Interview With Inflammation Module Authors Kelly Morrow and Beth McDonald

Kelly Morrow, MS, RD is an Associate Professor in the department of Nutrition and Exercise Science at Bastyr University and Nutrition Clinic Coordinator at the Bastyr Center for Natural Health. At the Bastyr Center, Kelly leads teams of graduate students in an integrative and functional medicine teaching clinic where they collaborate with Naturopathic Doctors, Medical Doctors and practitioners of East Asian Medicine and Acupuncture. Kelly is author of the Integrative Nutrition and Dietary Supplements chapter for the 14th ed. of Krause’s Food and the Nutrition Care Process. Kelly is Professional Advancement Co-Chair for Dietitians in Integrative and Functional Medicine (DIFM). Contact Kelly at kmorrow@bastyr.edu.

Beth McDonald, MS, RDN, CSSD is an integrative and sports nutritionist at the Center for Health and Healing in New York City. At the Center, Beth maintains a thriving nutrition practice and is an integral part of the Medical Fitness Team. She oversees dietetic interns and is serving as Co-Principal Investigator on a research study looking at integrative nutrition and mind-body approaches to managing IBS. Contact Beth at bethmcdrd@gmail.com.

The experiences or beliefs that have led the module authors in the direction of integrative and functional nutrition are both personal, but with different origins.

For Kelly, a major influence was growing up in Boulder, Colorado, which is a hub for natural medicine and alternative thinking. In her early 20s, Kelly developed eczema. At first, she sought conventional therapies to try to determine the cause and a cure, but had little success. After visiting a holistic nutritionist and naturopath, she learned that her inflammatory condition was caused by a series of imbalances, including nutritional deficiencies, food sensitivities, toxic exposures, and poor stress management. After making some dietary changes and learning how to meditate and reduce stress, her eczema went away. At that time it was not called functional medicine, but that is what they were practicing. As a result of this experience, Kelly decided to pursue a career as a holistic nutritionist.

Like many of us, Beth McDonald believes “we are more than just the sum of our parts.” What has drawn Beth to integrative and functional nutrition is the account for synergy between body systems, lifestyle, biomarkers, core imbalances, and metabolic pathways. As a conventionally trained registered dietitian nutritionist, Beth worked in the community nutrition setting in New York City prior to embarking on a life-altering experience of living abroad. While abroad, she stepped outside of conventional dietetics and explored first yoga and then integrative and functional nutrition approaches. It became suddenly clear that integrative and functional nutrition would help her to empower her patients by addressing health from a whole systems approach.

As with the experiences that led them to their career paths, the
ways they arrived in the field were very different, illustrating that a person’s early foundation does not need to be in IFM, although it may help.

Kelly completed a baccalaureate in psychology at the University of Colorado, and a master’s degree in integrative nutrition and a dietetic internship at Bastyr University.

In addition to academic training, she has attended many seminars and workshops on functional and integrative medicine, including those offered by the Institute for Functional Medicine. Among the courses she has taken and would recommend to those seeking a career in functional medicine/nutrition are Applying Functional Medicine in Clinical Practice (AFMPC) and Functional Nutrition.

Beth completed her undergraduate degree in nutrition and food science at Hunter College in New York City and attained a master of science from Columbia University in applied physiology and nutrition. She is self-taught in the areas of integrative and functional nutrition through constant reading of integrative and functional texts, research, and webinars, as well as regularly attending many conferences such as the Integrative Healthcare Symposium.

**How would you like to see the area of integrative and functional nutrition advance?**

Kelly hopes that healthcare practitioners, including RDNs, will embrace the field for it to become respected as a legitimate modality of practice. She encourages open-minded thinking and respect for differing philosophies.

Beth is encouraged by the growing awareness of the field and is pleased that Integrative and Functional Nutrition is beginning to be recognized by the Academy as a legitimate specialty practice with the upcoming online certificate of training program. She is hopeful for Integrative and Functional Nutrition to one day be recognized as a certified specialty practice, much the same as sports nutrition, diabetes educators, and others are.

**What advice would you give to those who are now entering the field of integrative and functional nutrition?**

Both Kelly and Beth agree that this is an exciting time to be entering the field because there is widespread interest and increasing acceptance. For an RDN, the best resource is to become a member of DIFM. The website is a wealth of information about ways to get training, including publications, webinars and in person trainings.

**What will the inflammation module include?**

The module will be a broad overview on how diet, environment, and lifestyle can contribute to inflammation. It provides a framework for assessment of many common inflammatory conditions using the functional medicine radial and ADIME. The module provides specific intervention recommendations and resources for further learning.

**What is the take home message for the student?**

In many cases, it is possible to slow and even stop an inflammatory process by making targeted diet, environmental and lifestyle modifications.

**What makes this topic a foundational piece of integrative and functional nutrition?**

Both Kelly and Beth believe and understand that many chronic diseases have inflammation as an underlying pathology. For this reason, inflammation is considered one of the core areas of imbalance in a functional medicine assessment.

Inflammation is poorly understood as many people are unaware that diet and lifestyle habits can have a big impact on the inflammatory process.

Although there is much talk about an “anti-inflammatory diet,” we must
Assess each patient for their individual needs. There are several versions of anti-inflammatory diets that we discuss in this module.

**Kelly and Beth have multiple successful experiences with treating inflammation and have shared two of those with us.**

At the Bastyr Center for Natural Health, Kelly and her co-workers see many patients with chronic inflammatory conditions. Recently they had a patient with unexplained rashes on her face and neck as well as chronic gas and bloating. The Bastyr team recommended a comprehensive elimination diet as well as immune-supportive supplements, including probiotics, essential fatty acids, and vitamin D. Upon re-introduction, the Bastyr team identified that citrus was a major cause of her rashes as well as high histamine foods including wine, vinegar, and chocolate. At present, her rashes are greatly reduced unless she eats any of her offending foods. Her gas and bloating are completely resolved as long as she stays away from dairy. The Bastyr team is working with her on what dietary threshold she can tolerate without causing the rashes and gastrointestinal (GI) symptoms to reappear. Part of the protocol involves staying on the immune support supplements. From a functional medicine perspective, the Bastyr team is also working with her to support her overall gut health and encourage stress reduction. The goal is that over time she will be able to regain tolerance to some of her favorite foods.

As a sports nutritionist working as part of the Medical Fitness Team at the Center for Health and Healing, Beth sees many patients with musculoskeletal injuries that require an anti-inflammatory approach. One recent patient was suffering from chronic knee pain that was preventing her from participating in activities that she once enjoyed. After removing inflammatory foods from her diet and beginning a supplement regimen including probiotics, fish oil, and turmeric, she returned one month later to report improvements in knee pain significant enough to allow her to once again resume bike riding with her partner. This in turn resulted in improved sleep, weight loss, improved digestion, and improved mood.

**Both Kelly and Beth regularly use the Radial in their practice. (See the online version for a copy of the Radial.)**

At the Bastyr Center, the systems approach outlined in the Radial is used to assess patients. When gathering intake data from a patient, they identify what core areas are out of balance and then decide which ones take precedent and which ones require a referral.

At the Center for Health and Healing, when a patient sees one of the nutritionists they complete an intake form that includes an assessment of medical history, nutritional history, sleep and stress issues, and a Medical Symptom Questionnaire, which together give an overview of how the patient is doing from a systems approach.

**Do you have a favorite process or a food for decreasing inflammation and/or a test that you use in your diagnosis?**

Kelly’s favorite anti-inflammatory foods-supplements are turmeric and fish oil. Both have excellent data to support their use in multiple inflammatory conditions and both are usually well tolerated. Some of the most common lab tests for inflammation include food allergy panels, CRP, ferritin, erythrocyte sedimentation rate and elevated eosinophils. People can also have tests done for toxic exposures, auto-antibodies, and other biomarkers associated with inflammation. At the Bastyr clinic, patients are often asked to fill out a Multi Symptom Questionnaire (MSQ) to identify core areas of imbalance. Not all assessment needs to be done via lab work. A good intake can often point the RDN or other medical practitioner in the right direction.

Beth’s favorite anti-inflammatory approach, which she finds most people benefit from, is consuming low glycemic foods, reducing animal protein, incorporating plant-based fats, and increasing veggies and fruits. Additionally, based on the patient’s individual needs, Beth may also recommend an elimination diet to address any suspected adverse food reactions. As far as supplements, Beth also likes supporting gut health with probiotics, glutamine and aloe as well as the use of essential fatty acids and turmeric.

**Kelly and Beth shared some of their clinical pearls and favorite resources for learning more about inflammation:**

- Stay connected with DIFM and IFM. Find a mentor or two.
- Start a functional medicine study group.
- Attend workshops and webinars.
- The Textbook of Functional Medicine from IFM and the Textbook of Natural Medicine by Pizzorno and Murray are both excellent resources. PubMed is informative regarding specific foods and bioactive compounds in relationship with disease states.
- The module lists a number of primary research articles on the topic.
- Integrative journals such as the Townsend Letter, Alternative Medicine Review, and Integrative Medicine Clinicians Journal are also helpful.
- Many additional resources are listed on the DIFM website, which is an excellent resource in and of itself.

The interview of Kelly and Beth was conducted by Sarah Harding Laidlaw, MS, RDN, CDE who is the DIFM newsletter editor. Contact Sarah at peaknut70@gmail.com.
Environmental Pollutants and Obesity: Can Detoxing Help Patients?

Angelo Tremblay, MSc, PhD
Mary Beth Augustine, RDN, CDN, FAND

Moderator Anne Wolf, MS, RDN opened the session by reviewing the definitions of “evidence-based” and “science-based,” then proceeded to introduce Angelo Tremblay, MSc, PhD. Dr. Tremblay began his lecture with an overview of environmental pollutants and presented data regarding the metabolic effects of these toxins. Persistent organic pollutants (POPs) include the infamous dichlorodiphenyltrichloroethane (DDT), and polychlorinated biphenyls (PCBs). Among five POP subclasses, organochlorines (OCs) are most strongly associated with metabolic syndrome. Human and animal studies have demonstrated that OCs also impair thyroid function, decrease the oxidative capacity/potential of skeletal muscle and inhibit enzymatic activity of mitochondria.

OCs are lipid-soluble, have a long half-life and are pervasive in our food and environment. Commonly used in insecticides, plasticizers and heat transfer fluids, OCs enter our food supply through animal products, such as meats and farmed salmon. Dr. Tremblay provided a striking example of how OCs can invade our food environment: OCs used as insecticides in southern countries are uni-directionally transported north via air currents, thus contaminating the grazing fields of cows across the United States, Canada and beyond.

Dr. Tremblay explained that all humans are polluted to some degree; the greater the body fat, the greater the concentration of OCs. As OCs are lipid-soluble, obese individuals carry the greatest load, while leaner endurance athletes have the least. Individuals following a vegan diet for endurance athletes have the least.

In a three-month study of 37 obese men, a standard fat diet (33% fat), a reduced fat diet (25% fat) and a fat-substituted diet, in which one-third of dietary fat was replaced by olestra, were compared. The fat-substituted diet resulted in increased excretion of β-hexachlorocyclohexane (β-HCH) but did not prevent plasma increases of 18 other OCs examined. In a single case study, olestra was used over the course of two years to successfully treat an obese male with OC toxicity, type 2 diabetes mellitus, hyperlipidemia, headaches, trunk and lower limb numbness and paraesthesias.

Dr. Tremblay concluded his presentation with a brief discussion of the link between gut microbiota and detoxification. In a recent mouse study, PCB exposure altered the biodiversity and abundance of gut microbiota, and produced a decrease in Proteobacteria. At present, more research is needed to examine the potential role of probiotics in assisting the body's ability to detoxify.

Mary Beth Augustine, RDN, CDN, FAND opened her presentation by sharing her own introduction to detoxification: a 1995 study in smokers was the first to demonstrate in humans that a vegetable—watercress—could detoxify a carcinogenic tobacco metabolite. Since then, interest in detoxification has risen dramatically, as indicated by the plethora of available detox books and “cleanse” diet plans. In a recent survey of RDNs, 68% reported an increase in patient questions about detox/cleanse diets, 30% agreed a detox diet could benefit most patients and 20% recommended a cleanse/detox diet. As early exposure to toxins has lasting effects on growth, cancer susceptibilities, neurobehavior, reproduction and obesity, assessing and addressing the toxic burden of patients is no longer optional. Throughout her presentation, Ms. Augustine demonstrated how RDNs can apply the four steps of the Nutrition Care Process for toxicity assessment and treatment.

In clinical practice, self-reported questionnaires are useful for screening of toxic exposures and symptoms. These include the Quick Environmental Exposure and Sensitivity Inventory (QEESI) (validated), Medical Symptom Questionnaire (MSQ) (non-validated) and the Agency for Toxic Substances and Disease Registry’s (ATSDR) exposure history form (validated). For patients with suspected toxic status, both conventional and functional laboratory testing provides objective data for use in diagnosis. These include screening of urine for heavy metals, as well as genetic blood tests for single nucleotide polymorphisms (SNPs) impairing the cytochrome P-450 enzymes required for phase I of hepatic detoxification.

Ms. Augustine then segued from assessment and diagnosis to intervention and monitoring/evaluation. She noted that “popular” detox diets often do not have sufficient amino acid profiles to support the enzymatic activity of detoxification pathways, and many patients have preexisting...
micronutrient and phytonutrient deficiencies. She described peer-reviewed research regarding the relationship of phytochemical intake, weight gain and inflammation,¹¹ the role of botanical diversity in reducing oxidative biomarkers,¹² and reduction of dietary exposure to organophosphorous pesticides through organic diets.¹³ Ms. Augustine then provided an overview of popular detox diet styles, as well as the “pretox before you detox” approach. “Pretoxing” involves reducing dairy, eggs, meat, wheat, sugar, alcohol, caffeine and salt, while increasing water, fruit, herbs and vegetables, specifically those rich in phytonutrients, such as alliums, leafy greens, cruciferous vegetables, beets, cranberries, turmeric and ginger. If required, foods and food components with evidence for oral heavy metal chelation (among them are garlic, modified citrus pectin, curcumin, selenium and N-acetyl-L-cysteine) may be increased.

Monitoring a patient on a detox diet includes targeted inquiry regarding symptoms, and assessment of weight, hydration status, blood pressure, fasting blood glucose, insulin, hemoglobin A1C, lipids, homocysteine, C-reactive protein and lipid peroxidase. Ms. Augustine cautioned that some individuals feel worse when detoxing, and mentioned intolerances to consider, as well as detox diet modifications for hypotension and hypoglycemia. She also provided tips to avoid “retoxing”: slowly reintroduce easily digestible foods prepared with moist heat and avoid sources of past toxin exposure. Toxin sources noted by Ms. Augustine include skin care and home cleaning products.

In conclusion, Ms. Augustine reviewed her six steps to detoxification:
1. Environmental history and exposure inventory,
2. Specific toxicological testing,
3. Remediation of abnormal biochemistry,
4. Optimal diet and supplemental nutrients to ensure biochemical reserve for detoxification,
5. Fiber to enhance elimination of toxicants, and
6. Regular sweating (with mineral repletion) to facilitate transdermal excretion of toxicants.

Ms. Augustine advised consideration of benefit/harm ratio when making clinical decisions in this area; practitioners should use Rakel’s Evidence versus Harm Grading¹⁴ as a guide.

Angelo Tremblay, MSc, PhD is with the Department of Kinesiology, Faculty of Medicine, Laval University, Quebec City, QC, Canada.

Mary Beth Augustine, RDN, CDN, FAND is Senior Integrative Nutritionist, Department of Integrative Medicine, Mount Sinai Beth Israel, New York, NY and DIFM Chair, 2014-2015.

Reviewed by Jacqueline Santora Zimmerman, MS, RDN. Jacqueline is an Adolescent Medicine nutritionist working with eating disorders and is DIFM Associate Newsletter Editor. jacqzimmerman@gmail.com
References for Environmental Pollutants and Obesity: Can Detoxing Help Patients?


The East Coast Food as Medicine (FAM) program took place September 17-21, 2014 at the Kripalu Center for Yoga and Health, a retreat and conference facility located in southern Massachusetts. Founded in 2001, FAM is an integrative and functional nutrition training that surveys current evidence and best professional practices, as informed by a mind-body approach to wellness. The East Coast training featured a dozen speakers with over 150 attendees, some coming from as far away as the Caribbean and Mexico and with backgrounds in diverse fields, including dietetics, oncology, and public health.

Over the course of this four-day program, sessions explored macro-, micro- and phytonutrients, physiological function and dysfunction, clinical diagnoses and treatments, as well as the role of environmental, genetic, and social factors on nutrition and disease. Guided by the theme of women’s health, the program opened by honoring female leaders past and present in the field of nutrition. As event moderators, Kripalu Education Director Kathie Madonna Swift, MS, RDN, LDN, and Kripalu Director James Gordon, MD established early on that FAM was developed to inform professional practice as well as to transform personal relationships to food, wellness, and healing.

Outside of the world of nutrition science, it is increasingly understood that, “we are what we eat.” For insiders with knowledge of both Western and integrative views on nutrition, evidence suggests that we may also be what our parents and grandparents ate. We can take this a step further to conceive that we may also be influenced by how our ancestors cultivated and prepared foods to unlock their nutritive potential. The modern-day kitchen—whether it be a satellite kitchen at a long-term care facility, in the home, or in an office temporarily transformed into a cooking space—is where the history, traditions and clinical applications of integrative and functional nutrition can come together and be translated into practice. The speakers at FAM presented various approaches to establishing food as medicine in the kitchen.

Bringing it Back to the Kitchen

The opening presentation, “A History of the Human Food Experience: Foraging to Farming,” presented by John Bagnulo, MPH, provided a brief but purposeful history of humans and agriculture from earliest times and through our contemporary food system, exploring the influences of dietary patterns and trends on health. Recognizing the role of diet in the etiology of major chronic diseases, Bagnulo advocated for eating seasonal and local foods, including a wide variety of organically-grown produce, sea plants and small fish, and emphasized the value of heritage and heirloom breeds over conventional. His interdisciplinary lecture, combining anthropology, epidemiology and nutrition, painted a picture of how one can turn inquiry into action by developing an evidence-based food philosophy that can inform cooking and eating habits.

Taking a different approach to food as medicine in the kitchen, Diane Imrie, MBA, RD presented “Transforming the Healthcare Landscape.” Her inspiring talk provided an overview of her work at Fletcher Allen Health Care in Burlington, Vermont, where she dedicated herself to bringing the medical center’s mission of high-quality care into its food service. Imrie was instrumental in shifting the facility’s purchasing from conventional to increasingly seasonal, local foods as well as implementing a hyper-local production system with on-site rooftop farming open to the hospital and community members. When comparing the costs, she found that although this raised the price tag for food service at Fletcher Allen Health Care, when compared to similar facilities, their cost was close to the median. Her story highlighted how bringing food as medicine into the kitchen in a large food service setting can be both feasible and effective.

The thoughtful FAM presentations by culinary experts Stefanie Sacks, MS, CNS, CDN, Marti Wolfson, and chef Jeremy Rock Smith, and Kripalu founder, James Gordon, MD, provided attendees with the opportunity to bridge evidence and practice. Their presentations on food preparation and culinary nutrition exemplified an overarching theme of the event: in order to make a significant impact with functional and integrative nutrition, we should work to bring our clients, and ourselves, into a new relationship with food. Through sharing the joyful aspects of healthful diets and the practice of mindful eating, and awakening the senses using visuals, hands-on experiences, and tastings, the speakers demonstrated how we as practitioners can help make specific or restricted diets realistic, practical, and delicious for clients and community members.

Applying a food-as-medicine approach may begin with the clinical assessment. During her talk, “Digestion: A Holistic Approach,” Kathie Swift introduced the IFMNT Radial as an assessment tool for personalized nutrition care. This radial looks at the influences of Lifestyle, Signs, Symptoms and Systems (nutrition-focused physical assessments), Biomarkers, Metabolic Pathways/Networks, and Core Imbalances on wellbeing. As a part of the nutrition care process described by Swift, assessment of a client’s critical food and nutrition factors should include questions not just about about diet and supplements, but also cooking methods, shopping
habits, and confidence in the kitchen. Swift reminded the audience that conversations with clients on specific diets—which are often intimidating to clients—are well suited for visual aids such as beautiful pictures of healthfully prepared meals fitting personalized nutrition guidelines.

In terms of treatment and care using a food-as-medicine approach, the FAM presenters shared a number of unique, client-friendly resources. For example, the “My Food as Medicine Plate,” a fun spin-off of MyPlate, was discussed. This alternative MyPlate includes the standard vegetable, fruit, protein, and grains categories, but it also includes a centerpiece of healthy fats, such as “avocados, nuts, seeds, olives, coconut and cold/expeller-pressed oils” and is explicit in the inclusion of starchy vegetables, such as sweet potatoes, peas and corn, in the grains category. Other recommendations included in this revamped MyPlate: to consume a rainbow of locally-grown fruits and vegetables, served raw, cooked and fermented, purchased when in-season; and, to use herbs, spices, and condiments as flavor enhancers and important sources of phytonutrients. See the table below for a list of other excellent food as medicine kitchen handouts and go to the DIFM website, IntegrativeRD.org for copies of select handouts offered to FAM attendees and intended for clients.

Continued on pg. 53

### Handout Topics for a Food as Medicine Kitchen

- List of sustainable and healthy foods that fit on the FAM plate, as well as their levels of key micronutrients
- Guide on common culinary herbs, including cooking uses and traditional medicinal uses
- Seasoning combinations typical to different cuisines of the world
- Meal planning worksheets
- Food storage and safety tips
- How to prepare whole grains and dried beans
- Sample pantry stocking lists featuring foods such as miso, non-dairy milks, sea salt, etc. based on your own food as medicine kitchen recommendations
- Basic cooking equipment needs
- Explanations on best materials for cooking equipment, including details on best materials and weight of pots and pans, merits of earth-friendly materials like bamboo, how to maintain cast-iron cookware, or safe cleaning techniques for coated copper or stainless steel cookware
- Healthy cooking techniques, highlighting, for example, the difference between sautéeing and frying, or the value of blanching versus boiling foods
- How to read, adapt and have fun with recipes—or even how to write your own
From Idea to Reality
Sacks and Wolfson presented two sessions on making the FAM kitchen a reality in any practice setting. One suggestion for counseling was to turn a cabinet in your office into a pantry stocked with your recommended staple food items to give clients a tactile experience to complement diet recommendations or typical handouts. Sacks and Wolfson also suggested having “top 10 recipe packs” on hand for specific needs/conditions and a library of cookbooks for patients to browse. The presenters took that a step further to suggest a quick cooking lesson or demonstration in office using a blender, a quality pan on an induction burner, or even just a good knife and cutting board. Sacks and Wolfson provided an upbeat, dynamic culinary nutrition education demonstration at FAM, and later offered audience members a chance to show their chops leading a cooking demo themselves. This was complemented by a discussion of how to prepare for a cooking workshop (e.g., the importance of knowing your audience as well as your ingredients, gathering evidence on specific foods in relation to health concerns relevant to your demographic, and creating relevant talking points that highlight your food philosophy). As was made clear by this pair of speakers, success can be found in partnering with a culinary nutrition educator or chef to develop culinary components for your practice.

Bringing the Kitchen into the Spotlight
The science and evidence presented at FAM was truly cutting edge, yet it was striking that when it comes down to preparing and eating food, there is something inherently nostalgic about the food-as-medicine kitchen: real, wholesome, seasonal foods cooked using methods harkening back to our ancestral roots. Advances in scientific knowledge allow us to distinguish the exact components of foods that can protect and heal, just as we are urged to recognize the value of a whole foods approach to nutrition and wellness. Two handouts from the session, including MyPlate, are available in the online version of the newsletter.

More on Food as Medicine
The East Coast FAM was an excellent event, providing evidence, updates on current research, and practice applications from start to finish. In addition to the speakers previously mentioned, the other featured experts were our own Mary Beth Augustine, RDN, CDN, FAND, as well as Joel Evans, MD, Cindy Geyer, MD, Mark Hyman, MD, Aviva Romm, MD, and chef Jeremy Rock Smith. The next FAM training is in Minneapolis, MN June 11-14, 2015 followed by Kripalu in September 18-22, 2015. Registration is available through the Center for Mind-Body Medicine, www.cmbm.org.

I would like to thank the Dietitians in Integrative and Functional Medicine DPG for their professional development award, as well the Kripalu organizers for their partial scholarship, both of which made it possible for me to attend this event.

Reviewed by Natasha Eziquiel-Shriro, MS nutrition candidate, Spring 2015 CUNY School of Public Health at Hunter College to fulfill requirements for receiving the Professional Development Award. Contact Natalie at natashaes@gmail.com.
<table>
<thead>
<tr>
<th>Herb or Spice</th>
<th>Traditional Uses, Potential Health Benefits</th>
<th>Culinary Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basil Ocimum basilicum</td>
<td>Antibacterial, anti-inflammatory, antioxidant, antispasmodic, vitamins and minerals</td>
<td>Pesto, tomato sauce, in salads and smoothies, in soup, as a rub for meat, poultry, and fish. Mediterranean or Asian flavor.</td>
</tr>
<tr>
<td>Bay Leaf Laurus nobilis</td>
<td>Antibacterial, antispasmodic, essential oil, tannins, bitter principles, herbicide</td>
<td>Soups, stock, casseroles, sauces, marinades</td>
</tr>
<tr>
<td>Cardamom Amomum subulatum</td>
<td>Anti-inflammatory, anti-spasmodic, essential oil, improves circulation</td>
<td>Baked goods, curries, soups, stocks, sauces</td>
</tr>
<tr>
<td>Cayenne Pepper Capsicum minimum</td>
<td>Anti-inflammatory, pain management, improves circulation</td>
<td>Dips, dressings, soups, stews, marinades, chili, sauces</td>
</tr>
<tr>
<td>Chili Pepper Capsicum annuum</td>
<td>Antioxidant, weight management</td>
<td>Use in marinades, sauces, soups, stews. Asian, Mediterranean, African flavor.</td>
</tr>
<tr>
<td>Cilantro Coriandrum sativum</td>
<td>Antioxidant, digestion, lowering LDL cholesterol, reducing free radicals</td>
<td>Pesto, smoothies, soups, sauces, as a rub for meats, poultry, and fish. Asian, Middle Eastern, Latin flavor.</td>
</tr>
<tr>
<td>Herb or Spice</td>
<td>Potential Health Benefits</td>
<td>Suggested Culinary Use</td>
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<tr>
<td>Cinnamon</td>
<td>Anti-microbial, blood sugar management, anti-spasmodic, digestive aid, aromatherapy</td>
<td>Add to cereal, baked goods, soup, chili, cooked fruit, beverages</td>
</tr>
<tr>
<td>Cloves</td>
<td>Anti-viral, expectorant, essential oil, digestive aid</td>
<td>Beverages, baked items, rub for meat</td>
</tr>
<tr>
<td>Coriander</td>
<td>Anti-spasmodic, vitamins, essential oil, digestive aid</td>
<td>Pickling, curries, soups, marinades</td>
</tr>
<tr>
<td>Cumin</td>
<td>Immune support, digestive aid</td>
<td>Add to dips, soups, sauces, or as a rub for meats, poultry, and fish</td>
</tr>
<tr>
<td>Fennel</td>
<td>Antioxidant, anti-microbial, anti-spasmodic, essential oil, digestive aid</td>
<td>Dipping sauces, marinades, picking spice, vinegars, soup. Mediterranean and American flavor.</td>
</tr>
<tr>
<td></td>
<td>Anti-spasmodic, diuretic, essential oil, vitamins and minerals, digestive aid</td>
<td>Rub for meat, herbal tea, in stir-fries</td>
</tr>
<tr>
<td>Herb or Spice</td>
<td>Potential Health Benefits</td>
<td>Suggested Culinary Use</td>
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<tr>
<td>Garlic</td>
<td>Antioxidant, lowers LDL, raises HDL, anti-inflammatory, prevents cerebral aging, anti-clotting, boosts immunity, anti-bacterial, vitamins and minerals, essential oil</td>
<td>Marinade for meats, poultry and fish, use in slow-cooked meals. World cuisine.</td>
</tr>
<tr>
<td>Ginger</td>
<td>Antioxidant, improves osteoarthritis, anti-emetic, anti-inflammatory, anti-microbial, immune boosting, anti-spasmodic, digestive aid, improves circulation, reduces nausea</td>
<td>Marinade for meats, poultry and fish, use in chutneys, smoothies, tea, and soups. Can be used in baked goods, stir fried, or candied. Asian style cuisine.</td>
</tr>
<tr>
<td>Majoram</td>
<td>Anti-spasmodic, sedative, digestive aid, vitamins and minerals, essential oil</td>
<td>Combined with other herbs for sauces</td>
</tr>
<tr>
<td>Mint</td>
<td>Digestion, anti-microbial</td>
<td>Pesto, herb rub, salad, smoothies, in beverages, dressings, marinades, dips, soups, and stews</td>
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<tr>
<td>Herb or Spice</td>
<td>Potential Health Benefits</td>
<td>Suggested Culinary Use</td>
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<tr>
<td>Parsley <em>Petroselinum</em></td>
<td>Antioxidant, anti-microbial</td>
<td>Marinade for meats, poultry, and fish, in salad, smoothies, in water, dressings, marinades, dips, soups, stews. World cuisine.</td>
</tr>
<tr>
<td>Rosemary <em>Rosmarinus</em></td>
<td>Anti-spasmodic, anti-bacterial, digestive aid, improves circulation, essential oil</td>
<td>Meat and poultry dishes, herb butters, salad dressings, soups</td>
</tr>
<tr>
<td>Sage <em>Salvia officinalis</em></td>
<td>Anti-fungal, anti-spasmodic, antiseptic, diuretic, essential oil</td>
<td>Sauces, soups, grains, rub for meat and poultry</td>
</tr>
<tr>
<td>Tarragon <em>Artemisia</em></td>
<td>Liver cleansing, essential oil</td>
<td>Stir fries, herb breads</td>
</tr>
<tr>
<td>Thyme <em>Thymus vulgaris</em></td>
<td>Antiseptic, anti-microbial, urine stimulant, essential oil</td>
<td>Sauces, soups, herb breads, rub for meat and poultry</td>
</tr>
<tr>
<td>Turmeric <em>Curcuma longa</em></td>
<td>Anti-inflammatory, anti-cancer, bile stimulant, digestive aid</td>
<td>Bean dips, dressings, marinades, sauces, soups, sews, rubs, and smoothies</td>
</tr>
</tbody>
</table>

*The Center for Mind-Body Medicine. www.cmbm.org All Rights Reserved © 2014*
Vegetables & Fruits
Make half your plate non-starchy vegetables and whole fruits. Fill your plate with a rainbow of colors and herbs & spices to get the full spectrum of phytonutrients. Include raw, cooked and fermented varieties. Shop with the seasons and look for local sources.

Fats
Include healthy fats like avocados, nuts, seeds, olives, coconut and cold/expeller pressed oils. Enjoy butter in small amounts.

Starchy Vegetables & Whole Grains
Starchy vegetables like sweet potatoes, peas, & corn and whole grains like quinoa & barley provide texture and nutrients.

Protein
Plant sources include beans, nuts and seeds. Most plants (vegetables, fruits, grains) have varying amounts of protein and amino acids. Animal sources include fish, poultry meat, and dairy.

Water & Beverages
Stay well hydrated with water and unsweetened beverages.

My Food As Medicine Plate

Vegetables
(non-starchy, in season)

Artichoke
Asparagus
Bamboo shoots
Bean sprouts
Beets
Bok choy
Broccoli/Broccoli raab
Brussels sprouts
Cabbage
Carrots
Cauliflower
Celery
Collard Greens
Eggplant
Fennel
Kohlrabi
Leafy Greens—arugula, endive, lettuce, radicchio, sorrel, spinach, watercress
Mustard greens
Mushrooms
Okra
Onions, leeks, shallots
Peppers
Radish
Snap pea/snow peas
Swiss chard
Tomatoes
Turnip
Zucchini/Summer squash
Water chestnuts

Fruits
(variety of colors, in season)

Apple
Apricot
Banana
Berries—black, blue, gogi, raspberry, strawberry
Cherry
 Cranberry
Date
Fig
Grape
Citrus—orange, grapefruit, lemon, lime, tangerine, pomelo
Melons—cantaloupe, honeydew, watermelon
Nectarine
 Papaya
Peach
Pear
Persimmon
Pineapple
Pomegranate

Herbs, Spices, Seasonings, and Condiments

Citrus juice and zest (lemon, lime, orange, etc.)
Herbs (basil, cilantro, dill, mint, oregano, parsley, rosemary, sage, thyme, etc.)
Spices (cardamom, cinnamon, cloves, cumin, coriander, turmeric, curry powder, etc.)
Garlic, ginger
Sweeteners—raw honey, 100% pure maple syrup, blackstrap molasses
Savory/umami—tamari, soy sauce, liquid aminos, nutritional yeast
Vinegar (apple cider, balsamic, red/white wine, etc.)

Protein

Animal
Beef, lamb, pork
Chicken
Dairy (cow, goat, sheep)
Eggs
Fish
Turkey

Plant
Adzuki Beans
Black Beans
Cannellini Beans
Edamame
Fava Beans
Garbanzo Beans
Great Northern Beans
Kidney Beans
Lentils
Mung Beans
Pinto Beans
Split Peas

Fats & Oils

Animal
Almonds
Avocado
Butter—pastured
Brazil nuts
Cashews
Chia seeds
Coconut—flakes, oil
Flax seeds
Hazelnuts/filberts
Hemp seeds
Macadamia
Nut or seed butter
Oils—cold & expeller pressed
Olives
Peanuts
Pecans
Pistachios
Pumpkin seeds
Sesame seeds
Sunflower seeds
Walnuts

Starchy Vegetables

Acorn Squash
Chestnuts
Corn
Parsnips
Plantain
Pumpkin
Peas
Potatoes
Rutabaga
Sweet potatoes/Yams
Taro
Winter squash
Yucca

Grains

Barley
Bulgur
Couscous (whole wheat)
Farro
Rye
Wheat Berries

Gluten-Free Grains

Amaranth
Buckwheat
Millet
Polenta
Quinoa
Rice—brown, wild
Teff

Cinnamon Supplementation Results in Increased Menstrual Cycle Frequency in Women with Polycystic Ovary Syndrome

Oral supplementation of cinnamon has been studied for its ability to increase insulin sensitivity. Polycystic ovary syndrome (PCOS) involving endocrine dysfunction that decreases frequency of the menstrual cycle has been found to improve with treatment for insulin resistance, which may occur in up to 95% of obese women diagnosed with PCOS. A randomized controlled trial studied the use of 1500 mg of cinnamon extract daily for six months. The cinnamon extract, divided into 3 doses of four 125 mg capsules, resulted in significantly increasing menstrual cycle frequency for women with PCOS. Other studies have found increased insulin sensitivity with cinnamon supplementation; however, this study did not. Although promising, the study was plagued with a high dropout rate that complicated reliability due to a small sample size at its end. Nevertheless, adverse effects of taking cinnamon supplements were minor and resolved quickly in contrast to prescription medications currently used to treat insulin resistance and PCOS. The authors conclude that repeating the study with a larger sample size would be valuable. (McCutchan C. HerbalGram. 2014;103:34-35.) http://cms.herbgram.org/herbalgram/issue103/ HG103-cinnamon.html

Green Tea Helps Improve Features of Metabolic Syndrome in Prediabetics

Sixty-five adults age 35-65 with the prediabetic risk factor of fasting blood glucose levels of 110-125 mg/dl were studied for 14 weeks. During this time 1 cup of green tea was consumed three times daily prior to meals (1 green tea bag infused for 6 minutes in 120 ml of hot water). The control group consumed one cup of hot water in place of the tea. No adverse effects were reported in either group. While there was no decrease in plasma glucose levels from the green tea, its consumption seemed to prevent further increase in fasting blood glucose, which led the authors to conclude that as part of a healthy lifestyle, green tea may significantly impact features of metabolic syndrome such as risk of developing diabetes. (Toolsee NA, Aruoma OI, Gunness TK, et al. Effectiveness of green tea in a randomized human cohort: relevance to diabetes and its complications. Biomed Res Int. 2013;2013:412379. doi:10.1155/2013/412379) http://cms.herbgram.org/herbclip/495/111337-495.html

Effect of Prebiotic and Synbiotics Supplementation on Metabolic Outcomes

A systematic review and pooled meta-analysis of 13 randomized controlled trials (RCTs) with overweight or obese adult participants (n=513) was conducted. All RCTs involved prebiotic or symbiotic supplementation and assessed plasma lipid profile, fasting insulin and fasting blood glucose. Prebiotics
significantly reduced total cholesterol and in subjects with diabetes, also reduced triglycerides and increased HDL. Symbiotics significantly reduced fasting insulin and triglycerides. (Bruna T.S. Beserra, Ricardo Fernandes, Vinicius A. do Rosario, Michel C. Moccellin, Marilyn G.F. Kurtz, Erasmo B.S.M. Trindade. A systematic review and meta-analysis of the prebiotics and symbiotics effects on glycaemia, insulin concentrations and lipid parameters in adults with overweight or obesity. Clin Nutr. 2014; published online before print: DOI: http://dx.doi.org/10.1016/j.clnu.2014.10.004

HOT Nutritional Genomics Research Publications – November 30, 2014


Effect of zinc supplementation on insulin secretion: interaction between zinc and SLC30A8 genotype in Old Order Amish. Diabetologia. 2014 Oct 28. [Epub ahead of print] PubMed ID: 25348609. Subjects in this study with one or two copies of the rs13266634 variant of the SLC30A8 gene had an increased insulin response to glucose after zinc supplementation.


Influence of +1245 A/G MT1A polymorphism on advanced glycation end-products (AGEs) in elderly: effect of zinc supplementation. Genes Nutr. 2014;9(5):426. doi: 10.1007/s12263-014-0426-2. PubMed ID: 25149676. Subjects who carried a variant of the MT1A gene were found to have higher baseline levels of advanced glycation end-products (AGEs). Zinc supplementation was found to improve intracellular zinc ion availability more among subjects who carried the gene variant.


Wellness and health omics linked to the environment: the WHOLE approach to personalized medicine. Adv Exp Med Biol. 2014;799:1-14. doi: 10.1007/978-1-4614-8778-4_1. PubMed ID: 24292959. Envisions growing use of genetic testing in conjunction with other considerations such as gene expression, epigenetics, metabolomics, lifestyle and behavior. Emphasis should be more on identifying areas needing active attention than on simply predicting risks. Areas of opportunity include immunological, cardiovascular, metabolic, neoplasms, cognition, mental health, and more. Identifies the need for professionals who are able to help interpret genomic data, and who work in conjunction with other specialists to help formulate “personal health action plans” for longer-term health and well-being.

Becoming Vegan: Comprehensive Edition
Brenda Davis, RD and Vesanto Melina, MS, RD
Summertown TN: Book Publishing Company
2014: 604 pp. $29.95; softcover
ISBN-10: 1570672970

The front cover accolades for Becoming Vegan include “…covers every aspect of vegan life….”; “…is supported by informative charts….”; “…authoritative, readable guide…a seminal work”; “…. should be on every vegan’s bookshelf.” Each statement is examined below.

Becoming Vegan “covers every aspect of vegan life.”

The authors, Brenda Davis, RD and Vesanto Melina, MS, RD live their teachings; they are vegan and thus, present veganism from the microscope of science and also through the lens of practicality. Veganism is defined not solely as a meal pattern/dietary preference, but rather a lifestyle: eat, purchase, apply, and use only plants and plant-based products and do so in a way that nourishes the individual while simultaneously sustaining the planet. Information on Concentrated Animal Feeding Operations, fisheries/aquaculture, animal welfare, and environmental ethics concerns such as global warming and air/water quality is well documented and informative. Herein lies the first ‘caveat emptor’; though the authors state veganism is not about ‘moral superiority,’ there appeared to be, at least in chapter one, an undercurrent of this perception.

Becoming Vegan is “authoritative…. readable…. a seminal work.”

Yes. Yes. And yes!

The 600 plus pages of Becoming Vegan include nearly 2000 references from a wide array of sources, nearly 50 tables and figures and as many eye-catching, power-packed textboxes, a comprehensive resource list, and sample menus for each life stage. Chapters are devoted to vegan eating across the life spectrum, addressing pregnant and lactating women, toddlers, youth, adolescents, and mature adults. Within each chapter, the authors discuss age-specific dietary and developmental concerns. For example, adequate protein, DHA/EPA and divalent minerals (namely iron and zinc) in pregnancy and lactation; food jags and disordered eating/eating disorders in children and adolescents; and bone health, calcium, vitamin D and related nutrients for mature adults.

Though the health benefits of vegan eating for primary and secondary disease prevention and health promotion are espoused and well-documented, the second ‘caveat emptor’ lies in the absence of discussing vegan eating in acute illness or exacerbation of a chronic illness. The authors provide substantive data that “protein-modified, rather than protein restricted, diets may prove advantageous in the long-term treatment of chronic renal failure.” But what of the individual in chronic kidney disease on dialysis who must increase protein, restrict fluids, moderate potassium, and control carbohydrate intake? Or the individual with Crohn’s disease or ulcerative colitis with concurrent irritable bowel syndrome or gluten sensitivity who is malnourished (i.e. anemic, deficient in vitamins D and B12) and must modulate intake of fermentable oligosaccharides, monosaccharides, disaccharides and polyols (FODMAPs)? Or the individual with a complicated, non-healing wound in whom protein, iron, and zinc requirements are increased? A well-planned vegan diet may be feasible but impractical or inadequate during periods of increased nutrient needs. Under such circumstances, these individuals could take supplements but often “the whole is greater than the sum of its parts,” and perhaps, on occasion, a more “flexitarian” approach is prudent.

“Should be on every vegan’s bookshelf.”

Absolutely, and in every RDN’s library too! An RDN would be hard-pressed to find a more comprehensive, easy-to-read, evidence-based reference on vegan eating. Controversial topics, concern for nutritional adequacy, and holes in the science are each forthrightly delineated. It is a “benchmark work on plant-based diets.”

Reviewed by Katherine Stephens-Bogard, MS, RDN/LD, CDE, RYT. Katherine is a registered dietitian nutritionist/diabetes educator with the Washington Health System and teaches vinyasa yoga classes at 2 studios. She has written for professional journals and lay magazines. When not counseling clients, educating professionals, or teaching/practicing yoga, she can be found cooking in her kitchen, or somewhere outdoors with her husband and two Golden Retrievers. Contact Katherine at kstephensbogard@whs.org.

Resource Review: Becoming Vegan

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BECOMING VEGAN

COMPREHENSIVE EDITION

the complete reference to plant-based nutrition

BRENDA DAVIS, RD and VESANTO MELINA, MS, RD

Summertown TN: Book Publishing Company
2014: 604 pp. $29.95; softcover
ISBN-10: 1570672970
The Swift Diet: 4 Weeks to Mend the Belly, Lose the Weight and Get Rid of the Bloat
Kathie Madonna Swift, MS, RDN
Joseph Hooper
Hudson Street Press 2014
ISBN: 978-1-59463-332-4

The Swift Diet logically presents the authors’ view of the science of nutrition from carbohydrates (including gluten/wheat) to fats, digestion, and the gut microbiome. The book explores the basic tenants of a healthy diet from the perspective of healing a bloated belly. The program begins with eliminating the three most offending food stuffs that are fattening and toxic and as Swift points out, wreak havoc on gut microbiota—gluten, dairy, and sugar. These are replaced by foods that promote and support a healthy gut microbiome—fiber, healthy fats, and lean animal protein. This four week plan can make a difference in less than a week for some people.

The Swift Diet presents the science of nutrition and engages readers by using stories from Swift’s experiences and patients and the wisdom gleaned from them. Readers can evaluate their own current health status through “Self-Inquiries,” questions at the beginning of chapters that readers ask of themselves. The book follows the “MENDS” approach: Mind your digestion; Eliminate the problem foods; Nourish the body and the belly; Dietary supplements; and Sustaining practices. The 4-week Swift Plan includes a meal plan with recipes for breakfast, lunch, dinner and snacks, and emphasizes physical activity by including different illustrated yoga poses and Qigong movements. The steps of the plan include: removal of offending foods, refinement by building on the success of the first week, reintroduction of foods and becoming a dietary detective to figure out what foods are offending, and renewal by continuing to internalize new habits and ‘mending microbes’.

FAQs explore questions that readers may have about what happens if symptoms do not subside, what to do if stuck at a weight before the goal is achieved, and how to modify or use one’s own recipes, to name a few. Also included are a shopping list with suggestions on where to get foods, an excellent notes section, and thorough footnoting of sources. This book is an excellent reference for the RDN and his or her patients with GI issues, those who are stuck by failed weight loss attempts, and those who need to mend their belly, heal their microbiome and achieve a healthy immune system.

Reviewed by Sarah Harding Laidlaw, MS, RDN, CDE who is Editor of the DIFM newsletter. Contact Sarah at peaknut70@gmail.com.
Chair's Corner

The year 2014 is now behind us. I wish each and every one of you a happy, healthy and prosperous 2015. From the early news I have heard regarding FNCE® 2015, the plans for an integrative track are underway. The sessions promise to be as good, if not better than, those offered in 2014. Stay tuned for more information and updates.

This issue begins a series of reviews from the Emerging Integrative Approaches for Nutrition and Dietetics Practice sessions at FNCE® 2014. Because of the number of sessions offered and the expert reporting of them from members, we want to give the reviews their due attention.

Our third Online Certificate Module authors, Kelly Morrow and Beth McDonald, MS, RDN, CSSD are interviewed in this issue. The topic of their module is inflammation and promises to be most helpful to all of us who practice in nutrition, both in traditional and integrative and functional arenas.

Editor's Notes

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This issue will highlight the Mind Body Happy Hour, Environmental Pollutants and Obesity: Can Detoxing Help Patients? co-presented by DIFM’s own Mary Beth Augustine, RDN, CDN, FAND; Application of ‘omics’ technologies to personalized nutrition, IFM 101 co-presented by DIFM’s Kelly Morrow, MS, RD who is also interviewed in this issue; and the Grains, Brains and Bellies session that was offered after hours by the Medical Nutrition DPG. Upcoming issues of the newsletter will review dietary nitrates, health coaching, the RDN’s role in primary care and many others. These will help whet your appetite for FNCE® 2015 to be held in Nashville, TN in October.

Our third Online Certificate Module authors, Kelly Morrow and Beth McDonald, MS, RDN, CSSD are interviewed in this issue. The topic of their module is inflammation and promises to be most helpful to all of us who practice in nutrition, both in traditional and integrative and functional arenas.

A report on the East Coast Food As Medicine (FAM) workshop and associated handouts will entice members to find out more about their program and to attend one of the workshops offered in 2015. Kathie Swift, an integral member of FAM has a new book for the consumer. For additional information, see the Resource Reviews section of this newsletter.

There is much more to read in this issue. Don’t forget to sign in to the DIFM website, IntegrativeRD.org, for the electronic version of this issue and to find out more about what is happening in the field of integrative and functional medicine and nutrition.

Until Spring!

Sarah Harding Laidlaw, MS, RDN, CDE
It was with great anticipation that I counted the days until this year’s FNCE for at long last an integrative track was finally being offered! The moderator, Mary Purdy, brilliantly set the stage for the forthcoming presentation by sharing her personal journey of discovering that the heart palpitations she was dealing with were in fact caused by an undiagnosed autoimmune thyroid disorder and how the use of a whole person approach led to resolution of her symptoms.

How is one identified as an integrative RDN? If you believe that an individual has unique needs based upon their environment, genetics, and personal history; the mind-body connection has an effect on one’s health; and food can be medicine, then you might be an integrative dietitian.

Roberta Lee, MD laid the framework for the introduction to integrative and functional medicine (IFM) by reviewing the history from the 1960s consumer movement towards a more holistic approach, to the increased prevalence of complementary and alternative medicine (CAM) amongst patients in the 1990s thru present day. During the early years of IFM, approximately 60-70% of patients would not discuss the use of these modalities with their primary care providers while today, some if not most, primary care providers bring up the topic first. In 1997, Andrew Weil, MD defined and formalized an integrative medicine (IM) training program at the University of Arizona. By 1999, the Consortium of Academic Health Centers for Integrative Medicine (CAHCIM) was founded with 11 member institutions. Presently there are 59 academic medical centers, including Canadian and Mexican institutions. Some of the most esteemed medical centers in the U.S. have implemented integrative medicine training into their medical education curriculums.

The crux of the IM program is optimal healing, through a whole person focus that utilizes all appropriate tools and approaches. As Dr. Lee explained the defining principles of IM, numerous key words and phrases such as “partners in the healing process,” “mind, body, spirit,” “conventional and alternative,” “health promotion and prevention,” “good medicine, evidence, inquiry driven,” helped to illustrate this whole person team approach. As this practice grows in popularity and acceptance, more providers are seeking additional training and new certification programs for physicians and nurses are now available. Of particular interest to the RDN are the results of the Integrative Medicine in America survey, which demonstrated that the top two interventions used in over 20 different conditions were food/nutrition and supplements, however only 68% of the 29 CAHCIM centers surveyed employ an RDN. Together nutrition and supplementation comprise about 30% of the content in the IFM board certification exam for physicians.

Dr. Lee continued to outline the foundations of IFM by moving on to an overview and history of functional medicine. Through the evolution of functional medicine (FM), gaps in medical training became evident, particularly in the areas of diet, nutrition, and the role of stress and environment on one’s health. Conventional medicine is focused on labels and providing a diagnosis, whereas an early pioneer in FM, Jeffrey Bland, PhD, recognized that disease is preceded by loss of function. Upon review of the six core principles of FM, we again see key beliefs, similar to those of IFM—each person is an individual influenced by genetics and environmental factors, treatment should be patient-centered as opposed to disease-centered, and a relationship exists between the mind, body, and spirit.

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The token phrase “you are what you eat” takes on an entirely new meaning when looking through the IFM lens. IFM providers take into account not only what you are eating, but also how are you absorbing, assimilating, and eliminating what you are eating. Dr. Lee guided the audience through a brief overview of the key role that the GI tract has on overall health and wellness, touching upon the microbiome and detoxification.

Kelly Morrow, MS, RDN took the conversation steps further by defining and detailing integrative functional nutrition (IFN). There is a parallel relationship between IFM and IFN as both embrace a personalized approach that focuses on uncovering the root cause of disease and restoring balance to the essential core areas of health to re-establish the individual’s vitality. In 2011, the Academy of Nutrition and Dietetics published Standards of Practice and Standards of Professional Performance for RDNs in IFM. Kelly outlined step by step the process and model the IFM RDN will utilize in completing a functional nutrition assessment with the Integrative and Functional Medical Nutrition Therapy (IFMNT) Radial. To highlight each component of the radial, she presented a case study based upon her personal journey to IFM and IFN as she sought answers for her eczema. This real world example helped to illustrate for the audience how a functional treatment plan is developed as core areas of imbalance are identified and appropriate dietary changes, supportive supplementation, and lifestyle interventions are determined.

It was no surprise that this session was so well received as both presenters did an outstanding job of providing an informative and intriguing introduction into the ever-growing field of IFM and IFN. Knowing the majority role that nutrition plays in any IFM care plan, RDNs must, as the nutrition experts, continue to be on the leading edge of the changing model of healthcare delivery.

Reviewed by Dana M. Elia, RDN, LDN, owner of Fusion Integrative Health & Wellness, LLC. DIFM Member Services Chair. Contact Dana at FusionIHW@gmail.com.
Grains, Brains and Bellies Review

T
his event was hosted by the Medical Nutrition DPG. The event featured a cooking demo by R.J. Harvey, RDN, LD, CEC, CRC, of Ancient Grain Fall Risotto, and a buffet of gluten-free food products including peach crisp and pulled pork sliders on gluten-free buns. The highlight of the event was the presentation by world-renowned gluten disorders physician Alessio Fasano, MD, and a signing of his new book, Gluten Freedom, following the event.

Fasano delivered a colorful presentation where he addressed the confusion around adopting a gluten-free lifestyle, posing the question “Is gluten-free necessary for all?” His objective was to set the record straight by highlighting the solid facts and emphasizing the very individualized relationship gluten has within each of our bodies.

Fasano gave a brief overview on the evolution of humans regarding the consumption of gluten-containing foods. He described how originally humans were not meant to consume gluten-containing grains and that these grains were only introduced with agricultural “playing” and engineering. With our bodies not programmed to ingest gluten, he explained that these gluten fragments cannot be appropriately digested and are instead only cut into pieces in our digestive tract. He explained that after gluten is consumed and fragmented, dysregulated zonulin may alter tight junction permeability, resulting in “leaky gut.” Zonulin is the only regulator of intracellular tight junctions, and therefore, gut permeability, discovered so far. According to Fasano, leaky gut is associated with a host of disease states, ranging from acute injury to chronic inflammation and autoimmune diseases.

Fasano described the difference between celiac disease, gluten intolerance, and gluten sensitivity. He was excited to share a recent definition for gluten sensitivity. This definition includes a list of characteristics to describe those who may be classified as gluten sensitive; the characteristics are as follows: 1. Symptoms are triggered by the ingestion of gluten-containing grains, 2. The individual has negative immune allergy tests to wheat and IgA deficiency has been ruled out, 3. There may be a possible presence of biomarkers of gluten immune reaction (AGA+), 4. There is a presence of clinical symptoms that can overlap with celiac disease or wheat allergy symptomatology, and 5. There is a resolution of the symptoms following a gluten-free diet and relapse after re-exposure to gluten-containing grains. He emphasized how essential a gluten-free diet is for those with celiac disease and for those with true sensitivities to prevent damage and alleviate symptoms.

But should everyone avoid gluten as a preventive measure? Fasano begs to differ. He explains that just like our bodies are consistently fighting a war with bacteria, our bodies are regularly fighting gluten. And the same way our bodies rarely lose the fight with bacteria, we rarely lose the war with gluten, resulting in sensitivities and subsequent symptoms/disease. Fasano expresses his frustration with the drastic split between professionals on gluten who argue fad vs. necessity. “Gluten is not the villain,” he proclaimed, and described that with a combination of the human genome, environmental factors, and the immune response, some individuals simply lose the war with gluten. In response, he recommended that gluten avoidance should be approached on an individualized case-by-case basis. He presented a number of recent research studies with conflicting results for the effectiveness of following a gluten-free diet whether it be for IBS, autism, schizophrenia, or autoimmune disorders. His answer to this dilemma is to be well aware of the role that gluten may play in individuals who have particular symptoms or disease states and to take them into consideration when developing an individualized treatment plan. Bottom line in the gluten debate? “Personalized Medicine,” he says.

Fasano’s new book, Gluten Freedom, delves further into the discussion of distinguishing scientific fact from myth. In the book he addresses gluten and its impact on depression, anxiety, and foggy mind as well as behavioral disorders, such as Autism Spectrum Disorder and schizophrenia. He includes the latest research on diagnostic procedures and treatment recommendations while also including practical tools for setting up a gluten-free kitchen and getting started with a gluten-free lifestyle.

Reviewed by Olivia Wagner, MS, RDN, LDN, Student Committee Chair. Contact Olivia at 630.433.6136 or oliviawagner28@gmail.com.

*This session was not included as part of the FNCE® meeting track but was offered, as noted by the reviewer, by the Medical Nutrition DPG as an evening session.
For Dietitians in Integrative and Functional Medicine (DIFM) members, Monday evening’s Mind Body Happy Hour provided a much appreciated break from the business of FNCE®. This gathering allowed DIFM members to mingle and meet other members from across the country while learning about and incorporating some key aspects of Integrative and Functional Medicine.

Mindfulness Meditation, led by Alicia Trocker, MS, RDN, was 15 minutes of instructive meditation. Trocker started the meditation session by stating that “meditation is being present in the moment…meditation leads to a decrease in stress hormones and relaxes the mind.” Members were quietly guided through box breathing and walking meditation, as Trocker emphasized that each breath and step should be used to find one’s balance and center. To close out the meditation, members were guided through quiet standing meditation and asked with each breath to focus on the top of their heads and to mindfully bring attention down through each part of their body as tensions were released.

Kathie Madonna Swift, MS, RDN, LDN, FAND, EBQ helped members bring focus to their body and to their “life energy” by introducing Qigong. Qigong is an “ancient Chinese health care system that integrates physical postures, breathing techniques and focused intention.” Qi, pronounced “chee,” means life energy or life force and gong, pronounced “gung,” means accomplishment or to work. DIFM members were guided through six Qigong exercises beginning with the proper Qigong stance and then progressing through drumming the chi, grand opening, pressing heaven & earth, energy flow, and quashing the organs. While guiding members, Swift indicated that movements such as energy flow were “used in digestive workshops to increase peristalsis,” a great example of tying integrative practices like Qigong to the field of dietetics. DIFM member, Loren Psalidas, indicated that “learning Qigong provided a different way to relax and get grounded.”

The practice of yoga closed out the Mind Body portion of the evening and was led by AAI Certified Yoga Instructor, Monique Richard, RDN. Yoga can be translated as union and is used to facilitate uniting of the mind, body and breath. Breathing exercises began the session, allowing members to focus on correct breathing and the flow of energy. Skillful and descriptive guidance was used by Richards to lead the packed room through several exercises, while ensuring focus was placed on each person’s mindfulness of body and personal ability. Richards encouraged participants by indicating that “yoga is a practice and not perfection and that just like dietetics, one is always learning.”

After wonderful Elderberry Spritzers, provided by DIFM sponsor Gaia Herbs, and time spent joining mind and body through meditation, Qigong and yoga, the evening came to an eventful close as 22 copies of Kathy Madonna Swift’s new book, The Swift Diet, were given away to DIFM members. The excitement in the room quickly rose as members rushed to claim their copy of this much anticipated book and expressed their eagerness to read and learn from The Swift Diet. Lisa Dorfman, MS, RD, CSSD, LMHC, FAND, a long time DIFM member summed the evening up stating that “The Gaia Happy Hour was the perfect FNCE ‘tonic’ for decompressing after long days of learning, laughing and enjoying time with colleagues, new and lifelong friends.”

References for Mind Body Happy Hour Review


Hannah Lima has a BS in dietetics and is currently a dietetic intern at Life University. Her areas of interest in nutrition include: preventive nutrition with a holistic approach, type 1 and type 2 diabetes, cardiovascular disease and renal disease (at early onset to help provide nutritional guidance relevant to diminished disease progression and/or complications).

Hannah.lima@student.life.edu.
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