Vitamin C

BOTTOM LINE MONOGRAPH
A concise evidence-based review, designed for use by patients or professionals. Based on systematic aggregation and analysis of scientific literature, historic/folkloric precedent, and expert consultation. Edited and peer-reviewed blindly by Natural Standard editorial contributors. Includes information on effectiveness, side effects, interactions, dosing, pregnancy and breastfeeding.

English  |  Spanish

FLASHCARD
Quick look-up or patient handout. Easy reading level for consumers. Adapted from a Natural Standard comprehensive professional evidence-based systematic review. Concise information includes brief summary, uses, safety, side effects, interactions and dosing.

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NEWS ITEMS

**August 2007** --Omega-3 and Vitamins for Bed Sore Prevention: Omega-3 acid and vitamin supplementation may help prevent bed sores in hospitalized patients, a new study reports....

**August 2007** --Antioxidants for Bone Health: A diet rich in antioxidants, such as vitamins C and E, may help improve bone health reducing the risk of osteoarthritis, a new study suggests....

**July 2007** --Vitamin C for the Common Cold: How Effective is it?: Vitamin C supplementation may not reduce the risk of the common cold in the normal population, contrary to popular belief and use, a new review reports....

**July 2007** --FDA: Tomatoes and Cancer: The U.S. Food and Drug Administration (FDA) has released a review that found only limited evidence for a correlation between eating tomatoes, rich in lycopene, and a decreased risk of certain cancers....

**July 2007** --Pomegranate Juice for Erectile Dysfunction: Pomegranate juice may help treat erectile dysfunction, a new study suggests. However, evidence remains inconclusive at this time....

**June 2007** --Ginseng for Cancer-Related Fatigue: Ginseng may relieve cancer-related fatigue, a new study suggests....

**June 2007** --Apple Peel for Cancer: A new study reports finding over a dozen compounds called triterpenoids in apple peel that appear to inhibit and/or kill cancer cells....

**June 2007** --Cactus Pear Pads for Diabetes Prevention: Prickly pear cactus pad consumption may stabilize blood sugar after a meal by reducing the glycemic effect, a new study reports....

**June 2007** --Folic Acid Supplements for Stroke: Folic acid supplements may reduce the risk of stroke, a new study reports. However, their effect on other heart outcomes remains unclear....

**May 2007** --Curcumin for Health: Curcumin, the yellow pigment of the spice turmeric, may help fight cancer and other diseases, new studies suggest....

**May 2007** --Bacteria for Asthma and Allergies: Acquisition of Helicobacter pylori (H. pylori), which predominantly occurs before the age of 10, may reduce the risks associated with asthma and allergies, a new study reports....

**April 2007** --Chinese Herbal Medicine for Breast Cancer Patients: Chinese herbal medicines may help ease the side effects of chemotherapy in breast cancer patients, a new Cochrane review suggests....

**April 2007** --Erycibe Elliptilimba for Breast Cancer: Erycibe elliptilimba, a traditional Thai medicine, may have antiproliferative effects against breast cancer cells, a new study suggests....

**April 2007** --Mediterranean Diet for Allergies in Children?: A Mediterranean-style diet rich in fruits, vegetables and nuts may help prevent allergic rhinitis and asthma symptoms in children, a new study suggests....

<table>
<thead>
<tr>
<th>Date</th>
<th>Study Title</th>
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<tbody>
<tr>
<td>April 2007</td>
<td>Vitamin C Lowers Mouth Cancer Risk: A diet rich in vitamin C may help lower mouth cancer risk, a new study suggests.</td>
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<td>April 2007</td>
<td>Hormone Replacement Therapy and Breast Cancer: Hormone replacement therapy (HRT) does appear to increase the risk of breast cancer, according to a new report by researchers from M.D. Anderson Cancer Center in Houston, Texas.</td>
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<td>April 2007</td>
<td>More Fruit, Less Meat to Reduce Colon Cancer Risk: Eating more fruit and less meat may help prevent precancerous colon polyps, a new study suggests.</td>
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<td>March 2007</td>
<td>Blueberries for Colon Cancer Prevention: Pterostilbene, a compound found in blueberries, may prevent the development of tumors in the colon, a new study suggests.</td>
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<td>March 2007</td>
<td>Blue Agave, Tequila for Colon Health: Compounds derived from the blue agave fruit, which is used to make the popular hard liquor tequila, may help deliver drugs to the colon to treat colon diseases such as ulcerative colitis, irritable bowel syndrome (IBS).</td>
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<td>March 2007</td>
<td>Plant Estrogen and Breast Cancer: Plant estrogens may reduce breast cancer in postmenopausal women, a new study reports.</td>
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<td>February 2007</td>
<td>Veggies for Enlarged Prostate Risk: Eating a diet rich in vegetables may have a preventative effect against prostate cancer, a new study suggests.</td>
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<td>January 2007</td>
<td>Vitamin C and Smoking: Negative effects of smoking act on monocyte's ability to move quickly to the site of infection in tissues; vitamin C may help prevent smoking-induced monocyte function, a new study reports.</td>
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<td>January 2007</td>
<td>Vitamin B 12 Deficiency &amp; Loss of Cognitive Function in the Elderly: Vitamin B-12 deficiency in the elderly may be associated with lower cognitive function, a new study suggests.</td>
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<td>January 2007</td>
<td>Multivitamins for Undernourished Pregnant Women: Multivitamin and mineral supplements may boost the birth weight of children born to undernourished women, a new study suggests.</td>
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<td>October 2006</td>
<td>Salad for Health: A diet rich in salad intake (i.e. the consumption of salads, raw vegetables, and salad dressing) may improve health by assuring dietary guidelines are met, a new study reports.</td>
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<td>July 2006</td>
<td>Vitamin C's Effects on Immune Response: Vitamin C supplementation may provide little to no immunity boost after intense endurance exercise, a new study suggests.</td>
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<td>April 2006</td>
<td>Vitamin C Shots as Cancer Therapy: In some recent cases, patients with advanced stages of terminal cancers have experienced unusually long periods of remission and/or recovery when they were given vitamin C shots. Dr. Mark Levine of the National Institute...</td>
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<td>August 2005</td>
<td>Antioxidants May Negatively Impact Blood Sugar Levels in HIV Patients: A small pilot study of ten patients with lipodystrophy, an HIV-related fat-redistribution syndrome, or continuously high blood levels of lactic acid were given antioxidant supplements.</td>
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<td>August 2005</td>
<td>Vitamin C Encourages Stem Cell to Heart Cell Transformation: Researchers at Brigham and Women's Hospital and Harvard Medical School have discovered that vitamin C prompts mouse embryonic stem cells to transform into beating heart muscle cells. The result...</td>
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<td>August 2005</td>
<td>Active Heart Supplement: In an unusual move, two doctors from New Jersey have begun marketing a heart health supplement that they developed themselves. Although not an uncommon practice amongst alternative medicine practitioners, chiropractors and derma...</td>
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<td>August 2005</td>
<td>A New Vitamin-Rich Beer Reaches the Market: Lady Bird Bio Beer has recently been released in India; according to its manufacturers it increases bioavailability of vitamins. The special brew contains aloe vera extracts along side the regular barley malt...</td>
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<td>August 2005</td>
<td>Chelation Therapy Involved in Death of Autistic Boy: Last week, a 5-year-old autistic child died during his third chelation treatment from cardiac arrest. Police and doctors at the Advanced Integrative Medicine Center in Portersville, PA have declined...</td>
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<td>May 2005</td>
<td>Pregnant Smokers who Can't Quit may Benefit from Vitamin C: If a smoking mother-to-be cannot quit cigarettes, vitamin C may help counter some of the negative side effects, according to the results of a recent animal study.</td>
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<td>January 2005</td>
<td>Vitamin C for Asthma or Allergies: Evidence Remains Inconclusive: A recent study suggests that vitamin C present in breastmilk may actually reduce the risk of the development of childhood atopy (allergies/hypersensitivity) (1). Hypovitaminosis C (vitam...</td>
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<tr>
<td>January 2005</td>
<td>Vitamin C Appears Ineffective for Common Cold Prevention or Treatment (Except During Chronic Extreme Environmental Exposure): The use of vitamin C in prevention/treatment of the common cold and respiratory infections remains controversial, with numerous...</td>
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<tr>
<td>March 2004</td>
<td>Effectiveness of an Herbal Preparation Containing Echinacea, Propolis, and Vitamin C in Preventing Respiratory Tract Infections in Children: A Randomized, Double-blind, Placebo-Controlled, Multicenter Study: Vitamin C...</td>
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<td>February 2004</td>
<td>Long-term effect of combined vitamins E and C on coronary and peripheral endothelial function: We tested whether long-term administration of antioxidant vitamins C and E improves coronary and brachial artery endothelial function in patients...</td>
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**September 2003** -- High dose of Vitamin C significantly reduces indinavir levels in pilot study: Effect of High-Dose Vitamin C (Vit C) on the Steady-State Pharmacokinetics (PK) of the Protease Inhibitor (PI) Indinavir (IDV) in Healthy Volunteers...

**September 2003** -- Antioxidants effect on pulmonary function in children: The pulmonary function of 2,566 children was examined in relation to intake of fruits, vegetables, juices and vitamins A, C, and E (1). It was found that poor lung function was associated with die...

**August 2003** -- The use of Vitamin C in human health and disease: A discussion about Vitamin C uses, recommended daily allowance for humans, sources, and other benefits and controversies about the vitamin (1)...

**June 2003** -- Effects of Topical Vitamin C on Photoaged Skin: Since Vitamin C posses antioxidant pathways and works in the collagen biosynthetic pathway, topically applied ascorbic acid may have photoprotective action on the skin (1). A double-blind, randomized study s...

**March 2003** -- Effect of vitamin C supplements on urinary oxalate and pH in calcium stone-forming patients: The contribution of ascorbate to urinary oxalate is controversial. The present study aimed to determine whether urinary oxalate and pH may be affected by vitamin...

**July, 2002** -- New study: vitamin C and vitamin E from foods may lower Alzheimer's disease risk: New study: vitamin C and vitamin E from foods may lower Alzheimer's disease risk. Background: A number of neurodegenerative disorders including Alzheimer's disease have been...

**October 2001** -- A randomized, placebo-controlled, clinical trial of high-dose supplementation with vitamins C and E, beta carotene, and zinc for age-related macular degeneration and vision loss: Vitamin C...

**January 1999** -- Oxidative stress in smokers supplemented with vitamin C: Vitamin C...

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**NEWS ITEMS ON RELATED TOPICS**

**September 2007** -- Pomegranate for Prostate Cancer: Extracts from pomegranate may help prevent prostate cancer, a new animal study suggests...

**August 2007** -- Antioxidant Supplementation may Increase Skin Cancer Risk in Women: Antioxidant may increase the risk of skin cancer in women, but not in men, a new study suggests...

**July 2007** -- Grapefruit and Breast Cancer Risk: Grapefruit may be associated with an increased risk of breast cancer in postmenopausal women, a new study suggests....

**June 2007** -- Pomegranate for Obesity: An extract from pomegranate may help fight obesity by acting as an appetite suppressant, research from a new animal study suggests....

**May 2007** -- Acerola: A recent study examined the flavonoid characteristics of acerola, the fruit of a small tree known as Malphighia glabra L. from the Antilles and northern South America....

**April 2007** -- Antioxidant Supplements and Chemotherapy: Antioxidants supplements may help increase cancer survival rates, tumour response, and the patient's ability to tolerate chemotherapy, suggests a new review....

**February 2007** -- Vitamins E and C and Kidney Cancer: A diet rich in vitamins C and E may help prevent kidney cancer, a new study suggests....

**January 2007** -- Report: Americans get ¼ Daily Calories from Drinks: The U.S. population gets nearly one quarter of its daily calories from beverages, according to a new report by the Milk Processor Education Program (MilkPEP)....

**October 2006** -- Complementary Medicine and Childhood Depression: There may be no benefit from complementary medicines as a treatment for childhood depression, a new study reports....

**September 2006** -- Micronutrients and the Risk of Enlarged Prostate: Some micronutrients may reduce the risk enlarged prostate or benign prostatic hyperplasia (BPH)....

**March 2006** -- The Antioxidative Power: A study found a new quantitative time dependent (2D) parameter for the determination of the antioxidant capacity and reactivity of different plants, defined as the antioxidative power (AP)....

**January 2006** -- Sodium Copper Chlorophyllin for Leukopenia: A sodium copper chlorophyllin may help treat leukopenia or abnormally low white blood cell count, a new study suggests....

**October 2005** -- Americans Still do not Heed Nutritional Guidelines: A survey of 8,940 people done by a Beltsville-based branch of the federal Agricultural Research Service has found that Americans do not follow diet recommendations. A two-year study followed
August 2005 -- Cranberry not Effective Against Certain Kidney Stones: Cranberry juice may be a common treatment for urinary tract infections but researchers have found that it may increase the risk of a certain kind of kidney stone. A study at the Mayo Clinic ran a fr...

August 2005 -- Folate may Help Reduce Alzheimer's Risk: The inaugural issue of Alzheimer's & Dementia: The Journal of the Alzheimer's Association has reported that a daily folate intake of 400 micrograms may reduce the risk of Alzheimer's disease. Elderly people reachi...

July 2005 -- Pomegranate Juice may Have Neuroprotective Properties: Pomegranate juice diminished brain tissue loss in the neonatal brain in a study published in the Journal of Pediatric Research. Recent developments in biology have found that a diet rich in polyphenols...

June 2005 -- Protandim: New Antioxidant Therapy: Protandim, a new antioxidant therapy, claims to reduce the signs of aging by rejuvenating the body's natural oxidative defenses...

April 2005 -- Weight Loss Supplement Lacks Studies: Suvaril is promoted as an all natural weight loss supplement. The new supplement is made of vitamin A, vitamin C, vitamin D, vitamin E, thiamin, riboflavin, niacin, vitamin B6, folate, vitamin B12, biotin, pantothenic...

August 2004 -- Herbal Medication use in Veterans with Chronic Hepatitis C: Siddiqui et al prospectively studied the proportion of US veterans with chronic hepatitis C that were currently taking vitamins and herbal medications to evaluate factors associated with use of ...

June 2004 -- Supplementation with Mixed Fruit and Vegetable Juice Concentrates Increased Serum Antioxidants and Folate in Healthy Adults: Vitamin C...

March 2004 -- Alternative cancer cures: "unproven" or "disproven"?: ABSTRACT OF ARTICLE: ...

July 2003 -- A Mixed Fruit and Vegetable Concentrate Increases Plasma Antioxidant Vitamins and Folate and Lowers Plasma Homocysteine in Men: Vitamin C...

July 2003 -- Reduction of Plasma Homocysteine Levels with Dehydrated Fruit and Vegetable Juices: In an all male randomized, double-blind, crossover trial 32 men were given an encapsulated dehydrated juice mixture and were evaluated after 6 weeks for changes in homocyst...

January, 2003 -- Glucosamine sulfate preparations: variations in amounts of claimed constituents: Glucosamine sulfate preparations: variations in amounts of claimed constituents. New publication: Russell et al. assessed the content of active ingredient in: Fourteen com...

December, 2002 -- Vitamin E/Antioxidants and Parkinson's disease risk: Vitamin E/Antioxidants and Parkinson's disease risk. New study: Zhang et al. analyzed data from two large cohort studies, the Nurses' Health Study and the Health Professionals Follow-Up Study, in or...

June, 2002 -- Echinacea for upper respiratory tract infection prevention: equivocal evidence from methodologically weak trials: Echinacea for upper respiratory tract infection prevention: equivocal evidence from methodologically weak trialsSummary: The evidence for...

June, 2002 -- Echinacea for upper respiratory tract infection treatment: preliminary trials support efficacy: Echinacea for upper respiratory tract infection treatment: preliminary trials support efficacy. Summary: Oral echinacea is frequently recommended to reduce i...

May 2002 -- MRC/BHF Heart Protection Study of cholesterol-lowering therapy and of antioxidant vitamin supplementation in a wide range of patients at increased risk of coronary heart disease death: early safety and efficacy experience: The present randomized trial aims ...

February 1999 -- Megavitamin and Dietary Treatment in Schizophrenia: A Randomised, Controlled Trial: Vitamin C...

Reference list with links to PubMed: Vitamin C

Lists of published articles for specific topics with live links to the National Library of Medicine (NLM) PubMed database (MEDLINE). These catalogs are limited to MEDLINE-listed citations. Natural Standard also aggregates many publications that are not MEDLINE listed, that are not included in these online lists. These additional citations are available as a part of Natural Standard special reports, which can be ordered through questions@naturalstandard.com.


61. Bordia, A. K. The effect of vitamin C on blood lipids, fibrinolytic activity and platelet adhesiveness in patients...


117. Cunningham, J. J., Mearkle, P. L., and Brown, R. G. Vitamin C: an aldose reductase inhibitor that normalizes


135. Demirag, K., Askar, F. Z., Uyar, M., Cevik, A., Ozmen, D., Mutaf, I., and Bayindir, O. The protective effects of


Abstract


257. Kamp, F., Jandel, D., Hoenicke, I., Pietrzk, K., Gross, R., Trugo, N. M., and Donangelo, C. M. Bioavailability


312. MacDonald, J. A. and Cohen, M. M. Effect of vagotomy on ascorbic acid nutrition in patients with peptic


318. Mangels, A. R., Block, G., Frey, C. M., Patterson, B. H., Taylor, P. R., Norkus, E. P., and Levander, O. A. The bioavailability to humans of ascorbic acid from oranges, orange juice and cooked broccoli is similar to that of synthetic ascorbic acid. J.Nutr. 1993;123(6):1054-1061. View Abstract


399. Podmore, I. D., Griffiths, H. R., Herbert, K. E., Mistry, N., Mistry, P., and Lunec, J. Vitamin C exhibits pro-


419. Regnier, E. The administration of large doses of ascorbic acid in the prevention and treatment of the common cold. II. Rev.Allergy 1968;22(10):948-956. View Abstract


484. Tanaka, H., Matsuda, T., Miyagantani, Y., Yukioka, T., Matsuda, H., and Shimazaki, S. Reduction of resuscitation fluid volumes in severely burned patients using ascorbic acid administration: a randomized,


41. View Abstract


555. Zollinger, P. E., Tuinebreijer, W. E., Kreis, R. W., and Breederveld, R. S. Effect of vitamin C on frequency of
