

BHN: Fuel Your Brain, Feel Your Best!

Potential Applications of Probiotics in Developmental Disabilities

By Donna Marie T DiVito, RD, LDN, CNSC



Probiotics are defined as “live microorganisms that when administered in adequate amounts confer a health benefit on the host (1).” There is growing interest of the influential role probiotics may play in health and disease management. Review articles are consistently touting their promising potential. The focus of early research on probiotics centered on the bacteria residing in the large intestine and the positive outcomes probiotics play in the management of antibiotic associated diarrhea. Now attention is directed to the commensal bacteria of the body as a whole termed the microbiota. Other residential locales of the microbiota are found in and around the body, spanning the gastrointestinal tract (including the mouth, stomach and small intestine) as well as the skin, respiratory tract and genito-urinary tract.

The list of potential benefits afforded by probiotics in modulating disease or health outcomes is long expanding: anticancer, antidiabetes, antiobesity, antiosteoporosis, hypocholesterolemic, prevention of urinary tract infections, etc. (2,3,4). Many additional potential benefits can also apply to individuals with developmental disabilities, by extrapolating from the existing research. This article will state the variables affecting the microbiota, describe the limitations in formulating therapeutic guidelines, summarize the probiotic strains that show beneficial results in the oral cavity, respiratory tract and gastrointestinal tract and summarize the role of the microbiota in inflammation and inflammation.

The human gastrointestinal tract alone is home to about 10^{14} bacteria, with over 600 species colonizing the oral cavity and 100 trillion residing in the large intestine of adults alone (2,5). The same species of bacteria may be found in various locals of the

body or specific species may be localized. The composition of a “healthy microbiota” is not fully understood (6). The goal of the Human Microbiome Project is to study the composition, structure and function of the microbiota (7). It is known that, regardless of the variety of species and their location, there is a form of communication (or signaling) among the various locals of microbiota of the body which plays a not yet fully understood function in immune and metabolic functions (6). The composition and type of microbiota varies from person to person (8). Variables which affect the microbiota include: genetics, ethnicity, age, health status and diet (9,10). Medications such as antimicrobials, immunosuppressants, cytostatic agents or proton pump inhibitors can also affect the microbiota (5).

When recommending a probiotic supplement, “one strain does not fit all.” Because of the wide variety of species, the sheer number of commensal bacteria and the variables contributing to their survival or growth, it is difficult for researchers to pin point a specific strain destined to reach the specific outcome in disease modulation. Also, the probiotic strain(s), dose, frequency and duration of the supplement are additional factors to consider in developing a research study design (4,10). It is noted that studies are not well controlled to accommodate all of these variables for consistent results (9,10). This is the difficulty in establishing therapeutic recommendations.

As research studies identify which specific strain or species contributes to the desired physiologic effect, the probiotic strain(s) must then survive the acidic environment of the stomach, intestinal enzymes and bile salts to reach their target (11). Once transit survival is established, probiotics may survive for up to a week (12).



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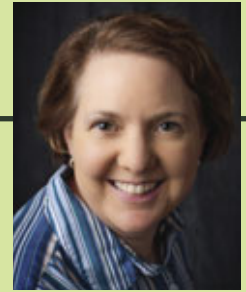
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From the Chair

Mary E Kuester, MA, RD



Happy New Year! It's hard to believe that another year has passed and we are starting 2014!

This time of year, many people set resolutions or new goals for the coming year. For many people these resolutions include improving their health through improved eating and exercise habits. For others, the goals involve career development or advancement, improving the community we live in or trying something new. Some people take this a step further and create a Vision Board for themselves. These boards are a visual representation of goals and aspirations and can take many forms and can include inspirational quotes, phrases or pictures to name a few things. What's your vision for your life? Does it include professional development? Perhaps it involves volunteering.

Volunteering has many benefits including connecting with others, improving social skills, increasing self confidence, improving mood as well as giving you skills to advance your career. It can also bring fun and fulfillment to your life.

Volunteerism has been a part of my life for many, many years. In the last year I have volunteered for a number of organizations including Volunteers for Outdoor Colorado (VOC) and Save Our Youth. As a volunteer for VOC I have been able to spend time outdoors and build a new trail as well as help with restoration in areas ravaged by wild fires. I also mentor a young girl for Save Our Youth. Both experiences have been fun and rewarding and have given me the feeling that I am making the world I live in a better place. I have been a volunteer with BHN for a number of years. First I was an Assistant Newsletter Editor and then I decided to run for Chair. I have enjoyed these experiences immensely, have met great people, and have been able to provide leadership for an organization that I care deeply about.

We have many opportunities for you to use your gifts and talents to help your colleagues in this practice group. There are a number of positions that will be open in June; some unfilled positions as well as some new opportunities. Here is a list of a few opportunities:

Executive Committee

- Website Coordinator
- Eating Disorder Resource Professional
- Mental Health Resource Professional
- Public Relations Director
- Social Media Coordinator

Publications/ Webinars

- Author and article for our newsletter or write a summary of a meeting/ conference you attended.
- Present a webinar on one of the four practice areas.
- Participate in the revision of our Mental Health Resource Manual.

If you are interested in any of these opportunities please contact us at info@bhndpg.org

Be sure to vote in the 2014-2015 officer elections beginning February 1, 2014 at www.eatright.org/elections!

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Bifidobacterium animalis subsp. *lactis* is the strain “most tolerant to acid, bile, and oxygen (13).” *Lactobacillus delbrueckii* and *Streptococcus thermophilus*, on the other hand, do not survive the stomach (14). The probiotics most commonly added to food and nonfood products are strains of the species *Lactobacillus*(*L.*) and *Bifidobacterium*(*B.*) (2,10). The most common strains include: *B. bifidum*, *B. longum*, *B. infantis*, *L. acidophilus*, *L. casei*, *L. johnsonii*, *L. rhamnosus*, *L. gasseri*, and *L. reuteri* (2,11). Probiotics are considered food supplements and not regulated by the Food and Drug Administration (4). Over the counter products may contain one strain or may contain strains that are not listed on the ingredient label (6). As over the counter products, these are not covered by insurance including Medicare or Medicaid. Individuals with developmental disabilities may have many out of pocket financial responsibilities and the cost of the probiotic supplement may need to be weighed against other therapies and or interventions.

While there are no specific therapeutic guidelines for probiotic use at present, we can extrapolate their potential impact for the vastly diverse developmentally disabled population. Specific locations of the microbiota are studied for the potential probiotics can play in mitigating medical symptoms or conditions. These locations span the gastrointestinal tract and the respiratory tract, within which, their role in anti-infection and anti-inflammation is gaining increasing importance. The summaries contained in the categories listed below are chiefly collated from review articles. Long-term randomized controlled studies are needed before clinical recommendations can be made (6,10).

Oral hygiene

Oral hygiene may be a challenge in individuals with developmental disabilities. Individuals may lack access to a dentist or lack dental insurance. In

addition, this population is at increased risk for oral aversion and thus may resist or refuse oral care. Caregivers of those fed exclusively via a feeding tube may overlook or neglect oral hygiene. When individuals have feeding tubes due to dysphagia and or aspiration, they may also be prescribed medications intended to decrease saliva production (to decrease drooling as well as reduce risk of aspirating secretions). All of these factors may contribute to an alteration in the oral microbiota. Although there are no studies specifically addressing the use of probiotics to improve oral microbiota in individuals with developmental disabilities, this seems to be a topic with significant potential.

Probiotics are providing promising results as part of the treatment plan for gingivitis, periodontitis, caries prevention and halitosis (bad breath) (2,3,12). Studies related to periodontal disease have shown that the strains *L. reuteri* and *L. brevis* decrease gum bleeding and reduce gingivitis (2). *S. salivarius* K12 delivered via gum or lozenge reduced halitosis (2). The combined ingestion of *L. rhamnosus* fortified milk and fluoride showed a significant reduction in early childhood caries and root caries reversal among the elderly (12).

Respiratory tract

Individuals with developmental disabilities, especially with neuromuscular conditions, may be prone to pneumonias due to aspiration. Moreover, those affected by gastro-esophageal reflux (GER) and those individuals receiving enteral nutrition (EN) may be increased risk for reflux aspiration. Of note, EN therapy is indicated for situations where oral intake is inadequate (often related to poor oral-motor skills and/or dysphagia). Children with developmental disabilities who are picky eaters should undergo a comprehensive nutrition assessment with a dietitian. There are a myriad of possible causes for picky eating, ranging from dysphasia and texture aversion to food allergies and GI intolerance. The World Allergy Organization Position Paper published in November 2012 states

“probiotics do not have an established role in the prevention or treatment of allergy (such as rhinitis, gastrointestinal allergy, asthma) (6).” Again this is due to inconclusive results and lack of control of variables in research studies design as mentioned above. Probiotics are showing promising results in the prevention and treatment of acute upper respiratory tract infection (4). Early childhood administration of *B. lactis* BB-12 may reduce respiratory infections (4). Probiotics are also beneficial with perennial allergic rhinitis in children; strains of lactobacillus (*L. casei*, *L. gasseri* A5 and *L. paracasei* LP33) have reduced the rhinitis symptom score (6). Probiotics have not been shown to influence the prevalence or incidence of asthma or wheezing in infants and children (6).

Anti-infection

The intestinal microbiota and its metabolites play a role in preventing pathogen colonization. The bacteria of the microbiota produce enzymes, organic acids (e.g., lactic acid, acetic acid), short chain fatty acids, and also antimicrobial peptides called bacteriocins (9,15). The short chain fatty acid butyrate stimulates the release of mucins from enterocytes (9). Mucins, in turn, assist in maintaining the mucus layer which physically separates the microbiota and enterocytes (9). Organic acids also lower the pH which in turn plays a role in preventing the survival and growth of pathogens (11). Organic acids also increase peristalsis which assists in moving the pathogens quickly through the intestine, preventing colonization (11).

Anti-inflammation

With the many co-morbidities that may be secondary to the developmental disability it is vital to protect the immune system. The role of probiotics in modulating the immune system and lessening the severity of some diseases which are involved in inflammation is gaining importance. The intestinal microbiota is part of the immune system. It is referred to as an additional “functional organ (7,9).” The intestinal microbiota is found in the lumen of the intestine, in the mucus layer, which

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does not contact the enterocytes (9). The intestinal microbiota and the enterocytes work together to build and strengthen the immune system.

Organic acids and bacteriocins found in the intestines directly compete with pathogens (15). The bacteria of the microbiota can also attach to the enterocyte, physically preventing the pathogen from entering the enterocyte (11). The bacteria can also activate processes leading to the production of anti-inflammatory cytokines, which protect the gut from inflammation (11,14). If the microbiota is disrupted, the enterocytes activate a pro-inflammatory response (9,14).

These are some of the factors which assist in controlling pathogens from crossing (translocating) through the intestinal mucosa (11). Intestinal inflammation alters permeability of the intestinal barrier and leads to invasion of pathogens (11).

Probiotics can change the intestinal microbiota and improve intestinal barrier function in inflammatory disorders such as irritable bowel syndrome (IBS), inflammatory bowel disease (IBD), and celiac disease (15,16). Critchfield et al describe the gastrointestinal (GI) symptom similarities of autism with IBS and the role of immune dysfunction in autism (17). The GI symptoms (bloating, excess gas, gastric reflux, and food sensitivities) of autism are similar to those with irritable bowel syndrome (17).

Functional bowel disorders

Individuals with developmental disabilities are at increased risk for developing constipation, as a result of one or more of the following factors: generalized slow GI motility caused by immobility/non-ambulatory status or limited motor function (related to the primary diagnosis); medications that affect the GI tract, sensory issues, food aversions or dysphagia resulting in a diet inadequate in fiber and fluid. Probiotics are under study for their potential benefits in management of "functional bowel disorders" such as

abdominal pain or discomfort, diarrhea, constipation, bloating and distension. In children with functional constipation, stool frequency may be improved with *B. breve* (4). In the review by Tabbers et al, *L. casei rhamnosus* significantly reduced abdominal pain in children when compared to use of osmotic laxatives (18). In adults, strains of the *Lactobacillus* and *Bifidobacterium* have shown "favorable effects" on stool frequency and consistency (3,19). Probiotics may assist with constipation in the institutionalized elderly (9). They may also show benefit with bloating (20). A temporary side effect of probiotics may be the symptoms that are being sought to treat - nonfunctional bloating and flatulence (6).

Antibiotic-associated diarrhea

Some populations of individuals with developmental disabilities are prescribed prophylactic antibiotics frequently such as those with urinary retention/urinary reflux. Different strains of probiotics have different effects in children and adults. In children, probiotics (*L. rhamnosus* GG, *Saccharomyces boulardii*, and *B. lactis* and *Streptococcus Thermophiles*) when given concurrently with antibiotic treatment, play a role in prevention or reduced risk in developing antibiotic associated-diarrhea (4). In adults, *Lactobacillus* strains (in particular *Lactobacillus* GG) have shown benefit in reducing the intensity or reducing the risk of diarrhea caused by antibiotic treatment (3,11).

Contraindications

Probiotics are considered safe in non-hospitalized, non-immunocompromised individuals (4). Probiotics should not be recommended to those with weakened immune systems. Those who are immune compromised are at risk of probiotic-induced bacteremia (6). "The case reports on sepsis emphasize that probiotics supplementation should be used with caution in children with indwelling central venous catheters, prolonged hospitalization, and recognized or potential compromise of the gut mucosal integrity (4)."

Conclusion

Research on probiotics is still in its infancy and too premature to deliver specific therapeutic guidelines. Probiotics are increasingly gaining the spotlight for their role in modulating and mitigating disease. The application of probiotic therapy into clinical practice is not backed by reproducible scientific studies due to the differences in the many variables involved in study design, as well as the fact that there is still much to be learned about the microbiota. While no therapeutic recommendations exist at present for the use of probiotics in developmental disabilities, many research studies along with empirical observations are stating otherwise. Registered dietitians play a crucial role in providing medical nutritional therapy. Probiotics may be beneficial to individuals with developmental disabilities. More outcome data on the use of probiotics in individuals with developmental disabilities, as part of the nutritional interventions, is needed.

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CPE credit (1 hour) is available from BHN for the full text version of the article, Potential Applications of Probiotics in Developmental Disabilities. Access the article at http://bhndpg.org/moa/newsletters/Probiotics_DiVito_12-19-13.pdf and <http://www.bhndpg.org/moa/cpes.asp> for reading/taking the quiz.

Eating Disorders in the Latino Population

Mae Lynn Reyes-Rodríguez, Ph.D.

What is new for eating disorders in the DSM-5?

The new category in the DSM-5 is now called Feeding and Eating Disorders and includes presentations that occur both in children and adults, namely pica and rumination disorders, avoidant/restrictive food intake disorder (ARFID), anorexia nervosa, bulimia nervosa, binge eating disorder, and other specified feeding and eating disorders (OSFED) (1). The most relevant changes between the DSM-IV and DSM-5 for anorexia nervosa are the elimination of amenorrhea and the rephrasing of the criterion related to fear of weight gain to include a behavioral component. For bulimia nervosa, the reduction of the frequency of binges from twice to once per week over a 3-month period was the most significant change. Finally, binge eating disorder was recognized as a distinct eating disorder (ED) marked by the same frequency of binge eating as described for bulimia nervosa.

How common are eating disorders in the Latino population?

Historically, these disorders have been associated with white upper-middle class females. The fact that most of the research, assessment measures, and diagnostic criteria have been developed for the Caucasian population has contributed to the misperception that EDs do not occur in diverse populations. However, EDs occur among all races/ethnicities, ages, sexes, and socioeconomic backgrounds (2,3).

Specifically, in the Latino population, our knowledge about EDs comes from studies conducted in Latin America, but less is known about these disorders in Latinos/as living in the United States. Some studies propose that the prevalence of disordered eating behaviors in Latina women is similar to or higher than those in non-Latina white women (4,5,6). The estimated lifetime prevalence in the United States of anorexia nervosa among Latinos is .08% in women and .03% in men, of bulimia nervosa 1.9% in women and 1.3% in

men, and of binge eating disorder

2.3% in women

and 1.6% in men

(4). In a study conducted in a large college sample in Puerto Rico, 3.26%

of females and

4.40% of males

reported symp-

toms congruent with the DSM-IV criteria for bulimia nervosa (7). Surprisingly, in this sample, the frequency and severity of symptoms related to bulimia nervosa were more common in males, pointing out the need to explore EDs in males and to develop male-friendly detection and referral programs at college campuses (8).

What is the access to treatment for eating disorders in the Latino population?

Although the prevalence of EDs in Latinos/as is comparable to the Caucasian population, limited access to care is a reality in the Latino population. Latinos/as with a history of EDs are less likely to utilize mental health services (3) and to be referred for further evaluation (9,10) in comparison to non-Latino whites. Many factors contribute to health disparities in Latinos/as with EDs. In addition to the general barriers to mental health treatment seeking that have been identified in this population, such as lack of health insurance, lack of bilingual services, and a delayed help seeking pattern, personal and emotional factors have also been recognized to play a role in Latina women with EDs. For example, the lack of motivation and information about resources and the stigma associated with having these disorders are considered to be key factors that influence treatment seeking in Latinas with EDs (11).

More recently, in *Promoviendo una Alimentación Saludable (PAS) Project Study*, (Promoting Healthy Eating Patterns), barriers and facilitators for the treatment in Latinas with a history of EDs were explored. The fear of not



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being understood, not being ready to change, the stigma of having an ED, and lack of family support were important elements that prevented Latinas from seeking treatment. Providing practical facilitators (e.g., bilingual services, affordable care services) may not be enough to encourage Latinas with EDs to seek help (12).

What we can do to reduce health disparities?

A critical step is creating awareness among health providers and the Latino population. The primary care setting has been identified as a potential avenue for early detection, especially considering the mental health stigma in this population (12). Half of the adults with EDs are diagnosed for the first time in a primary care setting (13). Health providers such as dentists, gastroenterologists, dietitians are instrumental in identifying symptoms that could be associated with the medical consequences of some disturbed eating behaviors. For mental health providers, it is important to assess EDs in Latinos/as, the symptoms of which could be masked or overshadowed by other emotional problems such as depression or anxiety. More culturally sensitive psychoeducational materials focused on the identification of symptoms and presenting the resources available for treatment could help to educate the Latino population about these disorders.

Currently, a small clinical trial including Latinas with EDs is being conducted with the support of the National Institute of Mental Health (NIMH), at the University of North Carolina at Chapel Hill (14). The purpose of the PAS study is to develop a culturally sensitive treatment model for Latinas with EDs in the United States. As part of this research study, treatment for adult Latinas with EDs is being offered at no cost. This is one of the few studies devoted to less acculturated Latinas in the U.S., with services in Spanish, integrating the family into treatment as part of a cultural adaptation process and using a fully integrated community based approach. More information about eligibility criteria is available on the web page (PAS Project) or by calling 919-966-7358.

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BHN Candidates

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Kathryn Russell, MS, RD

Nominating Committee Chair-elect: (vote for one)
Ashley Cizek, RD
Terry Anderson Girard, MS, RD, LDN
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A Challenging Recipe: How Medical Nutrition Therapy Can Help in Substance Use Disorders and Diabetes

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Substance Use Disorders: Diagnosis, Causes, and Treatment

Substance use disorders (SUD) are categorized with more than 300 other psychiatric diagnoses in the *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition* (1). When initially published in 1952 (DSM-I) by the American Psychiatric Association, this was the first official manual of mental disorders focusing on clinical application. The need for such a publication arose from growing recognition by the United States Army and Veterans Administration that World War II veterans needed services addressing what we now refer to as mental health disorders (2). The most recent version of the DSM, *DSM-5*, was released in May 2013 and continues to be viewed as the "bible" by mental health professionals who diagnose psychiatric illnesses in adults and children. It uses a multidimensional approach (i.e., consideration of clinical syndromes, developmental disorders and personality disorders, physical conditions, severity of psychosocial stressors, and highest level of functioning) as the basis for diagnosing mental health disorders because other factors in a person's life typically affect mental health.

Compared to the DSM-IV, the *DSM-5* does not differentiate between substance abuse and dependence, but instead, recognizes them as the same disorder on a continuum within a new category referred to as "addictions and related disorders" (1). To diagnose substance use disorder, the *DSM-5* states that two or more criteria must be present within a 12 month period. Severity of the SUD is based on the number of criteria presented, ranging

from mild (2 – 3 criteria) to moderate (4-5 criteria) to severe (6 or more criteria).

Genetic factors are recognized for their role in causing substance use disorders. Additional theories about the causes of substance use disorder include a desire to cover up or obtain relief from an uncomfortable life situation or chronic problem, (i.e. self-medicating to address emotional or physical pain) (1).

Magnitude of the Problem

- In 2012, the Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, and the United States Department of Health and Human Services published a 162-page report of findings from the 2011 National Survey on Drug Use and Health (NSDUH) (3). This survey is conducted annually to gather information about the use of illicit drugs, alcohol, and tobacco, with data collected during the month just preceding the survey interview. The 2011 interviews involved approximately 67,500 nonmilitary, noninstitutionalized individuals aged 12 years or older. The following is a snapshot of the 2012 report. Survey results have been extrapolated to reflect trends applicable to the larger United States population."
- An estimated 22.5 million people (8.7% of the population) were currently using illicit drugs, defined as marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics (pain relievers, tranquilizers, stimulants, and sedatives) used nonmedically.
- Slightly more than 50% of respon-

dents reportedly had consumed alcohol, with slightly more than 58 million individuals (22.6% of the population) having engaged in binge drinking (defined as having 5 or more drinks on the same occasion) on at least 1 day during the 30 days before the survey.

- Among young adults aged 18 to 25 years, binge drinking was reported by nearly 40% of respondents, with heavy drinking reported for more than 12%. Heavy drinking was defined as binge drinking on at least 5 days during the past 30 days.
- Slightly more than 68 million Americans (26.5%) reported using tobacco products, with the majority smoking cigarettes (22.1%), followed by cigars (5%), smokeless tobacco (3.2%), and pipes (<1%).
- Not quite 21 million individuals (8% of the population) were estimated to meet the criteria for substance dependence or abuse, according to the DSM-IV criteria.
- Treatment provided by medical facilities specializing in substance abuse (now categorized as SUD in DSM-5) is severely lacking for those in need. Of the nearly 22 million individuals aged 12 years or older in need of treatment for illicit drug or alcohol abuse, fewer than 11% received treatment.

Prevalence of Substance Use Disorder in Individuals with Diabetes

The NSDUH survey was conducted among the general United States population and did not identify participants who had a coexisting diagnosis of diabetes. Nonetheless, given the number

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of individuals known to have diabetes in this country (25.8 million) (4), medical nutrition professionals/diabetes educators inevitably will work with a number of patients who have both diabetes and a substance use disorder diagnosis.

Tobacco Use

Recent data from the Centers for Disease Control and Prevention found that 20% of adults aged 18 years or older with diabetes reportedly smoked cigarettes (5). Several studies have linked cigarette smoking to an increased risk for microvascular complications of diabetes (6) as well as insulin resistance, elevated blood pressure, and impaired endothelial function (7,8). Other investigators have reported a dose-dependent association between cigarette smoking and the risk for type 2 diabetes (9). Early smoking cessation has been shown to reduce the risk for developing type 2 diabetes to a level comparable to that of nonsmokers (10) and to mitigate the increased risk for coronary heart disease and mortality (11).

Alcohol

Based on data gathered from epidemiologic surveys and reports of those seeking treatment, 50% to 60% of individuals with diabetes currently are estimated to use alcohol (12,13). Binge drinking has been shown to increase the risk for diabetic ketoacidosis and is an independent risk factor for peripheral neuropathy and retinopathy (14). This is particularly worrisome for adolescents and young adults with type 1 diabetes because of the risk-taking behaviors that are common in these age groups and the prevalence of binge drinking, as described previously.

Other studies have shown a higher rate of adverse health outcomes linked to alcohol (15) or other drug use substance disorders among those with diabetes. Leung and colleagues (16) reported increased hospitalizations, longer length of hospital stays, and more frequent and severe health-related complications for Medicare and/or Medicaid beneficiaries with type 2 diabetes and a coexisting diagnosis of

an alcohol or substance use disorder. Finally, individuals who have substance use disorder diagnoses are less likely to follow diabetes treatment guidelines, including visits to the medical team for routine diabetes care (17).

Treatment

Research is ongoing to identify the most effective treatment approaches for individuals dealing with substance use disorders and diabetes, individually and as comorbid chronic diseases. Several studies have documented improved coordination of care and positive outcomes with a team-based care approach, as in the patient-centered medical home (18). Some investigators found reductions in nicotine dependence and the negative consequences of alcohol use with an integrated care model (18,19). A report by Ghitza and associates (20) found implementation of this care model resulted in lower total medical costs and improved health outcomes in a variety of settings. Ongoing social support in a one-on-one or group setting, coupled with an open and non-judgmental approach have been recognized as critical components of treatment for both diabetes and substance use disorders. However, the effectiveness of participation in Alcoholics Anonymous (AA) has revealed mixed results, as described in a review by Kastakas (21).. The number of people with diabetes in this review was not identified.

As reported by McLellan and colleagues in 2000 (22), part of the challenge in treating substance use disorders is fueled by a longstanding belief held by the public and some medical care providers that dependence is an acute condition, rather than a chronic illness. The researchers conducted a literature review comparing drug dependence to several other chronic diseases: type 2 diabetes, hypertension and asthma. Comparators included diagnosis, heritability, genetic and environmental factors, pathophysiology, adherence to treatment, and relapse rates. Results of the review led the researchers to conclude that drug dependence must be viewed as a chronic illness, and that long term strategies of medication management

and continued monitoring and follow-up are needed to produce lasting benefits for the patient and society.

Hands-on Patient Nutrition Programs

The following is a discussion of hands-on nutrition and cooking programs used by registered dietitians (RDs) at the North Florida/South Georgia Veterans Health System to increase the nutrition knowledge and skill levels of patients with substance use disorders. While class composition varies, as many as one third of the participants may also have a diagnosis of diabetes.

Nutrition Education Program

Good nutrition is essential to recovery from substance use disorders. Eating well replenishes nutrients, enabling those in recovery to function at optimal mental and physical abilities, which helps them to participate fully in cognitive aspects of the rehabilitation program, fully engage emotionally in the process, and bolster their chances at relapse prevention by keeping their mood and emotions on an even keel.

In an effort to motivate and empower residents to make positive food choices, we have been conducting hands-on interdisciplinary (occupational therapist registered [OTR]/RD) nutrition education as an integral part of the Substance Abuse Residential Rehabilitation Treatment Program (SARRTP), at the Veterans Administration Medical Center in Gainesville, FL, since 1997. Until recently, residents of this 20-bed, 90-day program prepared most of their meals as a community. This approach allowed OTRs and RDs to reinforce didactic classes on the role of diet in recovery with actual menu planning, functional and educational shopping trips, and weekly hands-on cooking classes. Although residents currently are temporarily housed on a hospital ward, the cooking (albeit scaled-down) and shopping classes continue.

Hands-on nutrition education can benefit any patient population. Via hands-on nutrition education, adults (most of whom learn best by doing) can master basic food skills, thus boosting their self-efficacy (perceived capability) and likelihood of succeeding in the

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behavior change process. Edible lessons are literally internalized, resistance to trying new foods can be overcome, and patients become empowered with practical tools to actively participate in their own health care, which is the hallmark of patient-centered care. Working together in the kitchen can transform the RD-patient dynamic to foster a therapeutic alliance.

For those in recovery, active participation in food preparation and enhancement of a nutrition knowledge base can highlight one aspect of life in which they can practice self-control and self-determination while nourishing themselves both literally and emotionally. From the perspective of occupational therapy, substance use disorder leads to “role deficiency,” that is, the loss or lack of development of many roles that usually anchor a person’s life in the realms of relationships, work, leisure, and schooling. Such problems in role performance frequently serve as the catalyst for people to enter recovery programs. The hands-on approach reinforces those roles, providing successful experiences that assist in the development of motor, process, and communication skills as well as feelings of competence. Such activity can impart the sense of mastery, purpose, and structure necessary for meaningful living and successful recovery.

Nutrition education and food preparation often provide opportunities for dealing with interpersonal and other issues such as control, deprivation, and gender roles in a therapeutic environment. Cooking and taking meals together also allows residents to develop leadership skills (especially among those with food backgrounds who can contribute their expertise), lends a sense of family and normality, and can be a venue for all staff team members to model appropriate meal-time conversation and interact less formally with residents. The cooking classes have also been a terrific volunteer experience for dietetic students.

Following are some general practical guidelines for establishing and con-

ducting hands-on cooking classes with patients/clients:

- Enlist institutional support by sharing timely reports that demonstrate cost-effectiveness and active participation by patients, highlighting the enhanced quality of care and improved patient satisfaction.
- Identify the target population. Participants can be outpatients with similar diagnoses, people interested in eating well on a tight budget, or those who simply want to stay healthy. Including family members in the program multiplies the effect.
- Ideally, find a well-lit kitchen venue where equipment can be stored securely and work surfaces and spaces allow for group preparation. The location should be easy to access and have sufficient parking.
- Try to approximate the standard participant’s basic kitchen equipment to make everyone feel at home and recognize that they do not need fancy utensils and machines for healthy food preparation. Suggestions for heart-healthy cookware are provided as well as encouragement to try using a second-generation (non-jiggle top) pressure cooker to increase the repertoire of delicious foods (beans!!) and decrease time spent in a hot kitchen.
- Use a patient-centered approach for the cooking class. Keeping the atmosphere supportive, nonjudgmental, gentle, and fun can inspire creativity, confidence, and ownership. Include participants in the planning by asking them to submit recipes and survey their likes, dislikes, medical needs, and interests.
- Limit the class size to 5 to 10 participants (depending on space and staffing) and prepare a small number of dishes to reduce the anxiety level. Having more than one staff person plus student volunteers allows us to work in smaller groups on several recipes simultaneously. Preparing the space in advance by setting up “stations” with each written recipe and its corresponding ingredients and utensils streamlines the process. We begin by gathering the entire group, explaining what we are going to

prepare and the accompanying nutritional concepts/benefits, which sets the intention, putting the lesson into a larger framework. Before the first cooking class, a session on kitchen sanitation and safety is very helpful (we use a video and quiz). Obviously, everyone must understand that they must wash their hands before beginning to work.

- Establish an overall learning goal of demystifying the process of putting food on the table. This can be accomplished by imparting general kitchen skills (e.g., measuring ingredients, use of knives); techniques and shortcuts; use of equipment; sanitation and safety; following and modifying recipes; preparing food from scratch for control of nutrient content; preparing lower fat and sodium, higher fiber, less processed, less expensive, better-tasting food; overcoming fear of trying new foods; and reducing the carbon footprint. Specific aspects are predicated by participants’ interests and nutrition goals.
- Introduce new “weird” foods (e.g., tofu, quinoa) by weaving the familiar with the less familiar. For example, we make changes in traditional southern recipes, such as preparing collards seasoned with lemon juice or sesame oil instead of fatback, creating barbecue tempeh with a homemade low-sodium sauce, crafting a glorified version of macaroni and cheese by sneaking in some tofu, and developing an oriental stir fry with gluten (affectionately dubbed “Chinese Chitlins”). Presenting nutrient dense foods and their role in disease prevention and treatment along with discussion of additional health-related topics specific to the audience can pique interest and increase acceptability.
- Consider other hands-on nutrition education activities, such as field trips to farmers’ markets, “health food” stores, supermarkets, restaurants, and farms.
- Gather outcomes data with simple pre- and posttests of objective knowledge, food habits, attitudes, and/or self-efficacy. Do the participants still

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think of tofu as a four-letter word? Share your results with institution administrators to gain support for expanding the program.

Incorporating hands-on nutrition education into your RD toolbox can enhance customer success while broadening your skills, job satisfaction, and fun quotient.

"Cook for Life" Program

"Cook for Life" was launched in August 2011, and is the Gainesville, FL, version of the Veterans' Administration Nutrition and Food Services' "Healthy Teaching Kitchen" project. Conducted by two RDs, the format includes 5 weeks of 2-hour sessions. Four of the sessions are hands-on cooking classes (very roughly themed breakfast, lunch, dinner, and snacks) and one session is a "consumer savvy" field trip to a local food market. Veterans are referred from the MOVE weight management program and outpatient nutrition clinics, most commonly due to one or more health concerns of overweight, hypertension, or diabetes. Our mission is to give participants the tools and motivation to prepare healthy, tasty, affordable meals to meet their dietary needs. The class is usually limited to four to eight people, and Veterans are encouraged to bring their significant others or family members.

Before the first class, students complete an interest/needs survey (so we can tailor the menu items and topics to each cohort) and a preprogram questionnaire. The questionnaire is designed to discern each participant's baseline in terms of dietary knowledge, attitudes, and self-efficacy. At the end of the final session, we ask them to complete the questionnaire again as well as a participant evaluation of the program. Using this material, we can generate quantitative data to document any changes in the dietary indices and qualitative data about the program to help us modify and improve it.

As of September 2012, data has been collected from 22 of 31 participants (several participants did not attend the

final meeting). The knowledge and attitudinal sections of the questionnaires produced less useful results. This may be due to confusing wording of the items, such as "Write the number that best reflects how you feel right now (1 – 5 from strongly disagree to strongly agree): Unsalted foods always taste terrible." There were only four or five items in those sections. In contrast, the self-efficacy questions revealed definitive changes. Participants were asked to rate their degree of confidence by recording a number from 0 – 100 using a scale ranging from 0 = cannot do at all to 100 = highly certain can do. One example that they were asked to rate was: "How certain are you that you can.....shop for healthy food?" By tracking general trends (grouping results: 0 to 49%, 50% to 79%, 80% to 100%) rather than smaller incremental changes, the self-efficacy data indicated a clear trend from "clueless" to "confident" in all ten items. These results are particularly gratifying because the adherence literature reveals self-efficacy to be the only consistent indicator of behavioral change. In other words, people who perceive themselves as capable of doing something are much more likely to attempt the task and to succeed.

The program evaluation form poses questions such as "What was the most helpful part of this program?" and asks for favorite and least favorite parts as well as suggestions for improving the program. In response to "Do you feel that your participation in this program will help you in achieving your health goals?", 19 of 22 participants answered "yes" (plus 1 neutral and 2 "somewhat"). Favorite and helpful parts of the program included linking food to health, how to prepare various foods, new ways of cooking, exposure to new foods, spices, ideas, group discussion and input, gaining confidence by hands-on cooking, getting copies of recipes, and especially eating. Other comments included "delightful surprise," "look forward to the class each week," and "enjoyed learning how to use a pressure cooker." Suggestions for future classes included more meat, more menu planning, more liquids, and most commonly, more and longer sessions.

A larger data set (n=86,) was also

collected May 2011 to May 2013 from the SARRTP nutrition education program, where cooking classes have been conducted for more than 15 years. Of 69 residents who were asked "Do you feel that the nutrition knowledge and skills you gained will help you in sustaining your recovery?", 64 wrote in "yes", 3 "no", and 2 "somewhat". Although SARRTP is voluntary, residents are often surprised by the mandatory "Nourishing Recovery" didactic and hands-on cooking classes, which often lead to some initially reluctant and even hostile participants. Their feedback frequently notes that they had negative impressions initially, but then found they actually enjoyed the classes. Serendipitous positive outcomes included socializing with peers, staff, and volunteers as a means to practice social skills; discovering an interest in nutrition; realizing the joy of cooking in community; and working through other life issues via food and cooking.

Overall, "Cook for Life" participants from both groups have found hands-on cooking classes to be informative, motivating, and simply fun. The dietetic practitioners have verified that the program is extremely gratifying for them. Our goal as RDs is to teach and promote healthy food preparation and cooking habits, for a greater understanding of how diet modulates health, and the acquisition of practical experience and skills to be implemented in the home. "Cook for Life" provides this in a patient-centered, nonjudgmental, supportive atmosphere where RDs can inspire creativity and confidence, empowering our Veterans to optimum nutritional wellness.

As the Native American proverb states, "Tell me and I'll forget. Show me and I may not remember. Involve me and I'll understand."

Complete graphed results, access to a video about "Cook for Life," copies of our evaluation forms, and other information about the program can be obtained by contacting Renee.Hoffinger@gmail.com.

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Charlotte Caperton-Kilburn BHN's DISTINGUISHED MEMBER AWARD

With great pleasure Charlotte Caperton-Kilburn, MS, RD, CSSD, LDN was presented BHN's Distinguished Member Award at the FNCE© 2013 BHN Breakfast Reception in Houston, Texas. She has been an active member of BHN for thirteen years, demonstrated exceptional management and leadership skills, a mentor to many, and is most deserving of this award.

Charlotte completed her internship at the University of Memphis, where she worked in Knoxville providing sports nutrition information for the Tennessee Volunteers and counseling clients challenged with eating disorders. Charlotte continually stretches herself to enhance her effectiveness as an RD in private practice, while growing her impressive list of professional accomplishments.

Since 2000 Charlotte has run a successful private practice, counseling clients with eating disorder, and in 2006 she was honored with the Emerging Dietetics Leader Award for Memphis and the state of Tennessee. From 2006–2011 Charlotte served as the Executive Director of the Tennessee Academy of Nutrition and Dietetics (TAND). She planned and organized leadership meetings and arranged speakers and sponsors to day operations. Her organizational skills and hard work moved TAND into a financially secure position.

Charlotte has been active on the BHN Executive Committee since 2006, initially the Public Policy Liaison, and in 2011 she led the practice group as Chair. Charlotte has been an invited speaker nationally and internationally. She presented at FNCE© in Philadelphia on legal issues, and she represented the BHN DPG at the American Overseas Dietetic Association Meeting in Malaysia.

Charlotte is currently the President-elect of the South Carolina Academy of Nutrition and Dietetics. For many years



Charlotte Caperton-Kilburn, MS, RD, CSSD, LCN (right) receives the BHN Distinguished Member Award presented by BHN Eating Disorders Resource Professional Karen Wetherall, MS, RD, LDN (left)

Charlotte has mentored interns on eating disorders and sports nutrition serving as a preceptor for several dietetic internship programs throughout Tennessee and South Carolina. Currently she is working with residents in the Charleston area to begin the SC Coalition for Overcoming Eating Disorders, a non-profit organization, which will provide information to the public about eating disorders.

Charlotte was one of several RDs across the country to receive a grant to work with students in Fuel Up to Play 60. She implemented this program in the Nashville area while being an adjunct faculty member at Lipscomb University.

Charlotte has reviewed books and position papers for the Academy in behavior health; most recently reviewing the SOP/SOPP for disordered eating and eating disorders. Additionally she has reviewed the last three editions of the SCAN DPG's Sports Nutrition Guide for Professionals.

Student Corner:

Opportunities in Behavioral Health for DTR and DPD Graduates

By Cynthia Johnson, Dietetic Intern

For many **Didactic Program in Dietetics** (DPD) graduates, the dietetic internship is started shortly after graduation, or in conjunction with a master's program. For others, due to a variety of reasons, the internship is either postponed or avoided altogether. Besides becoming an RD, other options in dietetics exist for a DPD graduate. These include finding work as a DPD graduate, earning a specialty certification prior to credential (or as stand-alone), or becoming a Dietetic Technician Registered (DTR). This article explores these options to see how they compare, and if they warrant pursuing.

Currently, the most popular option may be to obtain the Dietetic Technician, Registered (DTR) credential. With the Pathway III that became available in 2009, (allowing DPD graduates to sit for the DTR exam) DPD graduates are gravitating toward this option in increasing numbers. The Commission on Dietetic Registration (CDR) reports that as of November 1, 2013, the registry included 5,072 Dietetic Technicians, Registered. This is the first time since 2000 that the DTR registry has exceeded 5,000. That is due, in part, to the fact that since 2009 over 3,800 DPD graduates have become eligible to sit for the DTR exam, and of those, approximately 1,634, or 43% have taken the exam, with a 65% passing rate (1). Once registered, where are DTRs employed? Are they working in Behavioral Health? If so, in what capacity and at what compensation?

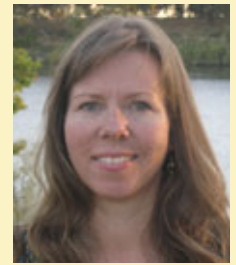
According to the Academy's *2013 Compensation & Benefits Survey* of the Dietetics Profession (2), the majority of DTRs (base: 866 practicing DTRs) are working in clinical, inpatient/acute care (33%); long-term, extended care, or assisted living facilities (27%). The primary positions held are in clinical nutrition – acute care/inpatient (44%) and food and nutrition management (19%). The positions with the most earning potential for DTRs are those in food and nutrition management, particularly if the DTR is in charge of a budget. Incidentally, food and nutrition management is the practice area that affords the DTR the most independence as well. The

Academy's *Scope of Practice* for the DTR delineates the supportive and assistive role of the DTR to the RD when it comes to the Nutrition Care Process, and in all direct patient care clinical and specialty nutrition settings (3).

Regarding Behavioral Health Care, there are *Standards of Practice* and *Standards of Professional Performance for Registered Dietitians (Generalist, Specialty, and Advanced)* by the Academy, but these documents do not exist for the DTR. Generally speaking, when direct patient care is involved, the DTR is subordinate to, and in an assistive role to the RD, but in other settings such as food management and community, the DTR generally seems to have management potential and more autonomy.

There are 15 specialty certifications that the DTR (and in some cases, the DPD graduate) do qualify to take, which according to the survey increases earning power and responsibility. The two most popular DTR specialty certifications are the Certified Dietary Manager (CDM) and Certified Food Protection Professional (CFPP). Incidentally, the median wages between a DTR holding an associate's degree as highest degree, and the DTR who entered via Pathway III (DPD graduate with bachelor's degree) are equal at entry (2).

In perusing the *Compensation & Benefits Survey 2013*, it was noted that there were behavioral health categories for the following: 'Clinical Dietitian, Specialist – Psychiatric,' which had 37 dietitians answering for hourly wage compensation, but zero results for DTRs; 'Eating Disorders' had 1 DTR respondent compared to 34 RD respondents (for hourly wage). The last Behavioral Health Nutrition-related area in the survey was 'Other' which contained an aggregate of specialties including Cardiac, Developmental Disorders, HIV/AIDS, Substance Abuse, Surgery and Transplant. The number of DTRs responding that they spent more than 50% of their time in this area was 2 (for hourly wage), compared to 90 for RDs. Salary values were not shown for the DTR, as the number of respondent DTRs in each of the above-mentioned categories was less than 15 (2).



Cynthia Johnson, BS, BA

In February 2013, a Joint CDR/ACEND Task Force (in conjunction with the Academy) developed and sent out a survey which was part of a practice audit to define the practice role of the DPD Baccalaureate program graduate. The survey included both DPD graduates who held the DTR credential, and those graduates who did not. From CDR, "The Task Force determined the DPD...graduate practice was not differentiated from the practice of [DTRs]. The results did not differentiate the practice activities performed by the Baccalaureate graduate and the DTR (1)". In addition, the Academy announced at the Food & Nutrition Conference & Expo in Houston, TX, that a new Nutrition and Dietetics Associate (NDA) designation for DPD graduates is currently under development.

In conclusion, based on the survey and documents referenced in this article, it seems that for the DPD graduate or DTR specifically interested in working in Behavioral Health Nutrition, in direct patient care, the opportunities, responsibility and earning potential appear to be somewhat limited, specifically regarding direct patient care to special populations. However, many opportunities exist for the DPD graduate who may want to pursue the DTR credential, and that is interested in food service/dietary management. The populations served may well cross-over with clients of behavioral health. It appears the DTR credential and specialty certifications are certainly viable short-term or long-term career options, with most limitations specific to direct patient care and median salary.

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BHN Spotlight Session Buzzing with Energy

By Adrien Paczosa, RD, LD, CEDRD

The Behavioral Health Nutrition practice group made a strong presence at FNCE 2013 in Houston, TX. Policy & Advocacy Leader for BHN, April Winslow, MS, RD, and Attachment and trauma specialist, Mark Schwartz, Sc.D., MFT, gave an energetic and intellectually stimulating presentation entitled "Food Matters: The connection between Nutrition and Psychotherapy." This BHN spotlight brought together the Therapist and Dietitian to share insight for developing a therapeutic alliance that creates safety and appropriate attachment. Additionally, the utilization of Neuroscience fundamentals that are influence through food offered dissolution of the physiological roots of dissociation. This session required a quick hand for note taking and the energy generated by the presenters left the attendees captivated.

The presentation began with Mark explaining to his audience psychotherapy and how to build a positive and appropriate attachment to aid in the healing of our mental health patients. He went on to discuss during the course of treatment for any mental health diagnosis the absolute need for compassion and understanding that relapse is part of recovery. This approach will only aid the treating professional to reach the true issues for which the patient is struggling.

Mark spoke about motivation of our client. We as health care professionals sometimes get too invested or wrapped up in outcomes and "doing" something for our patients. Mark explored creating the motivation we need to look behind the symptoms of the mental health issues. Symptoms have a profound function and purpose for our clients; we need to explore and sit with our clients in the problem under the problem.

Mark transitioned into the important role of the RD in mental health. For many patients the ideas of joy, senses of self and healthy relationships are foreign concepts, and thus the coping mechanisms have entered the patient's life to fill or numb them.

Coping behaviors, be it addictions, disorder eating, or mental health diagnosis, is a way for patients to say how defective they are to the world and fall further into the disease. Mark stated, "When you heal the shame is how you can measure the patient's level of change." We as RD's may not be able to quantify shame healed, but we can have a very valuable tool to help our patients. Our ability to listen, empathy, and heart to build a secure attachment to help patients move forward is what Mark believes is key. Then begin to help pull back as an RD and allow them to begin to find self with support is how we transition our patients to heal.

April began her session about bridging the gap between psychotherapy and nutrition. She played a clip from *Little Miss Sunshine* illustrating the power of shame around food on a kid. April went on to empower the audience by reminding them; RD's are the food and nutrition experts and we can provide "nerdy nuggets" to our patients to help guide them through the fog of mental health. By learning the language of psychotherapy we can build a stronger bridge with our clients. "The role of the RD is to identify and empower the patient to take emotional issues to the therapist."

"Get outside your box!" exclaimed April as she talked more about how RD's need to meet patients where they are. If you notice a patient dissociating when talking about food, then meet them where they are. She gave an example how she plays a board game in the middle of a session which allows the patient to get back into his/her body and engage in the nutrition session. All too often RD's will not know what to do when a patient displays coding skills in our office and by ignoring them, we only push them further away.

After exploring and meeting the patient where they may be emotionally age wise and health wise, RD's can invite the patients on the nerd train for

some biochemistry rides. April reminded the audience of the importance for nourishing the brain, because 15% of cardiac output and 26% total glucose needs are required by the brain for survival, glucose being the preferred fuel.

April stepped further into neuro-biochemistry by reviewing the structure of the brain as 60% lipids and through GABA and Glutamate the brain and nervous system will light up. April took the audience further into the brain to the Hypothalamus the ventromedial, and to the lateral hypothalamus. The ventromedial hypothalamus plays a roll in satisfaction of food and taste. The Lateral Hypothalamus is the part of the brain that regulates hunger and the appearance of food.

When trauma hits we see our patients cope and some will abuse and misuse food. What we can see in the body's response system could be the adrenal glands have shut down the cravings for carbohydrate and salt, the ventromedial and lateral hypothalamus switch in their function, the myelin sheath erodes when fat intake is compromised, and the intrinsic factor in our stomachs is down-regulated so less Vitamin B12 is absorbed.

The role of the RD when we have patients coming off trauma is not to expect or recommend intuitive eating, because they are not able to biochemically. Like any time, what we eat truly matters. April went on to explain that RD's can begin to heal patients with the powers of food to meet the damage occurring due to trauma and the elevation of the parasympetic nervous system. Repair the brain with at least, but possible more than six severing of fat. During depression the brain is trying so hard to stabilize CHO intake, and anxiety we need to calm the parasympetic nervous system through food rich in potassium.

In closing April encouraged the audience that RD's are the only medical professional trained to translate medical science into food.



Harriet H. Cloud, MS, RD

House of Delegates Report for the Fall 2013 Meeting

Harriet Holt Cloud, MS, RD, FADA • BHN-DPG Representative/Delegate

You are a clinical dietitian working in a hospital. You are a dietitian working in an eating disorders program. You are a dietitian

working for children with special health care needs at a children's rehabilitation center. Do you know the source of your funding and how secure your position is? That is one of the questions discussed during the FNCE meeting of the House of Delegates. Surprisingly many dietitians contacted prior to the October meeting could not answer that question.

The title of the discussion this year was Nutrition Services Delivery and Payment. Over 100 delegates and auditors attended the meeting and the discussion was lively. Much work was spent prior to the meeting studying this issue by delegates and communicating with the affiliates and DPG's they represented in obtaining information about what is happening related to funding and nutrition services.

During the two day HOD meeting a dialogue session was held. The purpose of the dialogue session was for delegates and meeting participants to:

1. Identify relevant stakeholders and their needs.
2. Comprehend the impact that current and evolving health care delivery and payment models will have on ALL areas or practice.
3. Give examples of successful integration into evolving delivery and payment models.
4. Communicate the need for nutrition and dietetics practitioners to be an essential part of evolving health care delivery and payment models.
5. Promote information to members and stakeholders and encourage members to utilize the Academy resources.
6. Empower members to lead efforts and seize opportunities to provide cost-effective nutrition services to optimize the public's health.

The dialogue sessions revealed a great deal of information related to the entire area of Nutrition Services, its delivery and service. Success stories of programs where nutrition is funded and billable were given. On the other hand

there was much discussion about lack of member and student knowledge of delivery and payment models, lack of member awareness of current resources available, the need for collaboration with stakeholders, insufficient outcomes data and lack of member engagement in this issue at the local/state and national level.

The Affiliates, DPG's, MIGs and Academy organizational units were challenged to engage in activities to support the needs of members to fully and successfully participate in evolving delivery and payment models. In the Behavioral Health Nutrition area what are the gaps in knowledge our members have related to funding for services? It will enhance opportunities for our members if BHN-DPG takes action to conduct research on funding opportunities in the areas of mental health, developmental disabilities, eating disorders, addictions, incorporating opportunities in the area of prevention and wellness.

One area of discussion involved the preparation of current and future students and educators and preceptors in understanding delivery and payment models along with seeking skill in marketing, leadership and quality care. Health care funding is changing with the Affordable Care Act, and the RDN requires training at the education preparation level related to ensuring that nutrition services are provided and funded.

Following FNCE and the HOD sessions, the HOD leadership team reviewed all of the comments and three motions were sent out to the delegates for review and additional comments. As a result the following three motions were made and we voted electronically:

Therefore, be it resolved that:

1. HOD request the Coding and Coverage Committee and the Legislative and Public Policy Committee collaborate in creating a Nutrition Services Delivery and Payment Action Plan. The plan should include the following elements:
 - a. Current Academy resources for nutrition services delivery and payment
 - b. Actions that members will need to take to address the delivery and payment of their services in their

practice settings

- c. Future educational resources that the Academy will need to provide for their members
- d. An evaluation component to determine the impact of this plan.
2. HOD request assistance from various Academy organizational units to support members to successfully participate in the evolving delivery and payment models:
 - a. Accreditation Council for Education in Nutrition and Dietetics (ACEND) creates new standards for graduate and undergraduate nutrition and dietetics didactic and supervised practice program that include competencies for the evolving delivery and payment models.
 - b. Commission on Dietetic Registration (CDR) assures the inclusion of competencies for practitioners related to assertiveness, marketing, leadership, business and management skills and outcomes data management and analysis.
 - c. Nutrition & Dietetic Educators & Preceptors (NDEP) considers opportunities to standardize curriculum design regarding delivery and payment models and tools for use by educators.
 - d. Committee for Professional Development investigates the establishment of a certificate program related to delivery and payment models.
3. The HOD requests the creation of a communication and marketing plan for members to use which focuses on students, legislators/policy makers, employers, consumers and other stakeholders. This plan will provide key messages specific to delivery and payment models for the RDN.

A report on the status of recommendations of all three motions will be shared with the HOD by May 1, 2014. It will then be shared with all members of the Academy. This is truly a mega-issue and one that needs input from all members of the Academy and our BHN-DPG. As new information is provided to me, I will share it by E-Blast. Thanks to all of our members for letting me be your delegate.

In the BHN Pipeline!

Lifestyle Intervention Conference

David A. Wiss, MS, RDN, CPT

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On October 7-9, 2013, BHN-DPG hosted a booth at the 3rd annual Lifestyle Intervention Conference at the Belagio Hotel in Las Vegas. David A. Wiss, MS, RDN, CPT, Therese Shumaker, MS, RD, clinical dietitian Sara Wilburn, and student Christin Chan represented the practice group. The theme of the conference was "Intervening on Process Addictions at Home and in the Workplace" and was created to stimulate discussion among providers who treat clients suffering from multiple addictions. There were four tracks: 1) Advanced Intervention 2) Love, Sex, and Relationships 3) Employee Assistance Professionals and 4) Food Disorders. Michael Cartwright (founder of American Addiction Centers) and Brad Lamm (founder of Breathe Life Healing Centers) hosted the conference. No alcohol was served at any of the events, morning group fitness was offered as part of the program, and healthful meals and snacks were served daily.

Dr. Patrick Carnes gave one of the keynote presentations on current issues related to the treatment of sex addiction. He discussed the impact of technology and social media on the human brain and behavior. Dr. Carnes linked changes in the human brain to the increase in addictive behavior and gave listeners a warning that "we are in trouble." In an interactive workshop, Dr. Dena Cabrera and Megan Kniskern, MS, RD, from the Rosewood Centers for Eating Disorders discussed current treatment for eating disorders and explored the trends of "diet fads" over the last century. Megan was one of two dietitians who presented at the three-day conference.

On the final day, the keynote speaker was Dr. Robert Lustig, an endocrinologist from the Department of Pediatrics

at University of California, San Francisco, who discussed sugar addiction and its link to hormones. Dr. Lustig reviewed the literature highlighting similarities between obesity and addiction, specifically related to decreased dopamine D2 receptors in the brain. He also discussed the relationship between insulin and leptin, presenting evidence that hyperinsulemia blocks leptin signaling and may play an important role in the obesity and food addiction epidemic. The paradox he recognized that if you give a normal weight 5-year old a cookie, they will be bouncing off the walls, whereas if you give a 5-year old obese child a cookie, they are often seeking more. This suggests that leptin signaling may be impaired in obese subjects and satiety cues are not properly transmitted, while low dopamine levels may lead to reward-seeking behavior. Dr. Lustig uses hormone replacement therapy and reported success with this method of treatment. He stated explicitly that sugar addiction (particularly fructose) has been induced in animal models and has a strong correlation in humans. He criticized the food industry for employing deceitful tactics similar to that of the tobacco industry and supports litigation against "Big Food."

Our primary objective as an exhibitor at this conference was to promote the role of the RD and RDN in private sector addiction treatment settings. We played the "Brain Game" with attendees who visited our booth and gave out BHN stickers with our new logo, new handouts created by our fabulous PR team and copies of the summer newsletter. From our perspective, the conference was a success. Several treatment providers and facilities visiting our booth were thrilled to learn about the possibility of incorporating a behavioral health nutritionist on their team.

PCOS: The Dietitian's Guide

Completely revised & updated, 2nd edition

by Angela Grassi, MS, RD, LD

Affecting one out of every ten women of childbearing age, Polycystic Ovarian Syndrome Disease (PCOS) is a commonly overlooked epidemic. Other diseases associated with PCOS include obesity, hirsutism, cardiovascular risk factors such as hyperlipidemia and impaired glucose tolerance. Insulin resistance is central to the pathology. Menstrual dysfunction and hyperandrogenemia history are a basis for diagnosis of PCOS. Left untreated PCOS may lead to diabetes, heart disease and infertility.

While much research has been completed since the first edition of this book, there is still much to be discovered about treating those who have PCOS. This book pulls together the most up to date evidence based research related to the physiology, pathology and nutrition for treating PCOS or suspected PCOS.

Understanding the history and symptomology are the most important elements in determining if someone has

PCOS followed by blood test and physical exams. The Registered Dietitian Nutritionist (RDN) maybe the clinician who recognizes the signs and symptoms and then coordinates for the blood test. This book contains the information needed for health care professionals to work effectively with the PCOS population. You will find sample meal plans, evidence based suggestions for alternative and complementary care and information about PCOS through the lifecycle.

Some of the most valuable updates of this book relate to diagnostic criteria and symptomology. Each chapter contains a summary of the most prevalent points with related references. Angela's own experience with PCOS and being a RDN allow her to provide valuable information for health professionals working with PCOS clients. It has always been a go to book for my practice and the updates make it even better.

Book review by Charlotte Caperton-Kilburn, MS, RDN, CSSD, LDN, past Chair of BHN and a private practice RDN in Charleston, SC

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In the BHN Pipeline! *(continued)*

Aging Well with Autism

"Aging Well with Autism" was a special workshop held July 2013 at Brandeis University in Waltham, MA co-sponsored by the NLM Family Foundation and The Heller School for Social Policy and Management. The purpose of the meeting was to discuss several unique challenges faced by the growing population of individuals with autism after age 55. Topics discussed included access to medical and health care services, health promotion interventions, as well as senior life planning initiatives for older adults with autism and their families. A summary of the presentations and discussions which took place at the workshop can be viewed on the Foundation's website:
<http://nlmfoundation.org/documents/2013AgingWellwithAutismSummaryFinal.pdf>

Save the Date! The Arizona Center for Integrative Medicine

11th Annual Nutrition & Health Conference
 State of the Science and Clinical Applications
 May 5 – 7, 2014
 Dallas, Texas
www.nhconference.org

Contribute an article or topic for future BHN*ewsletter* issues!

Contact www.newsletter@bhndpg.org or one of the BHN leaders listed in this newsletter.

Do you know someone within BHN who:

Is excellent in their practice area?
 Then nominate them for the BHN Excellence in Practice Award!

Criteria for the award include:

- Membership in BHN for at least three years
- Current practice in the area of Addictions, Eating Disorders, Intellectual and Developmental Disabilities or Mental Health
- Must have made contribution to specified practice area

Has provided excellent leadership within the field of nutrition? Then nominate them for the BHN Distinguished Member Award

Criteria for this award include:

- In practice for at least 10 years and a member of BHN for at least five years
- Active participation at the national, state, and/or district level.
- Demonstrated leader in the profession for populations served by BHN members through legislative involvement, research, management, education, publications, etc.)

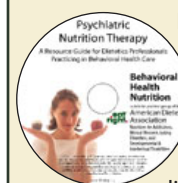
For more information visit the BHN website at www.bhndpg.org under the member only section.

***Nominations accepted from
 January 1st to May 31st***

BHN PUBLICATIONS

The Adult with Intellectual and Developmental Disabilities

This resource tool is designed to provide an overview of nutrition in individuals with intellectual and developmental disabilities. The resource guide is contained on one CD-ROM as a 209 page PDF file. **BHN Member Price: \$25.00**



Psychiatric Nutrition Therapy

This resource guide is intended for anyone working in the 4 practice areas within Behavioral Health Nutrition: mental illness, eating disorders, addictions, and those with intellectual and developmental disabilities who also require psychiatric care. The resource guide is contained on one CD-ROM as a 170-page PDF file. **BHN Member Price: \$25.00**

To order, visit

<http://www.bhndpg.org/publications/index.asp>

Academy of Nutrition and Dietetics Pocket Guide to Children with Special Health Care and Nutritional Needs

This pocket guide was developed through collaboration of the Behavioral Health Nutrition and Pediatric Nutrition dietetic practice groups of the Academy. This updated version contains the essentials to nutrition management in a comprehensive interdisciplinary approach to medical management of CSHCN. Up to date scientific evidence has been translated by the authors and editors into tables and practice guidelines for dietetic professionals.



To order, visit <http://www.eatright.org/shop/product.aspx?id=6442467529> (print only)

Or at <http://www.eatright.org/shop/product.aspx?id=6442467916> (print + online set).

Academy Foundation Updates

Foundation Awards Deadline February 1, 2014

The Foundation offers awards for continuing education, international and program development awards. To get information about the awards available to students, new awards and to download an application, go to <http://www.eatright.org/foundation/awards/>.

Food Safety Student Challenge - Deadline February 1, 2014

The Academy Foundation has a scholarship opportunity for students. The Academy Foundation/ConAgra Foods Food Safety Student Challenge was developed around the Home Food Safety campaign. Nine scholarships of \$4,500 will be available. The deadline to apply is February 1, 2014. For more information or to download an application, please visit: <http://www.eatright.org/foundation/hfschallenge/>.

Scholarship Deadline is February 15, 2014

Graduate scholarships, dietetic internship scholarships, undergraduate (didactic or coordinated) scholarships and dietetic technician scholarships are all available. The **Scholarship** application deadline is February 15. For more information about the scholarship program and to download an application, go to <http://www.eatright.org/foundation/scholarships/>.

General Mills Champions for Healthy Kids Partnership

For the past 11 years, the Foundation has partnered with the General Mills Foundation to provide \$500,000 in annual grants for innovative nutrition and physical activity programs being implemented by 501c3 charities which enlist the expertise of registered dietitians. We are happy to share that General Mills will provide the Foundation \$1,000,000 in funding to make these grants available for 2014. Through the Champions for Healthy Kids grant program, 50 grants of \$20,000 each will be awarded to non-

profit organizations implementing programs promoting healthy eating and physical activity. Applications will be available in February 2014. For more information, please visit: <http://www.eatright.org/foundation/championgrants/> or contact kids@eatright.org.

Support the Foundation of Your Profession

"I donate to the Foundation because it's the only source of grants and scholarships devoted solely to the dietitian. The more I learned about what the Foundation does and how our contributions are used to support what the RD

does, the more I felt a true commitment to providing annual support. In fact, I also have made plans to provide support through the Legacy program." Patricia A. Obayashi, MS, RD, CDE.

Support the Academy of Nutrition and Dietetics Foundation's annual fund. Your support will enable the Foundation to continue to provide scholarships, research grants, continuing education awards and innovative educational programs through the Kids Eat Right initiative.

To learn more about the Foundation, or to make a donation: www.eatright.org/foundation/donate.



Public Policy Workshop

March 30–April 1, 2014 in Washington, DC



*If dietetics is your profession,
policy should be your passion!*

For more information or to register, visit www.eatright.org/ppwconnect

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BHN: Fuel Your Brain, Feel Your Best!

NEW! Mission: Empowering BHN members to excel in the areas of Addictions, Eating Disorders, Intellectual and Developmental Disabilities and Mental Health by providing resources and support.

NEW! Vision: Optimizing the physical and cognitive health of those we serve through nutrition education and behavioral health counseling.

Academy of Nutrition and Dietetics website: <http://www.eatright.org>
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