



Health Hunters Newsletter

A service of the Riordan Clinic, cofounded in 1975 by Olive W. Garvey and Hugh D. Riordan.
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The HCG Rx+ Life Care Plan: A Prescription for Better Health

by Meg Fuson, RN

This is the beginning of a new year and the beginning of new resolutions. In past years, most of us spend the winter months concentrating on better health. We intend to exercise regularly and to choose healthier foods, to not only make us feel physically better, but also to induce a healthy weight loss. Our intentions are strong and we are resolute that this is the year we are going to reach our goals.



As we begin to create a health plan for the New Year, our focus is on weight loss and exercise. We want to lose those 20 pounds or more as quickly, and as painlessly, as possible. What is missing in this plan is a comprehensive formula for sustainable lifestyle changes that helps us maintain the weight loss.

As we make the decision to choose better health, it is very important to establish goals. The pinnacle goal of this weight loss plan is sustainability and should be geared towards long term success. Establishing a continuum of healthy lifestyle habits includes focusing on healthy foods, drinking adequate water, and exercising regularly. It is important that we eat good food that is nutritiously dense, such as vegetables. We should emphasize those vegetables that are bright red, green, and gold. Meats that are very lean, such as a filet of beef and pure white chicken breast, are an excellent choice of protein. Fresh white fish is another excellent choice of protein, including sole, mahi mahi, halibut, tilapia, and cod. Good fruits such as apples, oranges, grapefruits, and strawberries should also be included to achieve a balanced daily diet.



Let us not forget water. Water is one ingredient of our daily living that is vital for good health. Water hydrates the body to produce better functioning of all the major organs including the brain, the stomach, the intestines, and not to mention the largest organ of our body, the skin. In short, water lubricates and assists in many major bodily functions that are necessary for healthy living.

In 2010, the Centers for Disease Control and Prevention has determined that 25.6 million people, age 20 years or older, in the United States have been diagnosed with diabetes; 13 million are men and 12.6 million are women. Diabetes is the leading cause of kidney failure, non-traumatic lower-limb amputations, and new cases of blindness among young adults in the U.S. It is also a major cause of heart disease and stroke, and is the seventh leading cause of death in the U.S. Approximately 1.9 million people 20 years and older have been newly diagnosed with diabetes in 2011.



Letter from the Editor:

by Amanda Hawkinson

I hope your holiday season was wonderful and your new year is off to a great start. I love this time of year because it's a chance to evaluate what I've accomplished in the previous year, but more importantly, I like to make my resolution for the New Year. Many people make resolutions each year hoping to spend more time with family and friends, give up vices (smoking, alcohol, etc), and tame the bulge.

This issue of the *Health Hunters Newsletter* focuses on the Riordan Clinic HCG Rx+ Program, which will help you not only to lose weight but to maintain a healthy lifestyle. Learn tips from our Nurse Educator on the benefits of HCG weight loss and how you can maximize your results. Discover complementary therapies offered at the Clinic that can help you get the most of your program.

HCG can be found anywhere from your doctor's office to supplement stores, and even on the internet. But all HCG is not created equal. There is a significant difference between the homeopathic version that is popping up everywhere and the prescription version that is part of the Riordan Clinic's program.

So this year, as you think about your resolution to lose the stubborn holiday weight AND KEEP IT OFF, call the Riordan Clinic and find out more about our HCG Rx+ weight loss program (316-682-3100).

Happy New Year from all of us at the Riordan Clinic!

I hope this issue inspires you.

Amanda Hawkinson
Editor

newseditor@riordanclinic.org

Don't forget to "Like" us on Facebook.



Studies show that improved glycemic control profoundly benefits individuals with Type 1 or Type 2 diabetes. Many of these studies have shown that individuals with diabetes or prediabetes, who lose weight and increase their physical activity level, can prevent or delay Type 2 diabetes and return their blood glucose levels to normal. This in turn can reduce the risk of microvascular complications by 40% (CDC and National Diabetes Fact, 2011).

At the Riordan Clinic, we offer a multitude of services that stimulate an epidemic of health. One of the services is a life care weight loss program that is medically guided in a structured form to assist those with weight loss needs.

This weight loss program utilizes HCG (Human Chorionic Gonadotropin) and has a scientifically created regimen that promotes sustainable weight loss. HCG is a naturally produced hormone that biologically works with the hypothalamus, which is involved in regulating the appetite center of the brain.

Published studies suggest that HCG is conducive to helping the body lose weight by targeting the visceral fat that surrounds the major body organs. This visceral fat, in theory, may contribute to many diseases, including diabetes.

At the Riordan Clinic, our HCG Rx+ weight loss program was created as a tool to help those in need to establish sustainable weight loss, as well as change their lifelong eating habits. It is a program that is guided by a nurse educator at the direction of a medical doctor, to empower individuals to reach their weight loss goals, eat healthier for life, and maintain their weight for a lifetime. It contains a structured daily menu of proteins, vegetables, and fruits, and includes an additional healthy water intake.

The HCG Rx+ program includes prescription HCG, a complete pre-lab testing that is thoroughly reviewed by a doctor, vitamin supplements, informational books for guidance, and a body composition that breaks down the individual fat mass, muscle mass, and water mass. This information enables the nurse educator to modify the patient's daily menu if necessary, and to titrate the HCG as needed.

The HCG Rx+ program is formulated on an 85 day or a 51 day preference. It is structured in such a way that the patient is taking the HCG for a predetermined number of days, with a transition period, followed by a maintenance phase that will help patients maintain their weight for a lifetime. It is supported, not only by the nurse educator and the medical doctor, but also by other participants included in the program through a weekly conference call that is available to anyone involved in the HCG Rx+ program.

This comprehensive program also addresses information and guidance concerning hormonal issues, menopause, recognizing emotional eating patterns, and how we subconsciously sabotage good intentions. It also helps to educate the patient concerning environmental stressors and toxins and how to reduce your exposure. It is well established that there is an epidemic of obesity, which can lead to hypertension, strokes, diabetes, kidney failure, blindness, and amputations, among many other severe health issues.

We, at the Riordan Clinic, want to spread an epidemic of health to all of you in this New Year. Our HCG Rx+ weight loss program is a proven success and we have helped close to 300 patients create and sustain a new lifestyle that enables them to become healthier and happier human beings! We can also help you change your life and create a healthy new lifestyle that will allow you to do the same.

Here at the Riordan Clinic, we want to wish all of you a healthy and blessed New Year, not only for you, but for any and all of your loved ones as well!



Patient Profile

by Nichole Kunkel, RN

In March of 2011, a patient came to us seeking alternative treatment options due to his inability to lose weight with therapies that had worked for him in the past. He heard about our physician-supervised, HCG Rx+ weight loss program and began to research the advantages. While being hesitant to forgo a diet using female hormones, he felt as though he needed to make a lifestyle change that would teach healthy organic eating habits and would be sustainable. The HCG Rx+ program was just what he was looking for.

Before starting the program, this patient was at the greatest weight of his life (308 pounds). His weight took a heavy toll on his emotional well-being. He was constantly scoping out chairs where ever he would go, wondering which chair he would fit in and whether or not it would even be able to hold him. While speaking to people, whether it was an individual or a large crowd, he was concerned that he was not being heard or that he was being stared at due to his weight.

After successfully completing two HCG sessions, the patient is currently down to 242 pounds and has maintained his weight with minimal and controllable fluctuations over the past 6 months while being out of the program. He no longer has to take his cholesterol medication, blood pressure medication, oral blood sugar regulators, heart burn medication or even testosterone. He stated, "This [program] has completely changed the way I eat, which is what I wanted and needed in my life. The things I used to crave and eat no longer sound good and even make me feel ill if I do eat them. This [program] has made me a new man! I am much more confident in myself and I don't have to think about or worry about the little things that bothered me when I was almost 70 pounds heavier. My health has dramatically improved and my sex life has improved and that is great for me being that I'm in my 50's." Being one of his nurses and watching his improvements is gratifying. This patient truly looks 20 years younger simply as a result of his weight loss.

What a remarkable and encouraging success story from a man who has many people that see him as a role model and for many men and women that may be thinking about going through our HCG Rx+ program.

This patient is a great example of the weight loss success that awaits you with the Riordan Clinic HCG Rx+ weight loss program. Go to www.riordanclinic.org for additional information. If you are ready to improve your health and well-being, call 316-682-3100 to get started today!

Know Your Nutrients

FORMULA: VITAMIN COCKTAIL #9 (M.I.C. AND VITAMIN B-COMPLEX)

by Amanda Hawkinson



There are several things that a person can do in order to maximize his or her weight loss success. Participants of the Riordan Clinic HCG Rx+ program may wish to take full advantage of the many complimentary services we provide, especially our M.I.C. & vitamin B-complex injection. This injection is a compound that contains lipotropic amino acids, which decrease fat accumulation in the liver, and vitamin B12. The lipotropics are a combination of three amino acids. Each of the B vitamins helps the body to convert food (carbohydrates) into fuel (glucose), which is "burned" to produce energy. This group of B vitamins, often referred to as B-complex vitamins, also helps the body metabolize fats and protein. B-complex vitamins are necessary for healthy skin, hair, eyes, and liver as well as to help the nervous system function properly.

M.I.C. contains: Methione, Inositol and Choline

- **Methione** is a sulfur-containing amino acid. It acts as a lipotropic agent to prevent excess fat buildup in the liver and the body.
- **Inositol**, a nutrient belonging to the B vitamin complex, is closely associated with choline. It aids the metabolism of fats and helps reduce blood cholesterol. It also participates in the action of serotonin.
- **Choline** supports the health of the liver in its processing and excretion of chemical waste products within the body. It is required for the transport and metabolism of fats and cholesterol within the body, which is important for the healthy support of the endocrine, cardiovascular and hepatic system.

B-Complex contains:

- **Riboflavin: (vitamin B2)** is an easily absorbed micronutrient. It plays a key role in energy metabolism, the metabolism of fats, carbohydrates, ketone bodies (a vital source of energy during fasting), and proteins.
- **Thiamine: (vitamin B1)** helps the body's cells convert carbohydrates into energy. It is also essential for the functioning of the heart, muscles, and nervous system.
- **Pyridoxine: (vitamin B6)** is necessary for proper absorption of vitamin B12 and for the production of red blood cells and cells of the immune system.
- **Ascorbic acid: (vitamin C)** an antioxidant that helps block damage caused by free radicals, which occur naturally when our bodies transform food into energy. It helps the body make collagen, an important protein used to make skin, cartilage, tendons, ligaments, and blood vessels.
- **Niacinamide: (vitamin B3)** assists in the functioning of the digestive system, skin, and nerves. It is also important for the conversion of food to energy.
- **Cyanocobalamin: (vitamin B12)** is important to the body for growth, cell production, blood and nerve function. It is given to treat low levels of B12.



Schedule an appointment today and ask the doctor if a M.I.C and B-Complex injection can work for you.

VITAMIN COCKTAIL #9 (M.I.C. AND VITAMIN B-COMPLEX) — \$20.00.

NOTE: Patients with a sulfa allergy should not take this vitamin cocktail.

Source: Riordan Clinic HCG Rx+ Guide Book 2: Basics

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Riordan Clinic Research Institute

Riordan Clinic Director of Research, Dr. Nina Mikirova, with Dr. Joseph Casciari, Dr. Ronald Hunninghake, and Meg Beezley have published an article in the *International Journal of Medical Sciences*. The article was entitled "Effect of Weight Reduction on Cardiovascular Risk Factors and CD34-positive Cells in Circulation."



Over two thirds of Americans are overweight due to calorie rich foods and low physical activity. Obesity is associated with diseases such as diabetes, hypertension, and cardiovascular disease. Therefore, the team of researchers at the Riordan Clinic studied the effects of a low calorie diet in combination with oral complementation by vitamins, minerals, probiotics and hCG on body composition, lipid profile and stem/progenitor cells in circulation.

The study found that the physician-supervised low-calorie diet combined with the use of hCG and supplemental vitamins, helped to reduce several types of measurements of cholesterol that are considered to be cardiovascular risk factors. These measurements included LDL, total cholesterol, and LDL to HDL ratios. For participants who represented weight loss and fat mass loss, the maximum reduction in lipids that have an effect on overall cardiovascular health were 29% for cholesterol, 38% for LDL and 35% for LDL to HDL ratio.

Furthermore, the diet also improved body composition by reducing fat mass by $12.4\% \pm 8.7$. Although lean mass also was reduced, it decreased by only $5.7\% \pm 4.7$. As a result, participants went from an average BMI of 34.0 ± 7.2 (SD) to an average BMI of 28.5 ± 6.7 (SD).

There is strong evidence for the role of endothelial progenitor cells, including the population of CD34-positive cells, in the repair of arteries and in the maintenance of vasculature. Therefore, the level of stem/progenitor cells was measured before and after the introduction of the weight loss program.

The study showed that the diet improved the number of circulating CD34-positive cells. This improvement correlated with reduction of the proportion of fat mass. The subjects exhibited an average increase of forty percent CD34-positive cells per micro liter.

According to our study, the weight loss program resulted in the improvement of the number of stem/progenitor cells in circulation and the decrease of the values of cardiovascular risk factors.

To read this entire article and others published by Riordan Clinic researchers, visit www.riordanclinic.org.

If you would like more information about the Riordan Clinic HCG Rx+ weight loss program call 316-682-3100 today.



Bio-Center Laboratory—HCG Rx+ Blood Test

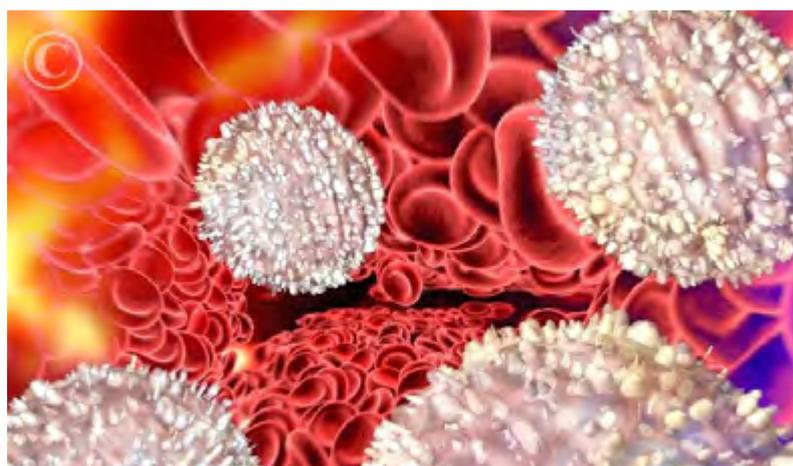
by Meg Fuson, RN

Before beginning your HCG Rx+ weight loss journey, several laboratory tests are performed by the Bio-Center Laboratory, our onsite lab. These include a Complete Blood Count (CBC), a Chemistry Profile, and a C-Reactive Protein-hs (CRPs). Many people may wonder why these particular tests are required for the Riordan Clinic's HCG Rx+ weight loss program. The following is a breakdown of the tests and why they are important:

COMPLETE BLOOD COUNT—CBC:

A properly functioning immune system is important for your health. By understanding your complete blood count, we are able to see if your white blood count is healthy and normal as well as make sure your immune system is functioning optimally.

- **White Blood Cells** are used by the body to fight infection and inflammation. White blood cells defend the body via phagocytosis, and produce, transport, and distribute antibodies as part of the immune process.
- **Red Blood Cells** function to carry oxygen from the lungs to the body tissues and to transfer carbon dioxide from the tissues to the lungs. An increase of RBC is associated with the need for vitamin C.
- **Hemoglobin** is the oxygen-carrying molecule in the red blood cells. A decreased hemoglobin level is associated with a decreased vitamin C level.
- **Hematocrit** is expressed as the volume of red blood cells in a known volume of centrifuged blood.



- **Mean Corpuscular Volume (MCV)** will indicate whether the red blood cell size appears normal, small, or large. It also can help to determine the presence of anemia or a deficiency of vitamin B-6, vitamin B-12, or folic acid.
- **Mean Corpuscular Hemoglobin (MCH)** is an expression of the average weight of hemoglobin per red blood cell. A decrease in this level is also indicative of vitamin C deficiency.
- **Mean Corpuscular Hemoglobin Concentration (MCHC)** measures the average concentration of hemoglobin in the red blood cells.

Bio-Center Laboratory—HCG Rx+ Blood Test continues on page 5...

In Gratitude ...

As a not-for-profit organization, we rely on many to make our vision a reality. **So many come together to provide our patients with a place of hope, health and healing.** Here are just a few we'd like to thank.

- All individuals and groups who have donated to our cause through financial support, including:
 - Aidan Foundation
 - Meggs-Nguyen Family Charitable Foundation
 - Garvey KS Foundation
 - Flossie West Memorial Trust
 - Hazel B. Linder Rev Trust
- Crestcom International for event/meeting space rental
- Everyone who continually spreads the word of the help we provide and our mission to promote healthy living from within.



Bio-Center Laboratory—HCG Rx+ Blood Test continued from page 4...

- **Red Cell Distribution Width (RDW)** is an indication of the degree of abnormal variation in the size of red blood cells.
- **Neutrophils** are the white blood cells used by the body to combat bacterial or pyrogenic infections.
- **Bands** are young non-segmented neutrophils or metamyelocytes.
- **Lymphocytes** migrate to areas of inflammation in both the early and late stages of the inflammatory process. Lymphocytes are used by the body to destroy and get rid of the toxic by-products of protein metabolism.
- **Monocytes** are the body's second line of defense against infection. They are phagocytic cells that are capable of movement; they remove dead cells, microorganisms, and particulate matter from circulating blood.
- **Eosinophils** are often elevated in patients that are suffering from intestinal parasites or from food or environmental sensitivities or allergies. They help to remove and breakdown the by-products of protein catabolism.
- **Basophils** constitute only a small percentage of the total white blood cell count. They are phagocytic and contain histamine, heparin, and serotonin in their cytoplasmic granules.
- **Platelets** or thrombocytes are the smallest of the formed elements in the blood. Platelets are necessary for blood clotting, vascular integrity, and vasoconstriction.



CHEMISTRY PROFILE:

A Chemistry Profile helps us make sure that your body, especially the liver and kidneys, is metabolizing energy as well as releasing toxins and waste. These various levels are checked when a chemistry profile is performed.

- **Glucose** levels in the blood are primarily dependent on the liver. Glucose is also directly formed in the body from carbohydrate digestion and from the conversion in the liver of sugars, such as fructose, into glucose.
- **Uric Acid** is a chemical created when the body breaks down substances called purines, which are found in some foods and drinks.
- **Blood Urea Nitrogen (BUN)** is a test that is predominantly used to measure kidney function. BUN is useful as a first indicator of renal insufficiency, especially if all the other renal indicators are normal.
- **Creatinine** is a by-product of the breakdown of creatinine phosphate in the muscle during muscle contraction. It is produced primarily from the contraction of muscle.
- **Sodium** constitutes 90% of the electrolyte fluid and is the most prevalent action in the extracellular fluid. Sodium acts as the chief base of the blood. It functions to maintain osmotic pressure and acid-base balance.
- **Potassium** plays an essential role in nerve conduction, the maintenance of osmotic pressure, muscle function, cellular transport via the sodium-potassium pump, and acid-base balance.
- **Chloride** is under the same influence as sodium and is affected by many of the same conditions that affect serum sodium levels, due to their reciprocal relationship.
- **Calcium**, in its majority in the body, is stored in the bone and teeth, which act as a major functional store. The body normally uses this reservoir to maintain the levels of calcium in blood, which are tightly regulated within a narrow



Bio-Center Laboratory—HCG Rx+ Blood Test continues on page 6...

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Lunch & Lecture Series 2012

HCG Rx+

A physician supervised solution for weight loss.

Presenter: Ron Hunninghake, M.D. and Meg Fuson, R.N.

Date: Thursday, January 12, 2012

Time: 12:00 p.m. to 1:00 p.m.

Cost: \$10—Lunch included using HCG approved food.



Dr. Ron Hunninghake



Meg Fuson, R.N.

Looking for a proven weight loss method?

- Lose weight
- Reset your metabolism
- Reduce your risk of developing metabolic syndrome, which includes:
 - high cholesterol
 - high blood pressure
 - high blood sugar
 - obesity

One year since introducing our HCG Rx+ program, participants have lost over 2,800 pounds! Our nurse educator and doctors closely monitor each person to help them achieve optimal weight loss using prescription HCG. If you are serious about addressing your weight issues and changing dysfunctional lifelong eating habits to avoid potential weight-related chronic illness in the future—this lecture is for you.

This is a popular topic so reserve your space early.



Reservations are required
For reservations: call 316-927-4723
or email us at
reservations@riordanclinic.org

Bio-Center Laboratory—HCG Rx+ Blood Test continued from page 5...

range. Calcium absorption is dependent on optimal acidity of the stomach.

- **Phosphorus** functions in the metabolism of glucose and lipids and is an important part of acid-base regulation and the storage and transfer of energy.

- **Total Serum Protein** is composed of albumin and total globulin. Protein absorption is affected by stomach, pancreatic, or small intestine dysfunction. Therefore, total serum protein can be used to screen for nutritional deficiencies and functional digestive problems.

- **Albumin** is one of the major blood proteins produced primarily in the liver. It plays a major role in water distribution and serves as a transport protein for hormones and various drugs.

- **Globulins** function to transport substances in the blood and constitute the antibody system and clotting proteins. They are produced in the liver as well as other tissues in the body.

- **Albumin/Globulin Ratio (A/G Ratio)** is totally dependent on the albumin and total globulin levels.

- **Bilirubin** is formed from the breakdown of hemoglobin from red blood cells, by the cells of the spleen and bone marrow.

- **Alkaline Phosphatase** levels are measured, as an increase in one or more of the isoenzyme levels indicates a problem in the specific tissue that is related to the elevated isoenzymes. An increase is seen in early liver disease.

- **Lactate Dehydrogenase (LDH)** is the enzyme that is involved in the catalytic conversion of pyruvate into lactate.

- **SGOT (AST)** is an enzyme present in highly metabolic tissues such as skeletal muscle, the liver, the heart, kidney, and lungs.

- **SGPT (ALT)** is an enzyme present in high concentrations in the liver and to a lesser extent skeletal muscle, the heart, and kidney.



- **Gamma Glutamyl Transferase (GGT)** is an enzyme that is present in highest amounts in the liver cells and to a lesser extent in the kidney, prostate, and pancreas. It is involved in amino acid and protein metabolism and can be liberated into the blood stream following cell damage or destruction and/or biliary obstruction.

- **Iron** is in the form of hemoglobin in 70% of the body. The remaining 30% is found in storage form in the liver, spleen, and bone marrow.

- **Cholesterol** is a steroid found in every cell of the body and in the plasma. It is an essential component in the structure of the cell membrane where it controls membrane fluidity. It provides the structural backbone for every steroid hormone in the body, which includes adrenal and sex hormones and Vitamin D.

- **Triglycerides** are composed primarily of fatty acid molecules attached to a glycerol backbone. They enter the blood stream endogenously from the liver and exogenously from the diet.

SPECIAL ASSAYS:

By measuring inflammation in the body the C-Reactive Protein-hs assay can differentiate between chronic and acute inflammation. Various lifestyle choices have an effect on inflammation in the body.

- **C-Reactive Protein-hs (CRP)** is produced in the fat cells and is related to both inflammation and an increased risk of heart disease and stroke. Fat cells have the ability to produce inflammatory signals that trigger cells to produce CRP's. CRP's may also produce biological effects on vascular walls that can cause a higher risk of cardiovascular disease. Obesity can cause an individual to have a higher level of CRP's and therefore a higher risk of developing heart disease and stroke.

For more information on the Riordan Clinic HCG Rx+ weight loss program and all laboratory testing required, please call 316-682-3100 today.

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The Nutrition Reporter™

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The independent newsletter that reports vitamin, mineral, and food therapies

Researchers Find Fish Oil Supplements Give Lung Cancer Patients an Edge

Two studies by a team of Canadian researchers have found that high-dose fish oil supplements improve the effectiveness of chemotherapy among patients with lung cancer and also help patients maintain their weight. The findings are especially significant given the relatively poor prognosis of people diagnosed with lung cancer.

In one study, Vera C. Mazurak, PhD, of the University of Alberta, Edmonton, and her colleagues treated 46 patients with conventional chemotherapy. Fifteen of those patients received fish oils in addition to conventional therapies. All of the patients had been diagnosed with nonsmall cell lung cancer, for which the response rate to treatment is less than 30 percent.

Patients taking fish oils supplemented with capsules providing 2.2 grams of eicosapentaenoic acid (EPA) and 240 mg of docosahexaenoic acid (DHA) daily, or a liquid providing 2.2 grams of EPA and 500 mg of DHA daily.

All of the patients underwent two to four cycles of chemotherapy, and their responses were assessed by an oncologist and a radiologist, based on imaging technology and physical examination.

“The response rates and clinical benefit were approximately 2-fold greater in the fish oil group compared with the [conventional] standard of care group,” wrote the researchers. Sixty percent of patients receiving the fish oils had a complete or partial clinical response, compared with just 26 percent of those receiving only chemo.

In the second study, Mazurak reported that fish oil supplements helped patients with nonsmall cell lung cancer maintain their weight. In this study, 16 patients took the fish oils in conjunction with conventional chemotherapy, while 24 received only chemotherapy.

Sixty-nine percent of the patients taking fish oil supplements maintained their weight, whereas only 29 percent of people undergoing chemotherapy (and

not taking supplements) maintained their weight. Those receiving chemotherapy alone lost an average of 5 pounds of weight during treatment.

In addition, patients with the biggest increase in blood levels of EPA had the greatest gains in muscle.

“The results indicate that supplementation with fish oil ameliorates muscle and adipose tissue wasting in lung cancer patients and provides a benefit over patients treated with standard of care receiving first-line chemotherapy.”

References: Murphy RA, Mourtzakis M, Chu QS, et al. Supplementation with fish oil increases first-line chemotherapy efficacy in patients with advanced nonsmall cell lung cancer. *Cancer*, 2011; doi 10.1002/cncr.25933. Murphy RA, Mourtzakis M, Chu QS, et al. Nutritional intervention with fish oil provides a benefit over standard of care for weight and skeletal muscle mass in patients with nonsmall cell lung cancer receiving chemotherapy. *Cancer*, 2011;117:1775-1782. □

Perspectives

Beware: Health Food Junk Foods

It's no surprise that huge corporations, such as McDonald's and PepsiCo, make billions of dollars each year by foisting junk foods on consumers – junk foods that lead to obesity, diabetes, and heart disease. But there's a part of me that expects something better from the natural foods industry, which often prides itself in organic foods, sustainability, and natural health, and creating small carbon footprints. That's not always the case.

In March I attended the Natural Foods Expo West in Anaheim, where thousands of food and vitamin companies sought to sell their products to health food retailers from around the country. There were some good products, of course, like coconut water and organically raised meats. But there was also a mind-numbing array of health-food junk foods, packed with calories and zero nutritional value.

With three of every four Americans now overweight or obese, I wonder how anyone can

More research summaries on next page

ethically sell junk food at a natural foods convention. One company was pitching their gluten-free and vegan organic macaroon cookies and organic chewy brownies. Another hawked its calcium-infused cookies, caramel calcium chews, and chocolate-flavored calcium chews.

I have absolutely no issue with companies making a profit. But I do have issues with companies damaging the health of people to make a profit. One should never forget the Latin phrase *caveat emptor* – let the buyer beware. –*JC*

Carnitine Helps Ease Fatigue Caused by Liver Disease

Hepatic encephalopathy (HE) is a serious neuropsychiatric complication of liver cirrhosis. As liver function deteriorates, toxins build up throughout the body and affect cognition, emotions, behavior, and energy levels. Fatigue is common in HE.

Carnitine, a vitamin-like nutrient, plays a key role in cellular energy production, where it aids cells' ability to burn fat for energy. In a new study, researchers report that supplemental carnitine significantly reduces fatigue in patients with HE.

Michele Malaguarnera, MD, of the University of Catania, Italy, and her colleagues treated 121 patients diagnosed with HE. Sixty-one of the patients were diagnosed with grade 1 HE (HE1), and 60 were diagnosed with more serious grade 2 HE (HE2).

Thirty patients in both groups were then given 2 grams of the acetyl-L-carnitine (ALC) form of carnitine twice daily for 90 days. The remaining patients received placebos.

By the end of that time, people taking ALC in the HE1 group showed significant improvements over those taking placebos. Specifically, Malaguarnera noted improvements in both mental and physical fatigue. Meanwhile, people taking ALC in the HE2 group also showed improvements in fatigue and increases in physical activity.

In addition, patients taking ALC in both groups benefited from reductions in ammonia, which results from the breakdown of protein. Normally, the liver breaks down ammonia so that it is harmless. In people with HE, liver function is so poor that it is difficult to clear ammonia from the body, and the excess ammonia affects energy production in the brain. The reduction in ammonia with ALC supplementation pointed to improved liver function.

Reference: Malaguarnera M, Vacante M, Giodano M, et al. Oral acetyl-L-carnitine therapy reduces fatigue in overt hepatic encephalopathy: a randomized double-blind, placebo-controlled study. *American Journal of Clinical Nutrition*, 2011;93:799-808. □

Vitamin E Reduces the Risk of Pneumonia in Some People

A new analysis of data from a controversial study has found that supplemental vitamin E can reduce the risk of pneumonia in some men, depending on other aspects of their lifestyles.

Harri Hemilä, PhD, and Jaakko Kaprio, PhD, of the University of Helsinki, Finland, conducted a subgroup analysis of data from the Alpha-Tocopherol Beta-Carotene Cancer Prevention (ATBC) study, which was conducted in the 1980s and 1990s. The study found – controversially – that synthetic beta-carotene supplements upped the risk of lung cancer in men who smoked tobacco and consumed relatively large amounts of alcohol.

In Hemilä and Kaprio's analysis, the researchers focused on the effect of vitamin E supplements (50 IU daily) on the risk of developing pneumonia. Of the 29,133 men in the study, 898 developed pneumonia and were treated for it in hospitals.

Hemilä and Kaprio reported that vitamin E supplements decreased the risk of pneumonia by 69 percent, but only among men who smoked the least or not at all and who also exercised. In sharp contrast, vitamin E seemed to increase the risk of pneumonia among men who were the heaviest smokers and also did not exercise.

The findings pointed to the importance of how lifestyle habits and supplements can interact.

Reference: Hemilä H, Kaprio J. Subgroup analysis of large trials can guide further research: a case study of vitamin E and pneumonia. *Clinical Epidemiology*, 2011;3:51-59. □

Adequate Vitamin D Levels Might Improve Survival in ICU Patients

Getting vitamin D supplements in the hospital might improve patients' odds of surviving a stay in the intensive care unit (ICU), according to an analysis of hospitalized veterans.

Vitamin D plays important roles in maintaining immunity and helping the body fight infections, according to Alan N. Petris, MD, PhD, of the Mountain Home Veteran's Administration Medical Center in Tennessee. For example, the vitamin boosts the body's production of beta defensin 2 and cathelicidin, which help fight infections.

According to Petris, checking the vitamin D levels of patients and providing supplements might just lower the risk of contracting infections in ICUs, as well as reduce ICU stays and costs. ICU costs are about seven times higher than non-ICU hospital costs.

Petris studied 136 veterans who spent time in the

ICU and who also had their vitamin D levels measured during the month before hospital admission.

On average, vitamin D levels in the group were low – 24.6 ng/ml, compared with a normal range of 30 to 100 ng/ml. Thirty-eight percent of the veterans had outright deficiencies of vitamin D, with levels below 20 ng/ml.

But Petris’s study came up with two significant findings. First, veterans who were deficient in vitamin D were twice as likely to stay in the ICU for three days or longer – 58 percent versus 29 percent. Second, veterans who were deficient in vitamin D were almost twice as likely to die in the ICU.

Petris wrote that “patients who survived, compared with those who did not, had significantly higher...vitamin D levels, and were significantly less likely to be classified as vitamin D deficient.”

He concluded by noting that vitamin D supplements may be an “inexpensive approach” to improving patient outcomes and reducing health-care costs.

Reference: McKinney JD, Bailey BA, Garrett LH, et al. Relationship between vitamin D status and ICU outcomes in veterans. *Journal of the American Medical Directors Association*, 2011;12:208-211. □

Vitamin D May Lower Risk of Age-Related Eye Disease

Several nutrients are known to reduce the risk of age-related macular degeneration (AMD) – lutein, zeaxanthin, and the omega-3 fish oils. According to a new study, vitamin D can be added to the list.

AMD is the leading cause of blindness among seniors and affects an estimated 8.5 million Americans.

Amy E. Millen, PhD, of the University of Buffalo, New York, analyzed photographs taken of the retinas of 1,312 women, as well as vitamin D levels and various risk factors for eye disease for the women.

According to Millen, women under the age of 75 who maintained relatively high levels of vitamin D, from food or supplements, had about one-half the risk of developing AMD.

Reference: Millen AE, Volland R, Sondel SA, et al. Vitamin D status and early age-related macular degeneration in postmenopausal women. *Archives of Ophthalmology*, 2011;129:481-489. □

More Evidence that Cranberries Help in Urinary Tract Infections

Supplements containing whole cranberry powder can reduce the chances of developing recurrent urinary tract infections (UTIs), and the benefits

appear related to the amount of cranberry powder.

Archana Chatterjee, MD, PhD, of the Creighton University Medical Center, Omaha, Nebraska, and her colleagues asked 60 women, ages 18 to 40 years of age, with recurrent UTIs to participate in a three-month study. The women were given 500 or 1,000 mg of standardized whole cranberry powder daily or no treatment at all.

After taking the cranberry supplements for 10 days, the subjects had significant reductions in *E. coli* bacteria in their urine. Furthermore, the lower dose of cranberry powder reduced the recurrence of UTIs by 36 percent, while the higher dose reduced UTIs by 65 percent during the study. No symptom relief occurred in the untreated control group.

Reference: Sengupta K, Alluri KV, Golakoti T, et al. A randomised, double-blind, controlled, dose dependent clinical trial to evaluate the efficacy of a proanthocyanadin standardized whole cranberry (*Vaccinium macrocarpon*) powder on infections of the urinary tract. *Current Bioactive Compounds*, 2011; 7:39-46. □

Taking Creatine Helps Patients with Muscular Dystrophies

Body builders often use creatine monohydrate to bulk up and increase muscle strength, although supplements have seen their share of controversy over the years. Despite that controversy, some doctors have reported that creatine supplements can benefit patients with serious muscle disorders.

Now, in a new analysis of published studies, researchers have confirmed that creatine can benefit people with muscular dystrophies and other serious muscle diseases.

Working under the auspices of the Cochrane Collaboration, Rudolf A. Kley, MD, of Ruhr University, Germany, and his colleagues analyzed 14 controlled human studies involving 364 participants. The subjects had been diagnosed with either muscular dystrophy or an inflammatory disease of the muscles.

According to Kley, people taking creatine supplements felt almost five times better than those who had been taking placebos. He also wrote that “creatine treatment increases muscle strength in muscular dystrophies.”

Energy in muscle and other cells is stored in the form of adenosine triphosphate (ATP). When ATP is used, it gets converted to adenosine diphosphate (ADP). Creatine works by helping the body recycle ADP back to ATP. The typical supplemental amount of creatine is 5 to 10 grams daily.

Reference: Kley RA, Tarnopolsky MA, Vorgerd M. Creatine for treating muscle disorders. *Cochrane Database of Systematic Reviews*, 2011;16:CD004760. □

Continues on next page

Quick Reviews of Recent Research

- Zinc may reduce prostate cancer death
Swedish researchers analyzed dietary zinc intake in a group of 525 men. After an average follow up of six and one-half years, men with high zinc intake were 36 percent less likely to die from prostate cancer. The greatest benefit occurred among men with localized tumors. In this group, high zinc intake was associated with a 76 percent lower risk of dying from prostate cancer.

Epstein MM. *American Journal of Clinical Nutrition*, 2011;93:586-593.

- Parkinson patients have low vitamin D
Add one more health problem that may be impacted by low levels of vitamin D: Parkinson disease. Researchers at the Emory University School of Medicine, Atlanta, measured vitamin D levels in 170 people who had early Parkinson disease and had not yet been treated. Of these, 70 percent had borderline deficiencies and 26 percent had outright deficiencies of vitamin D. Retesting a year later found some improvements – 51 percent of patients had borderline deficiencies and 7 percent had serious vitamin D deficiencies. The vitamin is involved in several biochemical reactions that can influence the progression of Parkinson disease.

Evatt ML. *Archives of Neurology*, 2011;68:314-319.

- High-protein diet has cognitive benefits
Twenty-three healthy young men were asked by Danish researchers to consume either a high-protein or “usual” protein diet for three weeks. The usual-protein diet consisted of 1.5 grams of protein daily (approximately 105 grams for a 150-pound man), while the high-protein diet provided twice that amount. Men eating the high-protein diet developed faster reaction times, according to cognitive tests.

Jakobsen LH. *Clinical Nutrition*, 2011: epub ahead of print.

- Vitamin D fortified yogurt improves glucose
Both vitamin D and calcium play important roles in regulating blood sugar and insulin. In this study, researchers from Tehran, Iran, asked 90 patients with type 2 diabetes to consume one of three yogurt drinks twice daily for 12 weeks. The drinks consisted of plain yogurt, yogurt fortified with 500 IU of vitamin D3 and 150 mg of calcium, and yogurt fortified with 500 IU of vitamin D3 and 250 mg of calcium. People consuming either of the fortified yogurt drinks had significant decreases in fasting glucose, HbA1c, HOMA-IR (a combined measure of glucose and insulin), waist circumference, and body-mass index.

Nikooyeh B. *American Journal of Clinical Nutrition*, 2011; doi 10.3945/ajcn.110.007336.

- Fish oils don't increase surgical bleeding
Fish oil supplements don't increase blood loss or post-surgical bleeding, at least among patients undergoing low-back surgery, according to a study conducted at the Hospital for Special Surgery in New York City. Doctors followed 95 patients, 16 of whom took fish oil supplements within 14 days of surgery. On average, they stopped taking the supplements about two days before surgery. Patients who had been taking fish oil supplements did not have an increased risk of bleeding during or after surgery. Rather, patients who had not taken fish oil capsules had slightly greater blood loss, and two patients had complications related to bleeding.

Kepler CK. *Journal of Spinal Disorders and Techniques*, 2011: epub ahead of print.

- Supplements help with insomnia
Italian doctors treated 43 people with insomnia, using a combination of melatonin (5 mg), magnesium (225 mg), and zinc (11.25 mg) or placebo daily for eight weeks. The supplements were taken one hour before bedtime. By the end of the study, people taking the combination of supplements led to greater ease in getting to sleep, higher quality of sleep, better alertness on waking, and less grogginess when waking.

Rondanelli M. *Journal of the American Geriatric Society*, 2011;59:82-90.

- Cherry juice enhances exercise recovery
British researchers asked 10 well-trained athletes to consume either tart cherry juice or a noncherry fruit juice for seven days before and two days after intensive exercise. Their responses were compared with intensive exercise without cherry juice. The cherry juice enhanced muscle recovery after exercise.

Botwell JL. *Medicine and Science in Sports and Exercise*, 2011: epub ahead of print.

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