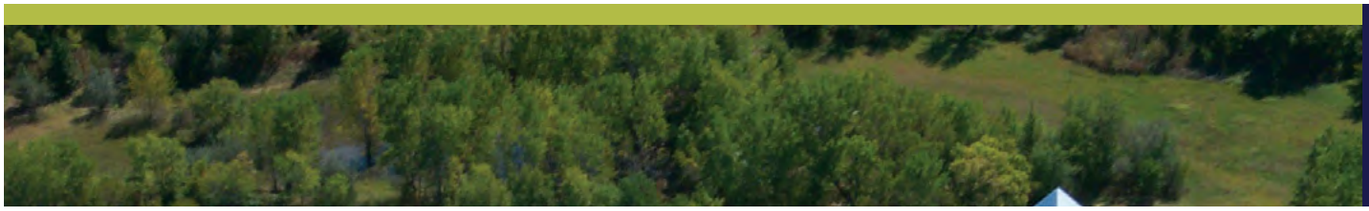
October 2011
Vol. 25
No 10



Health Hunters Newsletter

A service of the Riordan Clinic, cofounded in 1975 by Olive W. Garvey and Hugh D. Riordan. The Riordan Clinic is a not-for-profit 501(c)(3) corporation. Go to www.riordanclinic.org to make your tax deductible donation today.

Inside This Issue

Breast Cancer: Environmental Estrogen

by Jennifer Kaumeyer N.D.

October is breast cancer awareness month. Usually this is the month that all doctors, hospitals, clinics, non-profit agencies, gyms, etc. stress the importance of early breast cancer **detection**. While this is great and important, we at the Riordan Clinic would like to emphasize an even better concept—**BREAST CANCER PREVENTION.** Did you know that you could assess your odds of breast cancer years before tumor formation? Even better, if you find out that you are at high risk for breast cancer, there are known natural treatments and lifestyle changes that can help to significantly reduce your risk or even to prevent the occurrence entirely.

It is well known that women who are estrogen dominant are more at risk for breast cancer, as well as ovarian and endometrial cancers. **Estrogen Dominance** is a term that is used to describe the situation when the ratio of estrogen to progesterone is too high. There is also what we call "bad" and "good" forms of estrogen. Keeping the ratio of good to bad estrogen at a healthy level is also key to preventing cancer.

THE FOUR MAIN CAUSES OF ESTROGEN DOMINANCE ARE AS FOLLOWS:

1. **Overproduction of estrogen by the body and increased body fat.** Fat cells do secrete estrogens.
2. **Overload on the liver.** The liver is a filter of sorts. It detoxifies our body, protecting us from the harmful effects of chemicals, elements in food, environmental toxins, and even natural products of our metabolism, including excess estrogen. Anything that impairs liver function or ties up the detoxifying function will result in excess estrogen levels, whether it has a physical basis, as in liver disease, or an external cause, as with exposure to environmental toxins, drugs, or dietary substances.
3. **Chronic Constipation**
4. **Exposure to estrogen—like compounds in our environment**

Strictly speaking, it is possible that we are all—men, women and children—suffering a little from estrogen dominance, because there is so much of it in our environment. You would have to virtually live in a bubble to escape the excess estrogens we are exposed to through pesticides, plastics, industrial waste products, car exhaust, meat, soaps and much of the carpeting, furniture and paneling that we live with indoors every day. You may have on-and-off sinus problems, headaches, dry eyes, asthma or cold hands and feet, for example, and not know to attribute them to your exposure to environmental chemicals that are nearly identical to our

Breast Cancer: Environmental Estrogen continues on page 2...

Letter from the Editor:

by Amanda Hawkinson

As a woman, I fear breast cancer. I know many women who feel as I do. I even know some who have conquered the disease but who continue to feel scared because they worry that it may return. For a lot of women, breasts are what define us as women. Rightly or wrongly, they are equivalent to having children on our meter of womanhood. But what is breast cancer?

Breast cancer is a disease in which malignant (cancer) cells form in the tissues of the breast. It differs by individual, age group, and even the kinds of cells within the tumors themselves. While no woman (or man for that matter) wants to receive this diagnosis, hearing the words "breast cancer" doesn't always mean it is the end of the road. The diagnosis can be the beginning of learning what it means to fight, finding out the facts, and discovering hope.

Interestingly, women in the United States get breast cancer more than any other type of cancer, except for skin cancer, and it is second only to lung cancer as a cause of cancer-related death in women. Each year it is estimated that nearly 200,000 women will be diagnosed with breast cancer and more than 40,000 will die. Around 1,700 men will also be diagnosed with breast cancer and 450 will die each year.

During October, we try to inform people about breast cancer, hoping that everyone will get checked yearly. In support of Breast Cancer Awareness Month, this issue of the *Health Hunters Newsletter* will focus on environmental estrogen and the relationship between vitamin D and breast cancer.

Enjoy and help us spread awareness.

Thank you for reading!

Amanda Hawkinson
Editor
newseditor@riordanclinic.org

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

Breast Cancer: Environmental Estrogen continued from page 1...

own hormones. These chemicals are termed xenohormones. Over time the exposure will cause more chronic problems such as arthritis and pre-menopause symptoms and may be a direct or indirect cause of cancer.

The Riordan Clinic is a big advocate of prevention and therefore recommends having your hormones tested, especially if you have a family history of breast cancer or certain diagnoses such as fibrocystic breast disease, endometriosis, polycystic ovarian syndrome, irregular menstrual periods, PMS, fibroids and infertility. A genetic screening to see if you may have problems with certain liver detoxification pathways can also be performed. These tests can help clinic physicians get a better picture and formulate a very specific treatment plan. Knowing your hormone levels is a first start. However, the nutrients you eat actually control how your hormones are expressed. For example, a deficiency of vitamin B6 may explain why your progesterone is always so low. This is why Riordan Clinic doctors like to look at the biochemical individuality of each patient seen at the clinic. This makes it easier for our doctors to make educated guesses according to presenting symptoms and past medical history. Actually knowing exactly what is happening in your body can help doctors condense your treatments, while at the same time, increasing their efficiency and effectiveness. This can lead to a faster journey back to optimal health.

You can start making changes **TODAY** in your lifestyle to reverse the estrogen dominance and reduce your risk of breast cancer. The following are some suggestions:

1. **Increase dietary fiber.** Bowel regularity can ensure excess estrogen is eliminated.

2. **Use dietary supplements.**

   - Vitamin C (ascorbic acid)—helps overall immune health.
   - Vitamin B6—helps conjugate estrogens in the liver to prepare them for excretion.
   - Lecithin (a phospholipid) will promote bile circulation, which enhances estrogen's excretion out of the body.
   - Herbal Liver Support—milk thistle or a combo supplement. We carry specific supplements that have a combination of herbs and nutrients that support the liver detoxification pathways.
   - Flaxseeds—the lignans in flaxseeds support breast and hormonal health. Lignan compounds reduce excess estrogen from binding to receptor sites such as in breast tissue.
   - Calcium-d-glucarate—helps to deactivate toxic substances and excess hormones, encouraging their elimination from the body. It prevents the re-absorption of estrogens in the intestines.
   - Indole-3-carbinol and DIM—a component of cruciferous vegetables—broccoli, cauliflower, brussels sprouts—reduces the form of estrogen that stimulates tumors.
   - Iodine—while under supervision by your doctor is helpful for fibrocystic breasts and ovarian cysts.

3. **Perform aerobic exercise.** Research shows that physical activity curtails overproduction of estrogen. However, if taken too far, exercise can abolish periods altogether, resulting in the dangerous condition of Female Athletic Triad. While women with this condition have

Breast Cancer: Environmental Estrogen continues on page 3...

Patient Profile

By Kameron Hodges

In August of 2009, a 62-year-old female patient ventured to the Riordan Clinic to seek alternative treatment options due to her recent diagnosis of invasive ductal carcinoma, a form of breast cancer. Having been through a mastectomy, which revealed a stage I carcinoma, her oncologist recommended the use of aromatase inhibitors.

Research has proven that the use of these medications in the prevention of cancer reoccurrence has a significant impact on the patient's ability to make new bone, resulting in bone loss and osteoporosis. Although the patient was compelled to do what she could to prevent the cancer from returning, she was concerned with the impact her decisions would have on her future health.

An initial comprehensive laboratory assessment was ordered to check levels of specific vitamins, minerals and antioxidants that, if sub -therapeutic or abnormal, could be precursors for the production of abnormal cells.

After reviewing the results, the patient was asked to follow a regimen of vitamin K2-MK7, vitamin D3, and calcium to support bone health, omega-3 fish oil to suppress inflammation, oral vitamin C and high dose vitamin C infusions to boost her natural immune function.

She frequented the clinic for high-dose vitamin C infusions twice a week for several months. By January 2010, she was able to reduce her visits to once a week, and by May 2010, she reduced them again to once every other week. Currently, the patient visits the clinic once a month for supportive infusions.

While her cancer markers have remained consistently negative and her bone density has stabilized, this patient has also enjoyed a multitude of other health benefits

Patient Profile continues on page 4...

Breast Cancer: Environmental Estrogen continued from page 2...

low estrogen they are still in a very estrogen dominant state due to the almost nonexistent progesterone levels.

4. **Optimize your weight.** Excess body fat results in conservation of estrogen. This may explain why overweight women are at lower risk for osteoporosis; conversely, they are at higher risk of breast and uterine cancer.

5. **Eat a very colorful diet.** See how many natural colors you can get in at every meal! Some specific liver cleansing foods are beets, carrots, artichokes, lemons, parsnips, dandelion greens, watercress, and burdock root.

Limiting environmental exposure to xenoestrogens along with implementing a proper diet, exercise and supplements can help reverse the syndrome of estrogen dominance and not only aid in the treatment of breast cancer but prevent its occurrence entirely. Here is a list of common causes of estrogen dominance:

1. Commercially raised cattle and poultry fed with estrogen-like hormones.
2. Commercially grown vegetables that contain pesticide residues whose chemical structure is similar to estrogen.
3. Synthetic estrogens and synthetic progesterone (Progestin, Progesterone Acetate and birth control pills).
4. Exposure to xenoestrogen. Petrochemical compounds found in general consumer products such as creams, lotions, soaps, shampoos, perfume, hairs spray and room deodorizers. Such compounds often have a chemical structure similar to estrogen and they may act like estrogen. They are fat soluble and non-biodegradable.
5. Hormone replacement therapy with estrogen alone without progesterone. This increases the level of estrogen in the body.
6. Over production of estrogen from ovarian cysts or tumors.
7. Chronic constipation that causes the recycling of estrogen metabolites.
8. Stress, causing adrenal gland exhaustion and reduced progesterone output. Stress is one of the most frequently overlooked causes of estrogen dominance.
9. Obesity. Fat has an enzyme that converts adrenal steroids to estrogen. The higher the fat intake, the higher the conversion to estrogen.
10. Liver disease, such as cirrhosis, that reduces the breakdown of estrogen.
11. Deficiency of vitamin B6 and magnesium, both of which are necessary for neutralization of estrogen in the liver.
12. Increased sugar intake leading to a depletion of magnesium.
13. Intake of processed and fast foods that may be deficient in magnesium.
14. Increase in coffee intake. Caffeine intake, from all sources, was linked with higher estrogen levels regardless of age, body mass index (BMI), caloric intake, smoking and alcohol and cholesterol intake. Studies have shown that women who consumed at least 500 milligrams of caffeine daily, the equivalent of four or five

Breast Cancer: Environmental Estrogen continues on page 4...

Patient Profile continued from page 3...

that have improved her wellbeing and quality of life, including noticeable reductions in her body's inflammation and allergy response, decreased aches and pains, healthier complexion and hair and nail growth, improvements in muscle control, better sleep and less fatigue, and a more stable emotional state. In fact, by June of 2010, this patient boasts "I feel generally energetic, happy and well. I feel stronger than I did twenty years ago!"

If you have chronic health issues,

make an appointment today by calling 316-682-3100. The health, hope and healing we provide can make a positive impact in your life, just as it did for this patient.

Airing in **November** and **December 2011** on ...

DELTA AIR LINES

If you are flying Delta Air Lines during November or December, be sure to listen to Dr. Ron Hunninghake's interview during "The Innovators" segment on *The Executive Report* Talk Radio Business Channel.

We at the Clinic are excited about the opportunity to reach so many travelers during that busy time of year and spread the message of the health, hope, and healing that awaits everyone who comes to see us.

Breast Cancer: Environmental Estrogen continued from page 3...

cups of coffee, had nearly 70% more estrogen during the early follicular phase than women who consume no more than 100 mg of caffeine daily, or less than one cup of coffee.

Other therapies that we often recommend for breast cancer at the Riordan Clinic:

1. **Intravenous Nutrition**—vitamin C, magnesium, B complex vitamins, calcium, vitamin B6
   a. This can be implemented before surgery, after surgery, during and post chemotherapy and radiation, and/or as a treatment alone.

2. **Hyperbaric Oxygen**
   a. Molecular oxygen must be present at the time of irradiation for maximal killing effect. Hypoxia reduces tumor sensitivity to radiation about three fold. Hyperbaric oxygen forces oxygen into all body fluid, including lymph, CSF, and interstitial fluid, even in areas that have reduced or poor circulation. After 1st exposure to oxygen, all cells up regulate their genes for super oxide dismutase to counteract the free radical formation and to protect themselves against oxidative damages. However, cancer cells do not up regulate their enzymes properly and efficiently; consequently, they are more vulnerable to oxidative damage. Furthermore, hyperbaric oxygen stimulates fibroblast cells function, allowing more proper connective tissue formation. With short-term use, oxygen constricts blood vessels and reduces swelling caused by local inflammation induced by radiation.

While awareness of early breast cancer detection is crucial, the most important concept to remember is that we still want to address the cause of cancer. While the actual cause has not been completely agreed upon, we all know that it is a combination of a lot of things: lack of nutrition, exposure to environmental toxins, emotional stress (loneliness, anxiety/worry, depression, and sadness), shallow breathing and lack of oxygenation, and a lifestyle that is all work and no play. Modern life is stressful, and all these stresses are ultimately leading to cancer and other chronic disorders. So remember to slow down, take some deep breaths, eat fresh, laugh a lot and HAVE SOME FUN!

If you are interested in learning more about environmental estrogen and its relationship to breast cancer and/or reaching optimal health, call the Riordan Clinic today at 316-682-3100 to make an appointment with a Riordan Clinic doctor.

Vitamin D and Breast Cancer Risk

by Nina Mikirova, PhD, Director of Research

Breast cancer is the most commonly diagnosed cancer among U.S. women. In the United States, the disease affects about 230,000 females each year. In terms of mortality, breast cancer ranks second only to lung cancer as a cause of death from cancer among U.S. women. Approximately 20% of those diagnosed with breast cancer die from the disease.

Given the magnitude of the problem, considerable effort has been devoted to the elucidation of the etiology of breast cancer. Indeed, many factors have been related to altered breast cancer risk, including certain menstrual, reproductive (childbearing and lactation), and anthropometric [body mass index (BMI) and weight gain] factors as well as exogenous estrogen use, endogenous hormone levels, family history of breast cancer, history of benign breast disease, ionizing radiation, and alcohol consumption. Much of the risk for breast cancer comes from integrated lifetime estrogen exposure, either endogenous (produced in the body) or exogenous (taken orally). A diet high in animal products early in life leads to increased endogenous estrogen production over the entire lifetime. Night shift work is associated with reduced melatonin production, and melatonin can reduce the risk of breast cancer.

Vitamin D and Breast Cancer continues on page 5...

Vitamin Special

Vitamin D

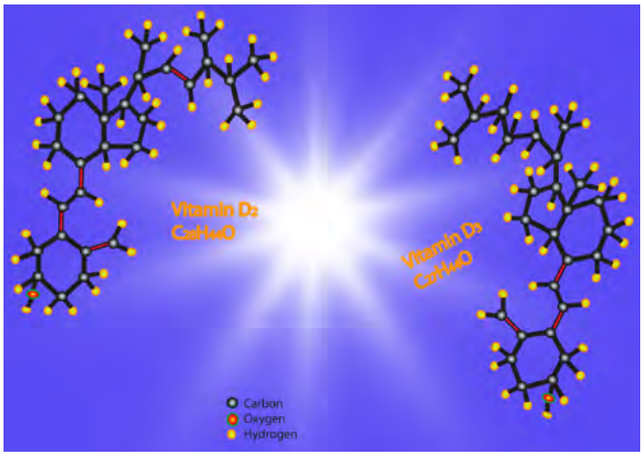
Vitamin D 2000IU
(reg $9.03)
Sale price: $7.68

Solar D Gems 4000IU
(reg $14.65)
Sale price: $12.45

Vitamin D Caps
5000IU—HCG FRIENDLY
(reg $17.35)
Sale price: $14.75

Vitamin D Liquid
5000IU
(reg $7.65)
Sale price: $6.50

Vitamin D and Breast Cancer continued from page 4...



What is vitamin D?

Vitamin D is technically not a vitamin. It is the name given to a group of fat-soluble prohormones (substances that are precursors to hormones). Two major forms of vitamin D that are important to humans are vitamin D2 and vitamin D3. Vitamin D2 is made naturally by plants, and vitamin D3 is made naturally by the body when the skin is exposed to ultraviolet radiation (in particular, UVB radiation) from sunlight. The active form of vitamin D in the body is calcitriol, which can be made from either vitamin D2 or vitamin D3. Recent studies in humans have provided evidence that vitamin D3 is more efficient than vitamin D2 in increasing the serum level of vitamin D, which is the precursor of the biologically active form.

Humans ingest vitamin D from foods, such as fish, eggs, and fortified dairy products, as well as from vitamin D–containing multivitamins and supplements. In the United States, the recommended daily vitamin D intake is 200, 400, and 600 IU for adults less than 50, 50 to 70, and more than 70 years old, respectively. An additional source of vitamin D is sunlight exposure, which can convert 7-dehydrocholesterol, a cholesterol-like precursor, into vitamin D3 in the skin.

Therefore, the status of vitamin D in circulation depends on exogenous vitamin D sources (from dietary and supplemental intake), endogenous production (through synthesis in the skin), and activities of vitamin D metabolic enzymes. Vitamin D levels in the blood vary by race, with the season, and possibly with the activity of genes whose products are involved in vitamin D transport and metabolism.

Vitamin D is involved in a number of processes that are essential for good health. It helps improve muscle strength and immune function, reduces inflammation, promotes the absorption of calcium from the small intestine, and maintains adequate blood levels of the calcium and phosphate that is needed for bone formation, mineralization, growth, and repair.

Is there evidence that vitamin D can help reduce breast cancer risk, and what are the possible mechanisms by which vitamin D may modify cancer risk?

Mechanisms by which vitamin D may modify cancer risk are not fully understood. The idea that vitamin D might reduce the risk of breast cancer was proposed based on effects on breast cancer cell proliferation. Laboratory studies have shown that vitamin D promotes cellular differentiation, decreases cancer cell growth, and stimulates apoptosis (cell suicide). Calcitriol, an active form of vitamin D provides numerous benefits against cancer. It limits blood supply to the tumor, reduces the spread of cancer and slows the proliferation of cancer cells. Several animal studies have also shown that carcinogen-exposed rats fed vitamin D or its analogues have fewer and later mammary tumors.

Laboratory studies were followed by ecological studies (populations defined geographically) using indices for solar ultraviolet-B (UVB) dose. Since then, there have been numerous ecological and observational studies of incidence and mortality rates with respect to solar ultraviolet-B (UVB) irradiance, serum vitamin D levels, and oral vitamin D intake.

Several ecologic studies have reported lower breast cancer incidence and mortality rates in populations with high sunlight exposure, and thus higher vitamin D levels, compared with those with lower ambient sunlight. These observations, together with

Vitamin D and Breast Cancer continues on page 6...

In Gratitude ...

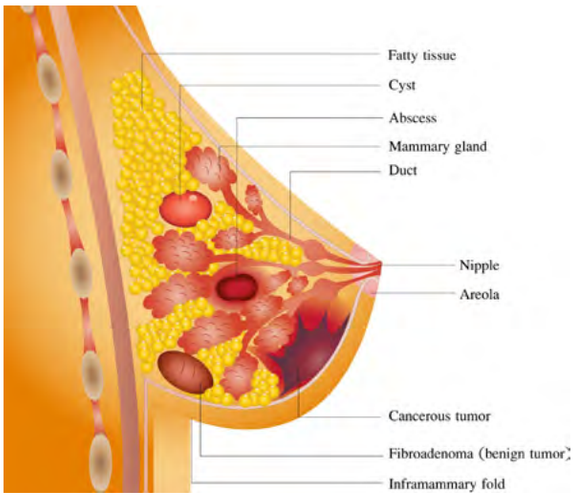
As a not-for-profit organization, we rely on many to make our vision a reality. ***So many come together to provide our patients with a place of hope, health and healing.*** Here are just a few we'd like to thank.

- All individuals and groups who have donated to our cause through financial support, including Allan Markin for his generous support of our research.
- Wesley Medical Center and Crestcom International for meeting space rental
- Green Acres Market for inviting Dr. Kaumeyer to speak during their lecture series

Vitamin D and Breast Cancer continued from page 5...

experimental evidence showing anticarcinogenic properties of vitamin D, have led to the hypothesis that high levels of vitamin D might reduce the risk of breast cancer.

However, epidemiologic studies of the association between vitamin D and breast cancer risk have had conflicting results. Although several studies have suggested an inverse association between vitamin D and the risk of breast cancer, others have shown no association.



In the *First National Health and Nutrition Examination Survey Epidemiologic* follow-up study, frequent recreational and occupational sunlight exposure was inversely associated with breast cancer risk. Consistent with previous ecological studies, this study suggested that women residing in the northeast of the United States might experience a higher risk of developing breast cancer than women residing in other regions of the United States. These results raised the possibility that levels of vitamin D synthesis in the skin due to sunlight exposure might be inversely associated with breast cancer risk. However, this study showed no associations between breast cancer and the intake of dietary or supplemental vitamin D.

A study in Norway found that women diagnosed during the summer had a better two-year survival rate than those diagnosed during winter. Vitamin D levels are higher in summer than winter, which may explain these findings.

Studies of vitamin D intake and breast cancer have been inconsistent, with some, but not all, showing inverse associations. Only two studies have examined the association between circulating vitamin D metabolites and subsequent breast cancer risk. One small study found no relationship between breast cancer and the active form of vitamin D. The other, larger study found high levels of both metabolites of vitamin D to be non-significantly associated with a lower risk of breast cancer overall, although a statistically significant inverse trend was observed in women who were more than 60 years old.

In contrast, in the *Nurses' Health Study*, there was an inverse association between vitamin D intake and breast cancer risk among premenopausal women but no association among postmenopausal women. The *Nurses' Health Study* found that vitamin D intake of 500 IU/d or more was associated with a significant 28% lower risk of breast cancer in premenopausal women. Consistent with this observation, a study based on the *Cancer Prevention Study II Nutrition Cohort* observed no associations of breast cancer with total and dietary vitamin D intakes among postmenopausal women.

Two published studies failed to establish any association between dietary vitamin D intake during high school and risk of breast cancer in adulthood.

In a hospital-based case-control study, an inverse association was observed between breast cancer risk and levels of the active form of vitamin D measured in whole blood collected at the time of diagnosis.

The association between blood levels of vitamin D and breast cancer risk was examined in a cohort of postmenopausal women who were enrolled in NCI's Cancer Screening Trial. During the subsequent follow-up period, 1,005 of these women developed breast cancer. When researchers compared the blood vitamin D levels of these women with those of 1,005 similar control women who did not develop breast cancer, they found no association between vitamin D status and risk of breast cancer.

Vitamin D and Breast Cancer continues on page 7...

Vitamin D and Breast Cancer continued from page 6...

Know Your Nutrients: Vitamin D

by Amanda Hawkinson

What is Vitamin D? Vitamin D is a group of fat-soluble prohormones that can be found in many dietary sources, such as fish, eggs, fortified milk, and cod liver oil. The sun also contributes significantly to the daily production of vitamin D; it is said that as little as 10 minutes of exposure is sufficient to prevent deficiencies. The term "vitamin D" refers to several different forms of this vitamin. Two of these forms are extremely important for humans: ergocalciferol (vitamin D2) and cholecalciferol (vitamin D3). While vitamin D2 is synthesized by plants, vitamin D3 is synthesized by humans in the skin when it is exposed to ultraviolet B (UVB) rays in sunlight. In addition, some foods are fortified with vitamin D2 or D3.

The major function of vitamin D is to maintain normal blood levels of calcium and phosphorus in the body. **By aiding in the absorption of calcium, vitamin D helps to form and maintain strong bones.** Vitamin D is used, alone or with calcium, to increase bone mineral density and to help decrease fractures. Recent research suggests that vitamin D may also provide protection from osteoporosis, hypertension (high blood pressure), cancer, and several autoimmune diseases.

Individuals who may be at a higher risk for vitamin D deficiencies include the elderly, obese individuals, exclusively breastfed infants, and those who have limited sun exposure. Also, individuals who have fat malabsorption syndromes (e.g., cystic fibrosis) or inflammatory bowel disease (e.g., Crohn's disease) are at risk.

Want to know your vitamin D levels? Contact us at (316) 682-3100 to schedule an appointment with a Riordan Clinic doctor to get your levels checked.

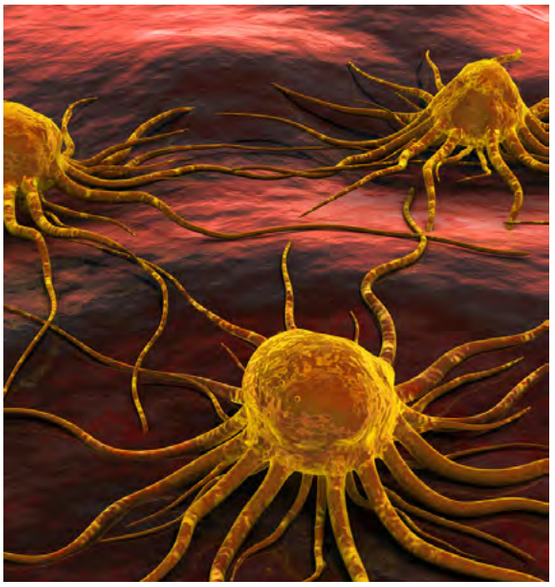
The case-control study of breast cancer found similar blood levels of vitamin D among study subjects regardless of disease status.

Two studies have evaluated how serum vitamin D metabolites may relate to breast cancer. In one study it was found that the active form of vitamin D in plasma samples collected at diagnosis was significantly lower in breast cancer cases than controls, whereas the mean vitamin D levels did not differ by disease status. In contrast, another study did not find any association between the active form of vitamin D levels in blood samples collected between 1964 and 1972 and the incidence of breast cancer (n = 96 cases) over 19 to 27 years of follow-up.

Several studies indicated that high levels of vitamin D are associated with a lower risk of breast cancer. A recent case-control study observed that women with a plasma vitamin D concentration less than 50 nmol/L had at least a five times higher risk of breast cancer than those with a plasma concentration exceeding 150 nmol/L.

A meta-analysis of prospective studies indicates that the decrease in breast cancer incidence with respect to serum vitamin D level follows a power law, with the lowest risk for those with levels near 150 nmol/L (60 ng/mL). Survival rates after diagnosis are higher for those with higher serum vitamin D levels at the time of diagnosis.

Based on observational studies of vitamin D levels, the rate of breast cancer decreases by approximately 30% when vitamin D levels in the blood are greater than 40 ng/mL (100 nmol/L) compared to lower levels of 20 ng/mL (50 nmol/L).



A modest reduction in risk with higher dietary vitamin D intake and/or sun exposure was also observed in the *National Health and Nutrition Examination Survey I* cohort, but not in a case-control study in Canada.

In summary, despite inconsistent results from epidemiologic studies, several lines of evidence suggest that vitamin D might be involved in the development of breast cancer. Specifically, (a) vitamin D has shown anti-carcinogenic properties in experimental studies; (b) some epidemiologic studies have suggested inverse associations between vitamin D intakes and breast cancer; (c) serum, plasma, and/or blood levels of vitamin D metabolites have been inversely associated with breast cancer risk in some studies; (d) high sunlight exposure, presumably reflecting vitamin D synthesis in the skin, has been associated with a reduced risk of breast cancer; (e) vitamin D and calcium intakes have been inversely related to breast density, an intermediate end point for breast cancer.

There have been no reported studies of using vitamin D in the treatment of women with breast cancer. However, some cancer treatment centers are now giving at least 5000 IU (125 mcg)/day vitamin D to patients with many types of cancer.

HCG Success...

Since introducing the hCG weight loss program in January, Riordan Clinic participants have lost over 2,200 pounds! Here is one success story:

A 47-year-old female started the Riordan Clinic's HCG Plus Program on August 8, 2011, weighing in at 170 pounds. Working at a radio station left her constantly on the go, and she found that over time the weight was beginning to add up. She was uncomfortable in her clothes and wanted a change, but her consistent travel had always made it hard for her to lose the extra pounds. She confided in a friend about her desire to lose weight. Luckily, her friend had discovered the Riordan Clinic HCG Plus Program and raved about her own personal success. With her mind set on finally losing the weight and with the support of her friend, she met with our nurse educator and began her journey.

Using injectable hCG along with B12 and vitamin supplements daily, she followed the specific hCG protocol, except for changing her beauty regimen. To ensure successful weight-loss, she chose to have a body cleansing performed the week before she started the program and decided to incorporate 30 minutes of walking to remain active.

From her starting date until Sept. 15, 2011, this patient has lost 17.2 pounds. Although many may not see the pounds lost as exceptional, she has had amazing results with her other measurements. Her fat mass has decreased by 29.8 pounds, her muscle mass has increased by 12 pounds, and her water mass has increased by 8.2 pounds. This is incredible! Her success is not the typical results we have seen in women, however, it is exciting to know that these goals can be achieved.

She still continues on her adventure to better health and reports that she feels happier and healthier than she has in years.

This patient is a great example of the weight loss success that awaits you with the Riordan Clinic HCG Plus 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!

Healthful Hints from Dr. K ...

by Jennifer Kaumeyer, N.D.

☺ Like this...	♥ Love this...
Adding the crunch to salad	Skip the croutons and add **walnuts** to lower your LDL.
Night out with friends	Sip on **red wine**, not cocktails to cut out a tenth of the carbs you'd get from margaritas.
Chocolate Indulgence	Replace chocolate ice cream with premium **chocolate sorbet** to cut calories in half. It is also fat and cholesterol free.
Rice as a side dish	Replace rice with **quinoa** for 15% fewer carbohydrates and 60% more protein than a comparable amount of brown rice; it also has 25% more fiber, which can help lower blood cholesterol.

Exercise Tips: (continued from September Newsletter)

Now that you are walking daily and you are slowly adding to the number of pushups you can do. Let's move on to **exercise tip 3: the air squat.**

In order to perform the air squat, stand with your feet just past shoulder width apart. Keep your head above your knees and bend your knees, moving your buttocks down and out past your ankles. Your arm position isn't incredibly relevant, but some people find it easier to move the arms up as you squat. However, you may find that holding your arms up, straight over your head, will give you better form when squatting. Once down begin to rise back to the standing position. You should try to get your buttocks down to just below your knees. If that's too far just go as far down as you can.

There are many squat demonstrations available online to give you a better idea of form.

Here's a sample squat routine that will surely make you feel the burn:

Start off with 10 full deep air squats, then hold in a squatting position with your knees bent and your upper legs perpendicular to your lower legs. Hold this position for a count of 10. Then perform 9 full deep air squats and then again, hold the squatting position for 10 seconds. Repeat for 8 and so on, working your way down to 1, holding for 10 seconds between each set. No weights involved and it shouldn't take much time at all, yet you will notice a difference in your legs and core (especially those problem areas ladies).

YouTube

Go to **www.youtube.com** and look for "Painting Health, Hope, and Healing" by the Riordan Clinic

We LOVE what we do! Visit Youtube and watch the Riordan Clinic employees have fun and be goofy while creating ART and expressing what the Clinic means to them...HEALTH, HOPE, AND HEALING.

Lab Special:
Breast Health Panel

Do you have a family history of breast cancer or are you concerned about your risk factors? As noted in this month's articles on breast cancer, many things play a vital role in the prevention and treatment of breast cancer, including optimal balance of vitamins and minerals. This month's lab special is our Breast Health Panel, usually only offered at this price during our semi-annual Check Your Health event. We've extended the offer in honor of Breast Cancer Awareness Month in hopes that anyone concerned about their risk factors will take advantage of the savings and schedule an appointment. The results from these tests can provide a guide to supplementation and proper nutrition to optimize breast health.

The breast health panel measures 10 different nutrients that are relevant to breast health:

- Vitamin A
- Vitamin E
- Vitamin C (plasma)
- Vitamin D
- Vitamin B6
- Folic Acid
- Lycopene
- CoEnzyme Q10
- Selenium RBC
- Vitamin C (urine)

Regular Price: $813

Sale Price: $447

45% savings

Lunch & Lecture Series 2011

Dr. Jennifer Kaumeyer

Balancing Hormones for the Natural Treatment of PMS and Other Female Disorders

Presenter: Dr. Jennifer Kaumeyer

Date: Thursday, October 13, 2011
Time: 12:00 p.m. to 1:00 p.m.
Cost: $10 — Lunch is included.

Looking for natural relief for the imbalance of hormones, such as progesterone and estrogen? PMS, menopause, certain cancers, and other female disorders are all linked to our hormones, and the effects of an imbalance can wreak havoc on our lives. In this lecture, learn the proper fluctuation of the female hormone cycle and why imbalances lead to certain symptoms. Dr. Kaumeyer will teach you how certain deficiencies and excesses can lead to improper balance of your hormones. You will leave this talk with a better understanding of your body and how to start balancing your hormones naturally. Having proper hormone balance is especially important for prevention of breast, uterine and ovarian cancers.

Join us to learn more about this important topic.

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

Check Your Health—Results

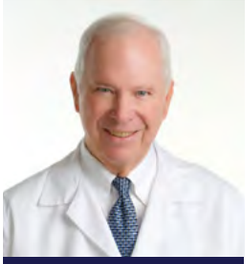
Presenters: Dr. Ron Hunninghake, Dr. Jennifer Kaumeyer, and Dr. Charles Hinshaw

Date: Thursday, October 27, 2011 **Time:** 12:00 p.m. to 1:00 p.m.

Cost: FREE—Lunch is NOT included. Feel free to bring your own.

Dr. Ron Hunninghake

Dr. Jennifer Kaumeyer



Dr. Charles Hinshaw

Riordan Clinic doctors will answer your questions and discuss laboratory results from the September "Check Your Health" event. You can participate in the lecture in two ways:

1. **Bring your "Check Your Health" test results** to the lecture and follow along as the doctors offer an explanation for some of the key measurements.
2. **If you didn't take part in the event but want to learn more,** we will provide you sample test results to use as a learning tool during the lecture. Follow along with the doctor's comments.

"Check Your Health" tests results provide a guide to supplementation and diet to optimize your health. Come to this lecture to learn how you can benefit.

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

The Nutrition Reporter™

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

Vitamin D3 is the Best Form – And New Research Shows More Health Benefits

Vitamin D3 is better absorbed than D2, but new research shows that the difference is striking. According to a study conducted at Creighton University in Omaha, Nebraska, vitamin D3 is absorbed almost twice as well as D2.

Doctors have often debated the differences between vitamin D3 (cholecalciferol) and D2 (ergocalciferol). Both types are converted by the liver and kidneys to the biologically active form of the vitamin.

Robert P. Heaney, MD, and his colleagues asked 33 healthy men and women to take 50,000 IU of vitamin D – one form or the other – daily for 12 weeks. Blood levels of the vitamin were measured during the study. Nine subjects allowed the doctors to obtain a small fat biopsy at the beginning and end of the study to assess vitamin D tissue storage.

By the end of the study, people taking vitamin D3 had 87 percent higher blood levels of the vitamin, compared with people taking vitamin D2. In addition, people taking vitamin D3 stored two to three times more of the vitamin, compared with those taking vitamin D2.

D3 is produced commercially from sheep lanolin, whereas vitamin D2 comes from nonanimal sources.

In other recent research, Eduardo Villamor, MD, of the University of Michigan in Ann Arbor, and his colleagues tracked the vitamin D levels and health of 479 schoolchildren. The children ranged from five to 12 years old at the beginning of the study, and they were followed for an average of 2.5 years.

During this time, children with low or deficient levels of vitamin D were more likely to become fatter and remain shorter, compared with children who had normal levels of the vitamin. Body fat was measured using body mass index, skinfold thickness, and waist circumference.

Meanwhile, John M. Brehm, MD, of the Harvard Medical School, and his colleagues analyzed the relationship between vitamin D levels and severe asthma reactions as part of a drug study involving 1,024 children. The subjects had been diagnosed with mild-to-moderate persistent asthma.

Thirty-five percent of the children had marginal to serious deficiencies of vitamin D. Over four years, those with low vitamin D levels were 50 percent more likely to visit an emergency room or to be hospitalized because of severe asthma reactions. "Even in those already receiving inhaled steroids, vitamin D insufficiency increased the risk [of severe asthma reactions]," wrote Brehm and his colleagues.

References: Heaney RP, Recker RR, Grote J, et al. Vitamin D3 is more potent than vitamin D2 in humans. *Journal of Clinical Endocrinology*, 2011: epub ahead of print. Gilbert-Diamond D, Baylin A, Mora-Plazas M, et al. Vitamin D deficiency and anthropometric indicators of adiposity in school-age children: a prospective study. *American Journal of Clinical Nutrition*, 2010;92:1446-1451. Brehm JM, Schemann B, Fuhlbrigge AL, et al. Serum vitamin D levels and severe asthma exacerbations in the childhood asthma management program study. *Journal of Allergy and Clinical Immunology*, 2010; 126:52-58.e5. ❑

Perspectives

Huh? Stop Taking Supplements?

A nutrition client recently related a conversation he had with a dietitian working at his gym. He had told her about the supplements he was taking, which had led to significant improvements in his blood sugar and cardiovascular risk factors. And the dietitian responded by suggesting that maybe he has been taking supplements for too long and should stop.

This kind of thinking on the part of the dietitian reflects an old-school view of nutrition: It focuses more on foods than nutritional biochemistry, and it's based on a lot of unsubstantiated assumptions.

First, the biochemical basis of our bodies derives from nutrition. Ignoring this is tantamount to ignoring the fact that plants don't need sunlight and water to grow. Even our genes depend on nutrients,

More research summaries on next page

such as amino acids and B vitamins, to function normally. We even need vitamins C and E to prompt stem cells to turn into actual functional cells.

Second, if someone takes vitamin supplements and his cholesterol, blood sugar, and homocysteine levels improve, that's pretty good empirical evidence of their benefits. Why would anyone want to stop taking natural substances (nutrients) that improve their risk factors for disease?

Third, there's a 50-year-old idea that people can get all of the nutrition they need from a healthy diet. Even assuming that were the case, how many people really eat healthy diets? Even with the best diet, only a relatively small percentage of nutrients actually get absorbed and put to use, and people tend to do better with larger rather than smaller amounts of vitamins and many other types of micronutrients. That's because our biochemistry functions best when there is an ample amount of "nutritional substrate" for all of the other biochemicals and chemical reactions.

Linus Pauling, PhD, once phrased it this way: why would you want to live with mediocre nutrition and mediocre health when you could live with optimal nutrient levels and optimal health? *–JC*

Whey Better than Milk and Soy Proteins for Boosting Metabolism

Researchers have long known that the body has to burn far more calories digesting, absorbing, and metabolizing protein, compared with breaking down carbohydrates (including sugars). Protein also has the advantage, through a variety of mechanisms, to decrease appetite.

But little is know about how different types of protein might affect thermogenesis, or fat burning, according to Kevin J. Acheson, PhD, of the Nestlé Research Center in Switzerland.

Acheson tested the effects of various meals on 23 thin, healthy men and women in their late twenties and early thirties. One of the meals was rich in whey protein, while the others contained casein (milk protein), soy protein, or primarily carbohydrate.

Based on an analysis of blood and urine samples, the thermogenic effect of whey protein was greater than that of casein or soy protein or carbohydrate.

However, the whey protein led to a lower sense of satiety – the subjects felt empty and more hungry – faster than after eating the casein, soy protein, or carbohydrate. Despite this effect, the subjects indicated that they "liked" the whey protein much more than the other meals.

According to Acheson, the digestion, absorption, and metabolism should burn about 23 percent more calories compared with carbohydrate (~6 percent) and fat (~3 percent) – at least based on theoretical calculations of metabolism.

Reference: Acheson KJ, Blondel -Lubrano A, Oguey-Araymon, et al. Protein choices targeting thermogenesis and metabolism. *American Journal of Clinical Nutrition*, 2011: doi 10.3945/ajcn.110.005850. ❑

Blueberry Antioxidants May Help Prevent High Blood Pressure

Eating a lot of blueberries might help you avoid hypertension, or high blood pressure.

Aedin Cassidy, PhD, of East Anglia University, United Kingdom, along with her colleagues at Harvard University, analyzed the dietary habits of 156,957 men and women and their risk of developing high blood pressure.

The researchers focused on dietary intake of anthocyanins, a family of antioxidant flavonoids. Anthocyanins are found in dark fruits and vegetables, such as blueberries, strawberries, raspberries, and eggplant skins.

After 14 years of follow up, Cassidy reported that people who consumed the most anthocyanins were 8 percent less likely to develop high blood pressure. Most of the dietary anthocyanins came from blueberries and strawberries. In terms of food, people who ate one or more servings of blueberries each week were about 10 percent less likely to develop high blood pressure.

Reference: Cassidy A, O'Reilly EJ, Kay C, et al. Habitual intake of flavonoid subclasses and incident hypertension in adults. *American Journal of Clinical Nutrition*, 2010: doi 103945/ajcn.110.006783. ❑

Type of Dairy Fat May Protect Against Diabetes, Heart Disease

Trans fats made from the hydrogenation of vegetable oils are known to increase the risk of overweight, type 2 diabetes, and cardiovascular disease. But a type of naturally occurring trans fat, found in dairy products, may help prevent these health problems.

Dariush Mazaffarian, MD, DrPH, of Harvard University's School of Public Health, and his colleagues tracked 3,736 men and women participating in the Cardiovascular Health Study. The participants, who were 65 years of age or older, completed a detailed dietary questionnaire at the beginning of the study, and three years later they had blood samples drawn to measure levels of different types of fats.

People who had indicated that they ate substantial amounts of whole-fat dairy products were later found

to have high blood levels of trans palmitoleic acid (TPA). TPA is found only in dairy products.

People with the highest blood levels of TPA were 61 percent less likely to develop type 2 diabetes. They were also a little thinner, had healthier cholesterol and triglyceride levels, lower insulin, and lower C-reactive protein levels, compared with people who had the least amount of TPA in their blood.

A similar form of palmitoleic acid is produced in the liver, and some research suggests that it too may have health benefits.

Reference: Mozaffarian D, Cao H, King IB, et al. Trans-palmitoleic acid, metabolic risk factors, and new-onset diabetes in U.S. adults. *Annals of Internal Medicine*, 2010;153:790-799.❑

Homocysteine, Vitamin B12 Impact Risk of Alzheimer's

High levels of homocysteine and low levels of vitamin B12 may increase the risk of Alzheimer's disease.

Babak Hooshmand, MD, and his colleagues at the Karolinska Institute, Sweden, measured blood levels of homocysteine and "holotranscobalamin," the active form of vitamin B12, in the blood of 271 people ages 65 to 71 years. Elevated levels of homocysteine, which can usually be controlled with supplemental folic acid and vitamin B12, are a risk factor for heart disease, stroke, and Alzheimer's.

None of the subjects had any signs of dementia at the beginning of the study. Seven years later, 17 of the subjects had been diagnosed with Alzheimer's disease. People with high levels of homocysteine and relatively low levels of vitamin B12 were more likely to develop Alzheimer's disease.

Reference: Hooshmand B, Solomon A, Kårehold I, et a. Homocysteine and holotranscobalamin and the risk of Alzheimer disease. *Neurology*, 2010;75:1408-1414. ❑

Ginger Reduces Chemo-Induced Nausea and Vomiting in Patients

Considerable research has shown that ginger root can reduce pregnancy-related nausea and vomiting. In a new study, researchers reported that ginger-root capsules have the same benefit for cancer patients undergoing chemotherapy.

Kamlesh K. Sharma, MD, of the All India Institute of Medical Sciences, New Dehli, and his colleagues treated children and young adults with bone sarcoma, giving them chemo drugs and anti-nausea medications. Some of the patients were also given capsules containing 1 to 2 grams of ginger root powder or placebos daily during up to 30 cycles of chemotherapy. The ginger dosage was based on body weight, with heavier patients receiving the larger amount.

The ginger reduced feelings of acute nausea (within 24 hours of chemo) by almost half, whereas placebos had little effect. Patients taking ginger also had about half the acute vomiting, compared with the placebo group. In addition, delayed nausea and vomiting (occuring 5-10 days after completing chemotherapy) was also greatly reduced among people taking ginger, compared with those taking placebos.

Reference: Pillai AK, Sharma KK, Gupta YK, et al. Anti-emetic effect of ginger powder versus placebo as an add-on therapy in children and young adults receiving high-emetogenic chemotherapy. *Pediatric Blood and Cancer*, 2011;56:234-238. ❑

Eating Heavily Salted Foods Affects Blood Vessel Tone

Doctors often recommend that people with hypertension reduce their salt intake. In a new study, researchers reported that eating a high-salt meal can negatively affect other aspects of the cardiovascular system.

Kacie M. Dickinson, PhD, of Australia's Commonwealth Scientific and Industrial Research Organization (CSIRO), investigated the responses of 16 healthy men and women to low- and high-salt meals. None of the subjects had hypertension.

The subjects were given meals on two different occasions. The low-salt meal contained 130 mg of sodium, whereas the high-salt meal contained 1,494 mg of sodium, which Dickinson described as the amount of sodium in a "commonly eaten meal."

Although the high-salt meal did not increase blood pressure, it did lead to a deterioration of "endothelial function," or blood vessel tone, 30 minutes after the meal. Poorer endothelial function is characterized by a stiffening of blood vessels and reduced blood flow, which may be factors leading up to hypertension.

Reference: Dickinson KM, Clifton PM, Keogh JB. Endothelial function is impaired after a high-salt meal in healthy subjects. *American Journal of Clinical Nutrition*, 2011: doi 10.3945/ajcn.110.006155. ❑

Some Dietary Fats May Ease Premenstrual Syndrome

Taking supplements containing gamma-linolenic acid and a mix of other healthy dietary fats can significantly reduce symptoms of premenstrual syndrome (PMS), according to a study by researchers from Brazil.

Edilberto A. Rocha Filho, MD, of the Federal University of Penambuco School of Medicine, and

Continues on next page

Quick Reviews of Recent Research

• Magnesium may protect against diabetes

Doctors from Justus-Liebeg University in Germany compared the effects of magnesium supplements and placebos on 52 men and women who had normal blood levels of magnesium, but were overweight and insulin resistant. The subjects took the magnesium supplements (providing 365 mg of the mineral) or placebos daily for six months. By the end of the study, people taking the magnesium had a significant improvement in fasting blood sugar and some reduction in insulin resistance. There was also a tendency toward lower blood pressure.

Mooren FC. *Diabetes, Obesity and Metabolism*, 2011: 10.1111/j.1463-1326.2010.01332.x

• Cinnamon also helpful in diabetes

Cinnamon has a long history of use in preventing and treating elevated blood sugar. Researchers at Thames Valley Hospital, London, asked 58 patients with type 2 diabetes to take either 2 grams of cinnamon or placebos daily for 12 weeks. People taking the cinnamon had a significant reduction in fasting blood sugar, waist circumference, and body fat, although the changes were not significant compared with the placebo group. (The study may have motivated placebo group members to eat more carefully.) However, after 12 weeks, people taking the cinnamon did have significant reductions in blood sugar (based on HbA1c levels) and systolic and diastolic blood pressure among "poorly controlled type 2 diabetic patients."

Akilen R. *Diabetic Medicine*, 2010;27:1159-1167.

• Omega-3 may serve as "clot buster"

So-called clot-buster drugs are commonly administered to stroke patients to reduce the further risk of blood clots and brain damage. In an experiment using laboratory rats, researchers at Loma Linda University, California, found that one of the key omega-3 fats, docosahexaenoic acid (DHA) led to significantly reduced post-stroke damage. DHA was provided intravenously after a stroke, and it reduced brain damage by up to 66 percent, compared with animals that did not receive DHA. DHA also led to post-stroke improvements in animal behavior.

Belayev L. *Translational Stroke Research*, 2010: doi 10.1007/s12975-010-0046-0.

• Very few Americans physically active

Nearly everyone understands that regular physical activity can reduce the risk of overweight, diabetes, cardiovascular diseases, and cancer. But a team of American researchers has found that very few people actually engage in any type of daily vigorous activity. In a study of almost 80,000 Americans, the researchers reported that only 5 percent of people exercised vigorously (not including people whose jobs involved physical activity). The most common types of exercise were using cardiovascular equipment and running. One-fourth of the subjects described food and drink preparation as their physical activities, although the researchers classified these activities as sedentary.

Tudor-Locke C. *American Journal of Preventive Medicine*, 2010;39:e13-e20.

Dietary Fats and PMS...

Continues from previous page

his colleagues treated 120 women who had experienced a variety of PMS symptoms. The supplements contained either 1 or 2 grams of fats or placebos, and they were taken daily for six months.

Each 1-gram capsule provided 210 mg of gamma-linolenic acid, 175 mg of oleic acid, 250 mg of other polyunsaturated fats, and 20 mg of vitamin E. The 2-gram dosage had twice these amounts.

Women in the study recorded the intensity of 23 PMS symptoms, including anxiety, depression, headache, and water retention. The 1- and 2-gram supplements led to significant improvements after three and six months, with the 2-gram supplement providing the greatest benefits. The placebos led to improvements after three months, but their benefits wore off after six months.

Gamma-linolenic acid is obtained from plant oils, and it is the precursor to prostaglandin E1, a hormone-like substance that has analgesic properties.

Reference: Rocha Filho EA, Lima JC, Pinho Neto JS, et al. Essential fatty acids for premenstrual syndrome and their effect on prolactin and total cholesterol levels: a randomized double blind, placebo-controlled study. *Reproductive Health*, 2011: doi: 10.1186/1742-4755-8-2. ❑

The Nutrition Reporter™ newsletter (ISSN 1079-8609) publishes full monthly issues except for August and December and is distributed only by prepaid subscription. Phone: (520) 529.6801. Email: nutritionreporter@gmail.com. The Nutrition Reporter™ is strictly educational and not intended as medical advice. For diagnosis and treatment, consult your physician. Subscriptions are $28 per year in the U.S.; either $34 US or $40 CND for Canada; and $42 for all other countries, payable in U.S funds through a U.S. bank. The Nutrition Reporter™ is a trademark of Jack Challem.

The Nutrition Reporter™
Post Office Box 30246 • Tucson AZ 85751-0246 USA
Editor and Publisher: Jack Challem
Copy Editor: Mary E. Larsen