

Health Hunter[®]

N E W S L E T T E R

Antioxidant vitamins and β -carotene in disease prevention

James A. Jackson, Ph.D.

Many studies have shown the relationship between free radical generation (mainly oxidants) and some pathologies associated with aging. The evidence that antioxidant vitamins and β -carotene may play an important role in promoting health and reducing the risk of chronic diseases has been accumulating for over 20 years. The evidence has become so great that *The American Journal of Clinical Nutrition* devoted the complete December 1995 issue to proceedings from a symposium held in Berlin, Germany, on October 1-12, 1994, titled "Antioxidant Vitamins and β -Carotene in Disease Prevention." Although it is impossible to present all the articles here, it is gratifying to note that many of the authors restate or recommend ideas and theories that The Center has been promoting for years.

Vitamin E also was effective in preventing cataracts.

Dr. Richard Doll, in discussing chronic and degenerative diseases, stated that cancer, heart attacks, and strokes cause 3/4 of all deaths at 35-69 years of age, and 2/3 at older ages. The risk of dying before age 70 is 25% (16% in women and 30% in men). Since chronic and degenerative diseases are the result of a series of changes built up over a time and may be produced by many different agents, the author says that it is possible to prevent, or delay many diseases.

Dr. Mark Levine and others reported that the RDA for vitamin C, 60 mg/d, while preventing scurvy, may not represent optimal vitamin C amounts. The amount needed for optimal human health is unknown. They also reported that vitamin C has little toxicity and is usually represented by abdominal bloating and diarrhea. This may occur after doses of greater than 2 g are taken at once.

Drs. M. J. Stampfer and E. B. Rimm reported that people from two large studies who used supplemental vitamin E for longer than 2 years had 40% lower rates of cardiovascular disease. Vitamin E from dietary sources only and doses less than 100 IU/d had no similar effect. Drs. G. van Poppel and R. A. Goldbohm reported that dietary β -carotene caused a significant reduction in cancer from the following sites: lung (10 studies of 3067 people); stomach (7 studies of 3386 people); esophagus (4 studies of 1796 people); cervix (2 studies of 630 people); pancreas (2 studies of 376 people); colon, rectum (5 studies of 2316 people); and prostate (3 studies of 571 people).

Dr. A. Taylor and others reviewed aging, antioxidant status, and cataracts. Cataracts are the leading cause of blindness throughout the world. In the U. S., cataracts increase from an incidence of 5% at age 65 to over 40% at age 75 and older. Age related cataracts in the U. S. cost \$5 billion/year. A delay in cataract formation by 10 years would reduce the prevalence of cataracts by 45%. Cataracts form because the lens

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New uses for vitamin E

Manfred Steiner and his research colleagues at Memorial Hospital of Rhode Island, Pawtucket and Brown University School of Medicine readily acknowledge vitamin E's antioxidant power, but they have been looking at other uses for this versatile vitamin as well.

"We have studied the effect of [vitamin E] on platelet function for many years and have discovered that this vitamin is a potent inhibitor of platelet adhesiveness," wrote Steiner in a special issue of *The American Journal of Clinical Nutrition* dedicated to the antioxidant vitamins.

Since adhesion of platelets in the blood (sticking to artery walls) is often the beginning in the production of a platelet plug whose growth is dependent on platelet aggregation, the researchers concluded that, "the combination of a strong antiaggregation agent (aspirin is most often used) with potent anti-adhesive substance (vitamin E) would result in more effective prevention of cerebrovascular ischemic

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Nutritional Medicine

by Ron Hunninghake, M.D.

Antioxidant attitudes

It struck me recently that antioxidants represent a whole new set of attitudes that I have adopted, that are quite helpful in the daily struggle to live a quality life.

Antioxidants are **proactive**: don't wait for degenerative disease to afflict you. Act by optimizing your reserves. Protect your vital assets by supplementing your "income" of plant based nutrients.

Antioxidants are **loving**: much like the teenager who seems to be washing the paint off their first car, we can take better care of our bodies by lovingly seeking higher antioxidant levels. Love means putting in the extra effort it takes to achieve a higher goal...the goal of optimal health.

Antioxidants are **growth oriented**: the absence of disease is not enough. We are shooting for abundance in energy and vitality. We are seeking a higher

level of functioning, out of which we can strive to manifest our cherished life goals.

Antioxidants reflect **balance**: not viewing antioxidants as a means to compensate for junk food habits, but as a realistic safety net against the uncontrollable toxic occurrences of living and eating the American cuisine.

Antioxidants reflect **awareness**: the active habit of looking for that which one truly wants in their life. Be aware of healthy pleasures. Be aware of whole food culinary delights. Be aware of opportunities to surrender old stressful behaviors; consciously act to feel better!

In the final analysis, true health begins in right attitude. Taking some vitamin pills does not constitute health! But by attending to your unique biochemical and antioxidant needs, with an attitude of daily improvement, the blessings of health can be won! H

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is 98% protein and is not replaced as a person ages. Therefore, as proteins are damaged by freeradicals from exposure to ultraviolet light, smoking, oxygen, or metabolic diseases, they accumulate and precipitate in the lens causing cataracts. Many studies have shown that supplementation with vitamin C causes a reduction in cataract formation. One study showed that people who consumed more than 300 mg/d had 1/3 less cataracts than those not supplementing. Another study showed that those consuming about 490 mg/d of vitamin C had 25% less cataracts than those consuming less than 125 mg/d. Vitamin E also was effective in preventing cataracts. Persons who consumed vitamin E supplements of more than 400 IU/d had 56% less cataracts than those not supplementing with vitamin E.

One of the most interesting articles was by Dr. A. T. Diplock who reported on the safety of antioxidant vitamins and β -carotene. The author restated the possibility that major diseases

which afflict humans worldwide may be preventable by improving the dietary intake of antioxidant nutrients, and that optimal intakes of antioxidants may not be achievable by diet alone; supplements may need to be taken. He stated the toxicity of vitamin E was very low, even at high doses. The possible exception is in persons with a vitamin K-associated blood coagulation disorder. Toxicity of β -carotene has not been reported, even with doses as high as 50 mg/d. In some people with high doses, yellowing (or hypercarotenemia) of the skin may occur. Massive evidence exists that vitamin C at doses of greater than 1 g/d is safe and that adverse effects do not occur in healthy subjects ingesting large amounts of vitamin C.

This edition of *The American Journal of Clinical Nutrition* is available in The Center's library. Although technical in some instances, it would still be worthwhile to stop by the library and review the journal if you have an interest in this subject. H

Continued from page 1
events (strokes).”

Armed with what they had learned in the laboratory, they constructed a carefully controlled study to see if vitamin E would work with humans.

Transient ischemic attacks (TIAs), temporary blockages in the arterial side of the cerebral circulation, are frequently an advanced notice of more severe strokes to come. Symptoms of TIAs disappear in 24 hours. By using people who had experienced one or more TIAs for their research, they could see if those people receiving the addition of vitamin E would do better over the long haul.

The researchers used 100 people who had had a TIA. Forty-eight of them received aspirin alone and 52 took 400 IU of vitamin E along with aspirin. A thorough neurologic evaluation by a neurologist as well as computerized axial tomography (CAT scan) studies of the brain were used to confirm the existence of a TIA.

The results were better than expected. By the time the study reached its final phase, six of the people taking aspirin only had developed ischemic strokes and another two had recurring TIAs. Only one stroke occurred in the vitamin E group along with one recurrent TIA.

“The beneficial effect of vitamin E was recognized within a relatively short period of time, i.e. months not years, as reported by [others],” the researchers found. The other two studies reported that health care workers who took vitamin E had a reduction in ischemic strokes when compared to co-workers not taking vitamin E.

They added that, “we contend that vitamin E is capable of exerting a role other than that based on its oxidant mechanism in preventing ischemic attacks.”

The researchers concluded with a strong statement. “We are confident in recommending the combined use of these agents for treatment of ischemic cerebrovascular disease. The regimen is well tolerated and has few side effects other than those related to the ingestion of aspirin. We also suggest that related diseases of cardiovascular origin may respond to the combined use of aspirin and vitamin E.” [H]

HEALTH HUNTERS AT HOME

Preventive gerontology

“The concept of ‘successful aging’ is based on an application of the principles of effective ‘preventive gerontology’: personal investments in healthy living coupled with societal investments in a safe and healthful environment,” wrote William R. Hazzard, M.D., in an editorial that appeared recently in *The Journal of the American Medical Association*.

The concept of preventive gerontology appeared in *Principles of Geriatric Medicine and Gerontology*, 3rd ed., written by Hazzard and others and published by McGraw-Hill Book Co. in 1994.

I hadn’t heard the term before, but I loved it when I read it. To be sure I understood just what precisely gerontology meant, I grabbed my *Stedman’s Medical Dictionary* to see how it defined the word. It said geriatrics is, “The science of old age, old people in their physiologic and pathology aspects.”

Well, I certainly want to prevent that!

[I found another word while I was looking it up — Presbyiatrics. There is a word I can’t wait to work into a conversation or paragraph. I had heard presbyter used in other terms, but not as a synonym for geriatrics.]

But back at preventive geriatrics. Hazzard was responding to a paper that appeared in the same issue of the journal. The title of his editorial was “Weight Control and Exercise: cardinal features of successful preventive gerontology.”

Now you can see why it caught my eye. These are both subjects that I am interested in and write about in *Health Hunter*.

Hazzard went on to point out three ways the paper (covered on page 6) provoked his editorial addressing the principles of preventive gerontology:

“First, [the paper] forms another link in the chain of evidence pointing toward weight control as a principal feature of a successful preventive strategy—specifically, minimizing the accretion of fat, especially centrally, the quintessential ‘android’ or apple-

shaped adiposity that accompanies aging in western culture.”

“Second, this study clearly places weight control as an anchor stratagem for both overweight middle-aged men still free of coronary artery disease or diabetes and patients who have experienced such complications, for whom the interventions would be part of a secondary prevention regimen.” This applies to women as well even though the study used 170 obese men, middle aged and older.

“Third, aerobic exercise appears to carry the same ameliorative benefits as fat reduction...the issue is not which approach is preferred, but rather that [aerobic exercise and weight control] appear efficacious.”

He went on to say that a cardinal principle of preventive gerontology is the discovery of common pathways to preserve health and promote longevity. Restricting energy (watching one’s diet) and increasing exercise is an excellent prescription for middle aged patients, and the public as a whole.

In short, Hazzard believes that leaving exercise out of the weight loss equation is often the first half of a futile cycle, followed by weight reac-cumulation and of doubtful net benefit.

So, what does *Health Hunter* intend to do to assist you and the ones you love in this process?

First, we will keep you informed of new studies on the benefits of exercise as well as offer you ways to either add exercise to your daily regime or enhance the exercise you are now doing by making it more fun. Fun is the key to exercise for me.

Second, we will continue to bring you insight into ways to reach successful weight loss. This we will do with our regular NutriCircles feature (page 5) to give you more information about individual foods as well as articles covering the latest information on whole foods in general.

Third, we will continue to bring you the latest information on nutritional medicine—all in the interest of effective Preventive Gerontology. [H]

Richard Lewis

INFORMATION WORTH KNOWING

When learning about a specific topic it is always helpful to have several sources of information or perspective. Another perspective on the uses and effectiveness of supplements is given in *The Doctors' Vitamin and Mineral Encyclopedia* written by Sheldon Saul Hendler, M.D., Ph.D. This book investigates the positive and negative effects of nutrients and locate sources for specific nutrients. A guide is given for vitamin A to zinc as well as other nutrients. The following questions are taken from Dr. Hendler's book.

1 Vitamins are a group of unrelated organic nutrients that are essential in small quantities for normal _____.

- a. metabolism
- b. growth
- c. physical well-being
- d. all the above

2 Although we are still learning about the function of vitamins we do know that fat-soluble vitamins are stored in the body while water-soluble ones are not.

- a. true
- b. false

3 Research indicates that _____ is beneficial in lowering cholesterol and triglycerides levels, and significantly lowers mortality rate.

- a. margarine
- b. folic acid
- c. nicotinic acid
- d. none of the above

4 Carbohydrates, proteins, lipids such as fats, fatty acids, and cholesterol, and vitamins are organic compounds meaning they are all compounds of the chemical element carbon. In addition to these elements our bodies need certain chemicals in their inorganic forms. These chemical elements are classified as the dietary _____.

- a. minerals
- b. guidelines
- c. biodycides
- d. all the above

5 Mineral-insufficiency and trace-element-insufficiency states are more likely to occur than are vitamin-insufficiency states.

- a. True
- b. False

6 Severe _____ deficiency may lead to abnormal heartbeat, dementia, muscle spasms, and convulsions.

- a. boron
- b. calcium
- c. chromium
- d. copper

7 There are twenty _____ necessary for the synthesis of proteins. Proteins are large molecules that are crucial to life.

- a. eggs
- b. amino acids
- c. stress reducers
- d. all the above

• FOR ANSWERS, SEE PAGE 7 •

Case of the month

A 38-year-old patient came to The Center in relatively good health. His major symptoms included recurrent aphthous ulcers (canker sores), herpetic tongue sores, back acne, halitosis (bad breath), upper back pains, left knee pain (he was a jogger), cold intolerance (including chronically cold hands), and chronic sinus drainage.

His history was significant in that he had grown up working in his dad's gas station, with long term exposure to leaded gas fumes, including chronic skin exposure. (He washed his hands with gas!) He frequently was treated with antibiotics as a child for recurrent otitis (inflammation of the ear).

Food sensitivity testing was positive for over 40% of the foods tested. His candida antibody testing was positive. B vitamin saturation levels were suboptimal as was his white blood cell C saturation. Hair testing showed copper toxicity and a high calcium/potassium ratio (which suggested poor peripheral conversion of T4 to T3). His serum T4 was borderline low.

Treatment included elimination of sensitive foods. (This was a slow process for this co-learner.) Garlic acidophilous, and other pro-biotics were used to restore more favorable gut flora. This helped his breath.

Vitamins, including B complex, high dose C, and zinc were started. Also, dessicated thyroid and later slow release T3 were utilized to improve tissue conversion of T4 to T3. The patient decided to have the amalgam fillings in his teeth converted to the white, non-metallic, composite type fillings.

The patient's improvement was slow. Over about a year, his mouth sores diminished significantly. The back acne cleared. Better hand and body warmth was achieved. The sinus drainage cleared, as did the back and knee pain. For the past seven years, the patient has been able to sustain and gradually enhance these improvements. [H]



More secrets of knowledge have been discovered by plain and neglected men than by men of popular fame, and this is so for a reason. For men of popular fame are busy on popular matters.

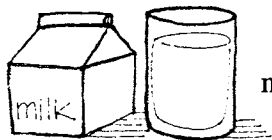
Roger Bacon

Calcium lowers blood pressure in study

Calcium supplementation produced a moderate but significant drop in the blood pressure of healthy males, according to research done at the University of Leuven in Belgium and published in the *Journal of Hypertension*.

In this study the researchers gave 32 healthy males either a placebo or one gram of elemental calcium, once in the morning and again in the evening, for 16 weeks. Blood pressure was measured at 1, 2, 4, 8, and 16 weeks. Those receiving the calcium registered lower standing systolic and diastolic blood pressures than did those receiving the placebo. [H]

Milk, supplemental calcium, weight bearing exercise slow osteoporosis



Drinking milk, taking supplemental calcium, and lifting weights are

all routes to greater bone mineral mass (BMD) for older women, according to a report in *The American Journal of Clinical Nutrition* by Cornelia Ulrich and colleagues.

Bone mineral mass is of concern for all postmenopausal women wanting to slow or stop osteoporosis in its tracks. Ulrich suggested, "that women may successfully enhance their genetically determined bone mass through weight-bearing exercise, post menopausal estrogen replacement therapy and adequate calcium intake." Her research showed supplemental calcium along with food sources is the best way to get adequate calcium for healthy BMD.

"Exercise itself, as well as its role in enhancing lean body mass, appears to positively affect BMD in premenopausal women," Ulrich added, as well as benefit older women. [H]

Mental Medicine

by Jon Sward, Ph.D.

Antioxidants—important for mental health

Antioxidants are important nutrients for our mental health, especially vitamin C. Since human beings cannot make vitamin C, it is all the more imperative that people understand its role in mental health and take steps to get plenty of it.

Vitamin C is intricately involved in the regulation of stress. The adrenal cortex is the key gland in the endocrine system for dealing with stress. When the body/mind is stressed in any way, whether by disease, injury, or the perception of threat, the adrenal cortex releases stress hormones. And the adrenal cortex uses more vitamin C than any other organ in the body. So, if people have inadequate levels of vitamin C they will not deal optimally with stress in their life.

The late Carl Pfeiffer, Ph.D., M.D. of the Brain Bio Center in Princeton,

New Jersey, and his colleagues did a study comparing various chemicals and their effect on the brain, including vitamins as well as drugs. They used the quantitative EEG (electroencephalogram), and developed a dose-response curve for each chemical's effect on the brain. The action of large dose vitamin C was one of the most interesting. Vitamin C at 1000 to 3000 mg had an antianxiety effect lasting a full six hours.

Dr. Pfeiffer says in his book *Mental and Elemental Nutrients*, 1975, p. 138: "A last and most interesting effect which vitamin C has in man is that of an antianxiety agent...vitamin C is now used in our general nutrient therapy program to treat patients who show excess...nervousness." He also referred to vitamin C as one of the "sleep vitamins." [H]

Food of the Month

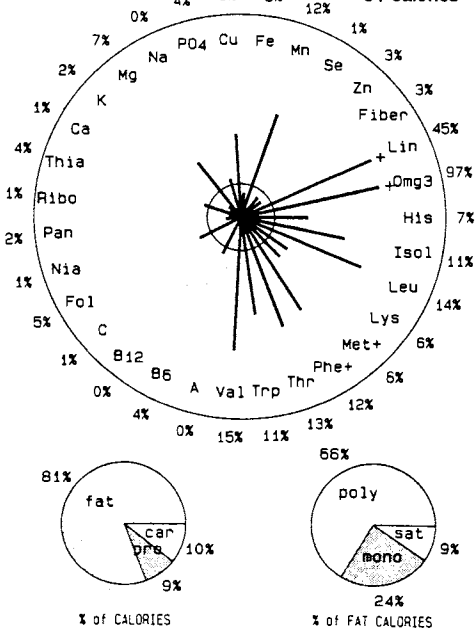
by Donald R. Davis, Ph.D.



ENGLISH WALNUTS (and black walnuts) are rich in α -linolenic acid, an omega-3 fat lacking in many diets. A half ounce of English walnuts contains 97% of the estimated RDA (see Omg3). The linoleic acid (Lin) lowers blood cholesterol. Unlike added fats and oils, walnuts supply all 9 essential amino acids (His, Isol, etc.), plus at least adequate levels of magnesium (Mg), vitamin B6, folic acid, thiamin, phosphate (PO4), copper, and manganese. Despite the high fat content of nuts (81% of calories here), two large studies find that frequent nut eaters have far less heart disease than nut avoiders, so take heart, and enjoy.

NutriCircle

1/2 oz. serving = 91 calories



The length of each bar shows the amount of one nutrient. If a bar extends out to the inner circle, the food has enough of that nutrient to match the calories it contains. The numbers show nutrient amounts in RDAs per serving shown. The pie charts show the sources of calories (left) and the types of fat (right). [H]

Beat The Odds Update

Cancer risk lowered with micronutrients

Upper gastrointestinal cancer occurs commonly in China, making it a perfect place for population based research studies.

One such study conducted by You Hui Zhang and associates and printed in *The American Journal of Clinical Nutrition*, selected Linxian County in China, since it has the highest occurrence of esophageal cancer in the world, to see if supplementing the diet with nutrients would have any effect on lowering the cancer rate or improving the immune system's resistance to cancer.

The researchers' general population study involved 29,584 people between 40 and 69 years of age who appeared healthy at the beginning of the 5 1/2 year study. They were divided into eight different groups with each group receiving a particular supplement regime.

At the end of the study, those

receiving a combination of beta-carotene and selenium had the highest immune response to a measurable invader of all the groups.

The researchers concluded that the, "participants in the [general population] trial experienced a beneficial effect of antioxidant supplementation with beta-carotene, vitamin E, and selenium on T-lymphocyte responses." T-lymphocytes in the blood, sometimes called T cells, are particularly important to the immune system.

Valuable as this study was in showing the importance of supplemental nutrients in boosting the body's immune response, it could not take into account the individual needs of each person and adjust the nutrients accordingly. Here at The Center, we test the individual's needs in the **Beat the Odds** program so that each person can find out what he or she needs and tailor the needs accordingly. H

Dutch dumping *trans* fatty acids

You will have a tough time finding *trans* fatty acids in Dutch margarine if you travel to the Netherlands this year.

Trans fatty acids are most often created by hydrogenating or partially hydrogenating fat—to take fats that are normally liquid at room temperature (like vegetable oils) and make them solid like margarine on the grocer's shelves. These modified fats were made to create a product that began to imitate butter, but was cheaper and had a longer shelf life.

Dutch scientists became concerned about what they were reading. In 1990 they began discussions about reports that *trans* fatty acids raised low density lipoproteins (LDL) and lowered high density lipoproteins (HDL) cholesterol concentrations in the blood serum of volunteers. This is the reverse of what one wants for a healthy heart, they believed.

"Subsequent studies confirmed the effect on LDL and, though less consistently, on HDL. *Trans* fatty acids also raise plasma triglyceride and lipoprotein (a) concentrations, a hereditary risk factor for cardiovascular disease that is otherwise little affected by diet," according to Martijn Katan of the Department of Human Nutrition, Agricultural University, Wageningen, Netherlands, reported in *The Lancet*.

Starting at the end of last year, Dutch margarine manufacturers had to state on their label the amount of *trans* fatty acids in their products. In addition, manufacturers are required to reduce the *trans* fatty acids in margarine to less than 5%, and some other products are dropping to 1% within the next year, Katan wrote.

With these changes in the composition of food fats now underway, the average Dutchman will lower his or her cardiac risk factor by as much as 5%, not counting the effect of lipoprotein (a).

In the US, industry is still taking a "circle the wagons" attitude that the allegations against *trans* fatty acids are exaggerated and, for now, are planning no change in their policy. H

CENTER UPDATE

Which came first, the chicken or the egg?

Weight loss is touted as better than exercise to improve the risk factors for heart disease by Leslie Katzel, M.D., and others in a recent article appearing in *The Journal of the American Medical Association*.

The researchers presented significant facts to justify their position that weight loss is the better way to go.

Here are a few of the findings:

"Only weight loss reduces glucose areas below the preintervention value."

"Weight loss, but not exercise training, increased HDL-C and HDL2-C (good cholesterol) levels."

"Weight loss induced either by reduced energy intake or exercise failed to lower blood pressure," according to another study.

From this the researchers concluded that, "these results

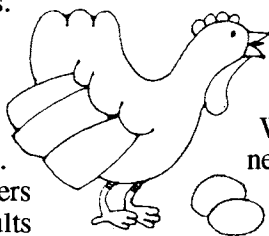
suggest that weight loss is the preferred treatment to improve CAD risk factor profiles in healthy, overweight, sedentary, middle-aged, and older men."

Now we come to which came first, the chicken or the egg—weight loss through diet alone, or weight loss through aerobic exercise or is a combination of both really needed?

The answer may be yes, that is yes to all three just like the answer to the chicken and egg might be yes.

This paper presents some interesting and good science for consideration, but there may be more to losing weight than following a particular diet or a particular aerobic exercise.

We are all individuals and we need to find out what works best for us. (See *Health Hunters at Home for more on this.*) H



Answers from page 4

- 1 d. Vitamins are obtained through diet because they are either not synthesized by our bodies or in inadequate amounts.
- 2 a. Water-soluble vitamins can not be stored in the body in significant amounts. Fat-soluble vitamins are A, D, E, & K.
- 3 c. Nicotinic acid, one of the forms of niacin (vitamin B3), is cheaper than cholesterol lowering drugs and has fewer side effects.
- 4 a. Minerals participate in a multitude of biochemical and physiologic processes necessary for the maintenance of health.
- 5 a. Low calorie diets, elderly people, pregnant women, people on diuretics, and people living where the soil is deficient in certain minerals all lead to a mineral insufficiency.
- 6 b. Calcium is essential for human life and is needed for nerve conduction, muscle contraction, heartbeat, blood coagulation, the production of energy, and maintenance of immune function.
- 7 b. There are other amino acids such as taurine and ornithine but they are not involved in the synthesis of proteins. HI

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Audio Tapes: Regular Price—\$7.00; Health Hunter Price—\$6.30
 Video Tapes: Regular Price—\$19.99; Health Hunter Price—\$17.95

THE DOCTORS' VITAMIN & MINERAL ENCYCLOPEDIA
 by Sheldon Saul Hendler, M.D., Ph.D.
 Looking for a good reference book for your library? Dr. Hendler gives you another viewpoint on the uses, effectiveness, and sources for vitamins and minerals in an easily understood manner. Softcover book.
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KNOW YOUR NUTRIENTS: Selenium
 with Ronald Hunninghake, M.D.
 An essential trace element, selenium plays an important part in a strong immune system. Research indicates that adequate selenium levels help protect against cancer of the colon, rectum, pancreas, breast, and ovaries. Low levels have been found in alcoholics suffering from cirrhosis of the liver. Audio cassette & video tape.

KNOW YOUR NUTRIENTS: Vitamin A
 with Ronald Hunninghake, M.D.
 One of the antioxidants, vitamin A, is essential for the normal growth of various organs (lungs and skin, for example) and has been linked to cancer prevention, working in concert with other antioxidants—vitamin C, vitamin E, zinc, and selenium. Audio cassette & video tape.

KNOW YOUR NUTRIENTS: Folic Acid
 with Ronald Hunninghake, M.D.
 Studies have shown that folic acid (B-complex vitamin) helps prevent birth defects and digestive problems. It's important to new cell growth, including red and white blood cells, and is needed for proper liver function. Fatigue, poor memory, and digestive problems are indications of low levels of folic acid. Audio cassette & video tape.

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Upcoming Events. . .

FEBRUARY				
Monday	Tuesday	Wednesday	Thursday	Friday
			1 L & L - Partially Hydrogenated Fats	2
5 Yoga Reduce Hips, Thighs, & Buns	6 L & L - Know Your Nutrients: Riboflavin	7 Yoga Reduce Hips, Thighs, & Buns	8 L & L - RECNAACancer Research Update	9
12 Yoga Reduce Hips, Thighs, & Buns	13 L & L - Know Your Nutrients: Vitamin B12	14 Yoga Reduce Hips, Thighs, & Buns	15 L & L - Beating the Winter Blues with Laughter	16
19 Yoga Reduce Hips, Thighs, & Buns	20	21 Yoga Reduce Hips, Thighs, & Buns	22 L & L - When & How is Chelation Useful?	23
26 Yoga Reduce Hips, Thighs, & Buns	27	28 Yoga Reduce Hips, Thighs, & Buns	29 L & L - Mind-Body Centering: Learning How	

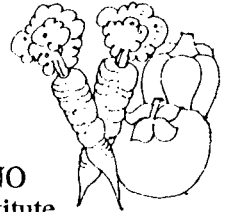
3/21 Spring Lunch & Lecture Classes begin

6/14-15 Bright Spot for Health Fair

Uncooked vegan diet high in antioxidants

Based on careful dietary analysis, vegans who eat their vegetables uncooked get more vitamins A,C, and E and beta-carotene than those who cook their vegetables or those who include meat in their diet (omnivores).

The research, conducted by Anna-Liisa Rauma and associates at the University of Kuopio, Kuopio, Finland and the TNO Food Research Institute



in Netherlands, showed that blood levels in the "living food" vegetarians for these nutrients were significantly higher than in omnivores.

This diet isn't for everyone, but omnivores can learn something from it —add more raw fruits and vegetables to your diet for better health.

INSIDE THIS MONTH'S ISSUE . . .

- Antioxidant vitamins and β -carotene in disease prevention
- New uses for vitamin E
- Antioxidants—important for mental health
- Cancer risk lowered with micronutrients

Health Hunter

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