Introduction to Integrative and Functional Medicine

Certificate Author: Kathie Madonna Swift, MS, RDN
Interviewed by Malorie Blake, MS, RDN, LDN, CNCS

What experiences or beliefs have led you in the direction of integrative and functional medicine?

My on-ramp to integrative and functional nutrition came with the diagnosis of an autoimmune condition and myalgic encephalomyelitis in the 1980s while living in the United Kingdom (UK). Myalgic encephalopathy (ME) is the term the ME Association feels is more appropriate than the original term of myalgic encephalomyelitis. It is also referred to as Chronic fatigue immune dysfunction syndrome or CFIDS. It is considered a neurological disorder by the World Health Organization since 1969. The naming of the condition—what it was did not explain why it was—so I began a quest to uncover the root causes and over time learned about detoxification, inflammation, and the connection between dietary intolerances such as gluten as contributors to chronic illness. This experience inspired me to share what I learned.

What educational background do you have in integrative and functional medicine? Mainly, how did you educate yourself in this field?

I started reading whatever I could get my hands on; back then we did not have the luxury of search engines, Google, Wikipedia or online support groups such as PatientsLikeMe. I connected with complementary and alternative healers in the UK and did everything I could to help myself including healing touch, aromatherapy, herbal therapies, and began experimenting with an elimination diet. When I returned to the United States, I started attending Functional Medicine conferences and listened each month to Dr. Jeffrey Bland’s Functional Medicine Updates. Back then, functional medicine aptly was called nutritional medicine! I also became the Nutrition Director at Canyon Ranch in the Berkshires and began a movement there to educate the doctors and nutritionists in functional medicine. Dr. Bland himself, as a guest presenter, witnessed the challenges I was facing in bringing this new paradigm to even a very progressive organization, which is why he interviewed me in his monthly series, and I am proud to say I was the first RD ever interviewed in Functional Medicine Update.

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

There are a number of areas that I am excited about:

- The Academy is going to have the first Emerging Integrative Approaches for Nutrition and Dietetics educational track at FNCE in Atlanta in 2014! This will certainly help put our practice area in the forefront.
- We are working with the Academy Center for Professional Development to develop an Online Certificate of Training Program that will include five 2-hour CPE modules that will...
be accessible for all members and non-members! I am the content developer for the first module, Foundations in Integrative and Functional Medicine and this will be followed by modules on Inflammation, Digestion, Detoxification and Dietary supplements.

• DIFM DPG is forging ahead with a number of initiatives including cutting edge educational webinars each month for members, and a research project with the Academy Dietetics Practice Based Research Network that will identify acquisition of knowledge and skills, demand for education and professional development, beliefs and attitudes, and practitioner’s use of modalities in integrative and functional medicine. And most importantly, DIFM DPG is working with external stakeholders and Networks to position the RDN as the leader in this practice area!

• I am also very excited about a new accredited online MS in Integrative and Functional Nutrition offered by Saybrook University that my RDN colleague Sarah Clarke, MS, RDN, CES and I helped curricular map. It will be directed by Mary Beth Augustine, RDN, CDN, FAND, DIFM DPG Chair 2014-2015, and the new program will offer its inaugural class in January 2015!

• I think each member is an agent of change in advancing integrative and functional nutrition—I get emails every day from RDNs doing some great things in this practice area at their organizations!

Can you tell us a little bit about your position at the Center for Mind Body Medicine?

I am the Education Director for Food As Medicine (FAM), a professional training program in nutrition for health care professionals. This was the first program of this kind in the nation and it is a feast of science and wisdom. I designed the curriculum and work with a stellar faculty from around the country to provide a science-based and heart-centered curriculum that entails functional medicine, integrative therapies, self-care practices and culinary nutrition education. I feel FAM is my greatest professional achievement and many RDNs share that they are proud of a program that is led by an RDN! The RDN is center stage at FAM. DIFM members receive a discount to the program since CMBM is a DIFM Network. (Come join us for FAM at Kripalu Center for Yoga and Health Sept 17-21).

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

There are so many opportunities to learn! I think joining DIFM DPG is first and foremost—the member benefits are outstanding! The EML is an excellent way to connect with colleagues; the webinars are evidence-based and include clinical pearls to put into practice; the benefits from the Network relationships are excellent and I would also encourage those entering the field to find a mentor. The Academy’s new eMentoring system is available to all members. You can search for one using a variety of parameters such as practice area. Visit http://www.eatright.org/ementoring/ for more details.

What will the focus be in the first webinar/module?

This module will be Foundations in Integrative and Functional Medicine. It will explore the roots and foundation of integrative and functional nutrition by describing the origins from Complementary and Alternative Medicine (CAM) to Integrative/Functional Medicine, defining the language and guiding principles, and introducing participants to the Integrative and Functional Medical Nutrition Therapy (IFMNT) Radial including all of its components such as Lifestyle; Systems; Signs and Symptoms; Biomarkers; Metabolic Pathways/Networks; Core Imbalances; Allergens & Intolerances; Thoughts and Beliefs; Environmental Exposures; Pathogens; and Personalized Nutrition Care Process.

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

Understanding the principles of integrative and functional medicine and the RDN’s role in this emerging area of health care is essential and thus an important foundational topic. For example, mental health illness is now the pandemic of the 21st century contributing to 1/3 of the world’s disability! Anxiety, depression and neuropsychiatric illness must be approached with a “whole systems” lens. The RDN must understand enteric nervous system dysregulation, gut-brain-microbiota interplay, nutritional imbalances and the mind-body connection to help build the person’s resiliency and restore health.

What do you think is poorly understood or not yet understood about/within the module you are teaching?

The Core Imbalances that underlie various disease conditions. Those imbalances can arise from disease-promoting lifestyle factors that can include diet, physical activity, and stress. Improving balance in the patient’s environmental inputs and the body’s fundamental physiological processes is vital to restoring health, and involves much more than simply treating symptoms. I think the Core Imbalances, including the new paradigm that is emerging around Digestive Health that encompasses the enteric nervous system, intestinal barrier function, microbiota and gut immune system, is poorly understood along with the scientific understanding of detoxification and its role in chronic diseases such as autism and neurodegenerative diseases such as Parkinsons, Amyotrophic lateral sclerosis (ALS), and Multiple Sclerosis (MS).
Can you provide a brief example of how Integrative and Functional Medicine was successful in improving the health of a patient?

A female patient came to me where I worked at a resort because she was interested in maximizing her metabolism. When I reviewed her health questionnaire, I learned she was suffering from chronic fatigue, anxiety, depression, bloating, constipation, and a recent colonoscopy indicated some inflammation with a diagnosis by her physician as spastic colon. Our consultation led to her experimentation with an elimination diet and I also advised her regarding some dietary supplements to support her digestive health. She shared with me that she didn't even care about the extra eight pounds she had gained over the years, she was so relieved to finally talk to someone who might be able to help her with her digestive symptoms. When I followed up with her a few weeks later, she was significantly improved and very grateful for the information and guidance provided. Had I not been well versed in an integrative approach to health and healing, the consultation may not have been as valuable to her.

What other resources would you recommend that our readers review in learning about Integrative and Functional Medicine?

- DIFM DPG membership of course!
- Food As Medicine, www.cmbm.org/fam - This is the best foundational course in integrative and functional nutrition and weaves in the essential element of self-care!
- Institute for Functional Medicine, www.functionalmedicine.org - IFM provides a number of trainings in functional nutrition.
- Kripalu Center for Yoga and Health, www.kripalu.com - excellent Healthy Living programs on topics such as Digestion and Detoxification.
- Subscriptions to journals such as Integrative Medicine: A Clinician’s Journal; Alternative Therapies in Health and Medicine, and Advances in Mind Body Medicine, all of these are available electronically and free of charge to DIFM members.
- Kansas University Medical Center (KUMC) - online certificate programs in integrative and functional medicine, http://dietetics.kumc.edu/IntegrativeMedicine.
- Arizona Center for Integrative and Functional Medicine (AZCIM), http://integrativemedicine.arizona.edu/.
- For those interested in pursuing a Master’s in Integrative and Functional Nutrition, consider Saybrook University: http://www.saybrook.edu.

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References

Additional tips for practitioners can be found in the online version of the newsletter in the Practitioner’s Corner. Go to http://integrativerd.org/members-only/learn/archived-newsletters/ for the current and past issues of The Integrative RDN.
Atending the Food As Medicine (FAM) professional training course at the end of a dietetic internship was truly nurturing for the mind, body, and spirit. It left me with a renewed passion for integrative and functional medicine as I embark upon a dietetics career. The four-day course was hosted by The Center for Mind Body Medicine (CMBM). It included evidence-based nutrition lectures, daily meditation, yoga, tai chi, and delectable organic whole food lunches enjoyed as a community. The spirit of collaboration was incredible, with attendees including, but not limited to, Medical and Naturopathic Doctors, Acupuncturists, Registered Dietitians, Mental Health Counselors, Registered Nurses, Health Coaches, and Chefs.

A few of the distinguished presenters included legendary author John Robbins, Physicians Dean Ornish, MD and Mark Hyman, MD, and Registered Dietitian Nutritionists Kathie Madonna Swift, MS, RDN, LDN and Brenda Davis, RDN. Without listing the entire FAM faculty, just know that there were many others, all of whom are making grand contributions to integrative medicine with nutrition as a common thread. In addition to the evidence-based presentations, the “Food As Medicine Cooks on Call” engaged participants with whole foods cooking demonstrations under the direction of culinary nutrition gurus Rebecca Katz, Catherine McConkie, and their outstanding team of chefs. It was a weekend of mindfulness and learning filled with “Clinical Pearls,” as Kathie Madonna Swift adorned them. A few pearls will be shared here, but words cannot truly do justice—consider attending the course in the future for an educational experience like no other!

Jim Gordon, MD, founder and director of CMBM, introduced the course and led the first of the daily meditative breathing exercises. A sense of calm and peacefulness filled the packed conference room as we fell silent and practiced soft belly breathing for a few minutes. These types of activities were woven beautifully throughout the weekend and really made for a unique cohesiveness between nutrition science and the basics of mind-body medicine. For example, on the first morning, everyone was instructed to use the blank paper and crayons provided to draw a picture of what food meant in their lives. There were no pressures to be artistic, but rather to simply draw from the heart and express oneself. This activity would be perfect to use in practice because it revealed many interesting ideas and discussions about core relationships with food. It was also a great way to break the ice and get to know others in the room.

Dr. Cynthia Geyer, MD launched the presentations with a talk on Understanding Core Imbalances and the importance of using a framework of Food As Medicine to correct them. As the Medical Director at Canyon Ranch in Lenox, MA, she uses “DISH” nutrition (Digestion and Detoxification, Inflammation and Oxidative Stress, Stress and Sleep, and Hormones) to bring balance to the plate and support patients toward wellness. Dr. Geyer encourages listening to the body, prioritizing sleep and exercise, reducing environmental toxin load, and a gentle array of dietary changes centered around a whole foods approach. A real pearl was when she said “adaptation not perfection”. It was a good reminder that small changes can make a big difference and working towards perfection can be a stressor in and of itself.

A firm foundation for the course was established by DIFM’s very own Kathie Madonna Swift, MS, RDN, LDN. As the Education Director for Food As Medicine since 2001, Kathie is a leading expert and innovator as a practitioner of Integrative and Functional Medical Nutrition Therapy (IFMNT). She displayed the IFMNT Radial as a framework by which to support patients using the assessment, diagnosis, intervention, monitoring and evaluation (ADIME) approach. She reviewed the radial, discussing the holistic integration of lifestyle, core imbalances, nutrition-focused physical, biomarkers, and metabolic pathways. Her talk truly emphasized the role and importance of the RDN in the clinical setting. It was great to hear people whispering in the crowd “I had no idea dietitians practiced this way.” It was inspiring to hear her speak several times over the course of the weekend and position the RDN as the leader in all matters food and nutrition. Because of this, many MDs attending FAM were eager to find an integrative RDN for their practice!

On the second day the course introduced John Bagnulo, MPH, PhD, a naturalist, nutritionist, organic farmer, author, lecturer, and former professor at the University of Maine. His passion for nutrition, the environment, and health is evident in every word and concept he shares. His three-part talk included a history of the human food experience, macro- and micronutrients, and their life. He discussed macro- and micronutrients practically down to the atom and has profound knowledge of the impact of farming practices on the bioavailability of nutrients in the body. Dr. Bagnulo encouraged his patients to increase the variety of plants they eat when at all possible, up to 40-70 different varieties per week! Although this may not be as tangible for low-income populations or those in food deserts, it has made for some interesting conversations ever since!

Women’s health and pediatrics were featured as well. Joel Evans, MD discussed the detoxification of excess estrogen and the critical need for nutrition to promote fertility. The emphasis highlighted newer research.
around what women eat during pregnancy and how it may impact their grandchildren. Sanford Newmark, MD discussed his groundbreaking work as a pediatrician working with attention deficit hyperactivity disorder using an integrative approach. The information shared about the impact of available medications for this condition was startling and worth reading about in his latest book. Both presentations were filled with practical go-to tips on how to best support these populations for optimal health.

It goes without saying that health gurus like Mark Hyman, MD, and Dean Ornish, MD gave incredible presentations that intertwined concepts of functional and lifestyle medicine. The film showing of Fed Up by Dr. Hyman was powerful and hearing the Q&A afterwards was a great way to understand how the different modalities view the role of nutrition. Another MD gem was Integrative Oncologist, Donald Abrams, MD, director of Integrative Oncology Research at Osher Center and renowned Clinical Medicine professor at the University of California San Francisco. He too, emphasized the role of nutrition and removing lifestyle obstacles to healing like stress, lack of sleep, and inconsistent exercise.

The course included community nutrition activists Catherine Couch, MBA of the Ceres Community Project and Ruthi Solari, MS, CN of Super Food Drive. Both of these extraordinary women are making great strides to feed underserved populations. Ceres supports those going through cancer treatment by cooking and delivering organic whole food meals. Super Food Drive supports those who rely heavily on food banks and raises the bar to get more whole foods donated. They were both an inspiration to get off the sidelines and do more.

The most important clinical pearl of this course for me was to stay open-minded to the opportunities that lie ahead as health care makes a huge shift toward integrative medicine. It is an exciting time to be starting a career as an RDN and I am honored to have received this opportunity to learn and grow. I am indeed hopeful to position myself amongst such great minds collaborating to create sustainable change using Food As Medicine. I believe this is the integrated healthcare of tomorrow today!

Note: Food As Medicine will be offered at Kripalu Center for Yoga and Health, Sept 17-21st. DIFM DPG members receive a discount on tuition for the course and some exciting new faculty members will be presenting including DIFM Chair, Mary Beth Augustine! For more information: www.cmbm.org/fam or contact Maureen George, mgeorge@cmbm.org.

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If you’re seeking a professional and educational environment where like-minded health practitioners come together to share research, provide clinical applications, foster connections and create a passionate community, the Integrative Healthcare Symposium will likely fit the bill. Held annually in New York City, this conference, “dedicated to improving patient care and defining the future of integrative healthcare,” packs a host of renowned speakers touching on a variety of topics into a 3-day exploration of the latest research and integrative therapies.

From the opening meditation to the visionary award and closing keynote by Dr. James Gordon, the conference embraced the mind-body connection and made clear that integrative medicine approaches are becoming more widespread. This writer, while not able to attend all thirty-some available sessions, found almost every attended session helpful and inspiring.

The Keynote Presentation by Jeffrey Bland explored the topic of menopause from the perspective of working to figure out the appropriate lifestyle changes instead of medicating women through it. With his characteristic emphasis on personalized lifestyle medicine, he touched on the many factors that create hormonal imbalance in the body from xenoestrogens to nutrient deficiencies and how we can help restore balance with diet, healthy detoxification and helpful supplementation.

Another session, entitled Cravings, Contentment and Chemical Imbalances by Dr. Erin Lommen, sought to dispel the myth that overeating is about lack of willpower, and explored the impact that neurotransmitters (or lack thereof) have on cravings and food addiction. The speaker discussed possible benefits of amino acids, adaptogenic botanicals, and vitamins that serve as cofactors for neurotransmitter production.

New and Revolutionary Concepts in the Pathophysiology, Diagnosis and Treatment of Hypertension presented by Dr. Mark Houston addressed the idea that blood pressure (BP) is less a disease and more a dysregulated vascular response, which may arise from oxidative stress, inflammation and/or autoimmune dysfunction in kidneys and arteries. He cited recent research showing that nocturnal BP is the most important on which to focus and that taking medications at night may be more effective. He also discussed how hydrochlorothiazide (HCTZ) might increase risk of hyperglycemia and highlighted studies showing that hypertensive patients are often deficient in B1, Mg, biotin, serine and calcium.

One inspiring talk that truly reflected how integrative medicine is being accepted by more mainstream communities was given by Tracy Gaudet, MD, Director of the Veteran’s Health Care Administration (VHA) newly founded Office of Patient-Centered Care and Cultural Transformation. She discussed integrating the whole person model into the VA Health Care System. She cited research about the efficacy and benefits of health care workers taking a Personal Health Inventory to better understand patient needs, and emphasized the lack of effectiveness of working with what is currently a problem-based model. She quoted a recent statement from Ralph Snyderman, MD, Chancellor Emeritus, Duke University at the The Summit on Integrative Medicine and the Health of the Public that “This disease-driven approach to care has resulted in spiraling costs as well as a fragmented health system that is reactive, episodic, inefficient, and impersonal...” The integrative approach puts the patient at the center, addressing not just symptoms, but the real cause of illness. It is care that is preventive, predictive, and personalized.”

Dr. Mark Hyman’s talk on Diabetes was an illuminating discussion on the high cost of health issues: $47 trillion dollars are predicted to be spent on medical issues over the next 20 years; NIH’s current budget for obesity is at $800 million; nearly 70% of current Federal spending is for Medicare/Medicaid. His talk also emphasized the effect that sugar is having on our health and compared its addictive properties to that of cocaine.

Dr. Tori Hudson, a long standing champion of women’s health discussed the current statistics around women and heart disease, which are worsening every decade. Currently one in four women have cardiovascular disease and are two times as likely to die from it than from all cancers combined. She spent her lecture highlighting the benefits of a Mediterranean-based diet as well as heart healthy botanicals, like garlic, guggul, gingko biloba, hawthorne, cinnamon and more. One study she mentioned showed that 250 mgs of hibiscus daily was comparable to Lisinopril in its blood pressure lowering properties.

Highlighting a topic that seems to be a buzz phrase these days, Dr. Robert Rountree took on the many causes of Mitochondrial Dysfunction, which include everything from antibiotics, excessive caloric intake, reactive oxygen species, stress, certain medications, hyperglycemia, environmental pollutants, and radiation. He described both the structure and function of the mitochondria emphasizing its integral role not only in our body’s energy production but in cell signaling, regulation of cell growth and differentiation, suggesting that mitochondrial dysfunction can result in increased risk of metabolic and cardiovascular disease, neurodegenerative issues, diabetes, and even cancer. Another hot topic that was
covered was the microbiome, deftly illuminated by Liz Lipski and Dr. Gerald Mullen. The presenters not only touched on the reasoning behind disrupted microbial environments (increase in C-sections, antibiotics, and our current physical environment and diet) but the many conditions associated with dysbiosis from anxiety to arthritis to asthma and even obesity.

DIFM’S own Kathie Swift, MS, RDN and Mary Beth Augustine gave thorough talks on Nutritional Interventions on Mind and Mood and The Detox Prescription respectively. Citing numerous research articles, Swift discussed the profound effects that our diet can have on mood, from the benefits of fermented foods and polyphenol compounds on the brain to how our microbiota affect the production of our neurotransmitters.

Augustine, joined by Dr. Woodson Merril, who referred to a vast amount of research connecting environmental factors and toxins to a variety of medical issues like asthma, CVD, infertility, depression, and other neurological issues, walked participants through a typical detox using both food and supplementation to support efficient biotransformation of toxins.

One highlight for this writer was a well thought-out, educational and instructional exploration of Women and Autoimmune Disease by Dr. Susan Blum author of the book The Immune System Recovery Plan. Not only did Dr. Blum thoroughly cover the basics of the adaptive and innate immune system, but she examined how a dominance in either the TH1 or TH2 immune response can manifest as certain medical issues in women like thyroiditis, anemia and sjogren’s in the former (TH1) and lupus and RA in the latter (TH2). Unsurprisingly, she touched on the effects dysbiosis and environmental factors have on auto-immunity as well as the connection between high levels of estrogen and autoimmunity. She mapped out several nutrition and supplemental protocols.

If you have ever seen Dr. David Perlmutter speak about The Care and Feeding of the Brain, you may know he speaks passionately and effortlessly on the subject. Outlining the many contributing factors to this brain degeneration, including pesticide exposure, poor detoxification, hyperglycemia, and excessive gluten consumption, supported his belief that costly dementia and Alzheimer’s disease are preventable.

Additional break out sessions included one that addressed the recent controversy surrounding fish oil and prostate cancer. It reviewed the flaws in this observational rather than intervention study that used data from the Select Trial study (studying Vitamin E and Selenium) to make the determination that fish oil contributed to prostate cancer simply because one blood sample from the men in that study, who went on to develop prostate cancer, had shown higher levels of omega-3 at one time. The presenters also highlighted many strong studies showing fish oil to be protective for health conditions from breast cancer to Alzheimer’s to hypertension.

The controversy around statins and heart disease was featured in many sessions, which presented research highlighting the association between statins and diabetes as well as mitochondrial dysfunction, and the sweeping body of evidence that has not shown much benefit from statins to those who have not experienced a cardiac event. Stay tuned, as this topic will no doubt continue to create discussion for years to come.

A thorough and multifaceted conference, the learning points and experience would be a boon to any health practitioner looking to explore integrative approaches and come home with clinical applications.

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References
In order to appropriately answer this common question, it is important to clarify that all dietitians are nutritionists, but not all nutritionists are dietitians. The three steps required to become a nationally credentialed registered dietitian are:

1. Earn a bachelor’s degree with a curriculum accredited by the Academy of Nutrition and Dietetics’ Accreditation Council for Education in Nutrition and Dietetics (ACEND);
2. Complete an accredited dietetic internship (approximately 6-12 months long);
3. Pass a national examination administered by the Commission on Dietetic Registration (CDR).

The licensed dietitian nutritionist (LDN) credential depends on the state’s licensure laws but it is set up to protect the public from those that are not qualified to practice through these accreditation standards. It is not a requirement at this time for an RD to hold a master’s degree, but approximately 50% of dietitians do have an advanced degree; in 2024 it will become a requirement to have a master’s degree.¹ This is not to say nutritionists or health/wellness coaches are not knowledgeable about nutrition, because they very well could be, depending on the programs they completed. However, the distinct difference is the years of practice, breadth of experience, and specifically the ability to practice medical nutrition therapy (MNT). MNT delves into the clinical, metabolic, and systemic manifestations found in acute and chronic diseases such as diabetes, cardiovascular disease, celiac disease, food allergies, and hypertension. Registered dietitian nutritionists’ academic curriculum, internship, and experiences are tailored to train the dietitian well above and beyond macro- nutrients, micronutrients, and calories.

So now that we have clarified the difference between registered dietitians and nutritionists, let’s delve into explaining what is considered integrative and functional medicine. The integrative component really focuses on the collaboration and communication between professional and patient, but also incorporates other professionals and modalities in order to achieve optimal health, healing, and wellness. It is a holistic approach, individualized for every unique person’s needs. Functional medicine doesn’t just look to manage a disease, but takes a deeper look at the root causes, environmental impact, genetic predisposition, physiological, psychological and interdependent factors that contribute to the disease. Internal (mind, body, spirit) and external factors (physical and social environment) are taken into consideration in order to assess the intervention and treatment. These may include Western, or traditional medicine, along with more alternative and complementary care such as supplementing with herbs, probiotics or specific vitamins and minerals, eliminating specific foods, employing certain cooking methods, or using Ayurveda, Chinese medicine, homeopathy and naturopathy, to name just a few.

Finally, this leads us to who integrative RDNs are and what they do. An integrative RDN puts all these components together—from the knowledge attained as a registered dietitian nutritionist to the many components of integrative and functional medicine—and combines it to take it a step further and dig a little deeper. Often working as a team, the integrative RDN collaborates with a physician in order to investigate clinical markers such as specific laboratory diagnostics that may be indicative of a vitamin, mineral, or nutrient deficiency. A specific whole-foods based plan can be developed and specific supplementation may be necessary. Stress-management is also a focus and can be recommended with physical movement and release such as yoga, massage, Qi gong, energy healing, meditation, or simply identifying triggers and creating a plan to address them. An integrative RDN may recognize that a detoxification program may be beneficial for the individual as well. However, this is not to be confused with the pop-culture definition of a “detox.” An integrative RDN will explain the phases of cellular metabolism, how the body physically breaks down food, and how a build-up of toxins inhibits optimal function. Ridding the body of excess toxins, cleaning up the diet and re-setting the mechanisms during a brief period are only some of the benefits of nutrition related interventions an integrative RDN may recommend. These are only some of the examples of what an integrative RDN may include in their practice. Take a look at the Integrative and Functional Medicine in Medical Nutrition Therapy Radial (http://integrativerd.org/resources/ifm-radial/) for a visual representation and/or the Summer 2011 supplement of the DIFM newsletter for a detailed description (http://integrativerd.org/members-only/learn/archived-newsletters/).

Currently, specific credentials are being developed to certify an integrative RDN. Many registered dietitian nutritionists naturally use various levels of integrative and functional medicine in their own private practice or clinical settings. The Dietitians in Integrative and Functional Medicine Dietetic Practice Group, www. integrativerd.org, is a great resource to find out more information or find an integrative RDN in your area.

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References

Additional Resources:
http://www.imconsortium.org/about/home.html
Further definitions can be further clarified at http://nccam.nih.gov/health/whatiscam.
A guide to reading botanical supplement research

With botanical evidence-based research increasing, it is vital to separate quality studies from those with reporting issues or methodological flaws. Since herbal research is a relatively young field, sorting quality from substandard research is often confusing. Studies using botanicals as interventions should analyze the material for proper identity, purity, composition, and strength. When reading an herbal clinical trial, the first question to ask is whether the author correctly identified the plant using the Latin name. The reasons for selecting a particular plant part, dosage form, and actual dose must adequately be described. Without information on the chemical content of the botanical product, it is impossible to evaluate the quality of the material. If the study results are negative, low quality material may be the reason for the negative outcome rather than the actual efficacy of the botanical studied. Additionally, opinion is often presented as fact or facts are offered in a contradictory manner. Adequacy of blinding can also be an issue as botanicals often have tastes and/or odors. Study authors should also describe the standardization methods used, if any, for the tested material. The discerning reader should evaluate all aspects unique to herbal research in order to make informed recommendations to patients. Betz JM and Hardy M. Evaluating the Botanical Dietary Supplement Literature. HerbalGram. 2013; 101:58-67.

Green Tea for Prevention of Pancreatic Cancer

In a study of pancreatic cancer cell metabolism, epigallocatechin gallate (EGCG)—the predominant bioactive component of green tea—was compared to oxamate, a known inhibitor of lactate dehydrogenase (LDHA), an enzyme necessary for cancer cell metabolism. EGCG significantly reduced glucose consumption, glycolytic rate, lactate production and anaerobic glycolysis in a way similar to oxamate. Authors conclude that both oxamate and EGCG disrupt pancreatic cancer cell metabolism, and state their observations are in line with research previously reported with breast cancer and colon cancer cells. Lu Q, Zhang L, Yee JK, Go VW, Lee W. Metabolic consequences of LDHA inhibition by epigallocatechin gallate and oxamate in MIA PaCa-2 pancreatic cancer cells. Metabolomics, 2014. DOI: 10.1007/s11306-014-0672-8.

Lycopene and Lethal Prostate Cancer

As part of the ongoing prospective cohort Health Professionals Follow-up Study (HPFS), just over 50,000 males were followed for 23 years. Diet was assessed by food frequency questionnaire at six timepoints (every four years) and total and lethal prostate cancer cases were obtained. In subsets of participants, plasma lycopene was measured (n=1200) and tumor biomarker expression was assessed (n=1180). Participants with the highest lycopene intake had a 27.7% lower risk of lethal prostate cancer than those who consumed the least. Based on their findings, the authors hypothesize that, “consumption of a diet rich in lycopene-containing foods reduces the aggressive potential of prostate cancer by inhibiting the neoangiogenesis that occurs in tumor development.” Zu K, Mucci L, Rosner BA, et al. Dietary Lycopene, Angiogenesis, and Prostate Cancer: A Prospective Study in the Prostate-Specific Antigen Era. J Natl Cancer Inst. 2014. doi:10.1093/jnci/djt430. PMID: 24463248

Dietary Pulses (Beans) for Lower Blood Pressure

A systematic review and meta-analysis of randomized controlled feeding trials was conducted following the Cochrane Handbook for Systematic Reviews of Interventions. Eight studies were analyzed (total n=554) in which dietary pulses were the primary intervention, which reported on blood pressure and had at least a three-week follow up period. The studies included individuals with or without hypertension. Participants were told to eat either dietary pulses or isocaloric other foods for an average of ten weeks. Soy and peanut interventions were excluded, as these are not considered dietary pulses. When participants consumed pulses, systolic blood pressure was significantly reduced (-2.25 mm Hg).
and diastolic blood pressure was reduced, not significantly. Additional research is needed in larger-scale studies to support these results.


**Probiotics and Hepatic Encephalopathy**

Standard treatment of hepatic encephalopathy (HE) is lactulose administration, which is associated with side effects including diarrhea, bloating and flatulence. A prospective randomized controlled trial investigated probiotics for prevention of HE in patients with liver cirrhosis. Study participants without overt HE (n=160) were randomly assigned to receive probiotics three times per day (VSL#3, 110 billion colony-forming units, including Bifidobacteria breve, longum and infantis; Lactobacilli acidophilus, plantarum, paracasei and bulgaricus; and Streptococcus thermophilus) or no probiotics. After three months, there were significantly fewer cases of small bowel intestinal overgrowth and minimal HE in the probiotic group compared to the control group. The probiotic group also had significant improvement in arterial ammonia, psychometric hepatic encephalopathy scores, oroccal transit time, and critical flicker fusion. In addition, the probiotic treatment had no side effects. Lunia MK, Sharma BC, Sharma P, Sachdeva S, Srivastava S. Probiotics prevent hepatic encephalopathy in patients with cirrhosis: a randomized controlled trial. *Clin Gastroenterol Hepatol.* 2014;12(6):1003-1008.e1. doi: 10.1016/j.cgh.2013.11.006. PMID: 24829488.

**Grapes for Knee Osteoarthritis**

Research presented at the 2014 Experimental Biology conference investigated the effect of grape consumption on inflammatory biomarkers, cartilage metabolism and physical activity in patients with symptomatic knee osteoarthritis (n=72). Participants were randomly assigned to receive treatment with 47 g of a freeze-dried grape powder (FDGP) or placebo for four months. At follow up, participants in the FDGP group 64 years old or younger had a 70% increase in very hard activity. Compared to baseline, a significant increase in inflammatory markers was seen in both groups, however, the increase was greater in the placebo group. Males but not females in the FDGP group had increased cartilage metabolism, evidenced by higher levels of a cartilage growth factor. Small R, Tiernan C, Kwon YH, et al. Age-associated effect of freeze-dried grape powder on inflammatory markers and physical activity in adults with knee osteoarthritis (1025.8) *FASEB J.* 2014;28:1025.8.

**Low Vit D Status Linked to Migraines**

In a cross-sectional study, serum levels of vitamin D, vitamin D-binding protein (VDBP) and vitamin D receptor (VDR) were examined in 52 participants newly-diagnosed with migraine and 49 age- and sex-matched controls. VDBP levels were similar in both group. However, in migraine patients, levels of vitamin D and VDR were significantly lower when compared to controls. No correlation was found between headache characteristics (aura, severity, frequency and duration), disease duration and serum vitamin D, VDBP and VDR levels. Celikbileck, A. et al. Serum levels of vitamin D, vitamin D-binding protein and vitamin D receptor in migraine patients from central Anatolia region. *Int J Clin Pract.* 2014; May 18. doi: 10.1111/ijcp.12456. [Epub ahead of print] PMID: 24837712.

**Personalized nutrition and cardiovascular disease prevention: From Framingham to PREDIMED.** *Adv Nutr.* 2014 May;5(3):368S-71S. doi: 10.3945/an.113.005686. Print 2014 May. (PubMed ID: 24829490). Progress is being made toward the practical application of nutrigenetics research. Using improved research methods, more recently-recognized gene-diet interactions are described which can affect cardiovascular risks (e.g., cholesterol, triglycerides, body mass index, blood glucose, and insulin resistance). Risk-reduction benefits of a Mediterranean diet are also briefly described. Continued development of genetics-related testing and research, combined with better education of both professionals and the general public is urged, along with greater academic-industry partnerships.

Nutrigenomics: Definitions and advances of this new science. J Nutr Metab. 2014;2014:202759. Epub 2014 Mar 25. (PubMed ID: 24795820). Nutrition-related epigenetics, transcriptomics, proteomics and metabolomics, are briefly described. Relevance to obesity, cancer and type-2 diabetes is also discussed. Although additional research is still needed, recent advances are beginning to enable personalized counseling.

Kallikrein 3 and vitamin D receptor polymorphisms: potentials environmental risk factors for prostate cancer. Diagn Pathol. 2014 Apr 22;9(1):84. [Epub ahead of print] (PubMed ID: 24753491). Carriers of two copies of the common GG allele of the TNF rs1800629 variant showed higher postprandial triglycerides and CRP levels; however, this was no longer found after adherence to a Mediterranean diet for 12 months. (The common name for rs1800629 is TNF-308G-A.)


Inquiries about above references? Contact Ron L Martin, MS, President, Nutrigenetics Unlimited, Inc.; ron@nutrigenetics.net.
The growing trend in botanical marketing and sales creates demand for reliable safety information for the public and professional. Botanicals, essentially safe and non-toxic, if used in the wrong way or dose can cause negative outcomes. Whether choosing herb supplements or advising clients, discerning the truth from the media or frequently flawed clinical studies is challenging. The second edition of the American Herbal Products Association’s Botanical Safety Handbook is an evidence-based and authoritative reference and valuable resource.

New research supporting traditional herbal use and information on herb-drug interactions has expanded proportionally with increased sales, prompting this book’s second edition. Ten expert reviewers from the field of integrative medicine spent five years in its writing. The editors identify the dietary supplement industry, the health care practitioner and the public consumer as the beneficiaries of the information provided for the purpose of facilitating more educated use at all levels. Presented as 550 herbal monographs listed alphabetically by Latin name, details outline contraindications, precautions, adverse events and side effects, drug and supplement interactions, considerations in pregnancy and lactation as well as a thorough review of clinical trials, research studies, and listing of literature reviews. A classification system assigns each herb into one or more Safety Class and an Interaction Class. The three Safety Classes are herbs safely consumed when used appropriately, herbs with restrictions, and herbs to be used only with supervision of a qualified expert on herbal medicine. The restrictions under the second class are for external use only, not to be used during pregnancy and/or lactation, and other restrictions specific to a particular herb. The three Interaction Classes specify if clinically relevant interactions are expected, biologically plausible, or known to occur. The classification system is based on the assumption that herbs and herbal products are being used in a rational and informed way. All sections promote a sensible approach to the use of herbs. The introduction clarifies the truths about herbal safety, where to take caution, and when to seek the help of a more experienced herbal practitioner. The five appendices feature cautionary plant constituents such as berberine and pyrrolizidine alkaloids; botanical actions which may cause side effects such as diuretic, emetic, or laxative; and an explanation of the pharmacodynamic and pharmacokinetic pathways for interactions of herbs with drugs.

The connection between botanical medicine and nutrition is highlighted in the book’s dedication to the late Mary Francis Picciano, past Senior Nutrition Research Scientist at the National Institute of Health’s Office of Dietary Supplements and co-author of the textbook Human Nutrition. This book offers today’s integrative nutritionist a practical guide for herbal therapeutic advice and with the vast number of plants and their medicinal uses; it is one to reference frequently.

**Botanical Medicine for Women’s Health**

Aviva Romm, MD
Paperback: $60.68
St. Louis, MO; Churchill Livingstone Elsevier. 2010. 694pp.

Author Aviva Romm is an integrative physician who was previously a Certified Professional Midwife and clinical herbalist. As an advocate for a woman’s right to natural healthcare choices, she pursued a medical degree to broaden the impact she could achieve. In 2010, Botanical Medicine for Women was published to advance her vision of wellness for women. Much more than a botanical textbook, it is beautifully written, easily understood and offers page after page of knowledge supported by evidence-based literature. Keeping with the holistic approach of herbalism, she addresses physiologic factors as well as emotional and spiritual influences on health, such as the emotional upheaval of adolescence. This text is written for the practitioner; however, it will benefit all women and anyone who has a wife, mother, sister, daughter, or interest in promoting wellness in the female community. It comprehensively provides alternatives to conventional therapies, but also points out where conventional therapy is more effective, whereby acting as an aid for decision-making when considering botanicals. More than men, women choose herbal therapies as alternative approaches. Interest is high for natural options that offer more personal empowerment, have fewer side effects, and work where allopathic treatments fail. Romm makes a strong case for the benefits of botanical medicines as part of a complementary practice.

Divided into five sections, the book walks through a woman’s life cycle offering strategies to promote health in each stage. The first section provides foundational herbal information to facilitate safety and comfort when using botanicals. Each of the next three women’s health sections addresses pathophysiology, signs and symptoms, diagnosis, conventional treatment, and botanical approaches to treatment. Diet and nutrition modifications as well as other lifestyle considerations are included. The first of these sections is devoted to menstrual wellness and gynecologic concerns such as endometriosis, chronic pelvic pain, uterine fibroids, urinary tract and vaginal infections, and breast cancer. The next section covers fertility and childbearing in detail, specifically addressing the safe use of herbs in pregnancy and lactation. Following is a chapter on menopausal health that offers options to hormone replacement and strategies to relieve symptoms such as hot flashes, night sweating, heart palpitations, insomnia, anxiety, and depression. The book culminates with seven plant profiles for herbs that are frequently used in gynecology and obstetrics, but are controversial due to questions about safety and lastly, a comprehensive table of herbs with uses in women’s health.

This reference book may not be meant for cover-to-cover reading, but it could be. Romm’s supportive, down-to-earth, and insightful writing makes it difficult to put down. Many of the issues addressed may provoke thoughts of someone you know who could benefit from the recommendations. Whatever one’s level of botanical use, the wisdom in this book promises better support for women and their health and is reason alone to keep it close at hand.

Reviewed by Dina Ranade, RDN, LD; DIFM Resource Reviews/Networking Editor 2014-2015. Contact Dina at dranade@comcast.net.
Student’s Corner

Interviews conducted by Olivia Wagner

But where do I start…? Q&A
Advice for Students and New Learners of Integrative and Functional Medicine

Are you just getting started with Integrative and Functional Nutrition (IFN) and trying to figure out where to begin? Have no fear! I asked three DIFM members to reflect on their journey to practicing functional nutrition and to share their greatest recommendations to those just beginning to explore IFN; here’s what they had to say!

Q: What would you have liked to educate yourself on as an early dietitian?

Kathie Madonna Swift, MS, RDN, LD
Current Employment: Nutrition Health Solutions, freelance
Years as a Dietitian: 33

A: "The Integrative & Functional Medical Nutrition Therapy (IFMNT) Radial and digestive health. All roads lead to the gut; it is the highway to health and pathway to longevity! The radial is an essential tool to connect dots and create personalized nutrition care plans."

Editor’s Note:

The IFMNT Radial was established as an integrated conceptual framework to assist the dietitian in practice. The circular architecture of the Radial allows for the evaluation of complex interactions and interrelationships among food choices and other key factors and determinants of health. The five key factors that are addressed are: Lifestyle, Systems, Biomarkers, Metabolic Pathways, and Core Imbalances.

More information on the Radial can be found on the DIFM website and in the Summer 2011 DIFM newsletter. To access links to the Radial go to, (http://integrativerd.org/resources/ifmnt-radial/) for a visual representation, or the Summer 2011 supplement of the DIFM newsletter for a visual representation and detailed description (http://integrativerd.org/members-only/learn/archived-newsletters/).

Kathie’s extra tip…

"As you practice IFN, collect outcome data and write up case studies. This is necessary to contribute to our emerging field!"

Ann Sukany-Suls, M.Ed, RDN, LD
Current Employment: Owner of Nutrition 4 U, LLC
Years as a Dietitian: 29

Q: What would you have liked to educate yourself on as an early dietitian?

A: 1. “Endocrine disease and Auto-immune disorders (i.e., Thyroid disease, Adrenal Fatigue, Fibromyalgia, Lyme, Chronic Fatigue, IBD, etc.), as well as more emphasis on lab data/interpretation—I would certainly seek training in functional lab testing as a new RDN grad.”

2. “Business skills such as the art of negotiating salaries/contracts, insurance billing and coding, marketing, website design, etc., which was lacking in my training. These are such valuable skills to acquire, especially if you’re going into private practice.”

3. “Counseling techniques including cognitive behavior therapy, motivational interviewing, and client-centered therapy, which offer a beneficial skill set for nutrition counseling.”

Ann’s extra tip…

"Many of the functional lab testing companies provide expert staff to assist with lab results interpretation and offer free clinician consultations."

Aglaée Jacob, MS, RD
Current Employment: private practice, author, freelance writer and naturopathic medicine student
Years as a Dietitian: 8

Q: What would you have liked to educate yourself on as an early dietitian?

A: "Digestive health! I think digestive health is key since health truly starts in the gut. My book Digestive Health With Real Foods is certainly the book I wish I could have found a few years ago and I hope it can help other [RDNs] learn what took me years to put together more quickly."

Aglaée extra tip’s…

“Never forget your core sciences (pathology, microbiology, biochemistry, etc.). They are so important! When I first realized that maybe my education was probably not complete and mostly showed one side of the story, I went back to my biochemistry and core science books to help me to identify what made sense and what didn’t. The science of biochemistry hasn’t changed in decades... while nutrition is an always changing and evolving science where there is definitely not a one-size fits all approach. Keep your biochemistry textbook close, it will help you more than any other textbooks!"

Choose a topic you are passionate about and look to it from ALL possible angles."

Have other questions about getting started in IFM? Contact Olivia Wagner, the Student Committee Chair, at oliviawagner28@gmail.com. Until then, happy learning!
M elinda Dennis, MS, RD, LDN (via phone)  
Nutrition Coordinator, Celiac Center at Beth Israel Deaconess Medical Center  
www.celiacnow.org  
www.Reallifewithceliacdisease.com  
In practice for 14 years; current position for 10 years

1) What resources do you find most valuable? What or who is your “go to” for information?

- Networking with both integrative and conventional peers;
- Ongoing webinars, which are more in depth (http://www.lizlipski.com/ - several weeks long, each session builds on the previous);
- Natural Standards Database;
- UpToDate (http://www.uptodate.com);
- Dietitians in Gluten Intolerance Diseases (sub-unit of the Medical Nutrition DPG);
- DIFM newsletter and listserv;
- Nutrition Entrepreneurs DPG;
- Websites: www.glutenfreedietitian.com (for testing being done on products for cross contamination);
- GlutenFreeDietitians.com;
- The Academy’s Nutrition Care Manual to set the framework;
- Making close connections to RDNs that work for favorite supplement companies;
- Becoming friends with other experts in my specific field; be generous with your expertise and in helping others make connections;
- Mini-rounds with other RDNs (virtual or in-person).

2) Any wisdom or clinical pearls to share?

- Appreciate the healing power of food and attitude.
- Rest! I recommend it like I recommend supplements; it is a big part of healing.
- Get a sense of what motivates your patient. Always ask: when was the last time they felt well? What was happening at that time?
  - Find your niche. Don’t try to be an expert on everything.
  - Write on what you really know; don’t write on what you don’t know.
  - Have a broad perspective. Examine both conventional and integrative perspective. You want to know to where everyone is coming from.
  - When I imagine creating something, I think: Do I have a clear intention that it will help others and will I enjoy it? If answer is yes to both, only then will I move forward with the idea.
  - Be the RDN that explains how to accurately screen for celiac disease.


Julie Starkel, MS, MBA, RDN  
(via phone)  
Co-Founder, Green Lake Nutrition, Seattle, WA  
http://www.greenlakenutrition.com/  
In practice since 2008

1) What resources do you find most valuable?

By far, I utilize the Natural Medicines Comprehensive Database (Professional Version) the most. It is provided free of charge to DIFM members and can be accessed via mobile app or online. It provides the latest pharmaceutical research on interactions, nutrient depletion as a result of medicines, potential interactions between medicine and supplements and even a clinical management series that provides practical evidence-based information on using natural medicines for specific conditions that helps us busy practitioners stay abreast of new developments. The interaction checker is also of tremendous value when vitamin or herbs are taken in addition to prescriptions. So many of my clients are of the senior population and come to see me with several chronic health conditions and have been prescribed innumerable medications from various doctors and then they self-medicate with herbals and vitamins of varying quality.

What or who is your “go to” for...
I may be a little biased as past chair of DIFM, but this dietetic practice group does an outstanding job providing quality webinars, many free of charge or for a nominal fee, a great newsletter and, most importantly, guidance to members for standards of practice for dietitians and nutrition professionals in the field of integrative and functional medicine. Many health conferences and certifications are provided at a discount to DIFM members to help deepen the understanding of the integrative approach. The leaders in the group are mindful of the role RDNs should be taking in the field of evolving healthcare and are working toward positioning us appropriately with assurance that we have the skills necessary to meet the necessary criteria.

2) Any wisdom or clinical pearls to share?

I believe that dietitians need to be students of healthcare as it has spanned the history of humans. Our moment is ‘but a grain of sand in the hourglass of time’ and this is perhaps the only time that the population has handed their health and nutrition over to big business that has the company profit and stockholders, not the consumer’s health, as their first priority. In the past, food was locally grown and consumed and most cultures had their own healing art that was affordable and readily available. RDNs are a perfect fit to tie the understanding of food as the primary preventive medicine as well as a powerful healing tool. RDNs need to continue to hone their knowledge and proficiency of the nutritional physical, genomics, and lab evaluation as well as have a good understanding of original and traditional medicines and healing systems from around the world that are being scientifically validated.

Ayurvedic medicine, Traditional Chinese Medicine (TCM), Native American and Polynesian medicine, to name only a few, have deep abiding traditions that acknowledge the connections of the body, mind and spirit. I believe as our integrative or holistic approach to medicine continues to evolve, we will come to the awareness that body, mind and spirit are inextricably tied together and true healing needs to embrace the whole person not as just the sum of its parts.

3) Please also tell us where you currently work and how long you have been in practice.

In 1976, I opened the Good Earth Health Food Shoppe in a small rural Ohio town that I still own and manage. Ohio has licensure so in 1997 I became an RD, then quickly got my Master’s of Science in human nutrition and further certification as a Board Certified Clinical Nutritionist. I currently have my practice in the same building as my business along with a chiropractor and massage therapist.

 Interviews conducted and compiled by Jacqueline Santora Zimmerman, MS, RDN, DIFM Associate Newsletter Editor 2014-2015. Contact Jacqueline at jacq.zimmerman@gmail.com.
DIFM is pleased to announce the upcoming Online Certificate of Training Program in Integrative and Functional Medicine, expected in Spring 2015. The 10-hour CPE program will include five 2-hour CPE modules, and the topics are Introduction to Integrative and Functional Nutrition, Digestive Health, Detoxification, Inflammation, and Dietary Supplements. The first module author, Kathie Madonna Swift, MS, RDN, LDN is highlighted in this issue of the Integrative RDN. I am sure you will find her interview inspiring.

As Chair, I had the great pleasure of attending and heading a DIFM booth at the Center for Mind Body Medicine Food As Medicine training in San Francisco June 5-8, 2014. For more information, see DeeAnna VanReken’s review of the training on page 6 of the newsletter. DeeAnna was the 2013 Student Stipend Award winner; her article was a requisite for receipt of the award. This 23-hour CPEU course combined cutting edge didactic learning with hands-on experiential mind-body medicine and culinary demos, and had lots worth tweeting and repeating! I would like to highlight some of the tweets worth repeating here:

- **Caring for cancer…**
  At #FAM2014 w/ oncologist Donald Abrams MD @ucsfosher tells patients, “Cancer is like a weed, my job is to help you tend your garden.” Donald Abrams MD @ucsfosher asks #cancer patients “What brings you joy, what are your hopes, & where does your strength come from?” #FAM2014

- **Start a SuperFood Drive in your area- great fact sheets and toolkits…**
  Local food security, nutritious food, empowered communities, health and food literacy http://www.superfooddrive.org #socialjustice #FAM2014

- **The case for dietary diversity…**
  Could you eat 40 varieties of plants in a week? Quite the challenge but John Bagnulo makes a convincing case! @MindBodyMed #FAM14

- **Organic, whole foods, local and sustainable food pantry…**
  Ceres Community Project has ‘extras’ like sauerkraut, goat kefir, immune broth with reishi and other herbs, and ‘Vital Bites’ #FAM2014

- **Weapons of mass destruction…**
  America’s new ‘weapons of mass destruction’ you’re using three times daily- #fork #knife #spoon

- **On environmental toxins…**
  “Eating canned soup for 5 days in a row increased urinary BPA levels 1,000 fold” Cindy Geyer MD at #FAM2014

- **On obesity…**
  “Why are there twice as many people who go to bed obese, as go to bed hungry?” asks @markhymanmd #FAM2014 #obesity

- **On gut health…**
  Gut health- “First you weed, then you seed” says @SwiftNutrition #FAM2014
  “The magnificent microbiota- the small life that resides in us”- we’re 90% bugs says @SwiftNutrition #FAM2014
  “Cephalic phase of digestion come first- the mindfulness of food- before the oral phase of digestion” says @SwiftNutrition #FAM2014

- **On ADHD…**
  Sanford Newmark, MD talking about #ADHD at #FAM2014 20% high school boys diagnosed with ADHD, 66% given stimulants, $9 billion spent on meds
  1 in 7 children with only ADHD are given antipsychotic meds #FAM2014

- **On commonalities between Mediterranean, Paleo, & Vegan diet…**
  What do #Mediterranean #Paleo & #Vegan diet have in common? Per Cindy Geyer MD’s venn diagram- veggies fruits nuts seeds oils #FAM2014
  All in all, Food As Medicine lived up to its promise of “A Feast of Science and Wisdom”.

So, DIFM members, if you are looking for your own ‘Feast of Science and Wisdom’ DIFM Network, the Center for Mind Body Medicine, is offering a second Food As Medicine course this year on the East Coast at DIFM Network Kripalu Center for Yoga & Health in Massachusetts September 17-21, 2014. Your fearless DIFM Chair will be speaking there, and DIFM members enjoy a discounted tuition of $650 ($795 for non-DIFM members). Please visit DIFM website www.integrativerd.org to see the multitude of member benefits, including discounted tuitions for many DIFM Networks conferences and live trainings. And, of course, do not forget FNCE October 18-21, 2014 in Atlanta, GA. If you have the opportunity to join us, it will be well worth it for the track on Emerging Integrative Approaches to Nutrition and Dietetics. For more information on the tracks being offered, see page 15 in the printed issue or page 13 in the online issue.
Welcome to DIFM for those of you who are just joining us, and welcome back to those who are returning members. As the healthcare landscape is changing, we are seeing a greater demand for integrative and alternative therapies for all types of health conditions. This makes our profession as RDNs even more in demand and those of us in the integrative and functional medicine arena even more so.

This issue of the Integrative RDN is filled with tips about who we are, how to become more educated or knowledgeable in the field, and what resources those of us practicing integrative and functional medicine find most valuable. For students and members new to the field, the Student’s Corner and the Practitioner’s Corner will provide some valuable information. And, if you have additional tips or resources to add, please feel free to email me and they can be included in an upcoming issue.

For those of you attending FNCE® in October, don’t forget that the Academy is offering a track on the Emerging Integrative Approaches for Nutrition and Dietetics Practice. For information on the sessions being offered, see page 15 in the printed issue or page 13 in the online issue. These sessions promise to offer a wealth of information that can help you advance your practice. We expect to have more information on the Online Certificate of Training in Integrative and Functional Medicine available at our booth at the DPG showcase and Product Marketplace. For those of you not planning on attending, you may want to reconsider if at all possible.

We hope that you enjoyed and benefited from our last issue on Genetically Engineered Foods; it was quite an undertaking! And we hope that you find this issue as beneficial for tips and resources to use in your practice. As always, I am open to your suggestions and ideas as well as offers to author articles.

Until Fall…………….

Sarah Harding Laidlaw, MS, RDN, CDE
Newsletter Editor
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