A Conversation with Mary Beth Augustine

Having a conversation with our Past Chair, Mary Beth Augustine, RDN, CDN, FAND is a little like chatting with a human encyclopedia, who happens to have a great sense of humor. Her history is remarkable, her passion—unstoppable, and her vision—admirable. Her module on dietary supplements promises to be a whirlwind of valuable information that will have direct applications for personal and professional clinical practice.

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

Cancer! Mary Beth has always loved nutrition and in her sophomore year of college, she considered switching her major from literature to nutrition, but thought the curriculum was too hard. She was then diagnosed with Hodgkin's disease, and after being encouraged by her mother, sought additional treatment with an alternative health care practitioner who started her on juicing vegetables and drinking aloe vera juice. She was unwilling to take the advice of her oncologist at Sloan Kettering who claimed diet would have not any effect on the cancer, and that eating vegetables would yield the same outcome as eating hotdogs. She continued to juice and focus on a whole foods, plant-based diet while in treatment and did remarkably well. She then decided to switch schools and get her bachelor's degree in nutrition at Marymount College. Seven years later, Mary Beth returned to Sloan Kettering Memorial Cancer center to work as a dietitian. She made sure that she found her former oncologist and shared her great success and recovery story. She attributes much of her recovery, and continued survivorship, to nutritional therapies.

What training/education have you obtained?

Mary Beth completed her internship at University of California San Francisco and currently is finishing her graduate research project to complete a Master's of Integrative Health and Wellness degree at Rutgers University. The in-depth clinical focus of the internship was critical to her ability to apply integrative principles in her current professional life. The training helped her understand pathologies and pharmacokinetic applications. She draws on that very strong foundation which allows her to help clinically complex patients in integrative medical centers, including her practice at the Mt. Sinai Beth Israel Center for Health and Healing, NY.

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

It is obvious that Mary Beth has a very clear vision on this. She is eager to see interprofessional education and a set of standardized competencies developed for integrative and functional medicine. In her opinion, establishing a clearly defined set of knowledge, skills, and competencies would protect the public and help regulate the field. She would also like to see the practice area of integrative and functional nutrition in the didactic curriculum, in internships and coordinated programs, on the registration examination for dietitians, and eventually recognized as a CDR board certification as “Certified Specialist in Integrative and Functional Nutrition.”
What advice would you give to those who are now entering the field of integrative and functional nutrition?

“Decide what population you want to work with and what type of setting you want to work in, because this determines the knowledge, skills and competencies that you need to learn.” According to Augustine, knowing that you want to work in a spa, or in a hospital, in a community organization, or as a culinary environment, is going to dictate what kind of training you might need. So decide what that is and then go build on the skill set that you need.

What shall we expect from the upcoming dietary supplements module?

Mary Beth defines it as a “risk characterization framework for clinical decision-making and patient shared decision-making.” Essentially, this means the module will guide practitioners on how to best perform risk assessment in order to make dietary supplement recommendations and effectively educate and engage the patient in shared decision-making about dietary supplement use.

Supplements are no longer considered “alternative,” in that 50% of Americans use them. Therefore, it is essential that nutrition professionals have the knowledge and skills to make recommendations about supplement use. Otherwise, we risk missing out on helping half of the population who seek guidance. Dietitians who believe they are not allowed to give advice on supplements may not be aware that it is actually within the scope of practice as stated in the Academy of Nutrition and Dietetics: Scope of Practice for the Registered Dietitian. Additionally, according to a recent survey of 5,164 Academy members, 87% of respondents expressed strong interest in gaining more continuing professional education in disease specific use of supplements.

Mary Beth cannot emphasize enough the importance of knowledge about dietary supplements as part of one’s clinical toolkit. She cites the ACEND (2015) Rationale for Future Education Preparation of Nutrition and Dietetics Practitioners report that revealed that skills that support the ability to “Apply integrative nutrition principles to nutrition care and medical nutrition therapy (MNT), including the use of nutritional genomics, dietary supplements and/or herbal remedies” were rated by Academy members and employers as “important skills needed for future practice in nutrition and dietetics.”

The take home message?

The culture around dietary supplements is changing. The National Institutes of Health’s National Center for Complementary and Alternative Medicine has changed its name to the National Center for Complementary and Integrative Health. This is one more recognition of the fact that the term alternative has become antiquated. Interdisciplinary approaches including dietary supplements have become more mainstream and accepted.

Can you provide a brief example of how your approach to treating a patient was bolstered by the use of supplements?

After witnessing numerous health transformations in her patients as a result of nutritional supplement therapies, Mary Beth feels that if she could not use dietary supplements in practice, she would have to leave the field. First and foremost she believes that food is medicine, and does not believe in using supplements in health maintenance. But she operates using what she terms “disease-specific etiology-driven recommendations,” which have aided many a patient in improving health outcomes. She has seen patients eliminate or reduce cholesterol medications, significantly improve issues of depression and anxiety, relieve severe asthma symptoms and much more.

Do you have a favorite type of supplement that you believe can be beneficial to some of our most commonly seen chronic health issues?

Mary Beth’s top four supplements are:

- Slipped Elm for constipation (Dosage: 400 mg)
- 5HTP for hot flashes, insomnia, snoring. (Dosage: 100 mg before bed)
- L-theanine for stress, insomnia, anxiety (Dosage: 100-200 mg)

Are there any poorly understood or not yet understood areas about supplements?

It is clear that more research is needed in vulnerable populations like pregnant women, children and the elderly, as well as in the practice area of oncology. Mary Beth would like to see research, industry and academia come together and have a summit on improving the quality, purity and identity of dietary supplements. Her dream is to see more collaboration on advancing the field for public health.

What other resources would you recommend that our readers review in learning about supplements?

The Natural Medicines Comprehensive Database (free to DIFM members) is an amazing tool with which to complete a self-study, as there is a whole CME series available. The database allows professionals to search the database for dietary supplements effective for a disease, condition or symptom, search for drug-nutrient depletion, and print clinician handouts (with links to PubMed references) and patient education handouts in three languages. This database is an endlessly helpful resource tool that offers an effective way to increase knowledge at no additional cost.

Mary Purdy, MS, RDN has been in private practice for the past 8 years and recently started working as a health coach with the company Arivale, helping to guide patients through recommendations based on the unique data of their genetics, microbiome and blood work. She is also an adjunct professor at Bastyr University and a Clinical Supervisor at their teaching clinic. Contact Mary at Mary@NourishingBalance.com.

References


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Fabrizio Mancini, DC – President Emeritus, Parker University
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Dale Bredesen, MD – Founding President and CEO, Buck Institute for Research on Aging
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The RDN as Health Coach: Emerging Opportunities and Skill Development

Natalie Digate Muth, MD, MPH, RD, CSSD, FAAP, ACE Certified Health Coach
Gina Crome, MPH, MS, RD, ACE Certified Health Coach and personal trainer

The American healthcare system has long been viewed as a system in crisis. The US spends approximately 16% of gross domestic product on healthcare, markedly higher than other nations. Despite the amount of funds spent on healthcare, outcomes data continues to show that Americans are getting sicker, as lifestyle-related diseases in the US have reached epidemic proportions. As a result of the Affordable Care Act, the American healthcare system is moving away from the traditional fee for service delivery system and more towards value-based care. This value-based system increases the focus on preventive care; with strong evidence supporting the efficacy of coaching interventions, this sets the stage for numerous potential opportunities for Registered Dietitian Nutritionists (RDN). This informative and empowering session was provided by Natalie Digate Muth, MD, MPH, RD, CSSD, FAAP, ACE Certified Health Coach, dietitian and pediatrician with the Children’s Primary Care Medical Group, Vista, CA and Gina Crome, MPH, MS, RD, ACE Certified Health Coach and personal trainer with Lifestyle Management Solutions, Glendora, CA and Kaiser Permanente, Fontana, CA.

The trend amongst healthcare organizations is the focus on accomplishing “The Triple Aim.” The Triple Aim proposes the question of how quality can be improved, while increasing access to care and lowering healthcare costs, all at the same time. Dr. Muth discussed how difficult it can be to achieve all three, as most of the time two points are covered at the sacrifice of the third. Enter health coaching into the equation: a cost effective interventional method that allows for the monitoring of patients and outcomes.

Implementation of the Affordable Care Act provides for certain preventive services to be offered to patients without incurring copay. The US Preventive Services Task Force (USPSTF) has developed counseling recommendations for free preventive care. Items categorized as Grade A or Grade B are considered preventive and must be covered with no out-of-pocket expense to the patient. A few Grade B recommendations are relevant to the RDN and a health coaching intervention: patients with a BMI >30 should be referred for intensive, multicomponent interventions; children over 6 years with weight to height >95% should be referred for intensive, multicomponent interventions; and, as of September 2014, adults with cardiovascular risk factors should be referred for behavioral counseling to promote healthful detained physical activity for cardiovascular disease prevention.

Centers for Medicare and Medicaid Services (CMS) does allow for an obesity counseling benefit, however it must occur in a primary care setting. Should the Treat and Reduce Obesity Act be passed by Congress, the obesity benefit would be able to be delivered by an RDN outside of a primary care setting. The Medicare Diabetes Prevention Act is also under consideration by Congress, which would allow for interventions for pre-diabetic patients.

Dr. Muth reviewed the philosophy behind the Patient-Centered Medical Home, a strategic multidisciplinary team approach to improve patient outcomes. This approach lends itself perfectly to the application of health coaching techniques, as the requirements include engaging and following up with patients as well as assessing their readiness for making lifestyle changes. These changes in the approach and delivery of healthcare services pave the way for the RDN as the nutrition expert—the go-to provider for nutrition-related interventions. However, do all RDNs possess the necessary communication skills and strategies to effectively facilitate behavior change in patients? Having expertise in health coaching techniques empowers the RDN to improve patient outcomes.

Gina provided an in-depth explanation of health coaching along with the evidence-based research supporting its use. Lifestyle change encompasses more than simply changing one’s diet. Essentially, health coaching is “a collaborative approach to support health behavior change and improved health through three pillars: nutrition, physical activity, and behavior modification.” Health coaching can be an attractive approach for the RDN as an opportunity to improve communication skills, increase client retention, improve patient outcomes, and increase marketability to new clients who are seeking more than just the eat this, not that, approach. She illustrated the results of one study using coaching with patients with type 2 diabetes and a second study with coronary heart disease patients. In both randomized controlled trials, the patients who received health coaching experienced better outcomes.

Gina detailed the difference between the traditional care model versus the health coaching model; the most obvious is the focus on allowing the patient to become the driver of change while the provider acts as a guide. Through this approach the client is seen as the expert of their own life, they have control over accepting information from the provider, and determining solutions that meet their needs as an individual. This model also affords the patient opportunity to determine their intrinsic motivators, rather than only addressing extrinsic factors. Real or perceived barriers to change are addressed, thereby providing a decreased resistance to change overall.

Both Dr. Muth and Gina outlined the various tools most often utilized with a health coaching approach. These models included: Positive Psychology, ACE Cycle of Change, Transtheoretical Model of Behavior Change, Motivational Interviewing, Cognitive Behavior Coaching, and SMART Goal Setting. The presenters then allowed the audience a unique opportunity for practical applications with role-playing activities for each of the tools discussed, creating an interactive, fun, hands-on experience. Overall, the presenters effectively outlined each of the tools and techniques utilized by health coaches, explaining the rationale for its usefulness to the RDN’s practice, and successfully engaged the audience in the health coaching experience.

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Who Can Be Successful in Primary Care? You Can.

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Catherine Virginia Moore, APRN, MN, FNP-BC, cvmoore@aol.com, www.lifechg.com

Primary care, which focuses on wellness/prevention and chronic conditions such as diabetes, hypertension, and hyperlipidemia, is a natural fit for the registered dietitian nutritionist (RDN) practicing integrative and functional medicine. To this end, the “Who Can be Successful in Primary Care? You Can.” session was presented in the first Emerging Integrative Approaches for Nutrition and Dietetics Track during the 2014 Food & Nutrition Conference & Expo™ (FNCE®) in Atlanta, Georgia. Session presenters Tracy Hussey, MSc, RD and Catherine Virginia Moore, APRN, MN, FNP-BC are both health care professionals in the primary care setting, and were able to share valuable insight and tactics for RDNs hoping to move into primary care.

Ms. Hussey, a primary care RD in Ontario, Canada, discussed the fledgling program she helped establish in offices throughout the province. As in the United States, it has historically been a difficult task for the RDN to be accepted and also, compensated, as part of a primary care health team. Most primary care facilities are physician’s offices and clinics, containing doctors (MD/DO), physician assistants (PA), nurse practitioners (NP), and nurses (RN/LPN). Ms. Hussey described how a group of Canadian RDNs came together with the purpose of working nutrition therapy into primary care. Through their diligent research and self-promotion, they were able to convince the provincial healthcare authorities to incorporate RDNs into healthcare teams. They have been very successful—for example, preterm births have decreased by 30% in the region since RDNs have been included in prenatal care; they hope to bring the program to the rest of Canada soon.

Ms. Moore is a family nurse practitioner in private practice, and she was able to provide unique insight gained from her own struggle in Alabama to be accepted into primary care. Ms. Moore discussed how, while most US patients receive treatment in ambulatory care settings, most RDNs reside in acute care settings. Ms. Moore also emphasized that healthcare delivery is slowly changing to coordinated care. It is of paramount importance that RDNs advocate being associated with the cost-savings that can result from prevention and lifestyle change treatment, because the major challenge to integration is the economic burden of having an RDN in the primary care office.

Ms. Hussey and Ms. Moore shared some useful methods for RDNs to demonstrate their value and potential in the primary care setting:

1. **Identify a primary care medical office that would employ an RDN.**
   - Contact healthcare provider friends that work in a primary care office. Most MD/NP/PA practitioners don’t know what RDNs do! About all they know is RDNs talk about food! Contact any acquaintances you may have that are pharmaceutical, lab, and other medical sales representatives who call on primary care offices. Associate yourself with allied health professionals, i.e. behavioral health professionals. Network with other RDNs interested in primary care for awareness and local reform.

2. **Sell your ability and the services you can offer.**
   - Start with Medicare Annual Wellness Visits in conjunction with the MD/NP, or PA. You can also add Medicare MNT visits (no deductible and no copay). This is attractive to primary care offices because it can be a revenue center for the practice, since many primary care offices currently do not have time to perform such services.
   - Offer lifestyle counseling to improve medical outcomes (diabetes, hypertension, prenatal, etc.). Primary care RDNs can explain test results with dietary implications to patients such as lipid testing, vitamin D levels, glucose/HbA1c, thus reducing physician workload. Be prepared to give the physician supporting data/statistics for improved outcomes! A simple Excel spreadsheet disease registry that quantifies outcomes is sufficient.
   - Become a Certified Diabetes Educator (CDE) so you can provide diabetes self-management care right in the physician’s office. Ms. Hussey added that in Canada, their group was trained in taking blood pressure (BP) and diabetic foot checks to add to their skill set for diabetes management visits.
   - Research corporate wellness programs and private payer lifestyle change program benefits.

3. **Determine Financial Compensation/Credentialing**
   - How will you be compensated—hourly, salary, per patient? Will you bill independently, or will the physician/primary care group pay you?
   - If you plan to bill independently for Medicare patient visits you will first need an NPI number
   - Next, obtain a Medicare number to bill in all 50 states as an RDN
   - For Medicaid, each state has its own application process, as do all insurance companies.

4. **Develop a rapport with support staff.**
   - A positive work environment is imperative for the workflow process with patients and to facilitate provider referrals. Review patient charts to determine who is in need of RDN services. Be a team player!

For additional information:


Reviewed by: Angela Wolfenberger graduated in May 2015 from the Kansas State University Didactic Program in Dietetics with a B.S. in Dietetics. She also holds a B.A. in Biology and Secondary Education, and has completed several graduate courses in Biotechnology. She is an Integrative Nutrition Health Coach (International Association of Health Coaches). Contact Angela at linawolf@ksu.edu.

Yoga Skills for Dietitians: Evidence, Psychophysiological Mechanisms and Tools You Can Use

Sat Bir Khalsa, PhD Sandeep (Anu) Kaur, MS, RDN, RYT

What better way to start off a Monday than with diaphragmatic breathing to set the tone for clarity, peace, and openness. This FNCE® session was buzzing with renewed energy and focus, attendees ready to know more about yoga practice applications. Moderator Annie B. Kay, MS, RDN, LDN, RYT helped attendees relax and invited mindfulness with the union of mind, body, and breath, honoring the true Sanskrit translation of “yoga” as “union” or “yoke.” Presenter Anu Kaur, MS, RDN, RYT opened her presentation by reminding professionals of the importance of mindfulness, stating “If we’re saying mindfulness is a self-help fad, we’re really undermining its scientific potency.” Kaur continued with reviewing the Integrative and Functional Medical Nutrition Therapy (IFMNT) Radial and elaborated on the place for mindfulness-based interventions—including yoga, Tai Chi, Qi Gong, and deep breathing—in the mind-body component of nutrition therapy. These interventions can complement weight management, chronic disease management, and behavior change modalities already used in practice by dietetic professionals.

Kaur continued with examples of the beneficial ways yoga and mindful, deep breathing can help clients reach their health and nutrition-related goals. She demonstrated simple ways to use breath to access a deeper understanding during counseling interventions and provide overall stress reduction. Just sitting with a client for a few moments with the eyes gently closed for 3-4 deep inhalations and exhalations at the beginning and/or end of a session sets an intention, an acceptance, and open-mindedness for the session, improving clarity both physically and psychologically.

Kaur shared her stance on this type of practice being well within the RDN’s scope of practice and referred back to the IFMNT Radial and Standards of Professional Performance paper.

Sat Bir Khalsa, PhD began the second half of the session explaining that yoga is not strictly positions contorting one’s body into a pretzel, laying on one’s mat almost asleep, a cult, a religion, or an unattainable combination of physical feats achieved in a certain time frame. He exquisitely explained yoga is a “practice,” a lifelong journey of mindfulness, and an evolution in physical ability. He further qualified his sentiment with reference to Bagchi and Wenger’s findings in 1957 that concluded “…physiologically Yogic meditation represents deep relaxation of the autonomic nervous system without drowsiness or sleep…” Dr. Khalsa continued to provide study after study of the physiological benefits of yoga related to:

- increased respiratory efficiency
- enhancement in genes associated with energy metabolism, mitochondrial function, insulin secretion, telomere maintenance and reduction in inflammatory response
- mood, anxiety and thalamic GABA levels in the brain
- alteration in brain structure and pain tolerance
- attention, stress management and mood enhancement of insulin sensitivity and effect on insulin receptors
- reduction in obesity, reversal of heart disease and decreased weight gain
- reduction in medication and improvement in mental health status.

Dr. Khalsa emphasized the explosion of yoga related research, its incorporation into schools, airports, cardiac rehab centers and in cities across the nation. He stated that it is a grassroots movement with an emerging area of evidence-based research that needs to continue. Dr. Khalsa concluded his session by adding light-hearted humor to the strong science showcased, joking “Yoga is gluten-free” followed by a cartoon featuring two people meditating with the caption of “Meditation, it is not what you think,” cleverly eluding to a double meaning.

Annie Kay closed this enlightening and riveting session by reminding us that yoga, just like dietetics and medicine, is “a practice, not perfection.” Namaste.

Reviewed by Monique Richard, MS, RDN, LDN, Integrative Clinical Dietitian, AAAI Certified Yoga Instructor, and DIFM Chair 2015-2016. Contact Monique at mnr2v@mtmail.mtsu.edu.

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Dietitians in Integrative and Functional Medicine

a dietetic practice group of the Academy of Nutrition and Dietetics
References

Three Ways to get the Most from Curcumin

Maribeth Evezich, MSN, RD, CDN

Introduction

Used for centuries in traditional Ayurvedic and Chinese medicine, the healing powers of turmeric and curcumin—the most active constituent of the spice—have recently gained mainstream awareness within the modern medical community and general public. Yet, few individuals understand how to integrate this spice into their daily routine for health purposes. This article provides an overview of the research on curcumin and turmeric’s health benefits and recommendations for boosting bioavailability, as well as precautions for use. It also provides a simple beverage recipe that can serve as a therapeutic tonic or in lieu of typical turmeric supplement protocols.

How Solid is the Research on Turmeric and Curcumin?

In 1937, The Lancet published the first article regarding the use of curcumin. The article focused on the use of curcumin as a treatment for human biliary diseases.1 However, modern medicine’s interest in the spice did not develop until decades later. In 1971, Indian researchers found evidence suggesting that turmeric may possess anti-inflammatory properties. Much of this activity appeared to be due to one particular constituent—curcumin.2 Several decades of research and more than 3,000 research studies later, turmeric and curcumin’s widespread health benefits have been well established. Some of the researched health benefits include:

- Curcumin possesses potent anti-inflammatory activity due to its inhibitory effects on cyclooxygenases 1, 2 (COX-1, COX-2), lipooxygenase (LOX), TNF-α, interferon γ (IFN-γ), inducible nitric oxide synthase (iNOS), and NF-κB.3,4
- Experimental evidences suggest that curcumin may also exert inhibitory effects on cancer development and progression, potentially due to a combination of anti-oxidant, anti-proliferation, pro-apoptotic, and anti-angiogenic properties through the regulation of genes and molecules that are involved in multiple signaling pathways.4
- Curcumin acts as an immune modulator, conferring beneficial effects in arthritis, allergy, asthma, atherosclerosis, heart disease, Alzheimer’s disease and diabetes.5
- Curcumin exhibits potent antioxidant, antiviral, antibacterial and antifungal properties.6
- Curcumin has been suggested to be beneficial in the prevention and management of over six hundred health conditions.7
- Turmeric has been found to be comparable to fourteen various drugs and medications and to have no adverse side effects, even at doses up to 8,000 mg per day (approximately one rounded teaspoon).8,9
- For example, turmeric was found to be as effective as a particular type of cholesterol medication, corticosteroids (steroid medications), blood thinner, and even antidepressants such as Prozac.10

Curcumin may be one of the most researched botanical supplements in the world. So, it is no wonder curcumin has been called a “Spice for Life.” Despite turmeric’s healthful reputation, few Westerners integrate this spice into their diet beyond the occasional curry dish. Following are tips, considerations and a recipe to bring turmeric into one’s natural pharmacy and pantry.

Curcumin or Turmeric?

Curcumin may get the media spotlight, but it is just 5% of turmeric’s weight and just one of its more than 300 phytochemicals, including various phenolic compounds, known as curcuminoids. The other major curcuminoids include: demethoxycurcumin, bisdemethoxycurcumin, and cyclomucurocin.6

Many studies prove the various curcuminoids work synergistically together and certain combinations of curcuminoids produce more biological action than any curcuminoid used alone.9 Not surprisingly, many practitioners recommend using whole turmeric for cooking as well as supplementation for health purposes. This reflects integrative medicine’s belief that whole plants are usually a better choice than isolates; a trust in “nature’s wisdom.”

Bioavailability?

A preference for whole turmeric may also be due to the well-documented low bioavailability of curcumin. When consumed, most of it goes directly into the gastrointestinal tract and is expelled. An hour following oral ingestion, very little remains in the bloodstream due to rapid metabolism in the liver and intestinal wall, and rapid systemic elimination.11

In contrast, turmeric stays in the digestive tract much longer than curcumin alone. Further, the natural oils found in turmeric root and turmeric powder enhance curcumin’s bioavailability seven to eightfold in humans.12 The whole, may in fact, be greater than the sum of its parts.

So, how can the low bioavailability of curcumin, as an isolate or as part of turmeric, be improved? A big answer is in your spice cabinet: black pepper. Piperine, the compound that gives pepper its pungent flavor, inhibits drug metabolism. Specifically, piperine inhibits the liver’s biotransformation of fat-soluble compounds into water-soluble compounds for excretion. Research shows that just a quarter teaspoon of black pepper can increase the bioavailability of curcumin by 2000%.13 But, even a quarter teaspoon might be a challenge for some people’s palates. Fortunately, as little as 1/20th of a teaspoon of black pepper can significantly boost curcumin levels.14

However, piperine should be used with caution by those on prescription medications. This same ability to inhibit curcumin metabolism could also alter clearance of prescription drugs. Another way to improve bioavailability is to prepare curcumin or turmeric with fat, as is done in curries.

Precautions

As is the case with so many herbs and spices, turmeric should be used with caution. Individuals with gallstones should only take turmeric under the direction of their doctor. And, because turmeric slows blood clotting, it should not be taken by those with clotting disorders or before surgery. Since turmeric is included in Ayurvedic formulas for birth control, women trying to become pregnant should limit their consumption of the spice, and it should be avoided entirely while pregnant or nursing.15
**TURMERIC ANTI-INFLAMMATION DRINK**

This turmeric recipe creates a true tonic. Definitions of the term range from “a medicine that invigorates or strengthens” to “anything invigorating physically, mentally, or morally.” Both are apt descriptions for this drink. The recipe features a flavor profile which counteracts the bitterness of the turmeric, which many find off-putting. More importantly, it uses all three ways to get the most from the spice; 1) using the whole spice, 2) including black pepper to boost bioavailability, and 3) the optional addition of coconut milk for fat-solubility. With its bright color, dynamic blend of flavors and energizing botanicals, this turmeric drink can serve as a therapeutic tonic or a post-workout recovery drink. To use in lieu of typical turmeric supplement protocols, drink a 1/2 cup serving three times daily. Yield: 7-8 servings.

**INGREDIENTS:**

- 3 cups coconut water (or filtered water)
- 1/2 cup fresh ginger slices or 1/4 cup juiced ginger (one 2-inch knob)
- 1/4 cup fresh lemon or lime juice
- 6 fresh mint sprigs
- 1 tablespoon dried organic (non-irradiated) turmeric (or one 2-inch knob juiced)
- 1/4 teaspoon cardamom
- 1/8 teaspoon sea salt
- 1/8 teaspoon black pepper
- 2 teaspoon raw honey (optional)
- Coconut milk to taste (optional)

This drink recipe works with or without a juicer and with either fresh or powdered turmeric. A blender can also be used to process the roots with a small amount of the filtered or coconut water. Combine all the ingredients in a sealable, BPA-free 750 ml (at least 3 cups) container. Add more filtered water or coconut water (including the optional coconut milk) to the top and refrigerate overnight. When ready to drink, strain and serve over ice.

**Take Home Message**

Used for medicinal and culinary purposes for centuries, scientific research has firmly established curcumin’s health benefits for preventative or therapeutic purposes. To overcome the challenge of curcumin’s low bioavailability, it is recommended to use whole turmeric spice, combine it with a small amount of black pepper and include a fat source in the preparation. Nutrition professionals can provide their patients with this guidance for integrating curcumin, a “Spice for Life” into their daily routine.

Maribeth Evezich, MSN, RD, CDN is a Lifestyle Medicine Consultant and Registered Dietitian living in New York City. She completed her Master of Nutrition degree at Bastyr University. She specializes in functional medicine, supplement protocols, and culinary nutrition. For more of Maribeth’s nutritional insights, visit her blog: Whole Foods Explorer or contact her at mevezich@yahoo.com.

**References**

News You Can Use

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Recent and Upcoming Meetings


September 28-October 2, Institute for Functional Medicine, Applying Functional Medicine in Clinical Practice. Atlanta, GA. http://www.functionalmedicine.org/conference.aspx?id=2916&cid=0&section=t500


The Integrative and Functional Nutrition Academy™ (IFN™), founded by Dr. Sheila Dean, DSc, RDN, CCN, CDE and Kathie Swift, MS, RDN, LDN, FAND, EBO, offers dietitians, nutritionists and other healthcare professionals educational opportunities. IFNA™ provides both online programs as well as onsite immersion experiences. All IFNA™ educational content is evidenced-based and peer-reviewed. IFNA™ is a CPE accredited provider by the Commission on Dietetic Registration. A certificate of training is available, as well as a new advanced practice credential, Integrative and Functional Nutrition Certified Practitioner (IFNCP™). For more information, visit www.IFNAcademy.com.

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Electronic Mail List (EML) Two highly active threads discuss canola, coconut and olive oils. The North American Olive Oil Association (NAOOA) launched a seed program to combat olive oil adulteration; check http://www.naooa.org/ for a listing of certified brands. A member also recommends www.truth-inoliveoil.com, a free site providing ratings of olive oils. Other threads discuss vegan protein powders, probiotics after antibiotics, and treatment strategies for a variety of health issues, including: IBS, chronic sinusitis, chronic UTIs, PCOS and skin breakouts. Join the EML here: https://groups.yahoo.com/neo/groups/DIFM_Listserv/info

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Reviews and Resources

A Review of the New York Attorney General’s Recent Actions against Herbal Dietary Supplements

In February 2015, NY State Attorney General (AG) Eric T. Schneiderman demanded that GNC, Target, Walgreens, and Walmart remove certain store-brand herbal supplements from their shelves based on the results of DNA barcoding analysis showing unlisted—or missing—ingredients. This review by the nonprofit American Botanical Council (ABC) details actions taken by ABC, trade organizations such as the American Herbal Products Association, the Consumer Healthcare Products Association, the Council for Responsible Nutrition and the United Natural Product Alliance in response to the AG’s demands. Herbal experts have questioned the AG’s actions on the basis of a single and relatively new DNA barcoding test as, “the technology is not suitable for detecting plant DNA in dry, liquid, or powdered herbal extracts” and it is “not considered a universally appropriate method for identity testing of finished herbal products, especially extracts.” Additional testing using different technologies should be used to confirm DNA barcoding results. The review also includes a discussion of the original and problematic 2013 study by Newmaster, et al., which sparked the AG’s investigation and details lessons learned from the ongoing media coverage of this topic. http://cms.herbalgram.org/hec/volume12/03March/NYAG_HerbalSupplement_InvestigationReview.html?ts=1429672530&signature=9459e4c4fa01eb54904186960f4cab17

The Expansion of Ketogenic Diet Therapies, and Opportunities for the RDN

by Kristen Mancinelli, MS, RDN

It’s fair to say there is some mystery and a good deal of fear around the ketogenic diet (KD). Questions arise about the risk of acidosis and hypoglycemia in the short term, and heart disease resulting from very high fat intake over the long term. The diet promotes significant changes in body chemistry, and there are potential side effects—but these aren’t sufficient reasons for RDNs to shy away from learning about and using the ketogenic diet in practice. Ketogenic therapies have been used in Western medicine for a century in the treatment of pediatric epilepsy, and they are rapidly becoming recognized as effective for other neurological disorders (including autism, bipolar disorder, depression, migraine, Alzheimer’s and Parkinson’s disease), as well as diabetes and obesity.1-4 RDNs cannot afford to remain ignorant about the implementation or applications of this important diet therapy.

To learn more about the clinical applications of the ketogenic diet, I attended the “Epilepsy Summit 2015” hosted by the Charlie Foundation for Ketogenic Therapies and the Epilepsy Foundation of Greater Los Angeles. Healthcare professionals (including many RDNs) working with individuals with seizure disorders, and family members of those individuals attended.
All attendees were actively learning how to work with this important therapy. No entity has done more to promote the use of ketogenic therapies than The Charlie Foundation, founded by Charlie Abrahams in 1994 after his son, who suffered from epilepsy, became seizure-free on the ketogenic diet. The Foundation now provides information about diet therapies for people with epilepsy, other neurological disorders, and tumors cancers.

A ketogenic diet produces blood ketone levels high enough to allow body tissues, especially the brain, to begin to use ketones as a significant metabolic fuel. The three ketone bodies acetoacetate, β-hydroxybutyrate, and acetone, are breakdown products of fat oxidation and are normally present in negligible amounts. Typical blood ketone levels are <0.3 mmol/L; they rise slightly after an overnight fast then dip again as soon as some carbohydrate is consumed. This balance will shift in a ketogenic diet, where blood ketone levels will rise to 3-8 mmol/L. It’s important to note that this physiologic state of ketosis is different from the life-threatening state of ketoacidosis, which RDNs see most commonly in patients with uncontrolled diabetes.

Ketosis is achieved by following a diet mainly of fat, with enough protein to meet needs, and very little carbohydrate. Ketogenic diets are classified by ratio of fat grams to protein + carb grams: the classic ketogenic diet has a ratio of 4:1 and is about 90% fat; modified versions are 3:1, 2:1, and 1:1 (a typical, non-ketogenic diet has a fat to protein + carb ratio of 0.2:1). Another version of a ketogenic diet, called the MCT oil diet, is high in the medium-chain triglycerides that produce ketones more readily than long-chain triglycerides, allowing for more protein and carbohydrate to be consumed. The Modified Atkins diet—probably the most liberal of the ketogenic diets—restricts carbohydrates to about 20 g per day and promotes high fat consumption with no other specific nutrient ratio requirements.

Compliance with this therapy can be a challenge, as the ketogenic meal pattern is highly unusual for most people. At the Ketogenic Summit there was a strong focus on educational challenges and the need for sensitivity and compassion when working with parents and families. One presenter said that parents may become distraught when the diet is initiated as they feel they are “starving” their child, and that this feeling eventually leads to acquiescence to the therapy: the diet pales in comparison to watching their infant or toddler seize. In addition to the emotional struggle, the practical aspects of the diet can also be overwhelming for families to manage. Appropriate fat-rich foods are more expensive than carbohydrate-rich foods. Parents and family members must learn new recipes and food preparation methods, and careful measuring and weighing of foods is required. Later, when the diet is liberalized and they must find foods in the grocery store, there is a new layer of difficulty in learning to read food labels and estimating nutrient content of mixed products.

The Charlie Foundation’s keto diet calculator is a much-loved tool among ketogenic therapy providers. This free online interface for those working with ketogenic therapies (www.ketodietcalculator.org) allows professionals and caregivers to enter an individualized diet for each patient, create daily and per meal ratios of fat, protein, and carbs, and enter foods, meals, and medications.

Beth Zupec-Kania, the Charlie Foundation’s dietitian and a leader in the field, works directly with patients undergoing ketogenic diet therapies, and she is a tireless educator of professionals. Beth is published widely in the literature on ketogenic diets and has seen tremendous improvement in patients with a range of conditions, including neurological and metabolic disorders. “For those who are willing to comply,” Beth says, “more than half have major improvement in their condition.”

While nutrient calculations are the bread and butter of the RDN, the ketogenic diet isn’t just about ratios of carbs, fat and protein. The KD requires a sophisticated understanding of metabolism. “Ketogenic therapies are explicitly metabolic therapies,” says Beth. “There is a metabolic shift to using fatty acids vs. glucose as the main source of energy, which has many implications.” Beth encourages RDNs interested in using ketogenic therapies to seek training and support in order to become proficient with managing patients through the KD process and preventing or treating adverse effects. As a starting place, The Charlie Foundation is spearheading the creation of a dietitian consortium to promote those ketogenic diet experts working in private practice or consulting. The foundation website is a great resource, and the foundation holds conferences every couple of years (for the schedule, visit http://www.ketoconnect.org/). Experiential trainings are also available from other sources including a week-long experiential training designed by Denise Potter, MS, RDN on the KD for pediatric epilepsy at the University Hospital in Ann Arbor, MI; Ketogenic Diet Seminars provided by Beth Zupec-Kania to hospitals, clinics and private practice RDNs, which include a Professional’s Guide, a Ketogenic Diet Primer, diet booklets and forms; and trainings upon request for KD in the treatment of epilepsy at John’s Hopkins.

Thanks to the significant benefit of ketogenic therapies for a wide variety of conditions, the medical community has begun to embrace ketogenic diet therapies more fully in the last few years. Two publications in 2008 helped make this shift possible: a randomized controlled trial on the use of KD therapies for childhood epilepsy published in the journal Lancet Neurology, as well as consensus guidelines for the clinical management of children receiving the diet in the journal Epilepsia. According to Beth, the use in other applications has emerged largely because epilepsy is often a comorbidity with other diseases. “For example,” she says, “many people with autism also have epilepsy. Every child with autism that I’ve worked with who we have started on the KD for epilepsy has had an improvement in behavior. I have one patient who is no longer on the autism spectrum because of the KD (although she still has occasional seizures).” In addition, glioblastoma brain tumors often present with a seizure initially, and the KD can shrink the tumor and even eliminate it in some cases. The use of ketogenic diet therapies for these and other conditions is a rich and growing area of research.

Kristen Mancinelli, MS, RDN is author of The Ketogenic Diet: A Scientifically Proven Approach to Fast and Healthy Weight Loss (Ulysses Press, 2014) and is DIFM Fulfillment Chair. Contact Kristen at Kristen.Mancinelli@gmail.com.

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The APOB insertion/deletion polymorphism (rs17240441) influences postprandial lipaemia in healthy adults. *Nutr Metab (Lond)*. 2015;12:7. doi: 10.1186/s12986-015-0002-9. eCollection 2015. PubMed ID: 25793007. The rs17240441 variant of the APOB gene was associated with greater variability in postprandial lipemia and insulin levels. Although postprandial lipemia is a recognized risk factor for cardiovascular disease, further study and replication of this study’s findings is still required.

Lycopene bioavailability is associated with a combination of genetic variants. *Free Radic Biol Med*. 2015. pii: S0891-5849(15)00110-0. doi: 10.1016/j.freeradbiomed.2015.02.033. [Epub ahead of print] PubMed ID: 25772008. Blood levels of lycopene from tomatoes varies considerably between individuals. Table 3 shows a list 28 variants in or near 16 genes which explained 72% of the observed variability in postprandial lycopene levels in this study.


The anti-inflammatory effects of resveratrol on human peripheral blood mononuclear cells are influenced by a supernoxide dismutase 2 gene polymorphism. *Biogerontology*. 2015. [Epub ahead of print] PubMed ID: 25753816. The effectiveness of resveratrol as an antioxidant was found to vary, depending in part on the rs4880 variant of the SOD2 gene.

Genetic variations in magnesium-related ion channels may affect diabetes risk among African American and Hispanic American women. *J Nutr*. 2015;145(3):418-24. doi: 10.3945/jn.114.203489. Epub 2015 Jan 7. PubMed ID: 25733456. Among Hispanic American postmenopausal women with low magnesium intakes, variants in or near the following genes were associated with increased risk of type-2 diabetes: CLDN19, SLC41A1, and MMGT1. For women in that group with high magnesium intakes, a variant in the NIPA2 gene was associated with reduced risk; however, with high intakes, a variant in the KCNJ11 gene was associated with increased risk.

Among African American postmenopausal women, high magnesium intake was associated with reduced risk among those with a variant in the CNNM1 gene. More research is clearly warranted.

A preliminary qualitative exploration of dietitians’ engagement with genetics and nutritional genomics: perspectives from international leaders. *J Allied Health*. 2014;43(4):221-8. PubMed ID: 25433186. Dietitians acknowledge growing legitimacy and applications of nutritional genomics as additional research continues. The need for education at every level, as well as a healthcare system that helps develop and cultivate its practical uses, is also discussed.

Can genetic variability in α-tocopherol bioavailability explain the heterogeneous response to α-tocopherol supplements? Antioxid Redox Signal. 2015;22(8):669-78. doi: 10.1089/ars.2014.6144. Epub 2014 Nov 12. PubMed ID: 25289663. Tables 3-5 list multiple gene variants which were found to account for 82% of the variability between individuals with regard to vitamin E bioavailability, which the authors suggest can help predict response to vitamin E supplementation.

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Supplementing Dietary Nutrients:  

Early in this manual, Dr. Guilliams defines its purpose. It is not a nutrition textbook or meant to provide guidelines on when or how to use nutritional supplements. The intention is to walk clinicians through supplement options addressing the most significant concerns and issues with the goal of bringing clarity to making choices and recommendations for patients. It does not specifically make these recommendations, but instead offers research mixed with educated opinion for a discerning clinician, based on their own methods of practice, to reach conclusions.

Thomas Guilliams is a molecular immunologist, researcher, and developer of natural-based therapies as well as founder of the Point Institute, an independent research organization offering virtual seminars and white papers. This is one in a series of resource manuals published by the Institute. Topics surrounding the use of dietary supplements are discussed detailing each macro and micronutrient, not from a standpoint of their function but from the perspective of why and how best to supplement. It points to studies showing the average American diet is deficient in critical nutrients supporting the wisdom of safe supplementation.

The first section outlines a core philosophy that Guilliams describes as a functional lifestyle modification approach. This is likely least useful for the integrative dietitian presenting familiar information such as Mediterranean diet, benefits of exercise, and behavior modification. The next section with a monograph for each specific nutrient is also familiar; reading through them is like taking a biochemistry class review. Beneficial though because for each nutrient questions are answered on issues of sound supplementation based on available biochemical, pharmacokinetic, animal and human study data. Each is a one to three page quickly read chapter.

Several standout sections make owning this book worthwhile all on their own. The articles on probiotics and how to choose a marine-derived omega-3 product were filled with value. A summary defines what dietary supplements are and how they are regulated. A section on botanicals highlights topics prominent in current media including preparation and contamination issues. On the subject of provitamins and activated forms of both vitamins and minerals, Guilliams asserts that making across the board assumptions that these forms are better utilized is wrong, instead posing that each individual nutrient be evaluated for the most beneficial form to supplement.

The dietary supplement market changes exponentially, growing with nutrition research, guidelines, and choices. Supplementing Dietary Nutrients brings together in one place the research and decision-making guidelines from source to mode of delivery to dose. As more supplement choices appear complicated by misinformation and the media it can be challenging to keep up. The information in this book is thought provoking, concise, logical and supported by research data. It serves its purpose well as a tool to strengthen clinical practice.

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Dietitians in Integrative and Functional Medicine  
a dietetic practice group of the  
Academy of Nutrition and Dietetics
Legally Lean

By Lisa Dorfman
Softcover, 248 pages.

Written by sports nutritionist Lisa Dorfman, MS, RD, CSSD, LMHC, FAND, who practices what she preaches, Legally Lean is a book designed to provide expert and accurate guidance to high school, college, as well as adult aged athletes. This easy-to-understand read focuses on all aspects of nutrition strategies that promote optimal performance and health for all levels of athletes.

Divided into five sections, the book explores the importance of ‘food first’ while considering the use and impact of dietary supplements and the serious consequences of performance-enhancing drugs. The introduction sets the stage for a healthy approach by acknowledging that athletes, as in years and centuries past, will do whatever it takes, whether through legal or illegal means, to look better, become stronger and faster, and to win. Statistics and warnings about steroid use, particularly among those in their late teens and beyond set the stage for why the ‘food first’ concept is the best choice for performance enhancement. Discussion about dietary supplements follows with information about who uses them and the risks associated with using them, including the potential for contamination with banned substances, the amount of vitamin, mineral or herbal content being more or less than claimed, and individual and varied response to supplements such as GI distress.

Section one includes five basic principles that provide a basic roadmap to follow as the reader begins their quest towards personal best. Detoxing unhealthy habits is identified as the most important part of the program and the steps for doing so are outlined in this section. Section two, the playbook, sets ground rules for a healthy diet, CORE foods, and hydration. The importance of clean eating, including organic foods and non-GMO products, is emphasized. Section three introduces the CORE Performance Plan, designed for healthy adults over 18 years of age to jump start their weight loss and establish healthier eating. Pre- and post-workout food, meal and snack options are offered.

In section four, performance nutrition is highlighted with the latest information included on food for fuels, body composition, gut distress, and nutrition periodization. Section four reviews the pros, cons and cautions of sports performance supplements. It is perhaps the most important section of the book for those who want to improve performance in a healthy manner. Young athletes and those competing in college or professionally may be vulnerable to the claims of quick improvements with dietary supplements. This section gives the reader questions to ask her or himself before taking supplements, information on how to read a supplement label, and the important things to look for when considering supplementation. Appendix A summarizes the most common and popular supplements. The book concludes with easy to prepare recipes and selected references and sports organizations/agency resources.

This book is an excellent resource for any RDN working with athletes, young or old, and for parents of children competing at the high school and college level. This book is a winner in the category of sports nutrition guidebooks.

Reviewed by Sarah Harding Laidlaw, MS, RDN, CDE, editor, The Integrative RDN. Contact Sarah at peaknut70@gmail.com.
The University of Kansas (KU) Integrative Medicine and the Department of Dietetics and Nutrition (DN) are excited to formally network with Dietitians in Integrative and Functional Medicine (DIFM). Members to provide information and practical clinical practice applications for Integrative and Functional RDNs, DTRs and students who are interested in learning more about the integrative and functional medicine paradigm. KU Integrative Medicine has two staff RDNs: Randy Evans, MS, RDN, and author, Leigh Wagner, MS, RDN. Diana Noland, MPH, RDN, LD, CCN, is a consultant and adjunct faculty at KU. KU’s nutrition team has created several learning opportunities for KU nutrition students, including annual workshops, a graduate-level certificate program, and an intern practicum experience. The nutrition team at KU looks forward to expanding these offerings to a wider audience of practicing clinicians (including non-nutritionists), and especially to offer these opportunities to DIFM members.

Students in the KU Dietetic Internship (DI) program attend three annual integrative-focused workshops. The first workshop introduces students to the foundational concepts of integrative dietetics, and helps them begin to develop their integrative lens. The second workshop reviews the Academy’s Nutrition Care Process (NCP) and puts the NCP within the framework of integrative dietetics. We discuss the differences between conventional and integrative assessments, and emphasize that integrative RDNs build on the foundation of conventional education. Finally, the third workshop focuses on the business side of integrative dietetics and the ethical and safe uses of dietary supplements within the context of nutrition entrepreneurship.

Students and RDNs interested in further developing their clinical skills and integrative dietetics knowledge base should take advantage of KU’s graduate-level certificate in Dietetics and Integrative Medicine. The certificate includes four online, graduate-level courses specific to the principles of Dietetics and Integrative Medicine and credits that can be used toward a graduate MS or PhD nutrition or dietetics degree.

- DN 880 Dietary and Herbal Supplements, focuses on the evidence, ethics and clinical uses of dietary supplements.
- DN 881 Introduction to Dietetics and Integrative Medicine, focuses on the paradigm of integrative dietetics and also challenges students to think like an integrative RDN through discussion boards, case-based assignments, and a semester project that requires students to write a review paper summarizing the evidence for integrative medicine therapies that utilize nutrition-related interventions.
- DN 882 A Nutrition Approach to Inflammation and Immune Regulation illustrates the integrative RDN as a competent healthcare practitioner to who applies evidence-based research to support integrative concepts and protocols. Students examine evidence for the role of anti-inflammatory foods, nutrients related to chronic disease, probiotics/probiotics and repair of the digestive tract in the context of digestive health and general wellness.
- DN 980 Nutrigenomics and Nutrigenetics in Health and Disease introduces both research and clinical applications of diet and lifestyle factors that ultimately affect gene expression and polymorphisms that may influence disease risk in response. Clear understanding of these concepts can empower dietitians within academic, industry and clinical environments.

Each year, KU Integrative Medicine accepts two students into the KU Dietetics and Integrative Medicine Fellowship program. Fellows take the four certificate courses described above, attend three workshops, and have the opportunity to complete nearly half of their DI internship hours within the KU Integrative Medicine clinic setting. Fellows are immersed in KU’s multidisciplinary team, which gives them the opportunity to experience the team working together to solve complex health cases. The KU Integrative Medicine clinic team provides personalized healthcare. Members include three medical doctors (MDs), a naturopathic doctor (ND), an advanced practice registered nurse (APRN), a physician assistant (PA), two RDNs, an infusion nurse (RN), two biofeedback technicians and a soon-to-be certified MD acupuncturist. Weekly team meetings are held to discuss complicated patients and learn from each other’s practice and knowledge.

Clinic RDNs also teach cooking classes to various audiences. These include cardiovascular rehabilitation patients, cancer survivors, their caregivers, and any individuals interested in taking classes offered at the Healing Foods Kitchen housed within the clinic.

DIFM Members can take advantage of two webinars offered by KU in the spring and summer of 2015. The webinars will summarize content covered in two of the certificate courses. KU looks forward to deepening the networking relationship with DIFM in the coming year by providing opportunities to further advance training in the specialty of integrative and Functional Medicine, and hopes you’ll join in on the upcoming webinars!

Leigh Wagner, MS, RDN is an Integrative and Functional RDN at KU Integrative Medicine in Kansas City. She loves building relationships with clients and investigating their histories to design personalized nutrition and supplement programs. Leigh teaches cooking classes on campus and is working toward a PhD in Medical Nutrition Science from the KU. Please join her on Instagram @GoodKarme for posts on nutrition, motivation and recipes.
Sports Nutrition: An Integrative and Functional Perspective

An interview with and commentary by “The Running Nutritionist,” Lisa Dorfman, MS, RD, CSSD, LMHC, FAND

Mickinzie Lopez

An interview with Lisa Dorfman, MS, RD, CSSD, LMHC, FAND explores how an integrative and functional approach plays a role in sports nutrition.

I have always been intrigued with the terms ‘integrative’ and ‘functional.’ The words alone embody an image of healthcare in my mind that is thorough, multifaceted, and relevant. Combined with the term ‘nutrition,’ they are a match made in heaven. While the concept sounds fascinating in theory, I have shied away from delving too deep into the topic in the past, as that was not what I was planning on specializing in—dealing with gut dysfunction, SIBO, and complicated food allergies, while challenging and entertaining in ways only a New York Times puzzle can match, was just not my bread and butter. And still isn’t. But those words: integrative and functional. I just could not seem to get them out of my head. Until one day I began to wonder… can this charming approach be applied to other specialties within the field of nutrition? How broad exactly is the scope of this philosophy? Clearly it can improve physiological and psychological health, but what about performance? What might happen if my career-fated true love, sports nutrition, were to blend with the two words I cannot seem to get off my mind? How would it differ from a traditional sports nutrition perspective?

To solve the answers to some of these questions, I sought the wisdom of a true expert in the field: Ms. Lisa Dorfman, MS, RD, CSSD, LMHC, FAND, a.k.a “The Running Nutritionist.” Ms. Dorfman has skillfully blended the philosophies of a functional, integrative approach to healthcare with her own experiences in sports nutrition and performance enhancement. This former Director of the Graduate Program in Nutrition for Health & Human Performance & Sports Medicine Nutrition & Performance at the University of Miami is an internationally recognized health expert and personal nutritionist for high school and professional athletes, including those in the NFL, MLB, PGA, USTA, US Boxing, and USA Taekwondo. She has worked as the Olympic & Paralympic Sailing Team Nutritionist for the 2008 Beijing Olympics, serves on the USOC Sports Dietitian Network, and provides nutrition coaching to current and future athletes competing for the Olympic Gold. Lisa was also a professional triathlete/duathlete, has competed in more than 34 marathons (PR 2:52), and was a member of TeamUSA for the 2004 World Long Distance Duathlon Championships. What sets her apart from other Certified Sports Dietitians? Her integrative and functional approach. If there was one person who could answer my questions, this was my gal.

During my interview with Ms. Dorfman, I began to uncover what an integrative and functional approach to sports nutrition looks like. In essence, it effectively combines the detailed nutrient calculations and dietary recommendations of sports nutrition with philosophies that emphasize an exploration into the unique genetic makeup of a person’s mind, body, and spirit, characteristic of functional medicine. Upon further discussion, I began to distinguish six key elements of this approach.

Integrative and functional sports nutrition considers the individual.

Sports nutrition, as with any other practice, recognizes that one approach does not work for every athlete. Variations in body size, weight, muscle mass, gender, age, and sport-specific goals dictate the calculations used to provide practical, quantitative nutrient recommendations for performance enhancement. An integrative and functional approach takes this one step further and evaluates not only nutrient needs, but also considers the internal and external factors that affect the athlete’s mind, body, and spirit as a whole.

Is it physiological?

Ms. Dorfman describes the mind-body modality as “an integration of all the factors—physiologic, psychological, emotional, and spiritual, to strategically guide athletes in finding the right fueling plan to perform their personal best.” Oftentimes, she meets athletes who have tried everything from diet recommendations to personalized training plans, yet still feel as though ‘something is missing’ from their practice. They are striving to reach their full potential as an athlete, and are searching for that ‘it’ factor that will transform their progress—the element of their training that elicits a feeling of whole-body excellence, and fulfills their needs in reaching their maximum potential as an athlete.

This is where her ‘psychotherapy hat’ comes on. As a Licensed Mental Health Counselor (LMHC), Ms. Dorfman considers mental wellness a key element in achieving peak performance and whole-body health. In addition to identifying emotional or psychological barriers her athletes currently face, she recommends exploring clients’ unique histories to gain a better understanding of the athlete as a person and the factors that have led them to where they are today. And while she clarifies that an individual’s personal history does not dictate their future, she emphasizes that past events can certainly influence future behaviors. Traditionally, “functional medicine practitioners look ‘upstream’ to consider the complex web of interactions in the patient’s history, physiology, and lifestyle that can lead to illness” (DIFM Website).

Sports dietitians who embrace this philosophy consider the same web to identify factors that may impede or hinder performance. The mind-body connection is deemed a powerful indicator of overall health and is believed to have trickle-down effects on athletic success, both physically and psychologically.

So do you need to become an LMHC to effectively provide care to your athlete? No, this license is not required (although beneficial!), but being mindful of an individual’s background and history will go a long way in meeting your client’s needs and goals.

Is it psychological?

Integrative and functional
dietitians use ‘all the tools in the toolbox,’ symbolically, to identify the root cause ailing their clients. Sports dietitians do the same, evaluating labs and measurements to obtain the clearest picture of their athletes’ physical health, from body composition to gastrointestinal function. They might use body composition, basal metabolic testing, nutritional formulas, allergy testing, and/or lab results to identify potential factors compromising nutrient absorption and performance enhancement.

Is it environmental?

Oftentimes, environmental factors can be a source of negative influence on health and performance. A functional and integrative approach evaluates the toxicity of an athlete’s lifestyle, and works with the personal preferences and financial budget to promote a healthy environment that allows the individual to thrive. Examples of decreasing toxic load may include swapping conventional foods for organics or using the Environmental Working Group’s Consumer’s Guide to Seafood to identify sustainable seafood choices with the fewest contaminants.

Is it the diet?

Sports dietitians simply would not be doing their job without a thorough analysis of an athlete’s dietary intake. Traditionally, sports nutrition involves evaluating macronutrient, micronutrient, and fluid recommendations for training, competition, and recovery to maximize performance and minimize injury. From a functional and integrative perspective, practitioners often utilize a “Food as Medicine” approach and consider the intricate compounds found in food and their potential benefits to the athlete, including immune-boosting, inflammation-fighting, and stress-reducing qualities. As physically and metabolically active individuals, athletes demand greater nutrient needs to address the implications of intense training loads on the body. This increased nutrient need is often met with erratic eating schedules, depleted nutrient stores, and preconceived strategies about how best to meet athletic goals. Dietitians trained with a functional and integrative approach work with their athletes to correct core imbalances and promote an internal environment of nutrient abundance, tissue repair, and gut healing. Additionally, a whole foods perspective is often promoted, to ensure maximum nutrient quality and enhancement of health and performance. Dietitians are able to work with their athletes to develop meal plans that minimize dependence on conventional sports drinks, bars, and gels by recommending whole foods substitutions that meet individual training needs.

Is it in the medicine cabinet?

Among all populations, athletes are known to be some of the widest users of supplementation. From multivitamins to pre-workouts and protein shakes, the sports nutrition segment of the supplement industry is one of the largest—and also one of the most dangerous. Experts in proper supplementation, DIFM dietitians evaluate products for efficacy, safety, and application, and can work with athletes to create individualized supplement plans to boost performance and address nutritional deficiencies. With responsible use, ergogenic aids can be an integral component of athletic success. DIFM dietitians arm athletes with the education and resources to maximize their potential by complementing their training and diet plans with key supplements.

Maybe it’s a little bit of each…

Perhaps the most defining cornerstone of an integrative and functional approach to sports nutrition is that it considers starting with an athlete as they are in their present state, and seeking a full, well-developed understanding of the human being inside and out. It recognizes the individual needs of each athlete and how they play a role in maintaining a connective balance of all body systems to achieve maximum performance and mind-body health. The relationship between dietitian and athlete becomes much stronger when practitioners utilize an integrative approach, and they become an integral part of the athlete’s life and training. Ms. Dorfman explained that the purpose of the first appointment may be simply to gather information. Lab results, dietary intakes, and personal accounts are collected and then reflected upon to create a bird’s eye perspective of the athlete as a whole. From these reflections, she develops a plan that truly addresses the unique needs of each individual.

“Integrative sports nutrition is a fluid practice; movement should be continuous so that you are never static in your training or performance.” I believe this applies to both the athlete and practitioner. Throughout an athlete’s life, the mind, body, environment, physical activity, and goals evolve. It is only logical that nutrition recommendations should adapt to support the athlete through each life cycle and situation. Likewise, a dietitian’s practice should maintain fluidity as well. Sports nutrition is a rapidly evolving field, and when asked about where she believes the future of integrative and functional sports nutrition is headed, Ms. Dorfman hinted at the topics of nutrigenomics and genetic testing. Undoubtedly, the future of sports nutrition is both promising and exhilarating. In the meantime, Ms. Dorfman recommends aspiring professionals earn their credentials, become involved in their communities, and arm themselves with knowledge, evidence, and determination. “As long as you build from your core integrity and beliefs, and from the science and evidence-based research,” you will succeed. And no matter what your practice style entails, “always remember that every athlete and individual deserves respect, love, support, and good food!”

Mickinzie Lopez is a dietetic intern at Meredith College, having received her MS in Nutrition in June 2015 from Bastyr University and BS in Business Management from Arizona State University. She entered the field of nutrition with an interest in sports performance enhancement strategies for athletes and was introduced to the many benefits of an integrative, therapeutic, whole foods approach to health while studying at Bastyr and a member of DIFM. Contact Mickinzie at Mickinzie.lopez@bastyr.edu.

Coffee Consumption and Type 2 Diabetes

Jordan Edmunds

Every day billions of people wake up and start their day—with coffee. People go to work, school, the gym, or begin a never-ending to-do list as soon as the sun comes up. The motivation to start the day is often heavily influenced by the consumption of this popular American drink. According
to the National Coffee Association's 2013 survey, 83% of Americans are considered coffee drinkers. A well-known key component present in coffee is caffeine. Caffeine is a chemical that inhibits the neurotransmitter adenosine, which causes the feeling of fatigue. This is one reason that caffeine gives us an alert feeling.

Coffee can now be purchased almost everywhere, whether from the grocery store and brewed at home, from a fast-food drive-through, or at a specialty cafe. While immediate benefits of coffee include the caffeine-induced jolt, research also associates coffee with a decreased risk of developing type 2 diabetes. Other benefits linked to coffee include decreased chances of developing certain types of cancer, decreased cholesterol levels, and protection for those at risk of developing Parkinson's disease. Media seems to constantly provide new information over the benefits of this popular drink.

Research has recently correlated coffee consumption and the decreased risk of developing type 2 diabetes. Type 2 diabetes is a common disease that affects millions of Americans. Factors that increase the risk of developing type 2 diabetes are mostly related to being overweight or obese and from diet and lifestyle choices. A longitudinal study conducted in 2009 that followed 41,934 and 84,276 healthy men and women, respectively, for more than a decade found that total caffeine intake from coffee and other sources was associated with a statistically significant decrease in the development of type 2 diabetes. Another longitudinal study with over 450,000 participants found that with each cup of coffee consumed per day, there is a 7% reduction in the excess risk of diabetes relative risk based on a 95% confidence interval. Effects seem to only make a difference if two or more cups are consumed per day, and benefits seem to have a maximum effect once a total of six or more cups are consumed daily. Several other studies also support an inverse relationship between coffee and decreasing the risk of developing type 2 diabetes. The graph below depicts the results that support this hypothesis based on a large study. From the information gathered and depicted in this graph, there is a relationship showing that the more cups of coffee consumed each day, the lower the relative risk ratio of developing type 2 diabetes.

This image shows the statistical correlation of the risk of developing type 2 diabetes and the amount of coffee consumed per day. “The center of each black square is placed at the summary point estimate; the area of the square is proportional to the statistical size; and each vertical line shows the 95% confidence interval about the summary estimate.” (Huxley et. al)

In the case of type 2 diabetes, blood glucose is chronically high due to receptor cells in the body becoming unresponsive to the effects of insulin. One popular theory explaining why drinking coffee may be protective against type 2 diabetes is that insulin sensitivity is increased due to decreased body fat from the physiologic factors elicited by caffeine, including increased thermogenesis, lipolysis, and fat oxidation. It has been shown that one of the biggest factors for developing diabetes is carrying excess weight in fat; a potential mechanism is that coffee protects against this factor by increasing basal metabolism. Studies involving epidemiology and in vivo research suggest chronic consumption of caffeine-containing beverages including coffee promotes decreased body weight in humans. On the other hand, there have also been studies finding chronic caffeine consumption decreases insulin sensitivity. Since the body loses its sensitivity to insulin during the onset of type 2 diabetes, there could be concern that caffeine could potentially exacerbate this and even lead to the onset of diabetes. Caffeine may decrease insulin sensitivity due to the release of epinephrine, one of the “fight or flight” hormones, which then promotes lipolysis and hepatic glucose production, and decreases muscle uptake of glucose. Lipolysis causes an increase in free fatty acids, which causes a decrease in insulin sensitivity. Excess glucose production and decreased uptake of glucose contribute to elevated blood glucose levels. It could be assumed, then, that coffee could be seen as something to avoid if one wants to control blood glucose levels. One factor that is overlooked, however, is that the antioxidants present in coffee may actually oppose the effect on insulin sensitivity of caffeine itself. Chlorogenic acids are antioxidants present in coffee that have been shown to increase insulin sensitivity through increasing the uptake of glucose in the small intestine. Other components in coffee that may also affect insulin and glucose levels include trigonelline, an aroma producing bitter alkaloid, and magnesium, which is an element involved in many of our body’s physiological functions. Interesting to note, because these non-caffeine compounds are still present in decaffeinated coffee, it has also been shown to be a protective factor against type 2 diabetes.

Type 2 diabetes is a serious disease that can impact one’s quality of life tremendously if not addressed and can lead to complications such as hypertension, kidney disease, eye problems, and nerve damage, to name a few. A possible way to reduce the risk of development of type 2 diabetes could be drinking at least two cups of coffee per day, which may be mostly due to increases in metabolism and mechanisms of components other than caffeine present in the drink. Aside from consuming a well-balanced diet and living an active lifestyle to prevent type 2 diabetes, it may be beneficial to drink up if you already love coffee, and
give it a chance if you haven’t before. Coffee may be one change in one’s daily routine that could have a positive impact.

Jordan Edmunds graduated this May with a degree in dietetics from Kansas State University. She has been accepted into the dietetic internship starting this fall at the University of Kansas Medical Center, where she will also complete her Master’s in Dietetics and Nutrition. In addition, she plans to obtain a graduate certificate in Integrative and Functional Medicine. Contact Jordan at jordanedmunds1992@gmail.com.

References
A new membership year is upon us, and what better way to celebrate than with a thirst-quenching smoothie (especially in this oppressive summer heat). This past month, members of the Executive Committee held a contest to see who had the best smoothie. When all was said and done, the Simple Green Smoothie was crowned the champ. It’s delicious, nutritious … and true to its name, über healthy! It’s even better when funded with some of our members and see what they’re whipping up. Without a doubt, these recipes are sure to please.

Chocolate Mint Smoothie
Submitted by Mary Purdy, MS, RDN

Combine all ingredients and blend until smooth. Add more liquid if necessary.

- 1 scoop vegan (not soy-based) or organic whey “protein powder”
- 1 cup frozen spinach (or 2 cups fresh)
- 1 1/2 cup almond milk or coconut water or a combination of the two
- 2 dates
- 1/4 cup rolled oats
- 1 TBSP walnuts or almonds or almond butter
- 1 TBSP cocoa nibs or cocoa powder
- 1/8 tsp peppermint extract or several fresh mint leaves

Freeze ingredients ahead of time for a quick breakfast. Blend on high for 1-2 minutes, and check consistency. Drizzle in additional water as needed to desired consistency. Serve in a chilled glass.

Arugula Love Smoothie
Submitted by Danielle Omar, MS, RD

- 2 big handfuls of arugula
- Juice of half a lemon
- 1/2 cup frozen pineapple
- 1/2 cup frozen mango
- 1 apple, cored
- Handful of fresh mint
- 4-6 oz cold water

Combine all ingredients and blend until smooth. Add more liquid if necessary.

Bravocado!
From The Detox Prescription

by Woodson Merrell, MD and Mary Beth Augustine, RDN, CDN, FAND

Submitted by Mary Beth Augustine, RDN, CDN, FAND

Functional Properties Per Serving

This avocado-pear smoothie is a crowd pleaser—adults and kids adore it. And what’s not to love? Avocado is a rich source of the heart healthy, cholesterol-lowering and cancer-fighting, beta-sitosterol. Avocado’s carotenoids, vitamin E, glutathione (the body’s master antioxidant), and oleic acid make it a super-duper super fruit. Add the toxin-binding power of the soluble fiber in the pear, and you’ve got a glass of detox delight.

Ingredients (makes 1 serving)

- 1/2 cup unsweetened coconut milk
- 1/2 avocado, pit removed, flesh scooped
- 1 pear, peeled and cored
- 8-12 oz. cold water (or 12-24 ice cubes for a frozen drink)

Directions

Add all ingredients to blender, starting with 8oz water (or 12 ice cubes) initially.

Legally Lean™ & Green Power “Juice”
From Legally Lean: Sports Nutrition Strategies for Optimal Health & Performance

Submitted by Lisa Dorfman, MS, RD, CSSD, LMHC, FAND

An excellent source of free radical fighting antioxidants A and C; good source of electrolytes potassium & sodium for cramping prevention & replace sweat losses; calcium for...
muscle contraction & bone support; & iron for oxygenating blood, this nitrate boosted, protein fortified power post workout fuel is the perfect blend of power boosting, energy driving mix of complex/simple carbs & high quality protein; provides a quick VO2 boost and sustained high-fiber carbohydrate fuel to accelerate post workout recovery, replenish glycogen stores and satiate until the next main meal or snack.

**Simple Green Smoothie**

Submitted by Jackie Glew, MS, RDN, CSO, LDN

(Reposted with permission by Ginger Hultin, MS, RDN, CSO, LDN @ gingerhultinrd via Foodtrients. [www.foodtrients.com/home-section-3/simple-green-smoothie/](http://www.foodtrients.com/home-section-3/simple-green-smoothie/))

A green smoothie can be blended in a matter of seconds and makes for a delicious breakfast, snack, or post-workout recovery drink. Juicing can remove fiber from fruits and vegetables, taking away some of the nutritional benefits of these foods. Making a smoothie or shake instead is simpler (just throw in the whole ingredient and blend!) and keeps the fiber intact for increased satiety. Instead of basing your beverage on fruit, make vegetables your main ingredient and flavor with sweet fruit and other culinary flavors like cinnamon or vanilla. Feel free to swap in your personal favorites if desired.

**Ingredients**

- 2 cups organic baby spinach, washed
- 1/2 small green apple
- 1 kiwi, peeled
- 1 cup milk of your choice (unsweetened almond, soy, rice, cow)
- 1 scoop whey or vegan protein powder (look for an unsweetened brand)
- 1 teaspoon vanilla extract
- ½ teaspoon ground cinnamon
- 1 teaspoon almond butter

**Procedure**

Toss all ingredients in a blender and process until smooth and frothy, adding cubed ice if desired. Serve immediately.

**Ingredients**

- 1/2 cup fresh beet juice
- 1/2 cup coconut water
- 1 organic frozen blueberries
- 1/2 frozen organic banana
- 2 cups fresh spinach
- 16 grams protein of choice—grass fed whey preferred—soy, pea, rice or veggie blend

**Directions**

Blend (with ice) & Drink Up!

Pumpkin Peanut Butter Harvest Smoothie

Submitted by Monique Richards, MS, RDN, LD

The beneficial levels of beta-carotene and fiber from the pumpkin are a great way to boost nutrition, easily and inexpensively. The protein and healthy fat in the peanut butter help with satiation along with the cinnamon to support blood glucose regulation.

Potassium from the banana and calcium and vitamin D from the liquid base aid in muscle, bone and cellular function.

This combination is very satisfying and almost tastes like a delicacy since the flavors mimic pumpkin pie and are dessert-like. Nutrition is delicious!

- 1 cup unsweetened soy, almond, or other plant-based milk beverage (calcium and vit D fortified)
- 2 tbsp. natural creamy peanut butter
- 1 tsp. honey, agave, or syrup
- 1/4 cup organic pureed pumpkin
- 1/2 tsp. cinnamon, nutmeg, and vanilla (adjust as you desire)
- 1/2 banana, preferably frozen
- Optional: yogurt or protein powder to increase creaminess and protein content ice

Blend together and enjoy this combination of goodness and nourishment!
Chair's Corner

Dear DIFM members, Integrative RDN readers and curious inquirers, on behalf of DIFM, and as the incoming Chair, I welcome you to the summer issue of The Integrative RDN and hope you’ll dive into this issue with passion and hunger for more—more knowledge, more questions, more answers, and more longing to build up your expertise, your dedication to dietetics, and your drive to be a life-long learner.

Not too long ago, the world lost another forward-thinking, and admired leader, Nelson Mandela, who said “Education is the most powerful weapon which you can use to change the world.” Here at DIFM we know that nutrition science is ever-evolving and elusive. Education is powerful and because health is a vitality we strive to attain within ourselves and our clients/patients we endeavor to dig deeper. We continue to search for answers and information to share with each other in order to better serve our clients, communities, patients, students, colleagues, and collaborative partners. DIFM also continues to enhance our integrative and functional medicine and nutrition educational resources by helping build the Certificate of Training program through the Academy, currently in process, with five modules to increase your knowledge, comfort, and depth of integrative and functional nutrition.

DIFM has created a short video to share with our colleagues within and outside of our profession. The video highlights the uniqueness of the integrative RDN and emphasizes the expertise and important role of an RDN in all areas of practice. We have held two Connecting Educator webinars under the direction and vision of Past Chair, Mary Beth Augustine, RDN, CDN, FAND, Ashley Harris MS, RDN, CSO and key committee members and panelists. The webinars have reached educators and directors of Dietetic Internships and Didactic Programs in Dietetics across the country, emphasizing the importance of enhancing our curriculum in order to continue being recognized as the nutrition experts. We have expanded the role of our Executive Committee in order to enhance the member benefits and champion more ways to allow the Integrative RDN and integrative modalities to be recognized across the board.

We are constantly trying to improve the delivery method, the accessibility and the quality of DIFM-related material, please know we are here for you. If you have ideas or want to get involved with DIFM, we would love to hear from you.

We aim to improve the ability to support practical application in our information delivery by providing recipes with functional foods, more pictures, content, interviews and additional “News You Can Use” in the newsletter. We want to extend a warm and sincere invite to students and pre-professionals to contribute to our newsletter and DIFM. We want to expand and enhance our presence as a Dietetic Practice Group and within our profession with concepts that are not new, just newly accepted, but highly effective. As Satoro said, “Individually, we are one drop. Together, we are an ocean.” Tides are continuing to change and we are riding that wave and influencing positive vitality. Welcome!

Join us on...
Twitter - https://twitter.com/integrativerdn
Pinterest - https://www.pinterest.com/integrativerdn/

The 2015-2016 DIFM Strategic Plan is final and may be found on the DIFM website, www.IntegrativeRD.org.

In seeking sponsors, DIFM has established product standards for products and services of value to the integrative and functional medicine field. We consider product quality, efficacy, manufacturing and business practices among other criteria. We encourage all professionals and individuals to choose products aligned with their own specific standards.
Welcome to Dietitians in Integrative and Functional Medicine (DIFM) and The Integrative RDN. For those of you just joining or rejoining DIFM, we are glad you have chosen to connect with us, the premier source for integrative and functional medicine and nutrition information in the Academy of Nutrition and Dietetics (the Academy). For those of you who are returning, welcome back and stay tuned for another exciting year!

With this issue we conclude our interviews with Certificate of Training Module authors. Mary Beth Augustine, RDN, CDN, FAND, our fearless DIFM past chair (2014-2015) is featured as the author on Dietary Supplements. I am certain you will find her interview as enlightening as I did. Stay tuned for information on when the Certificate of Training will be offered. The Academy is completing its review of the modules and we hope to have more information soon.

During the past year DIFM has had an influx of student members who are eager to include integrative and functional medicine in their repertoire. We are offering an opportunity for students to share their knowledge through articles and spotlights that will be included in the electronic version of the newsletter, so please check out this resource.

Another new offering will be fact sheets that can be reprinted for use by our members. These fact sheets will be made available through some of our sponsors, as well as by members and students. Hopefully many of you have seen, and are using, the fact sheet on stress, provided in the electronic version of the spring newsletter by DIFM’s Copy Editor, Emily D. Moore, MS, RDN, LD/N. We would appreciate any feedback you have on these resources and if you would like to author one, or have created one you are willing to share with members, do not hesitate to contact me.

We hope that you will be joining us in October at FNCE® in Nashville. The meeting promises to be another educational and fun-filled event. Some highlights of the meeting, including DIFM special events, are listed in this issue. Additional information will be posted on the DIFM website, www.IntegrativeRD.org, as available.

As always, I welcome your comments regarding topics in the newsletter and encourage you to volunteer for opportunities with DIFM and/or the newsletter. If you have read a book you believe members would find a useful resource, have attended a workshop or meeting you would like to report on, then, by all means let us know. And don’t forget to keep your eye out for DIFM’s professional and student stipend opportunities, whereby DIFM may help fund your attendance at IFM-related conferences or meetings; these opportunities are announced on the DIFM website.

Until fall,
Announcements

2015 DIFM Award Winners

Diana Noland, MPH, RD, CCN, LD

DIFM is pleased to announce that the inaugural Lifetime Achievement Award is bestowed to Diana Noland, of Burbank, California. Diana is considered a pioneer and the true mother of integrative and functional medical nutrition therapy by her peers, young and old. She is one of the emerging functional nutrition practitioners in our country, and has advanced knowledge and training in nutrition, supplements, and specialty functional testing, which she uses with clients locally, nationally, and internationally. She is owner of an Integrative and Functional Nutrition Therapy private practice, FoodFax, in Burbank, California.

Diana earned her B.S. degree from the University of Utah, in Chemistry/Pre-med/Foods and Nutrition. She completed a Dietetic Internship and then an M.P.H in Nutrition at Loma Linda University in California. She earned the title of Certified Clinical Nutritionist in 2001 (IAACN), and is now a candidate for the Institute for Functional Medicine in Sweden for a project to incorporate food sensitivity testing into their healthcare system. She has been a featured speaker at various healthcare conferences in Sweden for this project.

Diana has authored many articles and chapters in nutrition professional and lay publications. She has been a Preceptor or Peer Mentor for many students and professionals in Integrative and Functional Nutrition.

DIFM Lifetime Achievement Award

Diana is adjunct faculty at University of Kansas Medical Center (KUMC) Dietetics and Nutrition. She was coordinator of the development of curriculum for an integrative nutrition track in the dietetics internship graduate program at KUMC, in collaboration with the KU Integrative Medicine Clinic.

She co-authored an article scheduled for publication in the Journal of American College of Nutrition (within the next two months), “The Next Generation of Dietitians; Implementing Dietetics and Practice in Integrative Medicine”.

Diana served on the faculty of the Institute for Functional Medicine (IFM) and developed and chaired the IFM Nutrition Advisory Board 2006--2009. For the Institute for Functional Medicine, Diana was a co-founder of the Nutrition Advisory Board. She also served as Nutrition Coordinator and developed the Functional Nutrition Course and expansion of nutrition therapy for the IFM organization.

She is a sought after international speaker and educator on the benefits and concerns using functional nutrition, supplements, and herbs. In the last two years, Diana was recruited to become a consultant to the Chair of Karolinska Research Institute in Sweden for a project to incorporate functional nutrition/medicine into their healthcare system. She has been a featured speaker at various healthcare conferences in Sweden for this project.

Diana has authored many articles and chapters in nutrition professional and lay publications. She has been a Preceptor or Peer Mentor for many students and professionals in Integrative and Functional Nutrition.

Excellence in Practice Award

Susan Linke, MBA, MS, RD, LD, CLT, CGP

The 2015 Excellence in Practice Award is given to Susan Linke, from Dallas, Texas. She has been a DIFM member since 2006, in her words, “just as soon as I could!” Susan earned a BS degree and MBA in Marketing from Texas Tech University in 1985 and 1988; completed her Dietetic Internship and MS in Nutrition at Texas Woman’s University in 2005.

Susan is in private practice, specializing in a functional and integrative approach to medical nutrition therapy, especially in the area of chronic inflammatory conditions, since 2006. She became a Certified LEAP Therapist in 2006, and is a member of the Medical Advisory Board for Oxford Biomedical Technologies, Inc., 2013 to present. She has been a mentor to more than 500 RDs over the last 9 years for this company, teaching those who want to incorporate food sensitivity testing and integrative/functional principles into their own practice or workplace. She became a Certified Gluten Practitioner in 2010 (theDr.com), and has recently been appointed to be an Advisory Board member for the newly created Integrative and Functional Nutrition Academy.

Susan has been active in the Dallas Dietetic Association since 2009, and was Editor for the Herbal & Dietary Supplements section of the Texas Academy of Nutrition & Dietetics MNT Manual, 2013. She now also hosts a Dallas area mentoring group.
for students interested in integrative and functional nutrition. Susan has contributed to magazine articles and nutrition books, has an impressive list of professional presentations, and has participated in many media impressions, especially radio.

Susan’s personal philosophy is “Pay it Forward.” “As an older dietitian I recognize that I came into the game a little late. Therefore, my primary goal has not been to build my own practice, but rather to “pay it forward” collectively by helping as many other dietitians (and physicians) join the growing movement of functional and integrative medicine and help to train and mentor as many other dietitians as I possibly could along the way. For that reason, I have been actively involved in a variety of activities over the years with the express purpose of teaching, mentoring, motivating, and encouraging others in this growing field of knowledge.”

Excellence in Service Award
Deb Ford, RDN, CCN

The 2015 Excellence in Service Award is given to Deb Ford, RDN, CCN, from Van Wert, Ohio. Deb was one of the Founding Members of Nutrition in Complementary Care, the predecessor to Dietitians in Integrative and Functional Nutrition, in 1998. She has served the practice group in many capacities throughout the years, including: Secretary in 2002, Chair-Elect in 2009, Chair in 2010, Past Chair in 2011.

A life-long learner, Deb earned her B.S. degree in Dietetics from Bluffton University; a Master of Science in Human Nutrition from University of Bridgeport, CT, in 2001; Certified Clinical Nutritionist in 2001; Traditional Naturopath from California College of Natural Medicine in 2014. She is now enrolled in the Maryland University Integrative Medicine PhD. Program.

One of her many accomplishments was serving as Co-Chair author of the Standards of Practice/Stards of Professional Performance for Integrative RDNs, published in Journal of American Dietetic Association Journal, July 2011.

Deb has been in private practice since 1976. Seeing clients in individualized consultation, Deb incorporates the present day knowledge of science with the traditional wisdom of ancient cultures to make individualized recommendations for the prevention and management of both acute and chronic conditions. Deb’s passion, education and experience in the natural, holistic and integrative nutrition field make her approach unique.

Deb has owned the Good Earth Health Food Shoppe in Van Wert since 1976. She has been a pioneer in the area of natural foods and holistic healing on a very local level. The concept of ‘think global and act local’ is a very keen concept of Deb’s life in rural Ohio. Deb regularly holds classes on natural health and healing, cooking and nutrition. Along with her son, Dr. Ian Rainey, Deb hosts a weekly radio show/podcasts on current health topics of interest.
Meet DIFM in Nashville at FNCE®
October 3-6, 2015!

Product Marketplace
Sunday, October 4
9 am – 3 pm
Booth 25
Music City Center, Exhibit Hall C Read

DPG Showcase
Monday, October 5
9 am – 12 pm
Music City Center – Exhibit Hall C
Booth 142

Mind Body Happy Hour
Omni
225 Legends Ballroom F/G
Monday, October 5th, 5:30 – 7:30 pm
Enjoy an evening of networking and winding down after a busy day. Learn more about the therapeutic effects of EFT (Emotional Freedom Technique) Tapping, Deep Breathing with Aromatherapy, and Yoga.
Also, meet Ashley Koff RD, an award-winning dietitian on a mission to help everyone get Better Nutrition, Simplified. Members will have the opportunity to receive a complimentary signed copy of Ashley’s book “Mom Energy.” In addition, all members will receive a gift.
Registration for the Mind Body Happy Hour will be available in August.
Sponsored by:

Panel Discussion for Student Members
Immediately following the Mind Body Happy Hour, DIFM-invited panelists will discuss how they entered the field of integrative and functional nutrition and answer questions. While this will be student-focused, all members are welcome to attend. This is a must-attend event for DIFM student members.

Emerging Integrative Approaches for Nutrition and Dietetics Practice
Sunday, October 4, 2015
9:00 AM - 2:00 PM
Poster Session Number: 101
Integrative Medicine: Is there a Gap between Pre and Post Professional Education and Registered Dietitian Nutritionists Practice Interests?
Presenters: Mary Beth Augustine, RDN, CDN, FAND; Kathie Madonna Swift, MS, RDN, LDN, FAND, EBQ; Stephanie Harris, PhD, MS, RDN, LD; Rosa Hand, MS, RDN, LD; Ellen Anderson, MS, RD, LDN
10:00AM - 11:30AM
Interrogating Host-Microbiota Dynamics in Diet, the Metabolome and Disease
Speakers: Charlene Compher, Gary Wu

Focused Physical Exam: Identifying Malnutrition with Hands-On Training
Speakers: Erica Raymond, Jodi Wolff
3:30PM - 5:00PM

The Promise of Functional Foods: Translation from Crops to Community for Disease Prevention and Treatment
Speakers: Colleen Spees, Yael Vodovotz
Tuesday, October 6, 2015
8:00AM - 9:30AM

Collaboration and Engagement: Making the 2015 Dietary Guidelines Actionable for Americans
Speakers: Alice Lichtenstein, Yvonne Bronner, Marian Neuhouser
9:45AM - 11:15AM

The ‘Weight’ is Over: The Role of the Dietitian in Behavioral Approaches to Improve Health Outcomes
Speakers: Rebecca Krukowski, Catherine Champagne Twitter Feed Facebook Feed
Read more:
For session updates: http://fnce.eatright.org/FNCE/Tracks.aspx?GroupID=652

National Farmers Market Week
AUG.
2nd - 8th
2015
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