This workshop was well worth the effort and time it took to get to Denver a day early and to be immersed in cutting edge research and information. The speaker panel included: Dietitians in Integrative and Functional Medicine (DIFM) Professional Advancement Director Sheila Dean DSc-C RD LDN CCN CDE; Robert Rountree MD, owner and founder of Boulder Wellcare and Medical Director of Xymogen; Bellinda Jenks, PhD RD FACP, Director of Scientific Affairs and Nutrition Education at Pharmavite LLC; and Katherine M. Newton PhD, Associate Director of Research, Group Health Research Institute and Affiliate Associate Professor of Epidemiology, University of Washington, Seattle, WA. The conference began with Sheila Dean giving a general overview of the process of detoxification (biotransformation), then covering the production and detoxification of the estrogen hormones in more detail.

Detoxification or biotransformation refers to the metabolic pathways that convert usually fat-soluble toxic substances into metabolically inert water-soluble molecules that can be removed from the body via the bile or the urine. Phase 1 and Phase 2 detox takes place mostly in the liver, however 25% occurs in the small intestine and all tissues have some detoxification capacity. Phase 3 of this process is the excretion phase. Some of the causes of impaired detoxification include: lack of key nutrients, an overwhelmed toxic load, dysbiosis, intestinal hyperpermeability, drug-nutrient-herbal interactions that act as cytochrome P-450 (CYP 450) inhibitors and inducers (such as crucifers, grapefruit juice or charcoal grilled meats), and genetic variations or single nucleotide polymorphisms (SNPs). Phase 3 can be impaired by constipation, increased gastrointestinal transit time, and renal dysfunction.

Ms. Dean went on to describe some of the health problems associated with the standard American diet (SAD) including fibroids, endometriosis, migraines, generalized muscle aches, fibromyalgia, and fatigue. Besides the SAD, other possible disruptors of our detoxification systems are chronic drug use or polypharmacy along with substances in our environment that act as toxins - such as pesticides, industrial compounds and chemical by-products including plasticizers, combustion and incineration pollutants, synthetic medications, food additives and preparation by-products, and cosmetic additives such as petroleum and aromatic hydrocarbons. Because toxins are fat soluble, they are stored in the fat. EPA studies from 1982 showed 100% of human fat tissue studied had styrene residues from polystyrene used in food packaging. Alarmingly, research shows that umbilical cord blood contains these same compounds, many of which are now known to be endocrine disruptors. Other internal sources of toxins are from yeast in the gut, infections, and products of dysbiosis such as the enzyme β-glucuronidase which de-conjugates conjugated estrogen, leaving free estrogen which can be reabsorbed.

The detoxification CYP450 enzymes metabolize drugs and estrogen and the presence and activity of these enzymes are dependent on...
Happy New Year to each and every one of you!

The coming year promises to be an exciting one for Dietitians in Integrative and Functional Medicine (DIFM). The current and upcoming Executive Committee have so much cutting edge information to share with you, it is hard to know where to begin.

Make sure that you read about all the activities our student members are participating in. The new Student Speak page is offering students the opportunity to tell members about what it happening in the every changing world of academics - and more importantly, carry the DIFM message to future Registered Dietitians. We are fortunate to have two very energetic and talented student representatives in Kelly Moltzen and Erica Hart Kasuli.

The SNIP update and Laboratory assessment columns are becoming a regular in the newsletter. These brief but concise columns will provide you with cutting edge information on nutritional genomics and the field of functional medicine.

If you were not able to attend the pre-FNCE conference, make sure you read the report from the event. Then, order the CD so you will be up-to-date on the information presented in Acheiving Hormone Balance: An Endocrine Dance of Environment, Genes, Diet, and Detoxification. And stay tuned for information on the pre-FNCE conference planned for Boston this fall. The EC has quite an agenda in the works for that workshop and you will not want to miss it.

As always, it was wonderful to have the opportunity to see many old friends, put faces to names, and make new friends while in Denver. We all left FNCE feeling recharged with many ideas for 2010-2011 and hope that many of you will help us bring ideas to fruition. One way of helping is by volunteering. What better way of doing so is by offering to write a short article or review a book or program for the newsletter and or Web site. If you have an idea you would like to share for either, please do not hesitate to drop me an email at peaknut@cascadeaccess.com. I am always grateful for feedback and for offers to assist with the newsletter.

Wishing you a healthy and prosperous 2010.

Dietitians in Integrative and Functional Medicine has a new address! Please note that DIFM has a new address. If you need to post something to our Executive Assistant, please use the following snail mail address:

DIFM DPG
Dietitians in Integrative and Functional Medicine
P. O. Box 3624
PITTSFIELD, MA 01202

Please bookmark our new Web site address: If you need to get in touch with the DIFM Executive Assistant, please note the new email address: info@integrativeRD.org

The views expressed in this newsletter are those of the authors and do not necessarily reflect the policies and/or official positions of the American Dietetic Association.

We invite you to submit articles, news and comments. Contact us for author guidelines.

Send change-of-address notification to the American Dietetic Association, 120 South Riverside Plaza, Ste. 2000, Chicago, IL 60606-6995.

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Farewell and best wishes to Kathy Bernard, DIFM’s (formerly NCC) Executive Assistant for the past eight years. Kathy was an integral part of the Executive Committee. She was instrumental in keeping the business end of the DPG running and coordinating DIFM (NCC) activities at FNCE events.

Thank you Kathy for all that you did for the DPG.
You will be missed-and remembered with fondness.

Dietitians in Integrative and Functional Medicine
P.O. BOX 3624
PITTSFIELD, MA 01202
Nature often holds up a mirror so we can see more clearly the ongoing process of growth, renewal, and transformation in our lives.

—Anonymous

Dear DIFM Members,

Winter is the perfect season to cozy up with a good book, connect with friends over a steaming cup of chai, and enjoy the outdoor wonderland of nature’s slopes, trails, and paths. It is also a time of reflection, resolution, and renewal as the New Year emerges.

Reflection: As I reflect on DIFM 2009, I am inspired by the feedback that our members continue to share:

“I love our name change! I feel proud to be a DIFM member and I am sharing this excitement with my colleagues— they too are excited to know our practice group exists.” —Kristen

“The Pre-FNCE workshop on detoxification was excellent and I plan to buy the CDs to review this material again & again, as it was loaded with clinical pearls.” —Carol

“I appreciate the updates to the DIFM website, and especially our new domain name.” —Mark

Resolution: DIFM has a strategic plan in place that serves as our directional compass for achieving our 2010 resolutions, which includes marketing the DIFM brand to the public and the integrative medicine community. To achieve this goal, it is important that we resolve to stay abreast of emerging trends in CAM and in integrative and functional medicine.

The National Center for Complementary and Alternative Medicine (Reference: http://nccam.nih.gov/news/2008/121008.htm) reported that almost 40% of adults use some form of complementary or alternative medicine. Since 1997, there has been a significant increase in the public’s expenditures on CAM therapies, with estimates of ~$34 billion spent on these practices. Consumers are using a variety of therapeutic modalities, with the use of natural products (#1) and diet-related therapies (#7) ranking in the top 10 most commonly used CAM therapies.

This data is a call to action to market the DIFM brand so that the public is aware of RDs who have the knowledge, skills, and clinical experience in CAM therapies. I hope that you resolve to become listed in our Find a DIFM RD directory found on our website, and that you let your colleagues know about DIFM, as this Michigan DIFM RD shared with me:

“Our hospital is having a Food is Medicine meeting and I am so inspired by DIFM that I want to share it with my group and will display some DIFM materials and our website.” Lisa

Renewal: As we welcome a new year, I encourage each of you to explore and experiment with a new healing modality this year, whether it is trialing an elimination diet, taking a yoga dance class, getting some acupuncture, or starting a self-care journal. Number one in your life should be YOU and by you learning and embracing new therapies, in the process you will renew your passion in this ever evolving field.

DIFM would like to extend our thoughts, prayers, and generosity to the people of Haiti and the community of world healers helping them to regain their lives.

Healthy regards,
Kathie

Standards of Practice and Standards of Professional Performance for RDs in Integrative and Functional Nutrition

DIFM’s Standards of Practice (SOP) and Standards of Professional Performance (SOPP) workgroup has begun developing standards for RDs in Integrative and Functional Nutrition. The workgroup began meeting in late August 2009 and is well underway in developing these standards. The SOP and SOPP for RDs practicing in Integrative and Functional Nutrition will provide a means for RDs to advance knowledge and skills; define minimum competency levels for RDs; promote consistency in practice and performance; provide common indicators for self-evaluation; and develop Professional Development Portfolio goals and focus continuing education efforts. Members of the SOP SOPP workgroup include: Deborah Ford, MS RD CCN ACE (Co-Chair); Sudha Raj, PhD RD (Co-Chair); Rita Batheja, MS RD CDN; Ruth DeBusk, PhD RD; Dave Grotto, RD LDN; Diana Noland, MPH RD CCN; Elizabeth Redmond, PhD MMSc RD LD; Sylvia Escott-Stump, MA RD LDN; and Kathie Madonna Swift, MS RD LD. The Scope of Dietetics Practice Framework Sub-committee Advisor for this workgroup is Patricia L. Steinmuller, MS R CSSD LN.

For more information regarding the development of SOP and SOPP for RDs in Integrative and Functional Nutrition, please contact ADA Quality Management at quality@eatright.org.
our genes. Sheila quoted Dr. Syd Baker MD, a practicing physician with a special interest in the environmental and biochemical aspects of the chronic health problems of children and adults, as having said: “Detoxification is central to the understanding of functional assessment in medicine, not so much because we live in a toxic environment but because detoxification is the biggest item in each individual’s biochemical budget.”

Detoxification pathways can be assessed by measuring the clearance of caffeine (Phase 1 activity), aspirin and acetaminophen (Phase 1 and Phase 2 activity ratio) using saliva, urine, and sometimes blood. For example, low Phase 1 activity indicates slow CYP450 activity and metabolic detoxification difficulty. Chronic exposure to environmental toxins compounded by slow detoxification over time can lead to systemic health effects such as carcinogenesis, endocrine and metabolic disruption, immunologic dysfunction, neurotoxicity, and estrogen imbalance. Because estrogen metabolites vary greatly in their activity, the ultimate biologic effect of estrogen depends upon how it is metabolized or biotransformed.

There are two sources of estrogen – endogenous estrogens (estriol, estrone and estradiol) and estrogen metabolites, and exogenous estrogens which come from the diet and the environment. Exogenous estrogens from the environment are considered to be bad estrogens and those from the diet are good estrogens. Bad estrogens are those from hormonally treated livestock, hormone replacement medications, tamoxifen, cimetidine and oral contraceptives, phthalates and bisphenol-A, aromatic hydrocarbons, and organochlorine chemicals such as pesticides, herbicides, plastics, dioxins, polychlorinated biphenyls (PCBs), and other industrial solvents. Bad estrogens are also the 16-OH estrogen metabolites. Good estrogens are metabolized to the 2-OH metabolites which have weak estrogen activity. Women who metabolize more of their estrogen down the 16-OH pathway have an increased risk of breast cancer compared to those who metabolize more via the 2-OH pathway. Phase 1 detoxification of estrogen involves hydroxylation at the C-2, C-4 or C-16 of the estrogen molecule. Phase 2 estrogen metabolism involves methylation of the 2OH and 4OH catechol estrogens using the enzyme catechol-O-methyltransferase (COMT) into methyl esters that are more water soluble and easier to excrete.

Robert Rountree, MD reviewed environmental hormone disruptors and how they impact estrogen metabolism in the human body. These disruptors can blunt estrogen metabolism. Examples included atrazine which has contaminated ground water after waste water treatment and soy – as a potential breast cancer promoter, however, as he emphasized – ONLY IN A TEST TUBE (in vitro).

Dr. Rountree began his presentation of Endocrine Disruptors by asking the following questions:

• What is the physiological difference between endogenous (internally produced) and exogenous (environmental) estrogens?
• What are the sources and effects of environmental estrogens?
• What are phytoestrogens and are they safe to consume?
• What are the potential interactions between endogenous, exogenous and phyto-estrogens?

Enzymes involved in estrogen metabolism include the activating enzymes CYP19 (aromatase) and CYP1B1 and the protective enzymes COMT (Catechol-O-methyl transferase) and NQO1 (NAD(P)H dehydrogenase, quinone 1). Aromatase chemically converts androstenedione to estrone and testosterone to estradiol. It is active in all vertebrates and particularly in breast tissue where it can be especially active in breast cancer cells. Aromatase is also made by excess visceral adipose tissue. Activity is increased by exposure to plastics, inflammatory prostaglandins, age, insulin, obesity and alcohol to name a few. Aromatase is inhibited by prolactin, cigarette smoke, synthesis inhibitors, COX inhibitors, and a range of phytoestrogens.

In addressing these questions, he explained how the 2-OH estradiol and 2-OH estrone, (metabolized by the enzyme CYP1a acting on estradiol and estrone) is protective against cancer and as it is methylated, becomes anti-proliferative. However, the presence of the enzyme CYP3A4 acting on estrone produces 16αOH estrone which is an active estrogen and carcinogen that is also metabolized to estriol which is an active estrogen. There are increased levels of 16-OH estrone in obesity.

A different enzyme, CYP450 1B1 acting on estrone produces 4-OH estrone which is a carcinogen and active form of estrogen that can then be metabolized to quinone and semiquinone which are genotoxic free radicals. These 4-OH estrogens are increased by environmental toxins and known to cause DNA damage. The polymorphism, induced by dioxin, is present in patients with breast cancer. Polymorphisms increase susceptibility to induction and are associated with increased risk of breast and prostate cancer and may also have an impact on the immune system.

Dr. Rountree reminded us that estrone, estradiol and the 2-OH metabolites of these hormones are good and the 4-OH and 16αOH forms are bad. Whether the body metabolizes to the 2-OH forms or the 4 and 16 forms is dependent upon which enzyme is acting, and these enzymes are inducible by environmental agents.

He went on to describe estrogen receptors which are believed to have evolved from an ancestral steroid receptor gene with estrogen-like functionality identified in fruit flies & mollusks. There are two main types: Alpha, which is predominant in reproductive tissue with its major action being cell division/proliferation and having a stronger affinity for xenoestrogens. Beta estrogen receptor which is predominant in bone, bladder, brain, prostate, spleen, lung, and thymus with the major action being inhibition of osteoclasts, with a stronger affinity for phytoestrogens. Estrogen binds equally to both receptors and effects of receptor activation can be oppositional.

Xenoestrogens increase activity of CYP450 1B1 versus CYP1A2, a member of the cytochrome P450 mixed-function oxidase system. Xenoestrogens are industrially made compounds with estrogenic altering or augmenting effects that differ from
Pre-FNCE Workshop: Achieving Hormone Balance: An Endocrine Dance of Environment, Genes, Diet, and Detoxification

those naturally made by the body. They are hormonally active agents that are endocrine disruptors. Xenobiotics are chemicals found in the body which are not normally produced or expected to be in the body; they are often found in the context of environmental pollutants. CYP1A2 is involved in the metabolism of xenobiotics in the body.

Numerous diseases have been linked to endocrine disruptions. These include birth defects, premature puberty, infertility, reproductive cancers, adrenal disease, thyroid disorders, and autoimmune disorders to name a few. Xenobiotics contribute to this disruption. Xenobiotic substances such as antibiotics and organochlorides are becoming an increasingly large problem in waste water treatment systems. Herbicides and household cleaners, cosmetics, and plasticizers are also culprits.

Phytoestrogens, found in plants, have some structural similarities to human estrogens which allow them to interact with hormone receptors or enzymes in animal and human cells. They are a functional rather than a chemical class with legumes being the most abundant source of phytoestrogens. They may play a role in cancer prevention, blunt toxicity from xenoestrogens and high levels of endogenous estrogens, and provide support when endogenous estrogen levels are low. Phytoestrogens include the following classes: isoflavones, lignans, stilbenes/stilboids, coumestans, and flavonoids.

Dietary notes and recommendations included: eat cruciferous vegetables four times per week (steam for two minutes), the turmeric (curcumin) in curry inhibits inflammation; and aim for 625mg/day green tea catechins as they have a positive affect on the body. (1C green tea has 150-200 mg catechins).

Some Important Conclusions:

• Genetic factors contribute to our ability to clear toxins and drugs. Genetic tests are now available to help determine our biochemical uniqueness.

• Plants containing phytoestrogenic compounds including soy foods have been safely consumed for tens of thousands of years.

• Reproductive hormones are critical to the propagation of life on our planet

• Abundant scientific evidence indicates that chronic low-level exposure to combinations of environmental chemicals can disrupt signaling pathways used by endocrine and other organ systems in subtle but profound ways.

• The chronology of exposure parallels an increase in numerous chronic diseases and disorders including cancer, birth defects, infertility, menopause, and neuropsychiatric disorders.

Resources: www.ewg.org - Environmental Working Group

In her presentation An Overview of Menopause, Katherine M. Newton, PhD reviewed the Staging Reproductive Aging Workshop (STRAW), a study started in 2001, with the purpose of developing a staging system for menopause and re-evaluating the nomenclature and identifying knowledge gaps. The study was based on 6 cohort studies of menopausal women. Dr. Newton defined menopause epidemiology as: age at onset: ≈ 45.4 years; with duration of 4.0 - 4.8 years; 10% stop abruptly. Women who start transition at an older age have a shorter transition (age at menopause approximately 51 years); smokers often begin menopause two years earlier than non-smokers. African-American and Hispanic women are more likely to have an early menopause. Characteristics included varying cycle length and increased follicle stimulating hormone (FSH) level. Perimenopause is now being referred to as early or late menopausal transition, and transitional blood values are an FSH >20 mIU/ml and an estradiol of >50 pg/mL. Postmenopause is being defined as early, within 5 years of the LMP, and late, defined as 5 years post LMP until demise.

She stated that only vasomotor symptoms follow a unique pattern that differs from other symptoms and that clusters of symptoms are not clearly delineated. Cross-cultural comparisons suggest that symptoms are not universal, and predictors of symptoms vary across populations. Perimenopause symptoms of estrogen deficiency include:

• Vasomotor: hot flashes and night sweats

• Somatic: muscle and joint pain, numbness in hands and feet, headache, breathing problems, dizziness, light-headedness, sensations of tingling, and tightness or pressure

• Psychological: sleep disturbances, concentration, unhappiness, low energy, depression, crying spells, panic, tension, heart palpitations

• Sexual: loss of libido, vaginal dryness and irritation

Belinda Jenks, PhD addressed the group on Dietary Supplement Therapies for Management of Menopausal Symptoms. She began by summarizing the consequences of menopause:

– Accelerated bone loss

– Increases in low density lipoprotein cholesterol

– Memory problems

– Increased risk of urinary tract infections

Diet changes and dietary supplements may help maintain bone, lipid, brain and urinary tract health. The North American Menopause Society (NAMS) Position on Complementary and Alternative (CAM) therapies for menopausal symptoms were reviewed. It was noted that with the drop in hormone replacement therapy (HRT) use, it is estimated that greater than 50% of perimenopausal women try some sort of complementary and alternative therapy. CAM therapies include supplements, functional foods, counseling, and physical methods such as acupuncture. Ethnicity makes a difference in who may use CAM: approximately 60% of Caucasian and
Japanese women, 40% of African American and Chinese women, and approximately 20% of Hispanic women.

Common Supplements Used During Menopause
- Black Cohosh
- Calcium & Vitamin D
- Chasteberry (Vitex)
- Dong Quai
- Evening Primrose Oil
- Flax lignans
- Ginseng
- Ginkgo biloba
- Kudzu
- Melatonin
- Red Clover
- SAMe
- Soy Isoflavones
- Sterol/Stanols

The most controversial, but also very well researched, functional food or supplement is soy and its by-products. Some of the evidence supporting the use of soy and soy isoflavones were presented. Soy Isoflavone Epidemiology has shown that Japanese women who regularly consume soy products are protected against hot flashes. Asian populations consume an average of 25-50 mg of soy isoflavones from soy food each day while the Western population consume less than 2 mg of isoflavones per day.

When lifestyle modifications are ineffective, soy isoflavones can help reduce mild menopause-related symptoms (i.e. hot flashes) in doses of 40-80 mg. Soy should be used with caution when combined with levothyroxine, warfarin and iron. Avoid combined use with tamoxifen. It is an option for women with a history of breast cancer (see Dr. Rountree's prior comment about only in vitro soy being causal with cancer). Clinical evidence on the use of soy isoflavones reported in 2006 indicate isoflavone supplements containing predominantly genistein reduce hot flash symptoms and is more related to the genistein concentration rather than the total isoflavone content of the treatments. The minimum threshold of 15 mg of genistein per day appears effective for reducing frequency and severity of hot flashes.

Thyroid situations to consider in choosing soy isoflavones include healthy, normal thyroid function. Compromised thyroid function is common in approximately 10% of postmenopausal women. There is potential for interaction of isoflavones in individuals on thyroid medication. Medication can easily be adjusted to compensate for any theoretical effects of soy.

NAMS position states that there is little evidence that soy isoflavones augment breast cancer risk in healthy women or women with a history of breast cancer. While the American Cancer Society concluded that breast cancer patients can safely consume up to three servings of soy foods daily.

S-equol is the active metabolite of daidzein and believed to act as a selective estrogen receptor modulator (SERM). Approximately 30% of Asians and 20-30% of North Americans and Europeans, who in general consume less soy than Asians, have the ability to produce equol. Studies in Japan have documented an association between milder menopausal symptoms in equol-producers as compared to nonequol-producers. Natural S-Equol will be coming to the US market as a supplement, in spring of 2010.

Black Cohosh may help to alleviate mild menopause-related symptoms when lifestyle modifications are ineffective in doses of 80-120 mg/day. Black Cohosh should not be taken with immunosuppressive drugs or antihypertensive drugs. Safety monitoring indicates that chemically and biologically standardized extracts of black cohosh are safe during daily administration for 12 months (Geller 2009, Kronenberg 2009).

Practitioner Recommendations
- Soy isoflavones may provide vasomotor symptomatic relief for some women
- Evidence is weaker for black cohosh
- Chasteberry has evidence for relief from mastalgia (breast pain) but little for menopause
- Dong Quai is a traditional Chinese herbal medicine for menopause symptoms.

The one blinded clinical trial reported no benefit over placebo. Typically, Dong Quai is formulated with a mixture of Chinese herbs for management of menopausal symptoms that may result in a synergistic affect.

For more information about this excellent conference and to receive the speaker notes and full presentation, please see the order form on page 54. This activity is approved for 5 hours of CPEU from ADA.

Workshop reviewed by:
L. Kathleen Mahan, RD MS CDE has been a co-author of Krause's Food and Nutrition Therapy and Therapy for over a quarter of a century. She owns Nutrition by Design, Inc., (www.nutritiondesign.com) where she counsels patients both young and old on how to meet their nutritional needs or change their diets to maintain health and prevent or manage disease. Contact Kathleen at 206 363-5420, Fax 206-329-2392 or www.nutritiondesign.com.

Diana Noland, MPH RD CCN owns a functional nutrition therapy private practice in Northridge, CA. Diana is one of the emerging Functional Nutrition Practitioners skilled in a functional medicine approach to nutritional imbalances that are characteristic of chronic disease. Diana is the lead author for a new IFM publication, Functional Nutrition Therapy: Principles of Assessment, available in Fall 2010. Contact Diana at 818-840-8098, Fax 818-895-2454, nolandRD@nolandnutrition.com, or www.nolandnutrition.com.

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Drinking Wine: A Pleasure and a Health Benefit

Dr. Painter began his talk with the historical perspective of drinking wine. One of the earliest admonitions to drinking wine was a remedy for disease. Epidemiological studies have found that drinking wine may help support heart function. Researchers note a strong and negative association between death from CVD and wine consumption. The patient groups that appear to benefit most from light to moderate wine consumption are middle-aged men and women, who are also at an increased risk for developing cardiovascular disease. The combined data presented from epidemiological studies suggest that the risk of CVD decreased by approximately 20% with 0-2 alcoholic drinks per day. Moderate alcohol consumption solely for the prevention of CVD would not be recommended because of the potential adverse health effects associated with alcohol consumption.

Phytochemicals and Heart Health

Until recently, most of the medicinal properties of wine were in relation to its ethanol content. Many of the health-promoting compounds in grapes are found in the seeds and the skin, both used in making purple grape juice. Purple grapes contain phytochemicals called polyphenolic compounds. Purple grape juice may inhibit platelet aggregation, improve arterial function, and decrease LDL-cholesterol oxidation. Dr. Painter described a study from the U.S. Department of Agriculture that discovered that Welch's Purple 100% Grape Juice contains 170 calories. Dr. Painter emphasized, “Make sure you’re drinking 100% juice.” Editor's note: Alternatives for large amounts of natural sugar are warranted for persons with diabetes and dissacharide intolerances (fructose) who must moderate their carbohydrate intake, but most certainly will benefit from the flavonoids and phenolic compounds in grape juice.

Dr. Painter concluded that the phytochemicals in wine and purple grape juice appear to play a role in supporting a healthy heart. Research indicates that they may be the combined activities of these chemicals that are contributing to the reduction of risk factors associated with coronary thrombosis and myocardial infarction. We can drink to that!

Food Psychology: why we eat more than we think

Why are Americans gaining weight? Dr. Painter explained that we lose track of

Should we drink wine or purple grape juice?

The American Heart Association (AHA) cautions people not to start drinking if they do not already drink. If a person drinks alcohol, he should do so in moderation. This means an average of one to two drinks per day for men and one drink per day for women. (A drink is defined as one 12 oz beer, 4 oz of wine, 1.5 oz of 80-proof spirits, or 1 oz of 100-proof spirits). Studies suggest drinking 1-2 cups (8-16 oz) of purple grape juice per day may have cardiovascular benefits. One cup (8 oz) of Welch's Purple 100% Grape Juice contains 170 calories. Dr. Painter emphasized, “Make sure you’re drinking 100% juice.”

The biological activity of these compounds may contribute to the platelet-inhibitory properties of red wine and grape juice observed without high levels of ethanol. Decreased platelet aggregation response was noted in humans after drinking purple grape juice for just one week. The platelet inhibitory effect of the flavonoids in grape juice may reduce the risk of coronary thrombosis and myocardial infarction. There was an inverse relationship between drinking frequency and estimates of platelet coagulability. The phenolic substances in red wine inhibited LDL oxidation.

Liz Quintana, EdD
RD LD CDE

Dietitians in Integrative and Functional Medicine (DIFM) provided financial support for my attendance at the West Virginia Dietetic Association (WVDA) Annual Meeting, held on May 13-14, 2009 in Bridgeport, WV. The meeting was attended by registered dietitians, dietetic interns, and students from West Virginia and surrounding states. Sessions covered a variety of nutrition and dietetics topics including those of interest to DIFM members. One of the most interesting topics was the Pairing Food and Wine workshop presented by Jim Painter, PhD RD School of Family & Consumer Sciences, Eastern Illinois University. A very informative and entertaining speaker, Dr. Painter explained and demonstrated wine tasting techniques as well as discussed how wine may reduce the risk of developing cardiovascular disease (CVD). A behavioral food specialist, Dr. Painter also spoke on Food Psychology: Why We Eat More than We Think.

An introduction to tasting wine

In wine tasting, Dr. Painter described the three steps in the process. Wine tasting starts with the eye (visual) and the nose (olfactory) before the wine touches the mouth (gustatory). He explained that good wines should be bright and clear, whereas poor wines tend to be opaque, murky, troubled, and dubious. He described the robe (color of the wine), its intensity and hue. The color of good wine should be deep, rich, ample, and consistent. The aromas of wine can range from spicy to floral. In addition to gaining a new set of terminology pertaining to wine tasting, we learned to swirl the glass to revolve the wine to release its bouquet.

What is a good wine? Dr. Painter indicated it is a wine that those who are drinking it like. Wine preference is very personal. He cautioned, “Don’t let others dictate their taste to you!”

Benefits of wine for a healthy heart

Dr. Painter explained that we lose track of...
how much we are eating. In fact, most people are not aware of their volume of food consumption. This lack of awareness may lead to over-consumption. With the combo or value meals, we think that we are getting more for less money. We frequently spend a little extra for larger portions, thinking that we've gotten a deal. Dr. Painter asked, “Is it of value to get more of something we didn’t need in the first place?”

Dr. Painter shared some of his studies on how menus, lighting, wine, wait staff, and dining companions influence how much we eat and how much we enjoy the food we eat. He presented some techniques for helping consumers to become more aware of their eating patterns and provided ways for reducing food intake.

Techniques for promoting eating awareness and food intake reduction

1. Reduce portion size when eating out.
2. When dining out set food aside in a takeout container before you begin to eat.
3. Beware that even the names of foods can fool you.
4. Buy smaller containers of food in the grocery store.
5. Use smaller plates, bowls, and glasses.
6. Use visual cues for consumption, such as keep candy wrappers once the candy has been eaten.
7. Write down what you eat.
8. The Pistachio Principle, reduce calories by making stealth changes (replacing less healthy fat choices with pistachios) without restricting calories.

Dr. Painter defined the Pistachio Principle as a simple technique that can help keep pounds at bay – without feelings of deprivation. Nuts are a healthy snack choice, but choose wisely. In-shell nuts like pistachios slow consumption; empty shells left behind also serve as an important visual cue. Dr. Painter’s studies showed that when empty pistachio shells were left behind, the subjects ate 35 percent fewer calories, yet reported feeling equally satisfied with their portions. Additional information about Dr. Painter’s studies is accessible from his website: http://www.eiu.edu/~jpainter/


Attending the West Virginia Dietetic Association meeting was a great opportunity to obtain an update on a wide range of nutrition and dietetics topics of interest to registered dietitians (RD) in my home state. The WVDA Annual Meeting also provided an opportunity for our dietetic students and interns to meet RDs practicing in a variety of settings, as well as become more involved with our professional organization. My appreciation goes to DIFM-DPG of the American Dietetic Association for sponsoring the Professional Development Award that enabled me to attend the West Virginia Dietetic Association Annual Meeting.

Editor’s note: for more information about the studies cited in this report, please contact the author, Liz Quintana.

Liz Quintana, EdD RD LD CDE is Clinical Associate, Compton Nutrition Program Coordinator, West Virginia University School of Medicine, Morgantown, WV. Contact Liz at equintana@hhsc.wvu.edu.
Chakra Foods for Optimum Health: A Guide to the Foods that Can Improve Your Energy, Inspire Creative Changes, Open Your Heart, and Heal Body, Mind, and Spirit


Chakra for Optimum Health marries two seemingly divergent fields of study – food and nutrition with spirituality. Quite to the contrary, however, as author Deana Minich so eloquently outlines, nutrition, body, and spirituality form an interrelated triangle. Dr. Minich, a nutritionist, researcher, and writer of both technical and lay publications, guides the reader to choose foods based on chakras. According to the ancient system of Ayurveda -- the healing system upon which all medicine is based -- chakras are vibrational energy centers in the body. This energy emanates from the basic life form – the cell, which is a source of electrical activity.

The book, which is appropriate for both health professionals and consumers, begins with a mind-opening discussion about the vibration of food and the spirit of eating. The second chapter provides a primer on chakras. For those of us who have not been exposed to Ayurveda or Richard Gerber’s Vibrational Medicine, these introductory chapters are fascinating. The third chapter entitled “Discovering Your Chakra Issues,” offers a questionnaire for each of the seven chakras so the reader can determine where to focus his or her energy so-to-speak. Talk about an introspective exercise!

The next seven chapters correspond with the seven chakras – root, sacral, solar plexus, heart, throat, third eye, and crown. Each of these chapters begins with a quote, a list of terms that reflect the chakra, and a case study. Perhaps the quote that best embodies our work as nutrition healers is by Anna Freud, “I was always looking outside myself for strength and confidence, but it comes from within. It is there all the time.” The human body, when nourished properly -- when the mind is listening to what it needs -- has the innate ability to heal itself. Each of these chakra-specific chapters provides a discussion of the unhealthy root chakra correlated with the patient’s condition along with the healthy root chakra behavior, the physiology of the chakra, the relationship of the chakra characteristic to food and eating, affirmations to heal the chakra, and food and eating activities to balance the chakra.

The remainder of the book includes FAQs, recipes for chakras, chakra-balancing menus, lists of substances that deplete the chakras, lists of foods that activate and balance the chakras, and corresponding foods, and finally, health conditions and corresponding foods. Chakra Foods for Optimum Health is a useful guide for readers, providing tools to eat to heal with both physical and spiritual nourishment. Namaste.

Editor’s note: While this book is an excellent exploration of the relationship between food and spirituality, there is a lack of evidenced based references and their inclusion would enhance the information significantly.

Reviewed by Laura W. Lagano, MS RD CDN.
Contact Laura at 917-829-0250 or laura.lagano@verizon.net

Gluten Free Hassle Free
Marlisa Brown, RD, CDE
2009, Demos Medical Publishing
Soft cover, 366 pages, $19.95
ISBN-10: 1932306824

As a registered dietitian and diabetes educator in private practice, I am always looking for good books to recommend to my clients. Without a doubt Gluten Free Hassle Free is a winner. Written by a real foodie, this book provides easy to follow tips, strategies, and shortcuts to make living gluten free easy. In 15 upbeat, empowering chapters, Marlisa Brown, RD CDE clearly explains how living gluten-free can improve quality of life and enable one to stay healthy. The book is divided into 3 easy to read sections.

Part 1 Making the Change describes the prevalence of celiac disease and provides a check list to evaluate risk factors and health conditions associated with celiac disease. Not everyone who has celiac disease will have symptoms and sometimes it is misdiagnosed as another condition. So, readers are encouraged to review the lists of health problems carefully. The lists are followed by a brief discussion of the medical tests used to screen for celiac disease. The remainder of part one provides survival skills for living gluten free – no needless details. This is excellent for the person who just wants to know “what can I eat.” In addition to mouth watering meal plans there are tips for shopping, label reading, dining out, gluten-free cooking, and dealing with family and friends. Quick and easy are the operative words for Part 1.

Part 2 Making Gluten-Free Living Simple explores hidden sources of gluten, cross contamination issues, ways to include continued on page 55
Glutamate residues of proteins may be converted to gamma-carboxyglutamate (Gla) by the action of vitamin K. Gamma-carboxyglutamate is essential for Ca2+ binding in blood coagulation, as well as in bone formation, soft-tissue calcification, cell growth and apoptosis (Figure 1). Recommendations for vitamin K were originally made on the basis of blood coagulation factors, though in current research it has been associated with coronary calcification, osteoporosis, atherosclerosis, insulin sensitivity and possibly cancer. Accumulating evidence suggests that vitamin K requirements needed to maintain optimal bone and vessel function may be higher than currently set.  

**Direct measurements of vitamin K**

Methods for direct measurement of vitamin K concentration include measurements of both phylloquinones and the menaquinones, the two forms. Phylloquinone is primarily studied because it is the predominant source of vitamin K in western diets. Phylloquinone is not a reliable index of vitamin K status. Research has found functional measures of vitamin K to be more clinically relevant.

**Functional markers of vitamin K**

Elevated undercarboxylated osteocalcin (ucOC) is a functional marker of vitamin K insufficiency. Osteocalcin (OC) or Bone Gla protein (BGP) is secreted by osteoblasts and plays a role in mineralization and calcium ion homeostasis. It accounts for 10-20% of the non-collagenous protein in bone. OC is a vitamin K-dependent-Ca2+-binding protein. Transcription of the osteocalcin gene is regulated by 1,25-dihydroxyvitamin D, estrogens, glucocorticoids, and other molecules. Posttranslational modification of OC occurs through the vitamin K-dependent gamma-carboxylation. This gamma-carboxylation is largely responsible for its calcium binding properties, which are known to mediate strong binding of OC to hydroxyapatite. The ucOC test measures the amount of osteocalcin that is under-carboxylated. The serum concentration of ucOC is a sensitive indicator of vitamin K status, as high serum levels of ucOC are indicative of low vitamin K status and low levels are indicative of adequate vitamin K status.

High levels of ucOC have been reported to be a predictor of low BMD and hip fracture risk. This undercarboxylation is significantly increased in elderly women, and reflects not only some degree of vitamin K deficiency but also their poor vitamin D status, suggesting that vitamin D may be important, either directly or indirectly through its effect on bone turnover, for achieving a normal gamma-carboxylation of OC. This may be of concern for those supplementing with calcium and vitamin D, but without adequate vitamin K.

The test result above is of a 62-year-old female with osteopenia currently taking 1,000 mg of calcium a day. Her level of ucOC is 7.5, which is well above the reference limit of 6.2, suggesting she has a need for vitamin K. Increasing her vitamin K level, checking her vitamin D, and monitoring with DEXA was recommended to mitigate bone loss.

As part of full disclosure, please note that Elizabeth Redmond, PhD MMSc RD LD is a clinical consultant at Metametrix Clinical Laboratory in Georgia. She speaks regularly on laboratory testing in functional and integrative medicine and is a co-author in the Laboratory Evaluations for Integrative and Functional Medicine (2008) textbook. Contact Dr. Redmond at 678-638-2954 or eredmond@metametrix.com.

**References:**


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Figure 1

Undercarboxylated osteocalcin (ucOC) 7.5 H

95% Reference Interval

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The test result above is of a 62-year-old female with osteopenia currently taking 1,000 mg of calcium a day. Her level of ucOC is 7.5, which is well above the reference limit of 6.2, suggesting she has a need for vitamin K. Increasing her vitamin K level, checking her vitamin D, and monitoring with DEXA was recommended to mitigate bone loss.

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**References:**


continued on page 55
Berries - from the red hues of strawberries, raspberries, and cranberries to the deep blue shades of blackberries and blueberries - have become the subject of a great deal of scientific research and the object of growing consumer interest over their potential health benefits. In fact, studies are published regularly indicating how berries may help delay or prevent the onset of cancer, heart disease, age-related cognitive decline, and even obesity. The body of science has grown to such a degree that an International Berry Health Benefits Symposium was held in June, 2009 in Monterey, California to bring researchers together to share their berry findings.

Berries contain a collection of naturally occurring phytochemicals including: anthocyanins that give berries their rich colors and may be effective against lipid oxidation; ellagitannins, which may slow the growth of harmful bacteria such as Salmonella and Staphylococcus aureus; antioxidants that may improve cognitive and motor function; and proanthocyanidins that help prevent urinary tract infections. While studies suggest benefits from eating berries of all kinds, one of the more definitive and unique areas of research has focused on the anti-adhesion qualities of cranberries.

Here is a review of the recent studies presented at the symposium about cranberries’ anti-bacterial benefits as well as emerging science regarding the crimson berry’s role in other areas of human health.

Anti-adhesion benefits improve urinary tract health

For years, regular consumption of cranberry juice has been associated with the prevention of urinary tract infections, which was long assumed to be due to the acidity of the fruit. Clinical studies, however, have shown that cranberries (Vaccinium macrocarpon) are rich in a group of polyphenolic compounds called proanthocyanidins (PAC), which prevent a specific type of pathogenic E. coli bacteria from sticking to the surface of uroepithelial cells in the bladder, and thus, stop them from multiplying and developing into an infection. This anti-adhesion property is the reason why regular consumption of cranberry juice can help prevent urinary tract infections from developing. Research also suggests that sweetened dried cranberries may elicit the same bacterial anti-adhesion activity. The PACs found in cranberries are structurally different than those found in other plant foods. Polyphenol-rich grape and apple juices as well as green tea and chocolate have also been tested and found not to produce anti-adhesion activity.

A 1994 clinical study was the first to establish the fact that consumption of cranberry juice can prevent urinary tract infections. One study found that the consumption of eight ounces of commercially available cranberry juice cocktail (containing 27% cranberry juice) prevented adhesion of 79% of the antibiotic-resistant bacteria tested. The anti-adhesion activity was evident in urine within two hours and persisted for up to 10 hours following cranberry juice consumption. Another study found that regular consumption of a cranberry juice beverage reduced the recurrence of UTIs in women by about half. In a recent NIH-funded human clinical trial with 188 pregnant women, researchers found that two servings of cranberry juice cocktail daily reduced the probability of contracting asymptomatic bacteriuria by 57%. While the research showed a trend toward statistical significance, the study was not adequately powered to reach clinical significance, and a larger study is currently in planning.

Cranberry PACs also have the potential to prevent other types of infections, by preventing bacterial adhesion in the stomach and oral cavity. In the stomach, these PACs inhibit the adhesion of H. pylori, which are the bacteria responsible for stomach ulcers, a leading cause of stomach cancer. And in the mouth, these PACs can reduce the build-up of bacteria responsible for periodontal disease, a leading cause of tooth loss as we age. They can also potentially interfere with cariogenesis. As a result, investigators are currently testing oral care products such as toothpaste, rinses, and floss that are infused with cranberry extracts.

Anti-cancer properties

Results from laboratory studies have shown that polyphenolic extracts from cranberries inhibit the growth and proliferation of breast, colon, prostate, lung, and esophageal tumor cells. Cranberry compounds may inhibit cancer cell growth by inducing the cells to die and reducing their ability to invade surrounding tissues. In an analysis of the antioxidant phenol content of 20 fruits, cranberries were found to have the highest total phenol content.

Cardiovascular benefits

The same compounds in cranberries that help prevent infections and have potential anti-cancer properties also benefit heart health. Cranberry proanthocyanidins have been found to prevent LDL oxidation, which is believed to be the first step in atherogenesis and is associated with an increased risk of cardiovascular disease. A clinical study found that consuming a daily glass of light cranberry juice cocktail improved circulation by increasing blood levels of HDL-cholesterol by 8.6% in men with slightly elevated LDL-cholesterol.

Take home message - berries for health recommendations

The evidence towards the health benefits of including berries in the diet continues to grow and now includes the prevention of urinary tract infections, reduction in the risk of cardiovascular disease, and possible cancer prevention. While all berries contain several health promoting compounds, the ability of cranberries and cranberry juice to prevent urinary tract infections is the most well established connection between berries and health. Other sites where this unusual bacterial anti-adhesion property has been shown to have a similar effect on different species of pathogenic bacteria include the stomach and the oral cavity. Educating consumers about ways to include a wide variety of berries in their diet year-round will help ensure that they receive the unique health benefits provided by specific berries.

Julie Upton, MS RD CSSD is a registered dietitian in the San Francisco Bay Area who specializes in nutrition communications for print, broadcast, and e-media. Contact Julie at julieupton@gmail.com or view her weekly blogs at www.Health.com
Students Speak

Greater New York Dietetic Association Dietetic Internship Fair

Kelly Moltzen MPH, DIFM Student Representative

On November 14, 2009 Dietitians in Integrative and Functional Medicine (DIFM) members Rita Batheja MS RD CDN and Kelly Moltzen MPH staffed an informational table at New York University for the Greater New York Dietetic Association (GNYDA)’s annual Dietetic Internship Fair. Two-hundred fifty students from around the tri-state area came to this event to learn about potential internship programs to apply to, and at the same time were made aware of professional opportunities to become involved with, such as the DIFM dietetic practice group.

Many students had never heard of dietetic practice groups before, let alone DIFM, and thus, they had the opportunity to learn about the benefits of DIFM membership at this event. A large majority of these students expressed interest in learning more about DIFM and becoming members. In total, more than 35 students signed up to receive more information about DIFM. Along with the launch of the Students Speak section of the DIFM newsletter and website, this is an exciting time for the DPG as the awareness and growth of the practice of integrative and functional medicine within the field of dietetics is increasing exponentially.

DIFM Student Recruiting Event Held at New York University

Erica Kasuli Hart DIFM Student Member

On September 15, 2009 DIFM members, Rita Batheja MS, RD, CDN, Erica Giovinazzo, and Erica Kasuli Hart gathered, at the Greater New York Dietetic Association (GNYDA) student meeting to recruit students and inform them about the advantages of joining DIFM. The event was held at New York University and attended by more than 104 students from the following universities: New York University, Columbia University, Brooklyn College, Queens College, Hunter College and Lehman College.

The event was organized by the GNYDA student chair Erica Giovinazzo. Rita Batheja, Member Services Chair, and Erica Kasuli Hart shared DIFM benefits which were enthusiastically received by the students. DIFM Post-It-Notes and membership application forms were handed out to all attendees to remind them to consider joining DIFM. The DIFM student population is expanding with great camaraderie. This year, 2009 has been a big year for DIFM with many exciting ideas in the planning to continue to raise awareness and increase our student membership.
Why Join DIFM?

- Access to the Natural Standard Database, an up-to-date evidence-based, peer-reviewed database of nutritional therapies and dietary supplements—a $299 value!
- Annual Pre-FNCE Conference for DIFM members
- Access to the electronic mailing list (EML) to network with other DIFM members
- Reduced rates on DIFM workshops and other events and resources from the Center for Mind Body Medicine, the Institute for Functional Medicine and the International Omega 3 Consortium
- Find-A-DIFM RD Online Referral Directory
- Electronic and hard copies of Quarterly Integrative and Functional Medicine Newsletter
- Student Travel Stipends
- Networking opportunities with DIFM Registered Dietitians
- Numerous other resources for DIFM student members besides

How do students get involved in DIFM?

- Be active—join the DIFM electronic mailing list
- Follow DIFM on Twitter! http://twitter.com/adaDIFM
- Find the DIFM group on Facebook: “ADA Dietitians in Integrative and Functional Medicine (DIFM)”) http://tinyurl.com/yaglept
- Email Erica Kasuli Hart at egk209@nyu.edu or Kelly Moltzen at kmoltzen@nyu.edu if you are interested in volunteering for DIFM.

What are volunteer opportunities for students in DIFM?

- Volunteer at the DIFM booth at FNCE
- Write articles for the DIFM newsletter
- Recruitment for DIFM membership
- Website ideas, design and content

Why should students attend FNCE?

- Learn cutting edge evidence-based integrative and functional nutrition therapy
- Connect with other students and dietitians interested in integrative and functional nutrition therapy in your area and throughout the US

What are some topics that students want to learn more about?

- Fusion of Western/Eastern ideologies
- Food Allergies/sensitivities
- Supplementation
- Nutritional Genomics
- Detoxification

What are top challenges that students face?

- Lack of clinical practice and evidence-based education in integrative and functional medicine and nutrition therapy

Student Members in the News

Kelly Moltzen, DIFM Student Member is the co-chair of the ADA Corporate Relations Sponsors Review Task Force for the Hunger & Environmental Nutrition (HEN) DPG.

The goal of the ADA Corporate Relations Sponsors Review Task Force is to identify HEN members’ perceptions of ADA sponsorships by surveying members and consolidating the results in a report. The task force hopes to create recommendations for ADA corporate sponsorship policy that reflects the ADA’s mission of optimizing the nation’s health through food and nutrition.

For more information contact Kelly at 845-304-1521 or kellem41122@yahoo.com.
It seems that everyone either knows someone or has a family member with Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), a speech sound disorder, behavior issues or other neurologic disorders of unknown origin. In fact, autism prevalence in the United States is at 1 in every 150 children.\(^1\) Seventy percent of children with ASD have gastrointestinal dysfunction; which, in some cases, includes food allergies, sensitivities and intolerances.\(^2\)

Attention deficit hyperactivity disorder (ADHD) is prevalent in 2 to 5 out of 100 children; speech sound disorders in 8 to 9 out of 100 children; and psychiatric disorders in 21 out of 100 children.\(^3,4\)

The MET (mesenchymal-epithelial transition factor) receptor tyrosine kinase protein plays a key signaling role in fetal neurologic development, immune function, and gastrointestinal repair. Recent research on a variant in the promoter region of the MET receptor tyrosine kinase gene (rs1858830 G>C) has demonstrated a strong association between autism, as well as, the concurrent presence of gastrointestinal disorders. Researchers found that 118 out of 214 families had at least one ASD child with concurrent gastrointestinal conditions. The C allele was carried by all of the individuals in the ASD and gastrointestinal issue subset. The cause of this association may be related to changes in neurologic, immunologic and gastrointestinal development as a result of a reduction in gene transcription by the C allele.\(^5\) Other research has demonstrated some association between genetic susceptibility to celiac disease, malabsorption, food allergies and the development of speech apraxia, common in autistic children.\(^6\) Finally, research has shown a strong correlation between the children I see with neurologic disorders have concurrent gastrointestinal conditions due to increased intestinal permeability and the presence of food allergies, sensitivities, and intolerances which have resulted in a state of suboptimal cellular nutrition. The challenge I face, as an integrative and functional medicine registered dietitian (RD), is these children have strong preferences for foods which are considered to be suboptimal choices for their permeable guts and nutrient deprived brains. What is needed for the families is a plan to break the cycle. Part of the process involves helping families understand the root cause of dysfunction, which increases their potential compliance with the large changes which often need to be made.

Genetic susceptibility testing may one day be readily available to integrative and functional RDs to help further parents’ and clinicians’ understanding of this unfortunate, seemingly magic, combination of gene polymorphisms with environmental influences, including nutrition; which may have contributed to the neurologic challenges they face with their children.


Hormone Balance Pre-FNCE Conference

NOW AVAILABLE ON CD ORDER TODAY!

Want cutting edge information about hormone balance and detoxification?

Then don't miss out on this amazing and state-of-the-art CD on achieving hormone balance! You'll get the latest nutrition information and practice pearls from "Achieving Hormone Health: An Endocrine Dance of Environment, Genes, Diet and Detoxification," Dietitians in Integrative and Functional Medicine (DIFM) DPG's highly acclaimed 2009 pre-FNCE conference.

Four leading experts in Integrative & Functional Medicine, Sheila Dean, DSc-C RD CCN CDE; Bob Rountree, MD; Belinda Jenks, PhD RD and Katherine Newton, PhD take you on a guided tour beginning with the process of detoxification, also referred to as biotransformation. The interaction of individual genetic variations and environmental factors such as diet, drugs and exposure to environmental chemicals which have been shown to impair detoxification and disrupt hormone balance are discussed. The relationship between hormone health and many chronic health conditions including breast cancer, fibroids, endometriosis, autoimmune and chronic inflammatory disease are tied together. The role of estrogen metabolism in detoxification is highlighted as well as identifying the various mechanisms through which dietary and nutritional factors may influence estrogen metabolism from the neonatal to menopausal life stages. Clinical applications of achieving hormone balance are reviewed. The symposium concludes by discussing emerging nutritional approaches to women's hormone health that every Registered Dietitian needs to know.

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* CPEU questions will be sent with your CD to be completed along with instructions on submitting for CPEU's.

To pre-order the CD: send check or money order made payable to ADA-DIFM DPG 18 for amount of investment based on your membership category to:
Amy Jarck
DIFM Executive Assistant
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Pittsfield, MA 01202

If you have further questions: email us at info@integrativeRD.org

Achieving Hormone Balance: An Endocrine Dance of Environment, Genes, Diet and Detoxification CD

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missing nutrients, where to find gluten free products on the internet, and how to create gluten-free dishes with flair (with over 100 recipes). This section ends with Gluten Free Dining Out Cards, which are just priceless – written in every language from Arabic to Vietnamese – your clients will once again enjoy ethnic cuisine. The dining out cards tell the chef that the patron is following a medically required diet. The cards detail safe foods, unsafe foods, and preparation methods to prevent cross contamination.

Part 3 Making Your Life Healthy, Happy, and Uncomplicated delves into the emotional aspects of living gluten free: how to tell family, friends, and others about gluten sensitivity, how to deal with social events as well as difficult and unexpected situations. The reader is also provided with an extensive list of celiac organizations and research centers.

If you work with clients who have celiac disease or gluten sensitivity, Gluten Free Hassle Free is a must. It will serve as a great professional reference and a life line for your clients – enabling them to stay healthy and gluten free.

Reviewed by Constance Brown-Riggs, MSEd RD CDE CDN who is Spokesperson for the American Dietetic Association, and author of Eating Soulfully and Healthfully with Diabetes (iUniverse 2006). Contact Constance at 516-795-4288 or cbr5274@aol.com.

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(references cont)


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