Databases
<b>Methods Used to Analyze the Evidence</b>	Review Review of Published Meta-Analyses	Review	Systematic Review with Evidence Tables
<b>Major Recommendations</b>	<a href="#">View Major Recommendations</a>	<a href="#">View Major Recommendations</a>	<a href="#">View Major Recommendations</a>
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Limit to **Practice Guideline** under Type of Article

The screenshot shows the PubMed search interface. The search term "celiac disease" is entered in the search bar. Below the search bar, there are tabs for "Limits", "Preview/Index", "History", "Clipboard", and "Details". The "Limits" tab is active, and the text "Limit your search by any of the following criteria." is displayed. Under the "Type of Article" section, the "Practice Guideline" checkbox is checked with a red 'X' over it. Under the "Ages" section, the "All Child: 0-18 years" checkbox is also checked with a red 'X' over it. Other options include "Clinical Trial", "Editorial", "Letter", "Meta-Analysis", "Randomized Controlled Trial", "Review", "All Infant: birth-23 months", "All Adult: 19+ years", "Newborn: birth-1 month", "Infant: 1-23 months", "Preschool Child: 2-5 years", and "Child: 6-12 years".

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- Randomized Controlled Trial
- Review

**Ages**

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- All Adult: 19+ years
- Newborn: birth-1 month
- Infant: 1-23 months
- Preschool Child: 2-5 years
- Child: 6-12 years

# PubMed Results for “Celiac Disease” limited to “Practice Guideline”

[Federation of International Societies of Pediatric Gastroenterology, Hepatology, and Nutrition consensus report on celiac disease.](#)

Fasano A, Araya M, Bhatnagar S, Cameron D, Catassi C, Dirks M, Mearin ML, Ortigosa L, Phillips A; Celiac Disease Working Group, FISPGHAN.

J Pediatr Gastroenterol Nutr. 2008 Aug;47(2):214-9. No abstract available.

PMID: 18664878 [PubMed - indexed for MEDLINE]

[Related citations](#)

[AGA Institute Medical Position Statement on the Diagnosis and Management of Celiac Disease.](#)

AGA Institute.

Gastroenterology. 2006 Dec;131(6):1977-80. No abstract available.

PMID: 17087935 [PubMed - indexed for MEDLINE] **Free PMC Article**

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[Guideline for the diagnosis and treatment of celiac disease in children: recommendations of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition.](#)

Hill ID, Dirks MH, Liptak GS, Colletti RB, Fasano A, Guandalini S, Hoffenberg EJ, Horvath K, Murray JA, Pivor M, Seidman EG; North American Society for Pediatric Gastroenterology, Hepatology and Nutrition.

J Pediatr Gastroenterol Nutr. 2005 Jan;40(1):1-19.

PMID: 15625418 [PubMed - indexed for MEDLINE]

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# Searching Google for Guidelines



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File Format: PDF/Adobe Acrobat - [Quick View](#)

Diagnosis and Treatment of. **Celiac Disease** in **Children**. Clinical Practice **Guideline** Summary.

PURPOSE: This clinical practice **guideline** summary was developed ...

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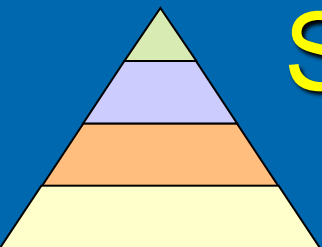
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American Dietetic Association (ADA). **Celiac disease** (CD). Evidence-based nutrition practice **guideline**. Evidence based nutrition practice **guideline**. ...

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# ADA Evidence-Based Nutrition Practice Guidelines

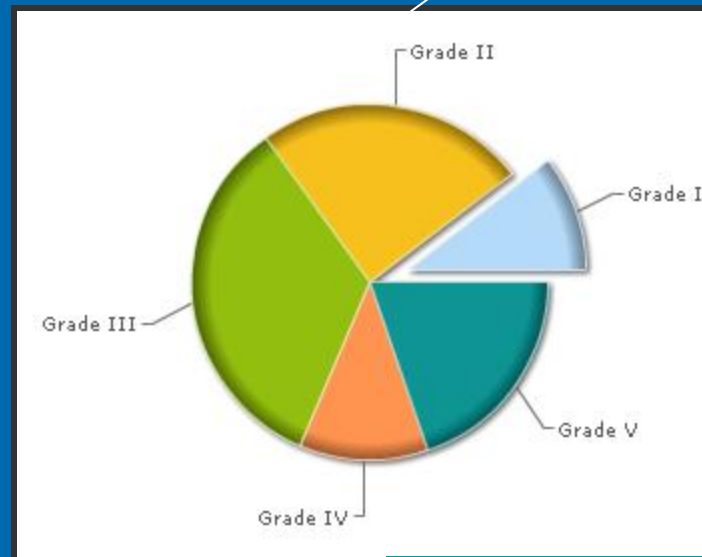
ADA Evidence-Based Nutrition Practice Guidelines	Date Published	Presentations	Toolkits	Guideline Tutorials	Educator Modules
<a href="#">Adult Weight Management (AWM)</a>	May 2006	<a href="#">AWM PPT</a>	<a href="#">AWM Toolkit</a>	--	
<a href="#">Celiac Disease (CD)</a>	May 2009	<a href="#">CD PPT</a>	2011	<a href="#">CD Brief</a>	<a href="#">CD Ed. Module</a>
<a href="#">Chronic Kidney Disease (CKD)</a>	July 2010	<a href="#">CKD PPT</a>	2012	--	--
<a href="#">Chronic Obstructive Pulmonary Disease (COPD)</a>	Oct 2008	<a href="#">COPD PPT</a>	2011	--	--
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<a href="#">Spinal Cord Injury (SCI)</a>	June 2009	<a href="#">SCI PPT</a>	2011	--	<a href="#">SCI Ed. Module</a>
<a href="#">Unintended Weight Loss in Older Adults (UWL)</a>	Oct 2009	<a href="#">UWL PPT</a>	2011	<a href="#">UWL Brief</a>	--

# Evidence Analysis Library Diseases and Conditions

## Pediatric Overweight: Grade Chart

### Diseases & Conditions

- Adult Weight Management
- Aging
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- Nutrition Care in Bariatric Surgery
- Breastfeeding
- Celiac Disease
- Chronic Kidney Disease (CKD)
- Chronic Obstructive Pulmonary Disease
- Critical Illness
- Diabetes 1 and 2
- Disorders of Lipid Metabolism
- Gestational Diabetes
- Heart Failure
- HIV/AIDS
- Hydration
- Hypertension
- Oncology
- Pediatric Overweight**
- Spinal Cord Injury
- Unintended Weight Loss



## Questions, Evidence Summaries, Bibliography

### Evidence Analysis Questions:

- What is the evidence to support the Food Guide Pyramid as an approach to limiting calorie/food intake in children?
- What is the evidence to support using the Traffic Light Diet to limiting calorie and food intake in children?

### Bibliography

- [Epstein LH, Paluch RA, and Raynor HA. Sex Differences in Obese Children and Siblings in Family-based Obesity Treatment. Obesity Research 2001;9:746-753](#)
- [Epstein LH, Paluch RA, Gordy CC, Dorn J. Decreasing sedentary behaviors in treating pediatric obesity. Arch Pediatr Adolesc Med 2000; 154 \(3\):220-6.](#)
- [Epstein LH, Paluch RA, Gordy CC, Saelens BE, Ernst MM. Problem solving in the treatment of childhood obesity. J Consult Clin Psychol 2000;68:717-21.](#)

# Evidence Summary

*reduce Pediatric Overweight > Other diets: Traffic Light and Food Pyramid*

## The Traffic Light Diet and Treating Childhood Overweight

The Traffic Light Diet (sometimes called the Stop Light Diet) was developed by Leonard H. Epstein and colleagues for use in their family-based childhood overweight research. This group of scholars has been responsible for a large portion of the best research on childhood overweight for over two decades. Perhaps because of the ground-breaking nature of their research, the Traffic Light Diet has become broadly recognized and in some cases copied.

Epstein and colleagues describe their Traffic Light Diet as part of a larger core "package" of interventions that generally includes family components and interaction with a therapist. Typically, however, the core of their intervention program is used for all interventions, while other variables are manipulated. While this approach of holding the diet intervention constant makes for good research on the effects of other factors on childhood overweight, it presents a problem when trying to isolate the independent effects of the specific dietary intervention on weight loss.

### Traffic Light Diet Description

The goal of the diet is to provide the most nutrition with the least number of calories. At a minimum, Epstein's Traffic Light Diet has the following characteristics:

- Foods are divided into five categories:
  - Fruits and vegetables
  - Grains
  - Milk and dairy
  - Protein
  - Other.
- Foods in each category are color-coded according to caloric density per average serving:
  - Green Foods: Foods containing <20 calories per average serving
  - Yellow Foods: Staples of the diet that provide most of the nutrition

### What is the evidence to support using the Traffic Light Diet to limiting calorie and food intake in children?

## Conclusion

#### Conclusion

The Traffic Light Diet is an effective component of a clinically supervised, multi-component childhood weight-management intervention program.

#### Grade I

#### Related Topics

Family-based Counseling to Reduce Childhood Overweight

Dietary counseling to Reduce Childhood Overweight

#### View Conclusion Statement

What is the evidence to support using the Traffic Light Diet to limiting calorie and food intake in children?

Quality Rating Summary

Bibliography

# Pediatric Weight Management Nutrition Practice Guideline

[Evidence Based Guidelines](#) > [Guideline List](#) > [Pediatric Weight Management Guideline](#) > [Major Recommendations](#)

## View Conclusion Statement

- Are low-glycemic diets effective in treating obesity in children (age 6-12) and adolescents?
- Do low-glycemic meals increase satiety in children and adolescents compared to higher glycemic meals?

## Pediatric Weight Management

- Executive Summary of Recommendations
- Introduction
- Major Recommendations
- Algorithms
- Appendices
- Background Information
- References

## Recommendations Summary

### Pediatric Weight Management (PWM) Reduced Glycemic Load Diet

[Click here](#) to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the [Supporting Evidence Section](#) below.

#### Recommendation(s)

##### PWM: Reduced Glycemic Load Diet - Children Six to 12 Years

If an ad libitum reduced glycemic load diet is selected for use in **children (ages six to 12)**, then this diet could be used to produce modest short-term improvement in weight status. Limited research shows that an ad libitum reduced glycemic load diet results in short-term improvement in weight status in this age group.

**Rating: Weak**  
Conditional

##### PWM: Reduced Glycemic Load Diet - Adolescents

If an ad libitum reduced glycemic load diet is selected for use in **adolescents (ages 13 to 18)**, then this diet could be used to produce modest short-term and longer-term improvement in weight status and body composition. Limited research shows that an ad libitum reduced glycemic load diet results in short-term improvement in weight status and body composition in this age group. One study shows weight status improvement at one year.

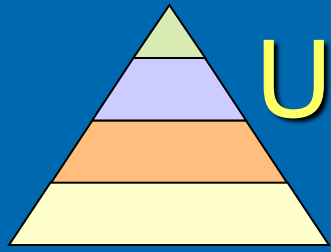
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- Revised May 2011
- **Steps** in the Evidence Analysis Process
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  - ◆ Step 2: gather and classify evidence
  - ◆ Step 3: critically appraise each article
  - ◆ Step 4: summarize evidence
  - ◆ Step 5: write and grade the conclusion statement





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SUMSearch 2

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# TRIP Database

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- Finds evidence based resources
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breastfeeding premature infants

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1. Effect of pre- and postdischarge interventions on breastfeeding outcomes and weight gain among premature infants

DARE. 2010

Developing World? CPD/CME Preview Conclusion Related TILT

2. Management of breastfeeding for pre-term infants. [Singapore Ministry of Health]

info@guidelines.gov (NGC) 2011

Developing World? CPD/CME Preview Conclusion Related TILT

3. Safe discharge of the late preterm infant

Canadian Paediatric Society 2010

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4. Multinutrient fortification of human breast milk for preterm infants following hospital discharge

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5. Breastfeeding in children?s wards and departments. Guidance for good practice

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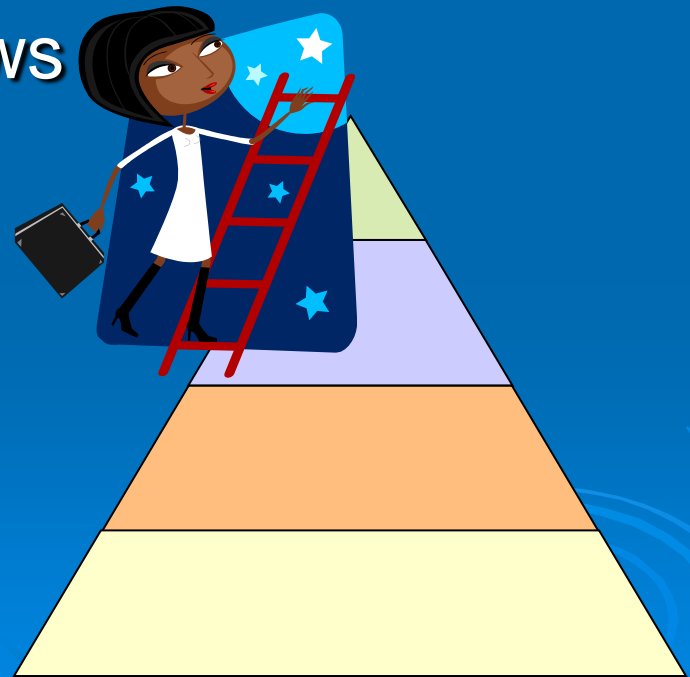
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# Systematic review vs Meta-analysis

- **Systematic review:**

- ◆ a literature review of RCTs focused on a single question which tries to identify, appraise, select and synthesize all high quality research evidence relevant to that question.
- ◆ Uses explicit methods to identify, select and critically evaluate relevant research.

- **Meta-analysis:**

- ◆ a systematic review combining results of several studies using quantitative statistics.

# Cochrane Database of Systematic Reviews

- Widely regarded as the “gold standard” of evidence-based information
- Extensive systematic reviews and complex synthesis
- Very focused, specific questions
- Includes full-text reviews and protocols
- Cochrane Abstracts indexed in *PubMed* and *CINAHL*



BROWSE

Cochrane Reviews: [By Topic](#) | [New Reviews](#) | [Updated Reviews](#) | [A-Z](#) | [By Review Group](#)  
Other Resources: [Other Reviews](#) | [Clinical Trials](#) | [Methods Studies](#) | [Technology Assessments](#) | [Economic Evaluations](#)

SEARCH

phenylketonuria diet  
[Advanced Search](#) | [MESH Search](#) | [Search](#)

## Search Results

Show Results in:  
**Cochrane Reviews [5]**

[Other Reviews \[0\]](#) | [Clinical Trials \[46\]](#) | [Methods Studies \[0\]](#) | [Technology Assessments \[0\]](#) | [Economic Evaluations \[1\]](#) | [Cochrane Groups \[0\]](#)

There are **5** results out of **6641** records for: "phenylketonuria diet in Title, Abstract or Keywords in Cochrane Database of Systematic Reviews"

View: 1-5

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Record Information

Issue: [Current](#) | [All](#)    Restrict to: [Reviews](#) | [Protocols](#)    Sort by:

- [Dietary interventions for phenylketonuria](#)  
Vanessa J Poustie, Joanne Wildgoose  
January 2010  
[Review](#)
- [Tyrosine supplementation for phenylketonuria](#)  
Diana Webster, Joanne Wildgoose  
August 2010  
[Review](#)
- [Sapropterin dihydrochloride for phenylketonuria](#)  
Usha Rani Somaraju, Marcus Merrin  
June 2010  
[Review](#)
- [Protein substitute for children and adults with phenylketonuria](#)  
Sarah HL Yi, Rani H Singh  
May 2011  
[New search](#) [Review](#)
- [Carnitine supplementation for inborn errors of metabolism](#)  
Mona Nasser, Hoda Javaheri, Zbys Fedorowicz, Zaman Noorani  
October 2010  
[Review](#)





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SEARCH

Enter search term  Title, Abstract or Keyword   
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**[Intervention Review]**  
**Dietary interventions for phenylketonuria**

- PDF
- [Summary](#) (56 K)
- [Standard](#) (246 K)
- [Full](#) (369 K)

- [Abstract](#)
- [Plain language summary](#)
- Quick links*
- [What's new](#)
- The review*
- [Background](#)
- [Objectives](#)
- [Methods](#)
- [Results](#)
- [Discussion](#)
- [Authors' conclusions](#)
- [Acknowledgements](#)
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[Tables](#)

**[Intervention Review]**  
**Dietary interventions for phenylketonuria**

Vanessa J Poustie<sup>1</sup>, Joanne Wildgoose<sup>2</sup>

<sup>1</sup>Institute of Child Health, University of Liverpool, Alder Hey Children's NHS Foundation Trust, Liverpool, UK. <sup>2</sup>Physio Corridor, Level 1, Bradford Royal Infirmary, Bradford, UK

Contact address: Vanessa J Poustie, Institute of Child Health, University of Liverpool, Alder Hey Children's NHS Foundation Trust, Eaton Road, Liverpool, Merseyside, L12 2AP, UK. [v.poustie@liverpool.ac.uk](mailto:v.poustie@liverpool.ac.uk)

**Editorial group:** [Cochrane Cystic Fibrosis and Genetic Disorders Group](#).

**Publication status and date:** [Published](#)

**Review content assessed as:** [High](#)

**Citation:** Poustie VJ, Wildgoose J

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**Abstract**

**Background**

Phenylketonuria is an inherited metabolic disorder that is highly restrictive and can be difficult to address in this review.

**Objectives**

To assess the effects of a low-phenylalanine diet on neuro-psychological outcomes and mortality, growth, nutritional status, eating behaviour and quality of life.

**Authors' conclusions**

The results of non-randomised studies have concluded that a low-phenylalanine diet is effective in reducing blood phenylalanine levels and improving intelligence quotient and neuropsychological outcomes. We were unable to find any randomised controlled studies that have assessed the effect of a low-phenylalanine diet versus no diet from diagnosis. In view of evidence from non-randomised studies, such a study would be unethical and it is recommended that low-phenylalanine diet should be commenced at the time of diagnosis. There is uncertainty about the precise level of phenylalanine restriction and when, if ever, the diet should be relaxed. This should be addressed by randomised controlled studies.

# Finding Systematic Reviews and Meta-Analyses in *PubMed*

- Use **Clinical Queries** Section: Systematic Reviews

## Find Systematic Reviews

For your topic(s) of interest, this search finds citations for systematic reviews, meta-analyses, trials, evidence-based medicine, consensus development conferences, and guidelines.

For more information, see [Help](#). See also [related sources](#) for systematic review searching.

Search **infant formula probiotics**

Go

- **Limit** to Type of Article: Meta-Analysis

Type of Article CLEAR

<input type="checkbox"/>	Clinical Trial
<input type="checkbox"/>	Editorial
<input type="checkbox"/>	Letter
<input checked="" type="checkbox"/>	Meta-Analysis
<input type="checkbox"/>	Practice Guideline
<input type="checkbox"/>	Randomized Controlled Trial
<input type="checkbox"/>	Review

# PubMed Clinical Queries

Strategy #2: Clinical Queries – Link on Advanced Search or Home page

Search **infant formula probiotics**

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use [PubMed direct](#)

## Clinical Study Categories

Category:

Scope:

Results: 5 of 37

- RCTs found in this column**
- Alpha-lactalbumin-enriched and probiotic-supplemented infant formula in infants with colic: growth and gastrointestinal tolerance. [Eur J Clin Nutr. 2011]
- Effects of probiotic and prebiotic on gastrointestinal motility in newborns. [J Physiol Pharmacol. 2009]
- [A multicentric study of a lactose free formula supplemented with *Saccharomyces boulardii* in children with acute diarrhea]. [Arch Pediatr. 2010]
- Effect of a new synbiotic mixture on atopic dermatitis in infants: a randomized-controlled trial. [Clin Exp Allergy. 2010]

See all (37)

## Systematic Reviews

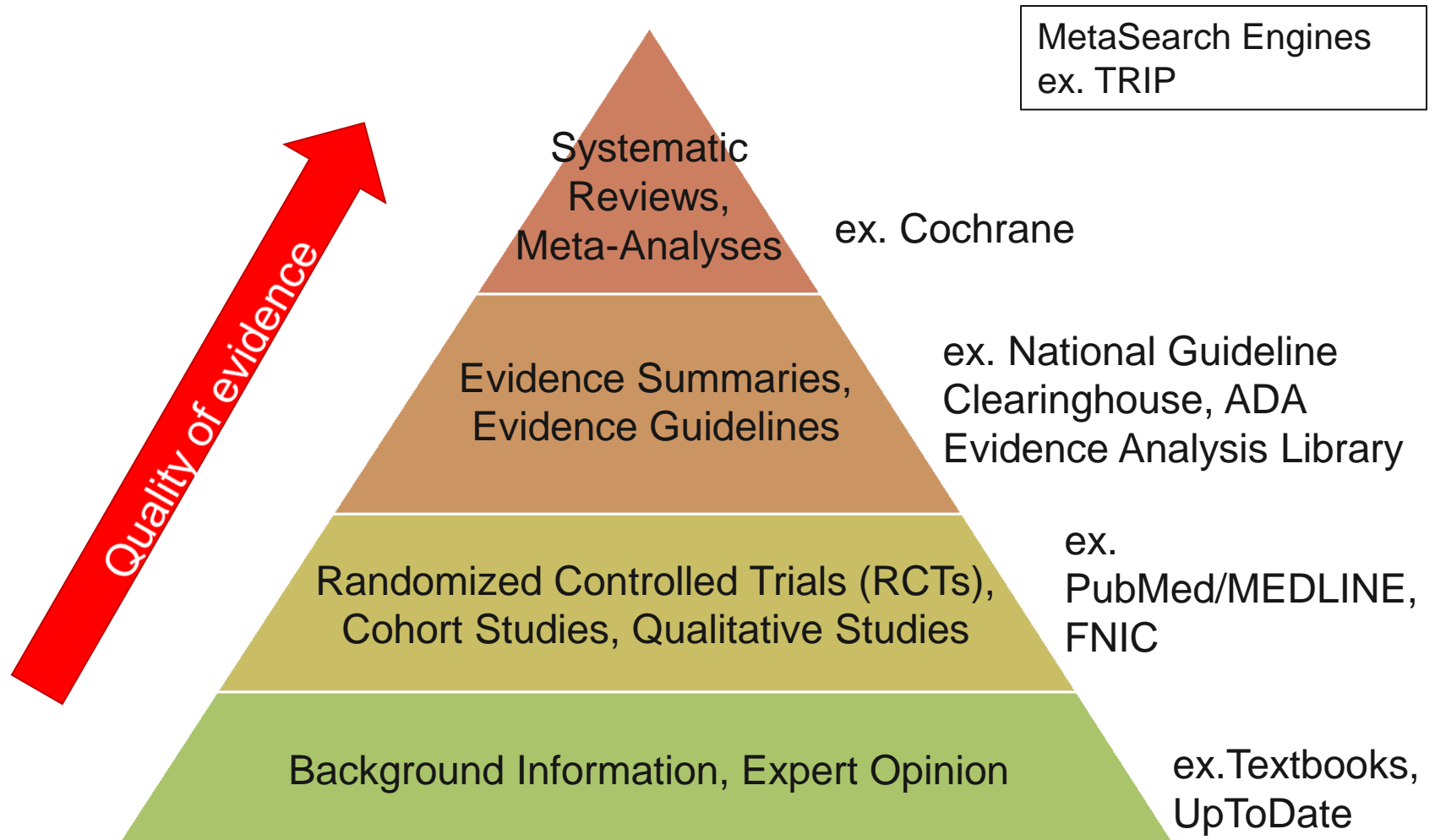


Results: 3 of 3

- Supplementation of infant formula with probiotics and/or prebiotics: a systematic review and comment by the ESPGHAN committee on nutrition. [J Pediatr Gastroenterol Nutr. 2011]
- The effect of *Bifidobacterium lactis* on the growth of infants: a pooled analysis of randomized controlled studies. [Ann Nutr Metab. 2009]
- Prebiotic supplementation in full-term neonates: a systematic review of randomized controlled trials. [Arch Pediatr Adolesc Med. 2009]
- Filter citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines. See [related sources](#).

See all (3)

# Searching for Evidence Pyramid



# Nutrition Websites

- American Dietetic Association [eatright.org](http://eatright.org)
- Assuring Pediatric Nutrition Care in the Community [depts.washington.edu/nutrpeds](http://depts.washington.edu/nutrpeds)
- Dietary Supplements Labels Database [dietarysupplements.nlm.nih.gov](http://dietarysupplements.nlm.nih.gov)
- Food and Nutrition Information Center [nal.usda.gov/fnic](http://nal.usda.gov/fnic)
- Food and Nutrition Service [fns.usda.gov/fns](http://fns.usda.gov/fns)
- Micromedex CareNotes® (\$) great for diet plans

# American Dietetic Association

## *eatright.org*

## Position Papers

### Position Papers: A-Z

- Addressing World Hunger, Malnutrition and Food Insecurity
- Agricultural and Food Biotechnology \*
- Benchmarks for Nutrition Programs in Child Care Settings
- Child and Adolescent Nutrition Assistance Programs
- Dietary Fatty Acids — Position of the American Dietetic Association and Dietitians of Canada
- Ethical and Legal Issues in Nutrition, Hydration and Feeding
- Food and Nutrition Misinformation
- Food and Nutrition Professionals Can Implement Practices to Conserve Natural Resources and Support Ecological Sustainability
- Food and Nutrition Programs for Community-Residing Older Adults — Position of the American Dietetic Association, the American Society for Nutrition, and the Society for Nutrition Education
- Food and Water Safety
- Food Insecurity and Hunger in the United States
- Functional Foods
- Health Implications of Dietary Fiber
- Individual-, Family-, School- and Community-Based Interventions for Pediatric Overweight
- Integration of Medical Nutrition Therapy and Pharmacotherapy
- Liberalization of the Diet Prescription Improves Quality of Life for Older Adults in Long-Term Care
- Local Support for Nutrition Integrity in Schools
- Nutrient Supplementation
- Nutrition Across the Spectrum of Aging
- Nutrition and Athletic Performance — Position of the American Dietetic Association, Dietitians of Canada and the American College of Sports Medicine
- Nutrition and Lifestyle for a Healthy Pregnancy Outcome
- Nutrition Guidance for Healthy Children Aged 2 to 11 Years
- Nutrition Intervention in the Care of Persons with Human Immunodeficiency Virus Infection
- Nutrition Intervention in the Treatment of Anorexia Nervosa, Bulimia Nervosa and Other Eating Disorders
- Nutrition Services: An Essential Component of Comprehensive School Health Programs — Joint Position of ADA, Society for Nutrition Education and American School Food Service Association
- Obesity, Reproduction and Pregnancy Outcomes
- Oral Health and Nutrition
- Promoting and Supporting Breastfeeding

#### New and Updated Positions

- Integration of Medical Nutrition Therapy and Pharmacotherapy
- Developmental Disabilities and Special Health Care Needs
- Food and Nutrition Programs for Community-Residing Older Adults — Position of the American Dietetic Association, the American Society for Nutrition, and the Society for Nutrition Education
- Child and Adolescent Nutrition Assistance Programs

#### Position Categories

- [Food Choices](#)
- [Food Supply](#)
- [Life Span](#)
- [Nutrition Management](#)
- [Public Health](#)
- [A-Z Index](#)

## Practice Papers

### Published Practice Papers

Practice reports are often done in the emerging areas of dietetics, areas that might not have sound scientific data, yet. Positions Committee oversees the development of practice papers and welcomes proposals from members.

- Dietary Supplements
- Home Care-Opportunities for Food and Nutrition Professionals
- Nutrient Density: Meeting Nutrient Goals within Calorie Needs
- Systems Approach to Measuring Productivity in Health Care Foodservice Operations

## Search FNIC

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## Browse by Audience

Information for... ▼

## Browse by Subject

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- ▶ Lifecycle Nutrition
- ▶ Diet and Disease
- ▶ Food Composition
- ▶ Weight and Obesity
- ▶ Food Safety
- ▶ Food Labeling
- ▶ Dietary Supplements
- ▶ Nutrition Assistance Programs
- ▶ Surveys, Reports and Research
- ▶ Professional and Career Resources

You are here: [Home](#) / [Resource Lists](#)

 [Printable Page](#)

## Resource Lists



FNIC Resource Lists help nutrition professionals and consumers locate information and materials for specific food and nutrition topics. Compiled by Nutrition Information Specialists, the lists provide resources in a variety of formats including articles, pamphlets, books, audio-visuals, and Web site links.

On This Page ... ▼

### Child Nutrition and Health

- Food and Nutrition Fun
  - for Preschoolers 2009 (PDF|133 KB)
  - for Elementary Age Children 2009 (PDF|116 KB)
- Infant Nutrition and Health Resource List 2009 (PDF|147 KB)
- Toddler Nutrition and Health Resource List 2009 (PDF|139 KB)
- Afterschool Snacks Training Materials
- Childhood Obesity: A Resource List for Educators and Researchers 2010 (PDF|118 KB)
- [Role of Nutrition in Learning and Behavior: A Resource List for Professionals 2008](#) (PDF|218 KB)
- Farm to School and School Gardening: A Resource List for Educators 2010 (PDF|163 KB)

### Ethnic/Cultural

- Cultural and Ethnic Food and Nutrition Education Materials: A Resource List for Educators 2011 (PDF|217 KB)
- Holiday Food and Nutrition Resource List 2010 (PDF|82 KB)
- Native American Nutrition Education Resource List for Educators 2006 (PDF|261 KB)

### Food Allergies

- Food Allergies and Intolerances Resource List for Consumers 2010 (PDF|252 KB)
- Toddler Nutrition and Health Resource List 2009 (PDF|139 KB)

### I Want To...

- [Find Sources of Free or Low-Cost Food and Nutrition Materials](#)
- [Ask a Question](#)
- [Request Library Materials](#)



### Consumer Corner

### See Also

- [SNAP-Ed Connection Recipe Finder](#)
- [WIC Works State Developed Materials](#)
- [Healthy Meals Resource System Education and Training Materials Database](#)

### Media Help

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To view Flash files you must have Macromedia Flash Player installed on your computer.

# Food and Nutrition Information Center [nal.usda.gov/fnic](http://nal.usda.gov/fnic)

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### Browse by Audience

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- Surveys, Reports and Research
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## Dietary Guidance

### Dietary Assessment Tools



Find MyPyramid Tracker and other tools related to dietary assessment, including calorie calculators and the National Cancer Institute's Diet History Questionnaire. Also find a link to the Dietary Assessment Calibration/Validation Register, a registry of validation studies and publications.

### Dietary Guidelines



Includes 2010 Dietary Guidelines for Americans, previous editions of the Dietary Guidelines, background information and international dietary guidance systems.

### Dietary Reference Intakes (DRIs)

Comprehensive listing of reference values used for planning and assessing nutrient intake. Includes information on specific nutrients and history of DRI development.

### Fruits & Veggies - More Matters™ Resources



Links to many resources for the Fruits & Veggies - More Matters Program, a national initiative to increase consumption of fruits and vegetables and promote good health. Includes links geared to children, parents and teachers as well as Spanish resources.

### Food Guide Pyramid - MyPyramid



Includes 2005 MyPyramid (MyPyramid.gov) food guidance system, past Food Guide Pyramid materials, reports, graphics and ethnic/cultural food pyramids from a range of organizations.

### I Want To...

- See MyPyramid.gov
- See Nutrient Recommendations by Age and Gender
- See Previous Dietary Guidelines

### Dietary Guidance

- Dietary Assessment
- Dietary Guidelines
- Dietary Reference Intakes
- Fruits & Veggies—More Matters™ Resources
- Food Guide Pyramid
- Fraud and Nutrition Misinformation
- General Nutrition and Health Information
- Interactive Tools



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### Browse by Audience

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- ▶ Nutrition Assistance Programs
- ▶ Surveys, Reports and Research
- ▶ Professional and Career Resources

# Food Composition

## USDA Nutrient Data Laboratory



### **USDA Nutrient Data Laboratory (NDL)**

*USDA, Agricultural Research Service.*

Home page for NDL, responsible for developing USDA's National Nutrient Database for Standard Reference, the foundation of most food and nutrition databases in the US, used in food policy, research and nutrition monitoring.

- Online searchable database of foods.
- [USDA National Nutrient Database for Standard Reference - Release 21](#)
- Download software to search the SR 21 database on a Window (PC or Handheld Personal Digital Assistant PDA).
- [Reports by Single Nutrients](#)  
Reports are sorted by nutrient content of selected foods in alphabetical order, or in descending order by nutrient content.
- [Frequently Asked Questions](#)
- [Glossary ♦ Acronyms and Documentation Terms](#)
- [Dietary Supplement Ingredient Database \(DSID\)](#)

### **USDA National Nutrient Database for Standard Reference, Release 21 Nutrient Lists -Reports by Single Nutrients**

*USDA, ARS, Nutrient Data Laboratory.*

Reports of selected food items and nutrients, sorted either by food description or in descending order by nutrient content in terms of common household measures. Single nutrients include protein, fat, energy (calories) carbohydrate, fiber, sugar, calcium, iron, magnesium, phosphorus, potassium, sodium, zinc, copper, manganese, selenium, vitamin A, vitamin E, vitamin K, vitamin C, thiamin, riboflavin, niacin, pantothenic acid, vitamin B6, vitamin B12, folate, cholesterol, fatty acids and various phytonutrients and antioxidants.

### **Nutritive Value of Foods, Home and Garden Bulletin No. 72 (HG-72)**

*USDA, ARS, Nutrient Data Laboratory.*

Contains data on over 1,274 foods expressed in terms of common household units. The 19 nutrients in the table are water; calories; protein; total fat; saturated, monounsaturated, and polyunsaturated fatty acids; cholesterol; total dietary fiber;

## Food Composition

### ● **USDA Nutrient Data Laboratory**

#### **Agricultural Research Service (ARS) Food Surveys Research Group**

#### ▶ **Individual Macronutrients, Phytonutrients, Vitamins & Minerals**

#### ○ **International Food Composition Resources**

#### ○ **Food FYI**

#### ○ **Additional Resources**

## Media Help

To view PDF files you must have [Adobe Acrobat Reader](#) installed on your computer.

To view Flash files you must have [Macromedia Flash Player](#) installed on your computer.

## Search the USDA National Nutrient Database for Standard Reference

Enter up to 5 keywords which best describe the food item. To further limit the search, select a specific Food Group.

Certain codes can also be searched: NDB number (the USDA 5-digit Nutrient Databank identifier); the USDA Food Code (enter the # symbol followed without a space by the URMIS code).

Keyword(s):  [Help](#)

Select Food Group:

To view reports on foods by single nutrients, such as calcium or niacin, go to [Nutrient Lists](#).

# USDA National Nutrient Database for Standard Reference

## Avocados, raw, California

**Refuse:** 33% (Seed and skin)

**Scientific Name:** *Persea americana*

**NDB No:** 09038 (Nutrient values and weights are for edible portion)

Nutrient	Units	Value per 100 grams	Number of Data Points	Std. Error
<b>Proximates</b>				
Water	g	72.33	33	2.170
Energy	kcal	167	0	
Energy	kJ	697	0	
Protein	g	1.96	30	0.158
Total lipid (fat)	g	15.41	31	0.630
Ash	g	1.66	30	0.138
Carbohydrate, by difference	g	8.64	0	
Fiber, total dietary	g	6.8	21	1.014
Sugars, total	g	0.30	11	0.098
Sucrose	g	0.06	9	0.043
Glucose (dextrose)	g	0.08	9	0.035
Fructose	g	0.08	9	0.019
Lactose	g	0.00	9	0.000
Maltose	g	0.00	9	0.000
Galactose	g	0.08	8	0.014
Starch	g	0.11	4	0.000
<b>Minerals</b>				
Calcium, Ca	mg	13	24	0.662
Iron, Fe	mg	0.61	24	0.122
Magnesium, Mg	mg	29	12	1.702
Phosphorus, P	mg	54	12	1.886
Potassium, K	mg	507	24	34.404
Sodium, Na	mg	8	18	1.360



# Nutritive Value of Foods

United States Department of Agriculture

Agricultural Research Service

Home and Garden Bulletin Number 72

Table 9. Nutritive Value of the Edible Part of Food

Food No.	Food Description	Measure of edible portion	Weight (g)	Water (%)	Calories (kcal)	Protein (g)	Total fat (g)	Fatty acids		
								Saturated (g)	Mono-unsaturated (g)	Poly-unsaturated (g)
<b>Fruits and Fruit Juices (continued)</b>										
	Avocados, raw, without skin and seed									
278	California (about 1/5 whole)....	1 oz .....	28	73	50	1	5	0.7	3.2	0.6
279	Florida (about 1/10 whole) .....	1 oz .....	28	80	32	Tr	3	0.5	1.4	0.4
	Bananas, raw									
280	Whole, medium (7" to 7 7/8" long).....	1 banana .....	118	74	109	1	1	0.2	Tr	0.1
281	Sliced .....	1 cup .....	150	74	138	2	1	0.3	0.1	0.1
282	Blackberries, raw .....	1 cup .....	144	86	75	1	1	Tr	0.1	0.3
	Blueberries									
283	Raw .....	1 cup .....	145	85	81	1	1	Tr	0.1	0.2
284	Frozen, sweetened, thawed ....	1 cup .....	230	77	186	1	Tr	Tr	Tr	0.1
	Cantaloupe. See Melons.									
	Carambola (starfruit), raw									
285	Whole (3 5/8" long).....	1 fruit.....	91	91	30	Tr	Tr	Tr	Tr	0.2
286	Sliced .....	1 cup .....	108	91	36	1	Tr	Tr	Tr	0.2
	Cherries									
287	Sour, red, pitted, canned, water pack.....	1 cup .....	244	90	88	2	Tr	0.1	0.1	0.1
288	Sweet, raw, without pits and stems.....	10 cherries.....	68	81	49	1	1	0.1	0.2	0.2
289	Cherry pie filling, canned .....	1/2 of 21-oz can .....	74	71	85	Tr	Tr	Tr	Tr	Tr
290	Cranberries, dried, sweetened....	1/4 cup.....	28	12	92	Tr	Tr	Tr	Tr	0.1
291	Cranberry sauce, sweetened									

You are here: [Home](#) / [Dietary Supplements](#)

## Dietary Supplements

### General Information and Resources [More](#)



Find links to general information about dietary and nutritional supplements from both governmental agencies and non-governmental organizations. Includes resource lists, individual supplement information, and links to resources for assessing supplement use.

### Regulations, Reports and Warnings [More](#)

Includes information on government regulations, labeling requirements, consumer reports and industry regulation information.

### Resources on Individual Macronutrients, Phytonutrients, Vitamins, & Minerals [More](#)

- **Macronutrients** - includes general and specific resources on carbohydrates, proteins, fiber, fats and cholesterol, water, as well as interactive tools.
- **Phytonutrients** - includes general information, government-related sites, and resources on specific phytonutrients such as tea, lycopene, and phytoestrogens.
- **Vitamins and Minerals** - includes general information as well as resources for specific vitamins and minerals.

### Herbal Information [More](#)

### I Want To...

- **See Nutrient Recommendations by Age and Gender**
- **Find Dietary Supplement Fact Sheets**
- **Find Herbal and Dietary Supplement Resource Lists**

### Dietary Supplements

- **General Information and Resources**
- **Regulations, Reports and Warnings**
- **Individual Macronutrients, Phytonutrients, Vitamins & Minerals**
- **Herbal Information**
- **IBIDS**
- **Ergogenic Aids**
- **Alternative Medicine**



Links to **Dietary Supplements Labels Database**  
[dietarysupplements.nlm.nih.gov](http://dietarysupplements.nlm.nih.gov)

**PediaSure Lactose-Free Nutrition Drink-Vanilla**

The label claims have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, cure, or prevent any disease. Consult your healthcare professionals before taking any dietary supplements.

Product Information | **Ingredient Information** | Manufacturer Information

Unit  
Liquid

Supplement Facts [See Ingredient Fact Sheets](#)

Nutrition Facts  
 (Chocolate Maple Nut)  
 Serving Size 1 bar (60g)

Ingredients	Amt Per Serving	Units	%Daily Value
Calories	220		
Calories from Fat	50		
Total Fat	6	g	9%
Saturated Fat	4.5	g	23%
Cholesterol	<5	mg	<2%
Sodium	100	mg	4%
Potassium	120	mg	3%
Total Carbohydrate	34	g	11%
Dietary Fiber	1	g	4%
Sugars	35	g	
Protein	9	g	18%
Vitamin A			25%
Calcium			30%
Vitamin D			20%
Vitamin K			15%
Riboflavin			25%

Ingredients of >6,000 dietary supplements:

- \*uses in humans
- \*adverse effects
- \*mechanisms of action

Fact Sheets by NIH and Other Research Centers

NIH and other research centers have developed Fact Sheets for the following ingredients in this brand:

- [Calcium](#) [ODS-Fact Sheet]
- [Carnitine](#) [ODS-Fact Sheet]
- [Chromium](#) [ODS-Fact Sheet]
- [Folic Acid \(Folate\)](#) [ODS-Fact Sheet]
- [Iron](#) [ODS-Fact Sheet]
- [Magnesium](#) [ODS-Fact Sheet]
- [Selenium](#) [ODS-Fact Sheet]
- [Vitamin A](#) [ODS-Fact Sheet]
- [Vitamin B12](#) [ODS-Fact Sheet]
- [Vitamin B6](#) [ODS-Fact Sheet]
- [Vitamin D](#) [ODS-Fact Sheet]
- [Vitamin E](#) [ODS-Fact Sheet]
- [Vitamin K](#) [ODS-Fact Sheet]
- [Zinc](#) [ODS-Fact Sheet]

More information about the uses, adverse effects, and mechanism of action of each active ingredient in this brand can be found by clicking that active ingredient on the "[Ingredient Information](#)" page.

# Dietary Supplements Labels Database

*brands, ingredients, and references*

s

[Home](#) | [About](#) | [FAQ](#) | [Glossary](#) | [Related Resources](#) | [Contact](#) | [Help](#)

## PediaSure Lactose-Free Nutrition Drink-Vanilla

Select ingredient from list below for general information, and links to information about its therapeutic use, adverse effects and mechanisms of action.

Product Information	Ingredient Information	Manufacturer Information	
▼ Active Ingredients	Amount/Unit	Units	▼ Daily Value(%) ▲
<a href="#">Biotin</a>	76.00	mcg	25.0
<a href="#">Calcium</a>	230.00	mg	23.0
<a href="#">Carnitine</a>	4.00	mg	Not Est.
<a href="#">Chloride</a>	240.00	mg	7.0
<a href="#">Choline</a>	71.00	mg	Not Est.
<a href="#">Chromium</a>	7.00	mcg	6.0
<a href="#">Copper</a>	0.24	mg	12.0
<a href="#">Folic Acid (Folate)</a>	88.00	mcg	22.0
<a href="#">Inositol</a>	19.00	mg	Not Est.
<a href="#">Iodine</a>	23.00	mcg	15.0
<a href="#">Iron</a>	3.00	mg	19.0
<a href="#">Magnesium</a>	47.00	mg	12.0
<a href="#">Manganese</a>	0.24	mg	12.0
<a href="#">Molybdenum</a>	8.00	mcg	11.0

- Search all USDA
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### Browse by Audience

Information for... ▼

### Browse by Subject

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- ▶ Weight and Obesity
- ▶ Food Safety
- ▶ Food Labeling
- ▶ Dietary Supplements
- ▶ Nutrition Assistance Programs
- ▶ Surveys, Reports and Research
- ▶ Professional and Career Resources

## Databases

### Non-FNIC Databases More ▶

Find on-line searchable databases such as AGRICOLA and PubMed from Federal government agencies, scientific literature and bibliographic databases such as ERIC, databases offered by colleges and universities and more.

### FNIC Databases

FNIC and its special project Web sites, the SNAP-Ed Connection (formerly Food Stamp Nutrition Connection), the Healthy Meals Resource System (HMRS), and WIC Works Resource System (WWRS), maintain databases of nutrition education materials. There is also a small Native American Nutrition Education Database, as well as databases available from the International Bibliographic Information on Dietary Supplements (IBIDS) and the Food Safety Research Information Office (FSRIO).

#### Search Individual Databases

- **WIC Works Education and Training Materials Database**
- **SNAP-Ed Connection Resource Finder Database**
- **Healthy Meals Resource System Education and Training Materials Database**
- **Native American Nutrition Education Database**
- **Food Safety Education and Training Materials Database**
- **Food Safety Research Information Office Research Projects Database**

### I Want To...

- [Ask a Question](#)

### Databases

- [Native American Nutrition Education Database](#)



### Consumer Corner

### See Also

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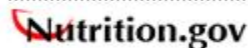
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Providing easy, online access to government information on food and human nutrition for consumers.

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In the News

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[USDA Launches New Food Icon, MyPlate](#)

The federal government's new food group symbol, MyPlate, will replace MyPyramid. It will help consumers think about their food choices by building a healthy plate. [Read the press release.](#)

[USDA Highlights the Launch of \*Let's Move!\* in Indian Country](#)

Part of the First Lady's Let's Move! initiative, Let's Move! in Indian Country will promote healthy eating and physical activity among Native American children.

[Supermarket Lighting May Affect Nutrients](#)

Reach for the produce packages at the front of the store shelf! USDA research shows packaged spinach leaves exposed to more light has higher nutrient levels than those left in the dark.

Spotlights

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**Dietary Guidelines for Americans 2010**



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<a href="#">GESTATIONAL DIABETES DIET</a>	<a href="#">NORMAL GROWTH AND DEVELOPMENT OF TODDLERS</a>	
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# Patient Education

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- **#1 SOURCE** for basic quality consumer/patient information
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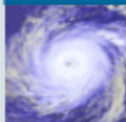
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**MAGAZINE**

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Cystic fibrosis (CF) is an inherited disease of the mucus and sweat glands. It affects mostly your lungs, pancreas, liver, intestines, sinuses and sex organs. CF causes your mucus to be thick and sticky. The mucus clogs the lungs, causing breathing problems and making it easy for bacteria to grow. This can lead to problems such as repeated lung infections and lung damage.

The symptoms and severity of CF vary widely. Some people have serious problems from birth. Others have a milder version of the disease that doesn't show up until they are teens or young adults.

Although there is no cure for CF, treatments have improved greatly in recent years. Until the 1980s, most deaths from CF occurred in children and teenagers. Today, with improved treatments, some people who have CF are living into their forties, fifties, or older.

*NIH: National Heart, Lung, and Blood Institute*

Get Cystic Fibrosis updates by email

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**Start Here**

- [Cystic Fibrosis NIH](#) (National Heart, Lung, and Blood Institute)
- [Cystic Fibrosis Interactive Tutorial](#) (Patient Education Institute)  
Also available in [Spanish](#)

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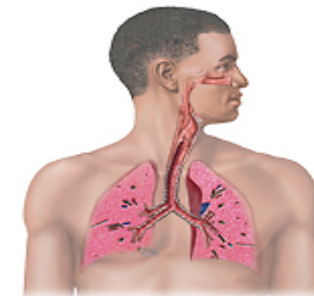
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**MEDICAL ENCYCLOPEDIA**

- [Cystic fibrosis](#)
- [Cystic fibrosis - nutritional considerations](#)
- [Fecal fat](#)
- [How to breathe when you are short of breath](#)
- [Neonatal cystic fibrosis screening](#)
- [Oxygen safety](#)
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- [Lungs and Breathing](#)

**National Institutes of Health**

The primary NIH organization for research on *Cystic Fibrosis* is the

## Latest News

- [Genes Tied to Severity of Cystic Fibrosis Identified](#) (05/23/2011, HealthDay)
- [Everyday Exercise Can Help Kids with Cystic Fibrosis](#) (05/06/2011, HealthDay)

## Diagnosis/Symptoms

- [CF Gene Mutation Testing](#) (American Association for Clinical Chemistry)
- [Cystic Fibrosis \(CF\) Respiratory Screen: Sputum](#) (Nemours Foundation)
- [Sweat Test](#) (American Association for Clinical Chemistry)
- [Trypsin and Chymotrypsin Test](#) (American Association for Clinical Chemistry)
- [Trypsinogen Test](#) (American Association for Clinical Chemistry)

## Treatment

- [How Is Cystic Fibrosis Treated?](#) (National Heart, Lung, and Blood Institute)
- [Therapies for Cystic Fibrosis](#) (Cystic Fibrosis Foundation)

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## Prevention/Screening

- [Cystic Fibrosis: Prenatal Screening and Diagnosis](#) (American College of Obstetricians and Gynecologists)
- [Newborn Screening for Cystic Fibrosis](#) (Cystic Fibrosis Foundation)

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## Nutrition

- [FDA Review of Pancreatic Enzyme Products](#) (Cystic Fibrosis Foundation)
- [Nutrition and Cystic Fibrosis: Changes through Life](#) (Cystic Fibrosis Foundation) - PDF
- [Nutrition for Your Child with Cystic Fibrosis \(Four to Seven Years\)](#) (Cystic Fibrosis Foundation) - PDF
- [Nutrition for Your Infant with Cystic Fibrosis \(Birth to One Year\)](#) (Cystic Fibrosis Foundation) - PDF
- [Nutrition for Your Toddler with Cystic Fibrosis \(One to Three Years\)](#) (Cystic Fibrosis Foundation) - PDF
- [Nutrition: School, Enzymes, and Sports for the Child with Cystic Fibrosis](#) (Cystic Fibrosis Foundation) - PDF
- [Pancreatic Enzyme Replacement in People with Cystic Fibrosis](#) (Cystic Fibrosis Foundation) - PDF
- [Supporting Nutrition: Understanding Tube Feeding](#) (Cystic Fibrosis Foundation) - PDF

# Interactive Tutorial

Introduction

**Cystic Fibrosis**

Causes

Symptoms

Diagnosis

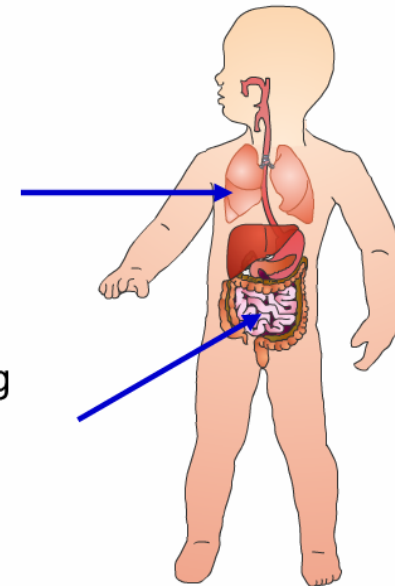
Treatment

Prevention

Facts

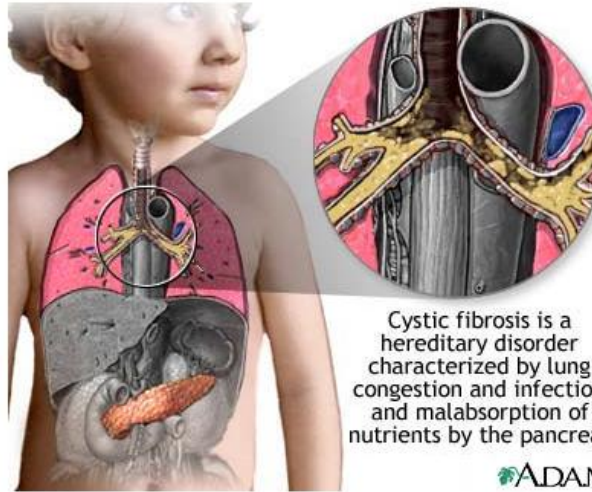
Summary

Mucus in patients with cystic fibrosis is very thick and collects in the intestines and lungs. The result is malnutrition, poor growth, numerous respiratory infections, breathing difficulties, and eventually, permanent lung damage. Lung disease is usually the cause of death in most patients.



# Medical Encyclopedia

## Cystic fibrosis



Cystic fibrosis is a hereditary disorder characterized by lung congestion and infection and malabsorption of nutrients by the pancreas

ADAM.

Cystic fibrosis is the most common cause of chronic lung disease in children and young adults, and the most common fatal hereditary disorder affecting Caucasians in the US.

Update Date: 7/7/2010

# MedlinePlus: Drugs, Supplements & Herbal Information

[nlm.nih.gov/medlineplus/druginformation.html](http://nlm.nih.gov/medlineplus/druginformation.html)

## 100 Herbs and Supplements Monographs in English & Spanish Pomegranate

### How effective is it?

Natural Medicines Comprehensive Database rates effectiveness based on scientific evidence according to the following scale: Effective, Likely Effective, Possibly Effective, Possibly Ineffective, Likely Ineffective, Ineffective, and Insufficient Evidence to Rate.

The effectiveness ratings for **POMEGRANATE** are as follows:

#### Possibly ineffective for...

- **Chronic lung disease (chronic obstructive pulmonary disease, COPD)**. Drinking pomegranate juice does not seem to improve symptoms or breathing in people with COPD.

#### Insufficient evidence to rate effectiveness for...

- **High cholesterol (hyperlipidemia)**. Some studies show pomegranate seems to lower total cholesterol and "bad" (LDL) cholesterol. But other studies find no benefit.
- **High blood pressure (hypertension)**. One research study suggests that drinking 50 mL of pomegranate juice daily for up to 1 year can lower systolic blood pressure (the top number) by 5% to 21%. But drinking pomegranate juice doesn't seem to affect diastolic pressure (the lower number). However, other research shows no effect on blood pressure when study subjects drink 240 mL of pomegranate juice daily for 3 months. Additional research is needed to sort this out.
- **"Hardening of the arteries" (atherosclerosis)**. Preliminary evidence suggests drinking pomegranate juice might help to keep the arteries in the neck (carotid arteries) clear of the build-up of fatty deposits.
- **Gum disease**. There is some evidence that painting the gum with pomegranate fruit peel extract in combination with gotu kola extract might improve gum disease.
- **Prostate cancer**. Early research findings suggest that drinking pomegranate juice might slow the progress of prostate cancer.
- **Heart disease**. Some preliminary research shows that drinking pomegranate juice might improve blood flow to the heart. But drinking pomegranate juice does not seem to prevent narrowing of blood vessels in the heart (stenosis). Also, there isn't enough information to know if drinking pomegranate juice helps to prevent heart disease-related events such as heart attack.
- **Intestinal worm infestations**.
- **Obesity and weight loss**.
- **Fungal mouth infections**.
- **Diarrhea**.
- **Dysentery**.
- **Sore throat**.
- **Hemorrhoids**.

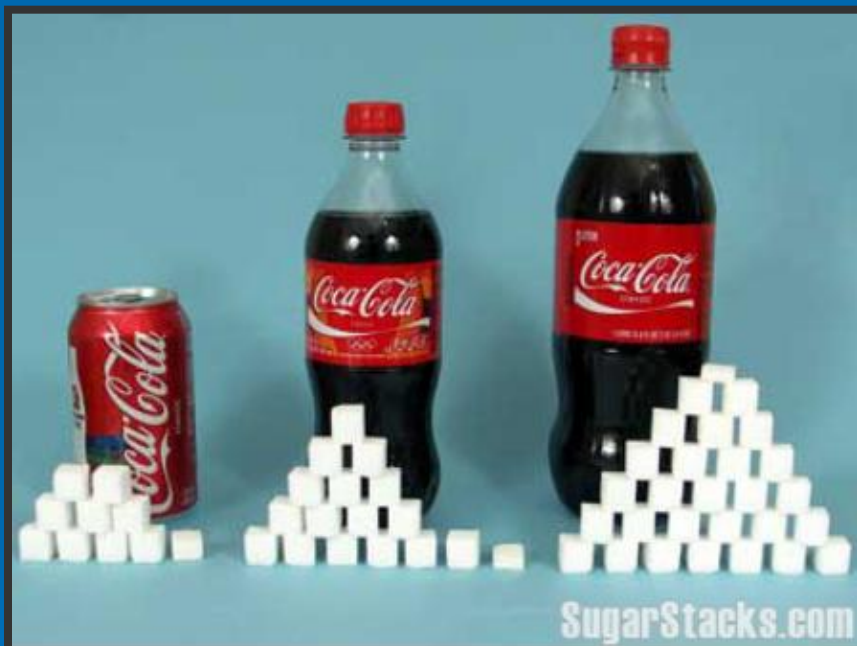


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14. Aviram M. Polyphenolic flavonoids content and anti-oxidant activities of various juices: a comparative study. Proceedings of the 11th Biennial Meeting of the Society for Free Radical Research International, 2002 Feb:1-9.

adapted from *Natural Medicines Comprehensive Database*

# Sugar Stacks

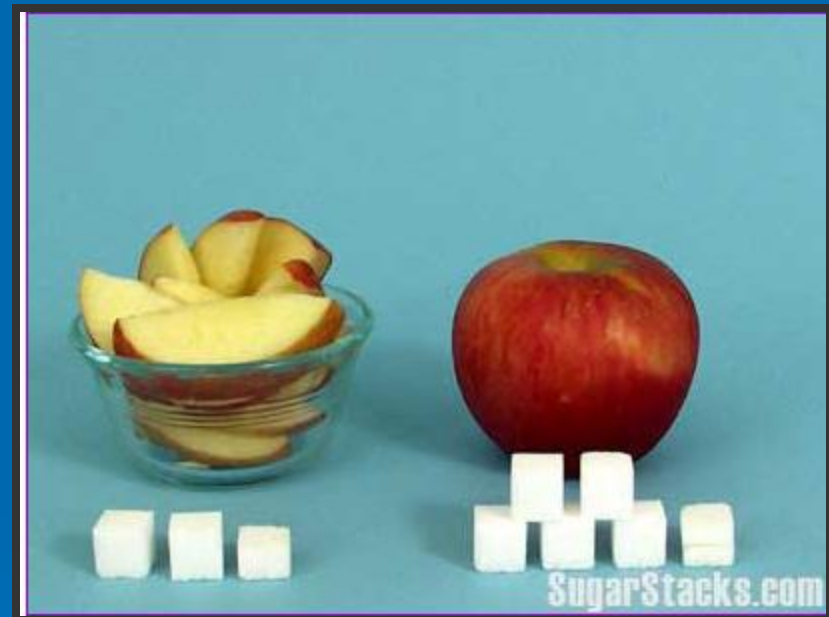


39g

65g

108g

Yikes! That's a lot of sugar!



[sugarstacks.com](http://sugarstacks.com)

# Cross-Cultural Healthcare Resources

- **EthnoMed** [ethnomed.org](http://ethnomed.org)  
Cultural beliefs and medical issues pertinent to healthcare of ethnic groups in the Seattle area
- **Culture Clues** [depts.washington.edu/pfes/CultureClues.htm](http://depts.washington.edu/pfes/CultureClues.htm)  
Tip sheets for increasing awareness about preferences from diverse cultures
- **SPIRAL** [spiral.tufts.edu](http://spiral.tufts.edu)  
Patient information resources in Asian languages
- **Health Information in Multiple Languages**  
[www.nlm.nih.gov/medlineplus/languages/languages.html](http://www.nlm.nih.gov/medlineplus/languages/languages.html)
- **Consumer Health Information in Many Languages**  
[nmlm.gov/outreach/consumer/multi.html](http://nmlm.gov/outreach/consumer/multi.html)



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## FEATURE: MAY/JUNE 2011

### VIDEOS: THE STIGMA OF MENTAL ILLNESS

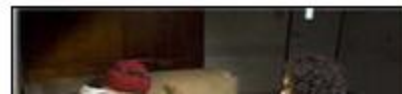
#### **Saving Face: Recognizing and Managing the Stigma of Mental Illness in Asian Americans**

This 68 minute training video was authored in 2008 by Elizabeth J. Kramer, Sc.M., New York University; and Francis G. Lu, M.D., University of California, Davis and is intended to demonstrate a culturally competent approach to addressing the stigma of mental illness in Asian-American patients. The video is comprised of three interviews of Asian-American simulated patients, from three major sub-ethnic groups of Asian Americans living in the United States, and ethnically matched psychiatrists in therapy sessions. The objectives of these scenarios are to demonstrate how Asian-American patients present their stigma, and how skilled clinicians manage it. View [video](#), download [facilitator's guide](#) and link to [DVD order form](#).



#### **iNo Soy Loco! / I'm Not Crazy! Understanding the Stigma of Mental Illness in Latinos**

This 46 minute training video was authored in 2009 by Elizabeth J. Kramer, Sc.M., New York University; Peter Guarnaccia, Ph.D., Rutgers University; Cynthia Resendez, M.D.;



#### Welcome To EthnoMed

EthnoMed contains information about cultural beliefs, medical issues and related topics pertinent to the health care of immigrants to Seattle or the US, many of whom are refugees fleeing war-torn parts of the world.

#### EthnoMed Accepts Award

EthnoMed was among 3 recipients of The National Council on Interpreting in Health Care (NCIHC) 2011 Language Access Champions Award at their Annual Membership meeting in New Orleans May 19th. This award honors work that improves the lives of all people through the promotion of language access in healthcare. EthnoMed is honored to receive this award and acknowledges the important work of NCIHC. Visit the [NCIHC](#) website for more info.

#### What's New On EthnoMed

N-648 Medical Certification for CIS Disability Waivers - Revised

Most Vietnamese women breastfeed their infants for the first 6-12 months (both in the US and in Vietnam). This can be difficult when the mother works outside the home and such women may stop breastfeeding sooner than they would in Vietnam. Children are often delayed in weaning from the nursing bottle to the cup until 2 years of age. This may result in an iron deficient diet.

## Child Rearing Practices

"Children sit where their parent's place them." This traditional Vietnamese expression characterizes the Confucian based parent-child relationship. Though parents in Seattle have adopted various degrees of western parenting styles, they take their responsibility to teach their children very seriously. The first priority is to teach filial obedience and respect, the second is to provide as much educational success as possible. In many homes, homework must be completed when arriving home from school, and television is only allowed on the weekends. If the parents don't feel the teacher is providing enough homework, they may make homework assignments themselves, or write questions for the child to answer.

In Vietnam, corporal punishment was the norm. In the US, parents are aware that this is not commonly accepted and they have had to change methods of discipline. Some parents state their children are harder to control here than they would have been in Vietnam and are frustrated that their children seem to lack respect for their elders.

## ADOLESCENCE, ADULTHOOD, AND OLD AGE

Refugee families have had to deal with many issues in adapting to their new home. In Vietnam, elders were the leaders in families, had the strongest influence in decision making, and were respected and sought after for advice. Younger family members were to be obedient and respectful. Also, elders held property rights of the family, and could retire once their children could support the family.

When these elders were transported to the US, they lost their property and much of their material goods. Many elders who want to work outside the home are unable to because of their lack of training for available work, their age, and lack of English skills. They can become very socially and culturally isolated while their younger family members become more Americanized. This can create a fundamental role reversal: the elders no longer have power, money or land, and become financially dependent on their children. Because they are culturally isolated, they are no longer sought after for advice. This creates much tension in families where elders feel ignored and disrespected, wh

# NUTRITION CLINICAL TOPICS

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## Articles and information related to nutrition and diet.

Related content

[Diabetes Patient Education Materials](#)

### **Food and fasting in Somali Culture**

Information about typical Somali foods and fasting traditions, influenced by Sunni Muslim practice.

### **Nutrition and Fasting in Cambodian Culture**

Information about traditional nutrition and commonly consumed foods in the Cambodian community in Seattle.

### **The Traditional Foods of the Central Ethiopian Highlands (research report no. 7)**

Information about traditional Ethiopian food and food preparation based on studies carried out as part of an applied nutrition program within the framework of the Children's Nutrition Unit (now transformed into the Ethiopian Nutrition Institute (1)). The studies were carried out in widely different parts of Ethiopia, and included the major ethnic groups and also took account of seasonal variations.

### **More About Ethiopian Food: Teff**

Information about Teff, a staple in the Ethiopian and Eritrean diet, and some of the nutritional benefits, and health implications.

### **Report on Somali Diet**

Information about common dietary beliefs and practices of Somali participants in WIC nutrition education.

### **Chinese Food Cultural Profile**

A general article about common foods and the role of food in Chinese culture.

### **Nutrition and Fasting in Vietnamese Culture**

Information about nutrition and commonly consumed foods in the Vietnamese community in Seattle.

### **Group Nutrition Education Poster**

A 1 page poster PDF summarizing a WIC group nutrition project for Spanish and Somali families.

### **Clinical Pearl: Report on Somali Diet**

A clinical pearl abstract about information collected from Somali nutrition education groups about the Somali diet.

### **Cambodian Shop Around Program**

Description of a pilot project to promote healthy eating and dietary management of diabetes in Seattle's Cambodian community; includes curriculum, recipes, photos and information about the prevalence of diabetes and other health conditions affecting Cambodian Americans, along with considerations of some historical and environmental factors that may influence Cambodian American diet.

### **Muslim Religious Observances and Diabetes**

Information about fasting practices, and recommendations for providers caring for diabetic patients during times of fasting. Includes recommendations related to medication management.


# REPORT ON SOMALI DIET

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Reviewer(s): Christine Wilson Owens, Editor; Salma Musa, CCM; J. Carey Jackson, MD

Date Authored: August 01, 2003

[View Documentation](#)

Also available as PDF 

## METHODS

The following information was collected during more than 70 nutrition education groups for Somali patients taught by dietitian Aliya Haq at the WIC clinic at Harborview Medical Center (HMC), between 1999 and 2002. WIC is a supplemental nutrition education program for pregnant and postpartum women, infants, and children up to age five. Nutrition education is an integral part of the WIC program, which also provides healthy food vouchers to low income families. More than 400 Somali patients have attended the nutrition education groups at Harborview since they began in September 1999.

Providers are encouraged to assess the needs and behavior of all patients individually, and to consider that the information presented here is not intended to be a full account of the dietary practices and beliefs of all Somali immigrants. As Westernization appears to have influenced some aspects of Somali immigrants' diet already, it will be important to observe if and how further acculturation impacts diet in the future.

## THE SOMALI DIET

Limited or no published data is available regarding the dietary beliefs and practices of Somali people residing in the United States. For this reason, the following information has been compiled to convey the lessons learned during nutrition education groups with hundreds of Somali patients. The information is organized into four sections:

1. **Religious Proscriptions** discusses the influence the dominant Muslim religion has on Somali immigrants' diet; includes descriptions of halal and haram foods, and fasting and breastfeeding practices.
2. **Foods Commonly Consumed and Methods of Cooking** lists foods that are commonly eaten in Somali immigrant households, including common ingredients and cooking methods for these foods, with indication of which foods are considered high in fat, high in carbohydrates and fat, high in salt, and high in protein. This section also discusses consumption of fast foods and elements of an acculturating diet.
3. **Common Dietary Beliefs** describes some of the commonly held beliefs regarding diet and nutrition that have been expressed by Somalis participating in the group education.

### Contents

- [Methods](#)
- [The Somali Diet](#)
  - [Religious Proscriptions](#)
  - [Foods Commonly Consumed and Methods of Cooking](#)
  - [Common Dietary Beliefs](#)
  - [Common Nutrition/Diet Related Health Problems](#)
- [General Recommendations for Providers](#)
- [Discussion of Group Education Intervention](#)

# Preventing Rickets in Breastfed Babies Cambodian version

## ការប្រុងប្រយ័ត្នចំពោះអាយុដែលបំបៅដោះពួក ពិធីការការពារក្រីសក្នុងការបំបៅដោះពួករបស់អ្នក

### អ្វីទៅដែលហៅថាភាគក្រីស?

វាគឺជាជម្ងឺម្យ៉ាងដែលឆ្អឹងគ្នាភាពមាំមួនបណ្តាលមកពីការខ្វះខាតជាតិវីតាមីនដីនៅក្នុងខ្លួន។ នៅក្នុងភូមិភាគ  
ខាងជើងឈាងខាងលិចតាមព្រំដែនភាគក្រីសនេះកើតមកពីការកំណត់ខ្លួន ថ្ងៃតិចពេក។

### តើការណាមួយទទួលបានភាគក្រីស?

គឺការកំណត់ខ្លួនយូរពេលដែលទទួលបានទឹកដោះម្តាយពីរយៈពេលប្រាំមួយខែ ឬខ្លីជាង ការកំណត់សញ្ញា ដែល  
ទទួលបានទឹកដោះម្តាយ ការកំណត់បើកមិនគ្រប់ខែ និងការកំណត់ប្រើប្រាស់ធានាជំនួយសម្រាប់ អាហារ  
ដែលមិនមានជាតិសាច់, ទឹកដោះគោ, ពងមាន់, ពងទា ។

### តើអ្វីទៅជាសញ្ញាភាគក្រីស?

- ក្មេងមានភាពខ្លាំងឆ្មាយ,
- មិនអាចដើរបាន ឬដើរបាន,
- មានការលូតលាស់យឺត,
- មានជំងឺប្រកាច់,
- រោគសញ្ញាផ្សេងៗ។

### តើអ្នកមានការការពារយ៉ាងណាឱ្យពួកអ្នកជឿស្រាវជ្រាវពីភាគក្រីស?

ដោយពន្លឺថ្ងៃមានមិនគ្រប់គ្រាន់នៅភូមិភាគខាងជើងឈៀងខាងលិច ការកំណត់ខ្លួនយូរជាតិវីតាមីនដីមួយថ្ងៃ  
រហូតពីរបីណាម្នាក់សំរាប់ភូមិភាគខាងជើងឈៀងខាងលិចនៃសហរដ្ឋអាមេរិក។

### តើអ្នករកវិធីមិនមិនចម្រើន?

វីតាមីនដីវិកាបានទៅតាមកន្លែងលក់ថ្នាំដោយមិនចាំបាច់មានសំបុត្រពិនិត្យពេទ្យ។ នៅក្នុងថ្នាំវីតាមីនដីវិកាមាន  
ផ្សែមកជាមួយនូវជាតិវីតាមីនដីផ្សេងៗដូចជា វីតាមីនអេ និងស៊ី ហៅថាត្រីវីសូល (Tri-Vi-Sol)។  
បើ សិនជាអ្នកប្រើប្រាស់ពេទ្យ អ្នកអាចសុំឱ្យពេទ្យ ឬអ្នកធ្វើការនៅការិយាល័យវិទ្យាសាស្ត្រពេទ្យជាតិវីតាមីនដី  
ដោយឱ្យពេទ្យបញ្ជាក់ថាវីតាមីនដីវិកាមានសារៈសំខាន់សំរាប់ភាគក្រីសចំពោះការកំណត់ខ្លួនម្តាយទាំងស្រុង។

សញ្ញាភាគក្រីស

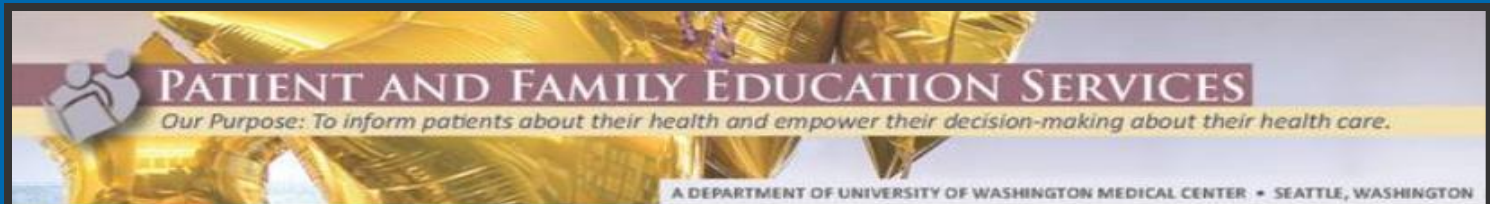
- ឆ្អឹងជំងឺកក
- ឆ្អឹងកោង
- កំណរត់
- ជើងក្របុក

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សម្ភារៈអប់រំអ្នកជំងឺនេះគឺត្រូវបានផ្តល់ដោយគម្រោង Community House Calls, គ្លីនិកនិស្សិតសាស្ត្រ  
អន្តរជាតិ និង គ្លីនិកកុមារ, មន្ទីរពេទ្យហាប៊ែរវិយូ Harborview Medical Center,  
សកលវិទ្យាល័យ វ៉ាស៊ីនតោន Seattle, WA ។

# Culture Clues

[depts.washington.edu/pfes/CultureClues.htm](https://depts.washington.edu/pfes/CultureClues.htm)



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*Culture Clues*<sup>™</sup> are available for these cultures:

- [Albanian](#)
- [Chinese](#)
- [Deaf](#)
- [Hard of Hearing](#)
- [Korean](#)
- [Latino](#)
- [Russian](#)
- [Somali](#)
- [Vietnamese](#)



## *End-of-Life Culture Clues*<sup>™</sup>

Also available are tip sheets regarding end-of-life care as often preferred by various cultures. The End-of-Life *Culture Clues*<sup>™</sup> are available for:

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# Communicating with Your Russian Patient

*Perception of Illness • Patterns of Kinship and Decision Making • Comfort with Touch*

*Culture Clues™* is designed to increase awareness about concepts and preferences of patients from the diverse cultures served by University of Washington Medical Center. **Every person is unique; always consider the individual's beliefs, needs, and concerns.** Use *Culture Clues™* and information from the patient and family to guide your communication and your patient care.

## How does the Russian culture deal with illness?

### *Helping Your Patient Feel Comfortable with UWMC*

- Remember to find out if this is your patient's first visit to University of Washington Medical Center.
  - **If it is your patient's first visit to UWMC, take a few moments for orientation.**
  - **Keep in mind that patients who are new to the system may not be aware of the role of the Primary Care Team or the process for getting a referral to a specialist.**

### *Explaining the Causes of Illness and Disease*

- Your patient and his or her family may believe that illness is caused by weather or social experiences, such as stress from the living situation or because of arguing with the family.
  - **Ask your patient if they have experienced stresses or strains recently.**
- Your patient may not like to take excessive medications. When an option, ask your patients if they prefer over-the-counter or homeopathic medicine.
- Spend time with the patient to show that the patient is cared for.

### Feeding Your Baby 6 to 12 Months

Source: Washington State Department of Health - Division of Environmental Health

- [Cambodian Khmer](#)
- [Chinese 中文](#)
- [English](#)
- [Korean 한국어](#)
- [Vietnamese Tiếng Việt](#)

### Feeding Your 1 to 2 Year Old

Source: Washington State Department of Health - Division of Environmental Health

- [Cambodian Khmer](#)
- [Chinese 中文](#)
- [English](#)
- [Korean 한국어](#)
- [Vietnamese Tiếng Việt](#)

### Feeding Your 3 to 5 Year Old

Source: Washington State Department of Health - Division of Environmental Health

- [Cambodian Khmer](#)
- [Chinese 中文](#)
- [English](#)
- [Korean 한국어](#)
- [Vietnamese Tiếng Việt](#)

### Healthy Choices for Kids

Source: Washington State Department of Health - Division of Environmental Health

- [Cambodian Khmer](#)
- [Chinese 中文](#)
- [English](#)
- [Korean 한국어](#)
- [Vietnamese Tiếng Việt](#)

### Starting your baby on family foods

Source: Health Information East London - National Health Service

- [Chinese 中文](#)
- [English](#)
- [Vietnamese Tiếng Việt](#)

### Give Your Baby a Healthy Start

Source: Washington State Department of Health - Division of Environmental Health

- [Cambodian Khmer](#)
- [Chinese 中文](#)
- [English](#)
- [Korean 한국어](#)
- [Vietnamese Tiếng Việt](#)

### Good Food for Kids

Source: Nutrition Education for New Americans Project

- [Cambodian Khmer](#)

# SPIRAL

[spiral.tufts.edu](http://spiral.tufts.edu)



#### 給家長，照料人及兒童的資料

兒童需要很多能量去成長，玩耍和學習。在選購及小吃時選擇適當的食物，可以幫助你的孩子建立一個健康的將來。

兒童可以與其他家人享用同樣的食物。一起進膳可以幫助他們有良好的飲食。良好的飲食習慣是可以終身受用的。

食物是無分好與壞的，而最重要的是飲食要均衡。在本小冊內的每個食物類別對發展良好健康都非常重要，因此每人都要將每一個類別的食物包括在內。

很多膳食都有從這五個食物類別加入不同的食物。想一想你孩子的飲食中缺少了哪類別的食物，然後將它們加入他們的膳食內。



#### 麵包，穀類食品及馬鈴薯

這些食物提供能量及維他命。每餐都應包括這些食物在內。

嘗試用不同的食品，包括麵包片，pitta 包，印度薄餅(chapatti)，麵包圈(bagels)，義大利粉，芋頭，飯，麵，早餐穀類食品或大蕉。



#### 奶類及奶類食品

# MedlinePlus Health Information in Multiple Languages

[nlm.nih.gov/medlineplus/languages/languages.html](http://nlm.nih.gov/medlineplus/languages/languages.html)

Find your topic by first letter:

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [XYZ](#) [XYZ](#) [List of All Topics](#)

## Infant and Newborn Nutrition - Multiple Languages



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[Marshallese](#) (kajin Majöl)

[Portuguese](#) (português)

[Russian](#) (Русский)

[Somali](#) (af Soomaali)

[Spanish](#) (español)

[Vietnamese](#) (Tiếng Việt)

### Arabic (العربية)

- Bottle Feeding Your Baby  
(Arabic) [العربية](#) PDF Bilingual  
Health Information Translations

### Bosnian (Bosanski)

- Bottle Feeding Your Baby  
Hranjenje bebe flašicom - [Bosanski](#) (Bosnian) PDF Bilingual  
Health Information Translations

### Chinese - Simplified (简体中文)

- Bottle Feeding Your Baby  
用奶瓶喂哺宝宝 - [简体中文](#) (Chinese - Simplified) PDF Bilingual  
Health Information Translations

# Navigating the Web Beyond Basic Google to Find Evidence

- Google Advanced Search

*[google.com/advanced\\_search?hl=en](http://google.com/advanced_search?hl=en)*

- Google Scholar *[scholar.google.com](http://scholar.google.com)*

# Searching Advanced Google for Guidelines

**Google** **Advanced Search** [Advanced Search Tips](#)

**allintitle:** Vitamin D supplements

**Find web pages that have...**

all these words:

this exact wording or phrase:

one or more of these words:  OR  OR

**But don't show pages that have...**

any of these unwanted words:

**Need more tools?**

Results per page:

Language:

File type:

Search within a site or domain:

(e.g. youtube.com, .edu)

[Date, usage rights, numeric range, and more](#)

Date: (how recent the page is)

[Usage rights:](#)

Where your keywords show up:

Region:

Numeric range:  ..

(e.g. \$1500..\$3000)

[SafeSearch:](#)  Off  On

pdf

.gov, .edu

in title



# Advanced Google Results for .gov

## [Vitamin D: MedlinePlus Supplements](#) 🔍

Researchers noticed that people who don't have enough vitamin D tend to fall ...

[www.nlm.nih.gov/medlineplus/druginfo/natural/929.html](http://www.nlm.nih.gov/medlineplus/druginfo/natural/929.html) - Cached - Similar

## [Calcium and Vitamin D: Important at Every Age](#) 🔍

Jump to [Calcium Supplements](#): If you have trouble getting enough calcium in your diet, you may need to ...

[www.niams.nih.gov/Health\\_Info/Bone/Bone\\_Health/Nutrition/](http://www.niams.nih.gov/Health_Info/Bone/Bone_Health/Nutrition/) - Cached

## [Randomized trial of vitamin D supplementation to prevent seasonal ...](#) 🔍

by M Urashima - 2010 - Cited by 65 - Related articles

Mar 10, 2010 ... OBJECTIVE: We investigated the effect of **vitamin D** ...

[www.ncbi.nlm.nih.gov/pubmed/20219962](http://www.ncbi.nlm.nih.gov/pubmed/20219962) - Similar

⊕ Show more results from nih.gov

## [Safety Alerts for Human Medical Products > Vitamin D Supplement ...](#) 🔍

Jun 15, 2010 ... Some liquid **Vitamin D supplement** products are sold with droppers that could allow parents to accidentally give harmful amounts of Vitamin D ...

[www.fda.gov](http://www.fda.gov) > ... > Safety Information - Cached - Similar

## [Vitamin D and Cancer Prevention - National Cancer Institute](#) 🔍

Vitamin D can also be obtained through dietary supplements. .... However, individuals who used any amount of **vitamin D supplements** had a lower risk of ...

[www.cancer.gov/cancertopics/factsheet/prevention/vitamin-D](http://www.cancer.gov/cancertopics/factsheet/prevention/vitamin-D) - Cached - Similar

## [Vitamin D Supplementation To Prevent Rickets in Breast-Fed Babies](#) 🔍

Clinical highlights recommend **vitamin D supplementation** for dark-skinned infants and children who are fed only breast milk to prevent rickets.

[www.ahrq.gov](http://www.ahrq.gov) > Priority Populations > Child Health - Cached - Similar

## [Vitamin D Supplement Study for Adolescents - Full Text View ...](#) 🔍

The purpose of this study is to determine if 14-19 year old African American adolescents are able to take a daily **vitamin D supplement** daily for about 4 ...

[clinicaltrials.gov/ct2/show/NCT00000454](http://clinicaltrials.gov/ct2/show/NCT00000454) - Cached


# Google Scholar

*scholar.google.com*

- Searches for **scholarly literature**, including peer-reviewed papers, theses, books, abstracts and technical reports
- Finds articles from academic publishers, professional societies, universities, etc. as well as scholarly articles on the web
- "**Cited by**" link identifies # that have cited the original
- Access to full text only available with subscription
- **Caution:** Not a reliable sole source for searching scholarly literature

# Google Scholar

Google scholar phenylketonuria diet children Search [Advanced Scholar Search](#)

**Scholar** Articles excluding patents since 2008 include citations  [Create email alert](#)

## [Efficacy of sapropterin dihydrochloride in increasing phenylalanine tolerance in children with phenylketonuria: a phase III, randomized, double-blind, placebo- ...](#)

FK Trefz, BK Burton, N Longo, MMP Casanova... - The Journal of ..., 2009 - Elsevier

... of tetrahydrobiopterin) to increase phenylalanine (Phe) tolerance while maintaining adequate blood Phe control in 4- to 12-year-old **children** with **phenylketonuria** (PKU). ... 3:1) to sapropterin, 20 mg/kg/d, or placebo for 10 weeks while continuing on a Phe-restricted **diet**. ...

[Cited by 25](#) - [Related articles](#) - [All 12 versions](#)

## [Glutamine, Ornithine, Citrulline and Arginine levels in Children with Phenylketonuria: The Diet Effect](#)

KH Schulpis, M Kalogerakou, V Gioni... - Clinical ..., 2011 - Elsevier

Thirty-seven poorly controlled patients (group A), 43 patients who strictly adhered to their **diet** (group B) and 50 controls were included in the study. In patients and controls blood chemistry, TAS and serum amino acids levels determinations were performed.

[Find UW Holdings](#)

## [Tetrahydrobiopterin Therapy for Phenylketonuria in Infants and Young Children](#)

BK Burton, DJ Adams, DK Grange, JI Malone... - The Journal of ..., 2010 - Elsevier

... administration, response evaluation, and side effect management associated with sapropterin therapy in infants and **children** aged <4 ... For 3 of 6 cases, **diet** records were used to monitor changes in dietary Phe. ... Severity of **phenylketonuria** ranged from mild to severe (classic). ...

[Cited by 1](#) - [Related articles](#) - [Find UW Holdings](#) - [All 4 versions](#)

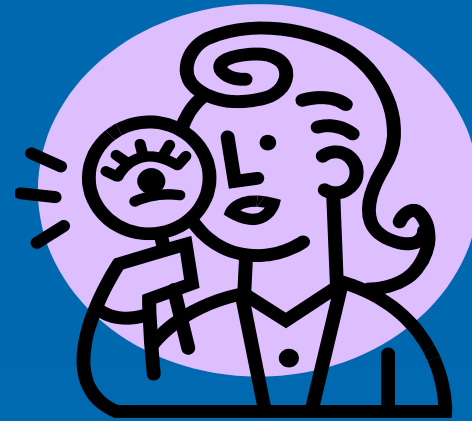
# Must Evaluate Web Resources: Evaluation Strategies

- Evaluate using **Criteria for Evaluating Web Resources**
- Determine the type of site by analyzing **Web Site Addresses**
- A User's **Guide** to Finding and Evaluating Health Information on the Web  
*[mlanet.org/resources/userguide.html](http://mlanet.org/resources/userguide.html)*

# Criteria for Evaluating Web Sites

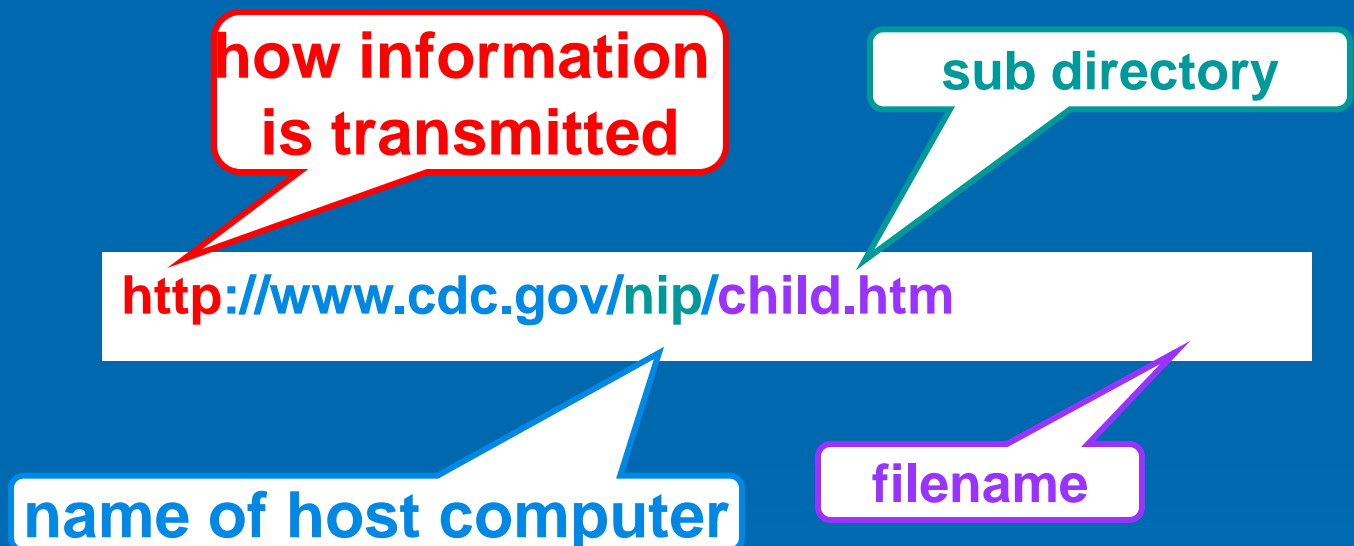
[healthlinks.washington.edu/howto/navigating/criteria.pdf](http://healthlinks.washington.edu/howto/navigating/criteria.pdf)

- Authority
- Accuracy
- Objectivity
- Currency
- Coverage



# Analyze the Website Address

- edu
- org
- com
- gov
- net




The URL (Uniform Resource Locator) includes the name of the host computer which can indicate the purpose of the web site.

# Information Overload!

- 2 million articles published in biomedical journals each year
- considering everything of potential biomedical importance would require perusing about 6,000 articles per day...
- If you only read 2 articles a day, at the end of year you would be 60 centuries behind.

# What are Email Alert Services?

- Deliver current citations into your email
  - Based on a search strategy you create
  - In most cases, abstracts of the articles are provided
  - May provide links to *PubMed* and full-text articles
- 
- A decorative graphic consisting of several sets of concentric circles, resembling ripples in water, located in the bottom right corner of the slide.

# *PubMed: My NCBI*

- Your personal space on the NLM computer system for:
  - ◆ **storing search strategies** used to generate updates
  - ◆ **storing references**
  - ◆ **creating email alerts** (recent PubMed citations sent automatically to your email)
- **Free** registration
- *PubMed My NCBI* help page:
  - ◆ [healthlinks.washington.edu/howto/myncbi.html](http://healthlinks.washington.edu/howto/myncbi.html)

Display Settings: [x] Summary, 20 per page, Sorted by Recently Added

- Results: 1 to 20 of 107**
- [Prevention and treatment of](#)  
1. Riordan J, Voegeli D.  
Br J Nurs. 2009 Nov 12-25;18(20):  
PMID: 20081668 [PubMed - index  
[Related articles](#)
  - [Therapists' roles in pressure](#)  
2. Guihan M, Hastings J, Garbe  
J Spinal Cord Med. 2009;32(5):56  
PMID: 20025152 [PubMed - index  
[Related articles](#) [Free article](#)
  - [Comparison of interface pre](#)  
3. Jünger M, Ladwig A, Bohbot  
J Wound Care. 2009 Nov;18(11):4  
PMID: 19901877 [PubMed - index  
[Related articles](#)

NCBI Home PubMed GenBank BLAST

## My NCBI

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- My NCBI Home
- My Saved Data
- Search Filters
- Preferences
- About My NCBI

Use My NCBI to save your searches and data, and to set NCBI Web site

### Sign into My NCBI

Username

Password

**Your PubMed search**

Search: cancer summer camps

Name of Search: **celiac disease**

E-mail: schnall@u.washington.edu

Would you like e-mail updates of new search results?

- No thanks.
- Yes, once a month.  
Which day?
- Yes, once a week.  
Which day?
- Yes, every day.

Formats:

- Send HTML e-mail
- Send text e-mail

Report format:

Number of items:

Send at most:   Send even when there aren't any

## My NCBI

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Use My NCBI to save your se

### My Saved Data

You have:

- [32 Saved Searches](#)
- [3 Collections](#)
- [1 Bibliography](#)

### Search Filters

You've set filters for:

- [PubMed](#)

### Preferences

You've set:

- [Common Preferences](#)
- [PubMed Preferences](#)

# My NCBI



# Arbor Clinical Nutrition Updates

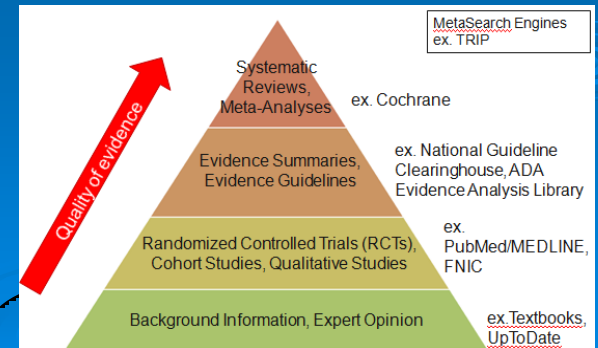
[www.nutritionupdates.org](http://www.nutritionupdates.org)

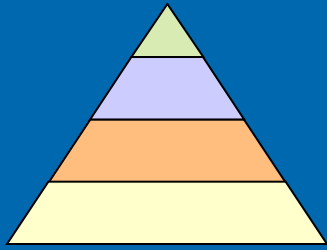
- Free evidence-based electronic nutrition journal
- Summarizes recent clinical research papers
- Adds commentaries



# Final Thoughts

- Use the *Locating Evidence-based Pediatric Nutrition Resources on the Web* handout to find evidence resources.
- Navigate the web efficiently using *Advanced Google* or *Google Scholar* and **evaluate!**
- Remember *ADA Evidence Analysis Library*, *PubMed*, *MedlinePlus*, *EthnoMed*, and **nutrition** sites to find evidence to incorporate into your clinical practice.
- Ask a **librarian...**  
your ultimate search engine!





# Resources



schnall@uw.edu

- PowerPoint located:

[healthlinks.washington.edu/hsl/liaisons/schnall/pednutrition2011.ppt](http://healthlinks.washington.edu/hsl/liaisons/schnall/pednutrition2011.ppt)

- List of e-Resources discussed:

[healthlinks.washington.edu/hsl/liaisons/schnall/pednutrition2011.doc](http://healthlinks.washington.edu/hsl/liaisons/schnall/pednutrition2011.doc)

- Schnall JG. Clicking your way to nutrition resources on the web. *Nutrition Focus* 2007 Jan/Feb 22(1):1-9.

[depts.washington.edu/cshcnnut/download/resources/nutfocus22\\_1.pdf](http://depts.washington.edu/cshcnnut/download/resources/nutfocus22_1.pdf)