

The riddle of allergies

Ron Hunninghake, M.D.

The immune system is our great internal sentinel. It is ever watchful against unwelcome invaders that could cause infection, cancer, heart disease, ulcers, allergies, and even accelerated aging. Without its careful monitoring of all foreign and potentially hostile substances to the body, we would fall prey to unscrupulous bacteria, viruses, parasites, endotoxins, drugs, chemicals, pollens, danders, molds, or even incompletely digested particles of food. All parts of us that come in contact with the outside world-our skin, the linings of our air passages, our digestive and genitourinary tracts-are guarded by our magnificent immune system.

...over 100 million Americans suffer from immune dysfunction.

Yet much to our dismay, we are confronted with a startling statistic: over 100 million Americans suffer from immune dysfunction. Asthma, allergies, hives, atopic dermatitis, and a plethora of immune disorders account for growing legions of antihistamine users, school lockers full of inhalant bronchodilators, billions of annual allergy shots, growing steroid use, and a shocking rise in the number of asthmarelated deaths nationwide.

What is going on here? Why is our "magnificent" immune system failing us so dramatically? This is a profound (and expensive) riddle.

Part of the problem may be due to a chronic overload on two small (1/8 of an ounce each!) glands that sit on top of our kidneys. A striking experiment was done on a group of dogs. Their adrenal glands were surgically removed. All the animals died, but only after developing a wide variety of immune dysfunction disorders: asthma, hay fever, eczema, and arthritic pain and stiffness. So what does this have to do with human allergies? Allergy sufferers seem to have a significantly lowered threshold to stress. Why? Because, as was demonstrated by Dr. Hans Selye, the famous stress physiologist, chronic over stimulation of our adrenals due to excessive physiologic and psychologic demands, results in eventual exhaustion of the adrenal glands. Insufficient adrenal responsiveness appears to be a major component of this riddle of allergies.

But everyone in modern times must contend with crippling stress, and yet not everyone suffers from debilitating allergies. Stress is one piece of the puzzle. What are other components?

Most of us think of allergies in reference to the respiratory system only. Stuffy nose, sinus congestion, and wheezing are common manifestations of inhalant allergies. Hives, eczema, and other forms of atopic dermatitis comprise the skin's manifestations of allergies. Indeed, skin testing is the most common form of allergy testing done in this country. While these two organ systems are the conventional targets of allergies, there remains one huge organ system that is commonly overlooked when it comes to allergies. and yet may represent the key to understanding our modern epidemic of allergy/immune disorders.

continued on page 🎗

Magnesium helps asthmatics breathe better

"Our findings provide evidence for the first time that differences in dietary magnesium intake may be important in determining lung function, airway reactivity, and respiratory symptoms in the general population," wrote John Britton, in *The Lancet*.

Britton and his colleagues at the University of Nottingham, City Hospital, in England and Brigham and Women's Hospital in Boston wanted to find what effect magnesium might have in relieving the symptoms of asthma such as wheezing. Research had already shown that magnesium worked to relax smooth muscles.

Using dietary information from 2415 people, they found a strong relationship between magnesium intake and the improvement of symptoms.

The researchers believe, from their research, the recommended daily allowance may be too low for everyone and for people with breathing problems especially.

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Nutritional Medicine

by Ron Hunninghake, M.D.

Functional medicine

When you go to see the doctor, something usually isn't right. "I hurt. I'm tired. I can't breathe." The doctor will listen, examine, test, then diagnose and treat.

Conventional medical training teaches pathophysiologic "lumping." The doctor attempts to classify your ailment along anatomical lines of abnormality. You come into the clinic feeling bad, and leave with "fibromyalgia" or "glomerulonephritis." These diagnostic terms refer to specific organ systems. "Fibromyalgia" refers to painful muscles and is often handled by a rheumatologist; "glomerulonephritis" is a disease of the filtrating units of the kidney and so is managed by a nephrologist.

When the topic of causation is brought up, not much is said. You're getting old." "You caught a virus." "Your immune system is attacking itself." Conventional diagnoses are good at categorizing the illness, but leave the notion of causative factors quite obscure.

A new medical discipline is emerging that takes a different perspective. When you get sick, something stops working like it should. A sinus infection is more than just a dys-

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The modern American diet has several characteristics that promote maldigestion. Over half of our calories come from non-whole foods. Fiber has been removed. Sugar and hydrogenated fats have been added. Chemical preservatives, pesticide and hormonal residues, and various colorings are commonly present in foods. Monotony abounds. The typical fast food cuisine consists of various combinations of about 18 basic foods. And then, to top it off, we eat in haste, with very poor chewing habits.

Whereas inhalants trigger IgE antibody formation, maldigested foods, in the form of small peptides, trigger IgA antibody formation. These secretory IgA molecules protect the gut lining from adverse food reactions. functional sinus cavity...your immune system is weak. And that may be tied to allergies over-burdening it. And that may be due to poor digestive breakdown of foods, leading to inappropriate absorption of large peptides which overload the immune system. Thus the *mal*-function at the basis of the *mal*ady appears to be weak digestion.

But, can we be sure that's the culprit. Of course...MEASURE IT!

This, in a nutshell, is functional medicine. Assess the basic functions of the body. Search for malfunctions as the root causes of chronic illness. Define these malfunctions, then strive to correct them, and measure to prove that the abnormalities are improving. Learn to classify illnesses according to root malfunctions. Maldigestion and subsequent immune overloading can be demonstrated to be a root cause of colitis, arthritis, migraine, and skin disorders. Malfunction crosses the anatomical barriers held dear to specialists. Functional medical care is holistic and ecologic in its approach to chronic illness.

So when you come to see the functional medicine doctor of the future with a head cold...he may ask for a stool specimen!

However, there is a limit to the gut's capacity to secrete adequate protection. Once overwhelmed, one of the consequences is an overproduction of powerful chemical mediators: histamine, inflammatory prostaglandins, leukotrienes, serotonin, and many more. One result of this barrage, in addition to a stuffy nose and other systemic allergic symptoms, is the slow loss of the stomach's ability to secrete hydrochloric acid. From this, proteins aren't completely broken down and food is inadequately sterilized of pathologic bacteria and parasites. The partially digested food passes into the small intestine and, paradoxically, does not trigger the production of pancreatic bicarbonate and digestive enzymes continued on page 3

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properly...further disrupting the digestive process.

The picture emerging here is one of what could be described as dysorchestration of the digestive process. Poor quality foods, overly processed, nutrient deficient, under-chewed, inadequately broken down, possibly infected...entering the gut and overwhelming an already stressed adrenal system. This is a picture of the immune system simply being overwhelmed! Allergies may represent an overworked, underpaid immune system!

This suggests that the proper treatment of allergies goes a lot further than simply taking an antihistamine. The entire system needs attention. Taping the hole in the radiator hose is not the proper treatment for an overheated engine! A more holistic systemic treatment plan is needed to address the multiple factors contributing to the dysfunction of the immune system. This view treats our immune system more ecologically. Specific problems are addressed with the aim of restoring better function to the system as a whole.

The riddle of allergies must then be solved on the level of the individual. Understanding food sensitivities, poor digestion, abnormal gut flora, adrenal dysfunction, dietary choices, micronutrient status, and a host of individualized factors will reveal that unique character of allergy in that individual. H

Try hummus instead of peanut butter

Here is a suggestion from the University of Berkeley Wellness Letter. Try hummus for your sandwich spread in place of peanut butter for lower fat.

Hummus, made from mashed garbanzo beans, also called chick peas. is seasoned with garlic, lemon juice and olive oil.

As a comparison, three tablespoons of hummus have about 4 grams of fat and 75 calories while peanut butter contains 24 grams of fat and 285 calories. If you are watching fat, hummus is the obvious choice. Hн

HEALTH HUNTERS AT HOME

Medicine, The Center's definition

The other day a copy of a page from a Webster's Dictionary appeared on my desk. Highlighted in fluorescent green and sandwiched between "medicinal" and "medicine ball" was the definition of "medicine."

I read the first definition and it piqued my interest. It said that medicine is "the science and art of diagnosing, treating, curing, and preventing disease, relieving pain, and improving and preserving health."

That definition fits what we do here at The Center perfectly, especially when you break it down word by word.

First, the science. When I take people through the laboratory at The Center, they are always amazed at the level of scientific sophistication they see there-the instrumentation and equipment, the education and experience level of the people who work with the testing. Or when they see the extent of the holdings in our medical library and just what resources are available to them, they are again impressed. We are solidly grounded in the science of medicine.

But it is in the art of medicine that we really excel. It is much like painting a portrait of an individual. Almost anyone can learn the science of painting ---preparing the canvas, the brush techniques, what colors are available.

The real art comes in the vision, the seeing how all of these pieces come together, the subtle blending of color to get just the right hue, just the right effect that sets science and art apart.

The Olive Garvey Center for Healing Arts is where the paint meets the canvas-where the science and the art of medicine meet the people who come for diagnosing and treatment.

Like any art, the art of medicine takes time, combined with carefully applied technique, to achieve the results the person commissioning his or her "portrait of health" wants.

In Webster's definition above, after science and art comes the word "diagnosing." This is the point where the individual seeking a portrait of health—whom we call the patient/ colearner-begins to participate in the

process.

In the diagnosing part, we are getting a clear concept of the individual patient's health goals. We get the background painted in, to see where the person has come from in his medical journey. Then we can work with the individual and begin treating or painting the present and the desired future.

Our people work together to carefully apply the brush strokes of diagnosis to each individual who comes to The Center.

If we do this right, when we get to the treatment of the individual we are reasonably sure we are treating the underlying problem or causes of the problem rather than just treating the symptoms. Many people participate in this process—the doctors, nurses, laboratory technicians, and the support staff. All have an important role.

Whether we are relieving pain or improving and preserving health, as the definition says, a blend of science and the art of medicine is important.

Just as no two paintings ever appear the same, no two individuals coming to The Center are the same. Our treatments work with the person, not parts. Can you imagine a portrait of a person that just painted a heart or a headache? It wouldn't tell you much about the individual or her health goals.

This is why we treat the whole person, not just the symptoms. We want to improve and preserve health, as Webster's definition of medicine states-to paint the most striking portrait of health possible. And in this process, the one who commissioned the portrait of health becomes a partner and a colearner. It is that person's portrait, his or her vision of health that needs to be painted.

Want to have your portrait or a friend's portrait of health and well being painted? Come to The Center where you will find people who are soundly grounded in the science of medicine and are clearly in touch with the art of what they do so that, in cooperation with the individual, they can paint a beautiful portrait. H

-Richard Lewis



INFORMATION WORTH KNOWING

National Library Week is April 14-20. We invite you to come to The Center and visit the Mabee Library. Listen to audio tapes, read some of the current material available, or look through some of the research articles we have collected over the years. We also have an extensive video collection, including our International Conferences and the Lunch and Lectures. Library hours are 8 a.m. to 5 p.m. Monday through Thursday and 9 a.m. until 4 p.m. on Friday. The questions this month are taken from various sources in the Mabee Library on the topic of allergies.



Currently it is estimated that of Americans suffer an

allergic reaction of some sort.

- a. one tenth
- b. one fifth
- c. one third
- d. one half

Certain types of headaches, such as migraines, can be triggered by _ _ or substances that provoke an allergic response.

- a. chocolate
- b. cheese
- c. red wine
- d. all the above

Certain foods, odors, and even geographic location can cause changes in vision.

> a. True b. False

Many times we have an allergy

- to food that we
- a. have never eaten
- b. hate c. crave
- d. none of the above

- A tip(s) for cat lovers who have an allergy to their cat is (are)
 - a. soak your cat in lukewarm water monthly for 10 minutes.
 - b. store kitty litter outside your home.
 - c. wear a gauze or paper mask while grooming your cat.
 - d. all the above.

The allergic face in children includes wrinkling of the nose, red earlobes, and

- a. circles or puffiness under the eyes
- b. swollen feet
- c. being vertically challenged
- d. all the above



"Hives," which are red, raised, itchy bumps, always have a known cause.

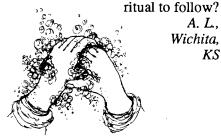
a. True

b. False

FOR ANSWERS, SEE PAGE 7

Answers from The Center

I have heard a lot recently about washing my hands as a way to prevent disease. Just how important is it to wash your hands and is there a particular



Children and adults are amazed by the amount of bacteria that can be grown on culture plates after touching them with finger tips. Much disease could be avoided simply by washing our hands after going to the bathroom and before preparing food. The washing, to be effective, should take a full 15 seconds for soaping followed by a water rinse. Next time you wash your hands, take 15 seconds and notice how clean your hands feel. H

Health Coach

Case of the month

A 17-year-old boy came to The Center with a lifelong problem of severe hyperactivity. Even as a baby he had severe colic and recurrent ear infections. The colic was so bad he required Phenobarbital at an early age.

Later as a young child he developed hyperactivity and was placed on Ritalin. His illness progressed to the point that he became violent, and was put on fairly strong psychotropic medication including imipramine, resperidol, and lithium, which helped to a very small degree.

He had recurrent headaches, but the main problem was his severe allergic reactions to foods, triggering the episodes of violence.

He came to The Center and had a complete biochemical evaluation. including thyroid testing, blood count, urinary potassium to sodium ratio, erythrocyte zinc and manganese levels, candida IgG titers, urinary pyrroles, fructosamine, rectal swab and stool for parasites, and the food sensitivity testing.

Almost all of these tests showed degrees of abnormalities. For example, over half the 90 foods tested were positive on his food sensitivity testing. He showed Indolimax nana on his stool specimen. He also had an elevated candida titer, elevated urine pyrroles, and less than minus 2 standard deviations on zinc and manganese in his erythrocytes. His potassium to sodium ratio was .2, which is less than -2 standard deviations. On his hair tissue analysis, he showed generally low mineral levels. His plasma vitamin C was average and his urinary vitamin C was 0.

As a result of working with his biochemistry and metabolism, we have been able to significantly improve his status. Supplements, and most importantly, in his case, dessicated thyroid, have helped him to calm way down. He told the physician the last time he was here, "I feel happier since being on the thyroid." The rest of the family was glad to have a happy child in place of the hyperactive and violent child that they first brought to The H Center.

Women coffee drinkers less likely to commit suicide

Women who drink two to three cups of coffee a day are less likely to commit suicide than those women who are coffee abstainers, according to research appearing in the *Archives of Internal Medicine*, recently.

"Compared with nondrinkers of coffee, the age adjusted relative risk of suicide in women who consumed two to three cups was 0.34 and 0.42 in women who consumed four or more cups per day," wrote Ichiro Kawachi, M.D., and his colleagues at Harvard Medical School and Brigham and Women's Hospital.

A relative risk of 0.34 means 66% less likely to commit suicide than noncoffee drinkers. This data came from a 10-year follow up from the National Nurses Study that included over 85,000 female nurses ages 34 to 59 years.

A similar reduction was found for caffeine consumption from other sources, as long as the consumption was the same as coffee.

Regular coffee drinkers reported pleasant effects following a cup of coffee while non-coffee drinkers reported unpleasant feelings and discomfort from one cup.

> So coffee drinkers, enjoy a rich, deep flavored cup of French roast coffee, knowing all the time that research shows you are improving your mental health, too.

We want to hear from you

Do you have a question about your health that might be interesting to others as well? Or do you have questions you are too timid to ask in person?

Well, here is your chance to get the answer. Send your questions to: *Health Hunter* Answers from The Center

3100 N. Hillside • Wichita, KS 67219

We will select one, two, or three questions each month, get the answer, and print them in *Health Hunter*. We won't use your name.

Let it go and live longer

If you are an emotional stuffer or know someone who is, you or your friend have a greater chance of dying from coronary heart disease (CHD), according to recent research.

Johan Denollet, Ph.D., and his colleagues with the Department of Physiology and Medicine at the University of Antwerp, Belgium, labeled these people as having a distressed personality, or Type-D personality. These are people who tend to suppress emotional distress.

Their research, published in a recent edition of *The Lancet*, found over four times the number of deaths from CHD in the Type-D group than those who didn't tend to stuff their anger and emotional distress.

Dr. Riordan, The Center's director, points out that we are designed to be fill-hold-release mechanisms. For instance we take in food, hold it in our gut to get the nutrients it has for our body to flourish, and then release it.

We need to do the same thing

mentally—take in information, hold it while we get what is valuable to us from it, and then release it. But, some people, like Denollet's Type-D personalities, tend to be fill-hold, fillhold, fill-hold. They seem to not get to the release stage. Dr. Riordan refers to this as emotional constipation.

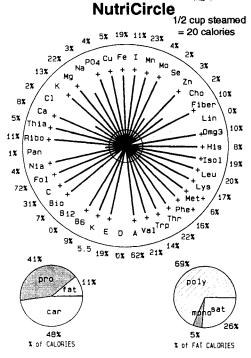
This is why we have a place at The Center where people can come and throw clay pigeons in a safe, convenient place. Throwing the clay pigeons and watching and hearing them shatter begins the release mechanism for some of these people. Clay pigeons, also called blue rock, are meant to be broken so there is no guilt from doing it. If one set up a simple place to do it, one could break them at home or at work.

As we used to say, "Let go and let live," applies to Type-D personalities when changed slightly. "Let go of your angers and emotional distress and let yourself live." And maybe just something as simple as breaking clay pigeons could be your ticket to letting go.

Food of the Month

by Donald R. Davis, Ph.D.

SPINACH is one of the richest foods. in terms of nutrients per calorie, with at least adequate proportions of nearly all known nutrients. (No common plant food supplies vitamin $D \text{ or } B_{12}$). A halfcup serving of steamed spinach (3) ounces) supplies 5.5 RDAs of vitamin K and over 60% of the RDAs for folic acid and vitamin A (as carotene). Spinach also has 11% fat calories, over half of which is α -linolenic acid, an omega-3 fat lacking in many diets. Although its calcium is poorly absorbed, spinach is an exceptional source of many other nutrients. It is also rich in beneficial phytochemicals. Popeye was right!



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 hutrient 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). \mathbb{H}

Beat The Odds Update

Vitamin E, the heart's friend

Adequate levels of vitamin E may reduce the plaque build-up in your coronary arteries, according to research by Jan Regnstrom and his associates at the King Gustaf V Research Institute in Stockholm, Sweden.

In their research they measured vitamin E levels in a different way. In addition to measuring the vitamin E levels in the blood serum, they checked the levels of vitamin E in the lowdensity lipoprotein (LDL).

"We investigated whether the vitamin E concentrations in serum and LDL were associated with the severity of coronary artery disease (CAD) as assessed by a semiguantitative scoring system in which coronary angiograms are analyzed for the number and size of stenotic lesions (global stenosis Score)," the researcher wrote. Stenosis or stenotic lesions are commonly referred to as plaque or blockage in the arteries of people with CAD.

For this study, the researchers selected 64 consecutive men who survived heart attacks, all less than 45

years of age, and matched them with 35 healthy controls. They found "Significant differences in vitamin E concentrations between [the heart attack] patients and [the healthy] control subjects in the present study only after lipid adjustment, as described in [another study]."

They went on to write that analysis of antioxidant vitamins in the, "WHO/ MONICA core study suggests that 60% of the variation of CAD mortality between the 16 European population groups included in the study is explained by differences in lipid-adjusted vitamin E concentrations and only [approximately] 20% by differences in conventional risk factors such as smoking, total serum cholesterol concentration and hypertension."

They concluded by stating, "The results of the present study provide further support for the notion that low concentrations of antioxidant vitamins may be an important risk factor for CAD." In short, be sure you get enough of the antioxidant vitamins. H

CENTER UPDATE

Which is better, milk or calcium supplements?

For years, people have been arguing over whether it is better to get your calcium from milk or is it just as satisfactory to use calcium supplements to build bones in the body.

New research by Lene Mortensen and Peder Charles of the Aarhus Bone and Mineral Research Group, Aarhus University Hospital in Denmark that appeared in The American Journal of Clinical Nutrition looks like it may put this ongoing discussion to rest.

In their study, they used 20 healthy women between the ages of 28 and 59. Using a partially blind, crossover study, they had the women take calcium in three ways, 1) three tablets containing 1000 mg of calcium carbonate a day, 2) the three same calcium carbonate tablets along with 5 mcg (200 IU) of vitamin D along with each tablet, and 3) drink a liter of milk a day (about 1.1 quarts). In addition they took three placebo tablets for a fourth period.

"This study showed that a regimen of calcium carbonate given at two meals and at bedtime increases calcium uptake significantly. Calcium uptake by this regimen was at least as good as the uptake of calcium from an equivalent amount of milk, ie, calcium carbonate can be used as an alternative to milk in persons who do not drink milk or eat milk products," the researchers concluded.

The addition of the vitamin D along with the calcium carbonate appeared to further increase the absorption. They also found that calcium carbonate is more efficiently absorbed when taken with a meal or at bedtime. The bedtime tablet had the advantage of slowing or reversing the calcium withdrawal process that goes on during sleep.

Kids favorite vegetables

What vegetables do kids rank as their top three:



2.



to turn this preference

to your advantage. The next time your kid says, "What is there to eat around here?", you can offer them a carrot or a chunk of lettuce.

You win in two ways. You play into their preferences at the same time you are taking another step in improving their nutrition. Ha

Data from Vance Publishing Corp., Lincolnshire, Ill.

Exercise for your dog

A company advertises The Trotter, a treadmill to exercise your dog, for just \$1795.

An ad should run right beside it that would let people know that you can take your dog for a walk and get two advantages, the dog gets its exercise and you do also.



You can buy a lot of walking shoes and a couple of chic walking outfits for \$1795.

Women still low in medical research support

This not too surprising fact, at least to women, appeared in the 1995 Scientific American Medical Poll.

- Percentage of female doctors who believe there is too little research done on women's health problems-81%
- Percentage of male doctors who agree—37%

Women at the grass roots level need to do everything they can to see the numbers change. H

Answers from page 4

c. About 75 million Americans have some type of allergy.
d. Smoked meat is another known trigger for headaches.

a. When evaluating vision problems, allergies may be something that is usually not considered. An unexplained ringing or buzzing in your ears may also be a symptom of an allergy.

c. If you are having allergic symptoms, you may want to eliminate the foods you eat most often in your diet and see if you feel better.

d. It usually takes more than one bath to remove the allergens and you do not need to use soap. Most cats, if they are bathed from the time they are a kitten, will be receptive to a bath. It is certainly better than getting rid of your cat.

• a. Circles under the eyes have been referred to as allergic "shiners."

b. Hives can be caused by shellfish allergy, anxiety, or some unknown cause. Other causes can be drugs, detergents, or other contact allergens.

SPECIAL DISCOUNTS

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

ANTIOXIDANTS AND AGING: Fact or Fallacy

James Jackson, Ph.D.

"Free radicals are implicated in Parkinson's disease"; "Taking vitamin E capsules will prevent heart attacks"; "Vitamin C and E will prevent cataracts"; are recent comments in the scientific and lay press. Research has also shown that antioxidants may retard the aging process. Learn the connection between antioxidants and the aging process. Audio cassette & video tape.

KNOW YOUR NUTRIENTS: B Complex

with Ronald Hunninghake, M.D.

Yes, B complex helps us deal better with stress. However, this is just the tip of the biochemical iceberg of all the essential functions of this diverse set of vitamins. Skin, brain, and gut are three other organ systems absolutely dependent on B vitamins. Learn how to "B" all you can be. Audio cassette & video tape.

KNOW YOUR NUTRIENTS: Riboflavin

with Ronald Hunninghake, M.D. Riboflavin, also known as vitamin B2, is known to be "good for the eyes." It is also important for building tissue, such as skin, and helps guard against infections. Listen and learn about the problems associated with getting too little riboflavin in your diet. Audio cassette & video tape.

KNOW YOUR NUTRIENTS: Vitamin B12

with Ronald Hunninghake, M.D.

Vitamin B12, technical name cobalamin, is important for the absorption of foods and is involved in the formation of nucleic acids, DNA, and RNA. In children, this vitamin is important because it stimulates the appetite, weight, and growth. B12 is found only in foods of animal sources, the richest being liver. Learn more about this important vitamin. Audio cassette & video tape.

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Upcoming Events...

APRIL							
Monday	Tuesday	Wednesday	Thursday	Friday			
1 Yoga Reduce Hips, Thighs, & Buns	2 L&L- Know Your Nutrients: Zinc	3 Yoga Reduce Hips, Thighs, & Buns	4 L & L - Eat Your Way to Natural Weight Loss, Part 2	5			
8 Yoga Reduce Hips, Thighs, & Buns	9 L&L- Know Your Nutrients: Copper	10 Yoga Reduce Hips, Thighs, & Buns	11 L & L - Wound Healing and Tumor Anglogenesis	12			
15 Yoga Reduce Hips, Thighs, & Buns	16	17 Yoga Reduce Hips, Thighs, & Buns	18 L&L- Hope: The Vital Spark of Life	19			
22 Yoga Reduce Hips, Thighs, & Buns	23 L & L -Know Your Nutrients: Potassium/ Sodium	24 Yoga Reduce Hips, Thighs, & Buns	25 L&L- Getting High Blood Pressure Under Control	26			
29 Yoga Reduce Hips, Thighs, & Buns	30						

MAY

Lunch & Lecture Classes:

- 2 Does Your Diet Supply the Nutrients You Need?
- 7 Know Your Nutrients: Chromium-for Better Blood Sugar Control
- 14 Know Your Nutrients: Calcium-More Than Just for Bones
- 16 Hair Tissue Analysis in Clinical Applications: A Valid Test?

6/14-15 Bright Spot for Health Fair

Fruits and veggies or supplements—which are best for vitamin C?

The controversy over whether it is better to get your vitamins from fruits and vegetables or whether it is o.k. to get them from vitamin supplements has gone on for years. A research study in *The Journal of Nutrition* shed some light on this debate.

Ann Mangels, with the Vitamin and Mineral Nutrition Laboratory, Beltsville Human Nutrition Research Center, USDA, and her associates discovered that, "Ascorbic acid (vitamin C) ingested as cooked broccoli, orange juice or fruit, or in synthetic form seems to be equally bioavailable." In short, you absorb it just as well.

The key word is supplement. If one isn't getting enough vitamin C from eating fruits and vegetables, then ascorbic acid or other forms of vitamin C supplements may be needed.

Always, though, eat your five servings of fruits and vegetables a day.

INSIDE THIS MONTH'S ISSUE . . .

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- Medicine, The Center's definition
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Health Hunter

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