A service of The Center for the Improvement of Human Functioning International founded in 1975 CELEBRATING 20 YEARS

Health Hunters NEWSLETTER

VOL. 21, NO. 9 OCTOBER 2007

The amazing amino acids

by Dr. James A. Jackson

Proteins are necessary for life in humans and all animals. Muscles, cell membranes, and proteins are made from amino acids. Amino acids get their name from their chemical structure; that is, they contain a nitrogen (amino group) on one end and a COOH (acid group) on the opposite end. The nitrogen group in the form of ammonia is a waste product from protein metabolism that is converted in the liver to urea. Urea is then removed from the blood via the kidneys. If the kidneys are severely damaged and cannot remove the excess ammonia (nitrogen), the brain will be damaged. If severe enough, one may have to have dialysis to remove various waste products from the blood. Many of our readers have had a simple test of kidney function to measure the level of nitrogen in the blood. It is called blood urea nitrogen, or simply abbreviated as BUN. The other blood test routinely measured for kidney function is creatinine.

There are 22 known amino acids. Eight amino acids (nine in children and infants) cannot be made in the human body. Amino acids of the body are alanine, arginine, asparagine, aspartic acid, cysteine, cystine, glutamic acid, glutamine, glycine, histadine (infants and children),* isoleucine,* leucine,* lysine,* methionine,* ornithine, phenylalanine,* proline, serine, threonine,* tryptophan,* tyrosine, and valine.* Any nutrients that cannot be made in the body and must be obtained in the diet (or as supplements) are called essential amino acids. The * indicates the essential amino acids. There are about 51 different nutrients that are essential for life; the eight amino acids are just one group.

Amino acids must be obtained in the proper amount and ratio. A missing or low concentration of any amino acid will proportionately reduce the effectiveness of all the others. Everyone's protein requirement is different. As stated before, amino acids make up proteins found in every tissue of the body and play a major role in nearly every chemical process affecting physical and mental functioning. They contribute to the formation of proteins, muscles, neurotransmitters, enzymes, antibodies, and receptors.

Health, age, and size determine the daily amount of protein you need. Children between the ages of 1 to 3 years need 23 grams of protein a day. Between 4 and 6 they need 30 grams, and between 7 and 10 years they need 34 grams. Adult males between 11 and 14 need 45 grams, while those between 15 and 51+ years need 56 grams. Women between the ages of 11 and 18 need 46 grams, while those between 19 and 51+ years need 44 grams.

There are two important basic types of proteins. They are complete proteins that contain all the essential amino acids in the proper proportion. These are usually found in animals: meat, poultry, seafood, eggs, milk, and cheese. Egg albumin (white part of the egg) is said to contain the proper ration of amino acids. Incomplete proteins lack certain essential amino acids. These proteins are found in seeds, nuts, legumes (peas and beans), and grains. For better nutrition, mix incomplete with complete proteins. Proteins, carbohydrates, and fat are interchangeable sources of energy. Carbohydrates and proteins have the same amount of calo

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Don't drink alcohol during pregnancy

Mothers who did not drink alcohol during pregnancy had brighter children than did mothers consuming alcohol during their pregnancy, according to a United Kingdom research study that appeared in *Pediatrics*. This was particularly true for daughters, said Dr. Sayal, the lead author of the study.

The researchers looked at 9,086 children who were born between April 1991 and December 1992. Mental health scores of the children were checked at ages 47 months, 81 months, 93 months, and 108 months. These scores indicated psychosocial and behavior problems the children might be experiencing.

At all the points the researchers tested, girls whose mothers consumed less than one drink per week in the first trimester were brighter children than those of women who drank more than one drink a week.

Dr. Sayal recommended that doctors suggest to mothers not to drink alcohol during pregnancy. HH

Inside this issue...

PUBLICATION INFORMATION

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Health Hunter Newsletter is published as a service 10 times a year by the Olive W. Garvey Center for Healing Arts, a division of The Center for the Improvement of Human Functioning International (CIHFI), a non-profit organization. Memberships are $25 for one year, $30 for outside the U.S.; $45 for 2 years, $55 for outside the U.S.; and $60 for 3 years, $75 for outside the U.S. To join, see the order form on page 7 of this issue. (Prices good through 2007.)

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Nutritional Medicine

by Rebecca K. Kirby, M.D., M.S., R.D.

Cat food

Let's talk about nutrition (are you surprised?). Sometimes in the discussion of taste, cultural preferences, recipes, and "good and bad" foods we forget the true purpose of what we eat. Quite simply, the substances in foods support our biochemistry.

Our bodies are complex organisms. At the cellular level, synthesis, catabolism, repair, regulation, energy production, and gene expression are some examples of the biochemical mechanisms that churn along nonstop in our bodies. Where are the supplies coming from for carrying on this activity? Ah, now we are back to eating again. What are you feeding your metabolic machinery? You wouldn't give your cat sweetened fruit juice and donuts for breakfast (the cat wouldn't eat it for one).

So, what's on your plate? Americans eat 130 pounds of sugar a year; 60% of the calories consumed come from refined (white) flour, rice, extracted fats and oils (margarine, shortening, etc.), and sugar (including fructose). You might as well put kerosene in your gas tank! Poor nutrition and lack of exercise account for 400,000 (preventable) deaths a year.

In lieu of a scientifically formulated chow pellet, we need to search out the best choices to supply our metabolism with vital nutrients. The best way to do this is to eat the cellular organisms (food) as they were grown (what we call whole foods)—unprocessed and unrefined (no cookie dough). With whole foods, we get more vitamins, minerals, healthy fats, and phytonutrients or phytochemicals. Phyto is Greek for plant, and scientists continue to identify more and more of these remarkable phytonutrients that are beneficial to our metabolic machinery.

You really do need to eat your vegetables. The USDA found that people who had diets high in sugar ate fewer fruits and vegetables; they also got less calcium, fiber, folic acid, vitamin A, vitamin C, zinc, magnesium, and iron from their diet. That's asking the metabolic machinery to do without enough vital nutrients.

Eating whole foods is the foundation of a good diet. Aim for 80% wholeness. If you pick up packaged food, your best defense is reading the ingredient label. Be aware of sugar on the label. For example, fruit-flavored yogurt has 7 teaspoons of sugar in it. (Buy plain yogurt and add your own fruit, nuts, cinnamon, etc.) It is helpful to remember that sugar comes by many names—dextrose, fructose, high fructose corn syrup, brown rice syrup, honey, and evaporated cane juice, just to name a few. Be thoughtful of your metabolic machinery; it's the only one you've got. Enjoy more vegetables, fruits, beans and peas, seeds, nuts, and whole grains. HH

Amino acids—Cont'd from page 1

ries per gram. Each has 4.0 kilocalories/gram. Fats have 9 kilocalories/gram.

Let's look at some amino acids and see why they are important in various parts of the body. The brain contains taurine, GABA, glycine, phenylalanine, DLPD, glutamine, tyrosine, and tryptophan. The anterior pituitary contains arginine, glycine, and ornithine. These are necessary for normal functioning of the pituitary gland and are especially important in the release of growth hormone. Arginine can be found in all protein-rich foods, chocolate, nuts, raisins, sunflower and sesame seeds, oatmeal, and whole-wheat breads. Any amino acid supplement should only be taken under the advice of a knowledgeable healthcare worker.

Glycine is the simplest of the amino acids. It helps in low pituitary gland function, helps supply the body with creatine, which is essential for muscle function, and may help in hypoglycemia. Glycine helps stimulate the release of the hormone glycogen, which then breaks down glycogen to release glucose in the blood. Glycine is included in many antacid medications as a treatment for high levels of stomach acid. Glycine is available in protein-rich

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Amino acids—Cont'd from page 2

foods and in supplemental form.

Tryptophan is another very important essential amino acid. Serotonin, the important brain neurotransmitter, is made from tryptophan. Amino acids and most other nutrients do not act alone! Many other nutrients are necessary for the conversion of one compound into another. To convert some amino acids to neurotransmitters it may take as many as 17 different minerals, enzymes, and vitamins. Vitamin B6, niacin, and magnesium are part of the compounds necessary to convert tryptophan to serotonin.

Phenylalanine is an important amino acid in the area of the brain. The heart needs carnitine, lysine, and methionine, as well as other substances such as coenzyme Q10 and magnesium, to operate correctly. Two amino acids that allow the thyroid to function are phenylalanine and tyrosine.

Amino acids important to the body organs are as follows:

Muscles - Glycine, Lysine, Leucine, Valine, Isoleucine
Liver - Alanine, Methionine, Threonine, Tryptophan, Phenylalanine
Skin - Lysine, Proline, Cystine
Bone - Histidine, Lysine
Gallbladder - Glycine, Taurine
Stomach - Glutamine, Glycine
G.I. Tract - Histidine, Glutamine
Pancreas - Cysteine
Blood - Serine, Histidine, Cysteine, Tryptophan

Magnesium, vitamin B6, or P5'P should be added to all amino acid supplements.

There are over 34 symptoms of amino acid deficiencies. These range from behavioral disorders, anxiety, chronic allergies, hypoglycemia, mood swings, chronic fatigue, etc.

Why do amino acid deficiencies occur? Some of the more common reasons are poor diet, inadequate digestion and absorption of proteins, inadequate cofactors such as B6 and magnesium, chronic stress, anxiety, illness, and rare inborn errors of metabolism.

How would one overcome these deficiencies? Eat a balanced diet, add digestive enzymes to break down proteins to amino acids, add necessary cofactors, and take necessary cofactors recommended by a healthcare professional. HH

HEALTH HUNTERS AT HOME

Green tea and heart disease

Green tea is good for you! I know, you have heard this before, but let me share a research paper with you that appeared in a recent issue of *Nutrition Reviews*. The title is "Mechanisms and Effects of Green Tea on Cardiovascular Health."

In this paper, the researchers point out that green tea is rich in antioxidants and anti-inflammatory catechins called epigallocatechin gallate (EGCG for short). EGCG is very good in reducing atherosclerosis lipid peroxidation and several other heart-related disease markers.

First of all, let's go over the advantages of green tea. The non-fermented green tea has a large amount of catechins. It is mainly consumed in China, Japan, Korea, and Morocco. In the USA, we mainly drink fermented black tea. Fermented black tea and oolong tea are much lower in the valuable chemicals that protect the heart.

In green tea, catechins make up 80 to 90% of the flavonoids, of which EGCG is the most abundant with 48 to 55%. Several others make up the remainder of the catechins in green tea. A cup of green tea has about 90 mg EGCG, according to C. D. Wu and G. X. Wei.

Now, for heart problems. "While tea drinking in general has been associated with cardioprotective benefits, green tea consumption, specifically, has been correlated with a reduced risk of cardiovascular events and other surrogate markers of [cardiovascular disease] in Chinese and Japanese cohorts," wrote the researchers.

"Recently reported data from the Ohsaki study, which included 40,530 Japanese adults who were followed for 11 years (1995-2005), showed an inverse association between green tea consumption and mortality due to all causes and cardiovascular disease," they wrote.

Kono and associates reported in 1992 a significant drop in total cholesterol in the blood serum and the consumption of nine cups or more of green tea per day of 1,306 Japanese males. In another paper, Imai and Nakachi reported a significant reduction in the levels of cholesterol and triglycerides with drinking more than three cups of green tea per day. The researchers quoted several other research papers also showing a reduction of some cardiovascular disease risk factors and drinking green tea.

Green tea extract reports were also quoted in this research paper. For instance, in a triple crossover study, 224 mg and 674 mg of green tea catechins were shown to reduce after-meal blood plasma triglycerides by about 15% for the 224 mg dose and about 28% for the 674 mg dose when compared to control subjects.

Green tea can also be used for weight reduction. "Abdominal obesity and percent body fat, which are independent risk factors for [cardiovascular disease], have also been parameters of interest for researchers in green tea intervention. Epidemiological studies have shown an inverse correlation between habitual tea consumption practiced for more than 10 years and a body fat percentage and distribution," the researchers wrote. Anti-obesity effects of green tea have been investigated in both animals and humans alike.

Green tea works, but is it safe to use? Green tea consumption can be considered part of a healthy lifestyle, at least in China, Japan, and Korea. But the researchers had a comment to make about concentrated green tea extracts. They wrote that green tea extracts of EGCG below 1 gram a day may be safe. You should take higher doses under close medical supervision.

A diet rich in functional food containing antioxidant polyphenols such as green tea beverages, combined with physical exercise and lifestyle changes can offer you and me primary prevention against cardiovascular disease. "... freshly prepared green tea appears to be a healthy dietary choice to consider," wrote the researchers in the final sentence of the article. Drinking green tea makes sense to me and, hopefully, it will make sense to you as well. HH

—Richard Lewis

INFORMATION WORTH KNOWING

by Marilyn Landreth, M.A.

Do you think that lowering your cholesterol levels is the only thing you need to do to have a healthy heart? Guess again. According to Julius Torelli, M.D., Founder of the Integrative Cardiology Center, there are seven tests that are necessary to determine how healthy your heart is. Six are laboratory tests and one is a CT scan. In his book, *Beyond Cholesterol: 7 Life-Saving Heart Disease Tests That Your Doctor May Not Give You*, he explains what the tests are, what they show, and how to get them. Laboratory tests are one way to find out the balance in your body. When blood levels of a specific substance are either too high or too low, something is not working as it was intended to function. Lowering high cholesterol levels through diet and a healthy lifestyle is beneficial but not the only thing that needs to be considered. Also, Dr. Torelli discusses the importance of lifestyle factors in having a healthy heart. The questions this month are taken from his book.

1 Atherosclerosis is a buildup of fatty material in the wall of a coronary artery. It often takes several _____ before the buildup narrows the interior of the artery.

a. days
b. months
c. decades
d. generations

2 Metabolic Syndrome is a collection of health problems that can interact with one another to cause a threat to the _____.

a. metabolism
b. heart
c. thyroid
d. liver

3 We all know that there are risk factors such as smoking, high blood cholesterol, and high blood pressure, along with others, that are associated with heart disease. Now we know that there is a single cause-and-effect relationship between risk factors and coronary artery disease.

a. True b. False

4 Inflammation is the body's response to an injury. Inflammation plays a crucial role in the development of blockage of the coronary arteries. C-reactive protein (CRP), ferritin, and _____ levels rise during inflammation.

a. disulfiram
b. barbiturate
c. fibrinogen
d. all of the above

5 A high C-reactive protein (CRP) level indicates that inflammation is happening somewhere in the _____.

a. heart
b. body
c. liver
d. thyroid

6 Homocysteine is another indicator for cardiac risk. Although doctors do not know exactly how it works, many people have high levels of homocysteine when they have a heart attack. Doctors now know how to lower homocysteine levels.

a. True b. False

7 Studies based on blood samples from 28,000 seemingly healthy women followed over eight years suggested that CRP levels were a better predictor of cardiovascular disease than _____.

a. Low Density Lipoprotein (LDL)
b. High Density Lipoprotein (HDL)
c. Very Low Density Lipoprotein (VLDL)
d. Medium Density Lipoprotein (MDL)

• *FOR ANSWERS, SEE PAGE 7* •

Garden update

by Gary D. Branum, Ph.D.

Boy, this farming is an unpredictable business! Although we call it the Brightspot Garden, I think of what we do here at The Center as farming, primarily because we can't easily protect the garden from the weather. If it was a true garden, we could cover the tomatoes to protect them from the frost, but that's hard to do with 105 plants.

The garden had its ups and downs this year. We've had about 8 inches more rain than an average year and only two days over 100 degrees, so the heat and drought stress on the plants was much less than usual. On the down side, we had a late freeze from April 4-10 that set us back a couple of weeks. Also, insect damage, coupled with diseases that are carried by insects, has been a little greater than normal this year.

A new crop for the garden in 2007 was strawberries. We harvested a few, but strawberries don't really start producing until the second year, so watch for those next year.

In spite of the problems, we've had a reasonable year. In early summer we harvested about 250 pounds of potatoes, which is an improvement over the past two years when we lost some to wet conditions. We had a great corn crop this year, harvesting four times for a total of about 180 pounds of good ol' corn-on-the-cob. Asparagus (166 pounds), peppers (245 pounds), and okra (317 pounds) production was good. Lettuce, eggplant, and blackberries were down. Melons (460 pounds), squash (650 pounds), and greens were about average.

We're still harvesting some produce, so the final yearly totals aren't in yet. We've harvested about 1,750 pounds of tomatoes, with more being produced. We expect to start harvesting sweet potatoes any day and we'll have over 500 pounds ready to store for the winter. Jerusalem artichokes won't be harvested until after the first freeze and we expect to harvest over 200 pounds.

To date, the total produce from the Brightspot Garden is 4,811 pounds of organic goodness, with more to come. This is slightly down from the past couple of years but, as with all farmers, we hope to do much better next year. HH

Test of the Month

by Dr. James A. Jackson, Director, Bio-Center Laboratory

Thyroid function tests - part two

Iodine? What does it have to do with the thyroid? Plenty. Your thyroid could not make T4 and T3 (thyroid hormones) without it. Iodine is an essential trace mineral, which means your body cannot make any. Iodine is the elemental form and iodide is the reduced form that is stored in the thyroid gland. About 90% of the total body iodine (6,000 to 12,000 ug) is contained in the various thyroid compartments. The average iodine intake in the U.S. is 250 to 700 ug (or more) daily. Iodide is added to salt and bread in the U.S. The RDA is about 150 ug a day. Iodine is also concentrated in the breast and may protect against fibrocystic breast disease and cancer.

The classical disease associated with iodine deficiency is called "goiter." The thyroid enlarges and the goiter may be seen protruding at the base of the "Adam's Apple." A goiter may form from other conditions, but usually it is not as large as it is in iodine deficiency. A goiter in infancy may result in hypothyroidism and cretinism. Goitrogenic substances inhibit the absorption and binding of iodine. Some of these are chlorine, fluoride, and bromide which are found in tap water, pools, hot tubs, toothpaste, mouthwash, soft drinks, baked goods, etc.

What tests does the laboratory do to check your iodine? Indirectly, we measure the T4, T3, and free T4 and T3. We also offer a test that measures a 24-hour urine iodide level. After a loading dose (usually 50 mgs), urine is collected for 24 hours and returned to the laboratory. The amount of iodide excreted is measured. The reference range is 0.1 to 0.45 mg/24 hours. The percent excreted is also measured. This gives an evaluation of the total body saturation of iodide/iodine. The lower the percentage excreted, the less the body is saturated. Our physicians look for excretion rates of 90% or higher to show an adequate body saturation of iodine.

Herbal History

by Chad A. Krier, N.D., D.C.

Phyto-estrogen herbals

The herbal combination Phytoest by Wise Women Herbal contains useful herbs for supporting healthy estrogen levels. I use it in cases where estrogen levels are found to be low, for initiation of menses and in menopause. Phytoest contains dong quai, fennel, black cohosh, and alfalfa. These herbs do not contain estrogen but are supportive to conditions that may result from lack of estrogen.

Dong quai (Angelica sinensis) is known as a female tonic and is thought to promote circulation in the pelvic organs. Dong quai is anti-inflammatory, analgesic, and helps to promote bowel movements (ok! it may be a mild laxative). It works well for PMS and menstrual cramping.

Black cohosh (Cimicifuga racemosa) is anti-spasmodic, estrogenic (promotes estriol type activity), sedative, diuretic, uterine tonic, and anti-inflammatory. Cimicifuga works well in the management of menopausal symptoms. A standardized extract called Remifemin, manufactured in Germany, is used as a replacement or adjunct for hormone replacement therapy by many women.

Fennel (Foeniculum vulgare) works as a phytoestrogen. It's useful in cases of amenorrhea (lack of menses) and oligomenorrhea (infrequent menses).

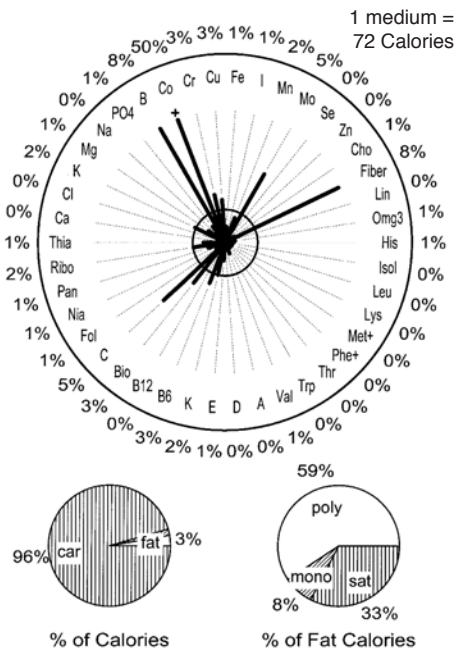
Alfalfa (Medicago sativa) is phytoestrogenic and works as a restorative tonic on the female reproductive system. It's a nutritious herb containing many minerals and vitamins and is often used in botanical formulas for its nutritional value.

I generally recommend ¼ tsp three times daily mixed in water or juice for general female support.

Food of the Month

by Donald R. Davis, Ph.D.

APPLES are an icon for good nutrition and "keep the doctor away," so their nutrient contents seem surprisingly low except for vitamin C, fiber, and a few others shown here. However, apples (especially with their skin) rank very high in phytochemicals, which may explain the paradox. Though phytochemicals are not essential and have no RDAs, they add greatly to the value of fruits and vegetables. They help prevent many troubles, including heart disease, cancer, asthma, and diabetes. It seems that the phytochemicals in apples contribute much to keeping the doctor away.



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).

Mental Medicine

by Marilyn Landreth, M.A.

What is your favorite "moment"?

The leaves are turning colors and drifting to the ground. The sumac's bright red color shows up plainly on a gray fall day. This is one of my favorite times of year. I used to question if fall was my favorite time of year or if it was spring.

When fall arrives the cold days of winter are fast approaching, and winter could be very cruel on the farm where I grew up. We had a big black wood stove in the living room to try to heat both stories of our house. At night we would go to a cold bed and shiver for a long time. In the morning it would be so cold that we would have to break the ice in the water bucket before we could wash our faces. (Now that was a way to wake up!) It would be so cold that we would put our eggs in the refrigerator to keep them from freezing. We had to walk to school a mile away no matter how cold it was. (My daughter always teases me that it must have been uphill both ways.)

Spring was a wonderful time of year, as the days became warmer and longer. It also meant that the hot days of summer were just around the corner. The windows and doors remained open in our old house to let any breeze through. We had one fan, but it just blew hot air. The weeds, bugs, and all the chores made summer a miserable time.

The return of the first cool day reminded me of my past dilemma of deciding which season was my favorite. With all the conveniences that we have, each season is a joy that I no longer dread. I also realized that each moment is all we really have right now. Each moment is to be cherished. My favorite moment recently was cuddling up watching a video with a grandchild on each side. What is your favorite moment? HH

CENTER UPDATE

Muscle loss and low selenium for older adults

Aging is often associated with a loss of muscle strength. This often increases the risk of falls, hospitalization, disability, and death. Yet, the biological mechanisms involving the loss of muscle mass and strength are not completely understood, that is, until recently.

A study that appeared in a recent issue of *The American Journal of Clinical Nutrition* took a look at low levels of selenium in the blood plasma accompanied by loss of muscle strength for 891 men and women who were 65 years old and older. These men and women lived in two small towns in Tuscany, Italy, but the results may apply equally to individuals in the USA, as well as other developed countries.

To find out if low selenium has anything to do with loss in muscle strength, the researchers measured the blood plasma levels of selenium as well as the hip, knee, and grip strength of the subjects. They defined poor muscle strength as the lowest one-fourth of hip, knee, and grip strength.

This is what the researchers found. Of the 891 adults they tested, those who had the lowest one-fourth of selenium in their blood plasma also had the lowest hip strength, knee strength, and grip strength. And, as you can guess, the adults who were in the top one-fourth had the most strength in their hips, knees, and grip.

"This study showed that low [blood] plasma selenium is an independent correlate of poor skeletal muscle strength in older adults living in the Tuscany community," the researchers concluded. "To our knowledge, this is the first study to show an association between [blood] plasma selenium concentrations and poor muscle strength in older adults."

It will take additional research to find out if adding selenium to the diet will help one regain muscle strength, but it is probably wise to add selenium until they find out. HH

Case of the month

A 45-year-old woman came to The Center in January 2005 complaining of sinus problems. She had had the stuffiness and sinus problem for over 20 years. She said that she would see her doctor every month or two months and ask him for two weeks of antibiotics. "Oh, yes," she would add, "I will need a prescription for the yeast infection that will be caused by the antibiotic."

Dr. Chad Krier, a doctor at The Center, has an excellent solution for sinus problems. He inserts cotton applicators, which have been dipped into diluted essential oils, up the nose into four sinus locations and then covers the area with a diathermy heat treatment for about 15 minutes. He also has the person take one Euphrasia Complex tablet three times a day, along with a wet sock technique three times a week.

When Dr. Krier saw this woman, he suggested the sinus technique program to her and she agreed. She said that he had to actually "screw the cotton applicators into the sinuses because they were so clogged." Once they were in, he applied the heat treatment and she just laid on the table for about 15 minutes. Then, Dr. Krier removed the heat treatment from her face and took out the applicators.

She said that she felt great after the applicators were removed. She actually started feeling better during treatment and really great after it. "There was sneezing for a short time after the treatment, but I felt so much better and without the antibiotics and the side effects that come with them."

She continues taking the Euphrasia Complex to this day and she sees Dr. Krier when her sinus problem reccurs. She says that the treatment is not a cure, but it is so much better and cheaper than the antibiotics followed by another yeast infection. "I just come in for a treatment about four times a year and leave here feeling great—no antibiotic, no yeast infection caused by the antibiotics, no side effects. Nothing. I just feel great. I am free at last," she said recently. Dr. Krier has seen other people with sinus problems and has had similar results with all of them. HH

Answers from page 4

1 c. This buildup is called "coronary artery disease" and has been found at autopsy in men and women in their twenties.

2 b. Two or three health problems acting together are more potent than any one problem.

3 b. Because we all differ in so many ways, what is harmful to one person is not to another. Risk factors do not act alone and need to be triggered.

4 c. Fibrinogen is manufactured in the liver and is needed to form blood clots. In inflammation it rises sharply acting as an inflammation marker.

5 b. Although the inflammation may not be in the coronary arteries, inflammation elsewhere in the body seems to increase the likelihood in the coronary arteries as well.

6 a. Supplements of folate, vitamin B, and vitamin B-12 achieve a lower homocysteine level.

7 a. Women with the highest CRP levels were twice as likely to have a heart attack or stroke or to die from heart disease as those with a high LDL level. HH

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BEYOND CHOLESTEROL:
7 Life-Saving Heart Disease Tests That Your Doctor May Not Give You
by Julius Torelli, M.D. & George Ryan
Most people think that knowing your cholesterol level and getting it within a certain range can insure a healthy heart. Research has shown that cholesterol is not the only indicator of heart health. Find out what other seven tests can play a part in having a healthy heart. Softcover. $13.95 HH price $12.56

PLEASE DO EAT THE DAISIES...
with Gary Branum, Ph.D.
Most of us tend to separate plants into edible (fruits and vegetables), ornamental (flowers and trees), and weeds (anything we don't like). By doing this, we are depriving ourselves of some wonderfully tasty treats. Dr. Branum introduces you to a few unlikely delicacies. Dandelions, anyone?

THE POTENTIAL OF ADULT STEM CELLS (NON-EMBRYONIC) IN REGENERATIVE MEDICINE
with Neil Riordan, Ph.D.
Currently adult stem cells have shown their amazing power of healing various chronic diseases, including diabetes, heart disease, Parkinson's, and other neurological diseases. Dr. Neil Riordan, Director of the Bio-Communications Research Institute, discusses the facts on how adult stem cells cure diseases and the safety of using adult stem cells as treatments.

ARE YOU GETTING ENOUGH VITAMIN D?
with Rebecca Kirby, M.D., M.S., R.D.
Vitamin D affects more than bones. It has health implications for muscles and balance, gum disease, cancer, inflammation, and diabetes. Find out more about the "sunshine vitamin."

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11 Hyperbaric Oxygen Therapy (HBOT): How Oxygen Under Pressure Can Help Heal Many Diseases

18 Top 10 Reasons to Eat More Whole Foods

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Winners of the Health Hunter Contests will be announced.

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High folate intake, lower breast cancer

The researchers wanted to find out if a high folate intake would lower the incidence of postmenopausal breast cancer, according to Ulrika Ericson and associates in a report that appeared in *The Journal of Clinical Nutrition*.

In their study, the researchers used 11,699 Swedish women aged 50 years or older who participated in the Malmo Diet for about 9.5 years.

Their conclusion, after looking at the data at the end of the study, was that high folate intake does reduce the incidence of breast cancer in postmenopausal women—at least the ones in the study. Their findings could not be explained by intakes of other nutrients found in the same food.