Letter from the Editor:

Welcome to our inaugural issue of SCAN Connection!

The subunits of SCAN (SD-USA, Wellness/CV, and DEED) have teamed up to provide you with this one-stop resource that will replace the individual subunit newsletters going forward. As RDNs, we come across so many diverse types of patients daily, and it’s very rare that any of them fit perfectly into one little box. So, to provide the best care we can, we need to strive to have a broader understanding of the issues our patients face. While we can’t be experts in every topic, keeping up to date on emerging trends in the research and knowing how to recognize signs and symptoms of various issues (and knowing when to refer!) only enhances our knowledge base and improves our ability to effectively help our patients. We’ve incorporated this cross-functional concept into this newly combined newsletter, and we hope you find it valuable in your daily practice.

Each issue of SCAN Connection will have an overarching theme, and you’ll find information related to that theme from each of the 3 subunits. For our first issue, while school may be out for the summer, we’re keeping the brain front and center in here. We cover information related to nutrition supplementation in traumatic brain injury, diets for the ever-increasing aging population, and an interdisciplinary perspective on how cognitive impairment may impact the treatment paradigm in eating disorders.

Much like our previous subunit-specific newsletters, you’ll continue to find information on how to connect with other RDNs, resources that can augment your practice, and upcoming events to further your knowledge base. SCAN Connection is your newsletter, and my team of top-notch section editors and I look forward to continuing to provide you with timely, informative content and making this combined subunit newsletter a go-to resource for you. Please feel free to reach out to me or any of the section editors if you have comments, concerns, ideas for upcoming issues, or an interest in contributing—we welcome your input!

And now, it’s time to connect...

Rebecca Rivera Torres, MS, RD
Connection Corner

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Want to write for our newsletter? Have thoughts on something you read? Or, maybe you just have a great topic for an article you’d like to see covered? Connect with one of the Sports Dietetics-USA, Wellness/CV, or DEED subunit section editors above today!

Letter from the Editor

Connection Corner
Connect with us, and get involved with SCAN!

Nutrition Supplementation for Concussion: Emerging Evidence
Can DHA offer neuroprotective benefits for athletes?

Food for Thought: Diet and Healthy Brain Aging
A new diet shows promising effects on the aging brain.

Are you reaping all the benefits of your SCAN membership?

We have myriad resources available, from ready-made fact sheets to use with your patients to PULSE, our peer-reviewed publication, to continuing professional education and development opportunities for you. Go one step further, and join our complimentary subunits to get more in-depth topic information by accessing your My Profile area on SCAN’s website, scrolling down to Membership Details, and checking the boxes for any (or all!) of the subunits that interest you. And, what better way to network and discuss nutrition advances and best practices with other RDNs like yourself than to converse directly via our electronic mailing lists (EMLs)? Don’t forget, we’re social too! Like us on Facebook and follow SCANdpg on Twitter, Instagram, and Pinterest. So, what are you waiting for? Be in the know and make your SCAN connections today!
Nutrition Supplementation for Concussion: Emerging Evidence
by Anthony J. Anzalone, MS, and Jonathan M. Oliver, PhD

Over the last several years, sports-related concussions have received considerable attention. While most of the attention has been brought about by the media regarding lawsuits and discussions surrounding retired professional football athletes, it is important to understand that the seriousness of sports-related concussion is not limited to the professional playing field. In fact, sports-related concussions are one of the leading causes of traumatic brain injury (TBI) in youth and young adult athletes.

In simple terms, a concussion results from either direct or indirect forces acting on the head or neck. A commonly cited adage regarding concussion in sport is, “If you’ve seen one concussion, you’ve seen one concussion.” The statement highlights the diverse nature of concussion, particularly regarding the clinical manifestation of injury. The central reason for the quip lies within the definition of the diagnosis itself. The word concussion merely describes the mechanism of injury; however, concussive injuries result in a complex neurometabolic cascade of events at the cellular level that results in a multitude of functional disturbances identified as the signs and symptoms of injury. As 2 injuries are often not alike, management of concussion is difficult. The American Medical Society for Sports Medicine, in their most recent position statement, suggested that protective equipment does not reduce the incidence and/or severity of concussion in sport, highlighting the need for new approaches for the prevention and treatment of sports-related concussion.

Nutrition supplementation has emerged as a particularly promising strategy for conferring neuroprotection prior to and following head injury. Nutrients have the capacity to target multiple mechanisms of injury, which makes them ideal for neuroprotection. Perhaps the most well studied nutrition strategy for neuroprotection is docosahexaenoic acid (DHA), an omega-3 fatty acid that is highly enriched throughout the central nervous system (CNS). As an integral component of the CNS, DHA has been shown important for various aspects of brain health.

In animal models of TBI, supplementation with DHA prior to and following injury has proven to counteract the effects of injury. Interestingly, the dosage that confers the greatest benefit is approximately 40 mg/kg/day, which corresponds to approximately 4 g/day in today’s football athlete. A recent large-scale human study, and the first in this specific population, demonstrated that DHA provides a neuroprotective effect in American football athletes over the course of a competitive season. Football athletes consumed varying dosages of DHA (2 g/day, 4 g/day, or 6 g/day) or placebo for an entire season, and blood biomarkers of head trauma were examined. Those supplemented with DHA exhibited attenuations in the concentration of biomarkers of head trauma throughout the study. While further exploration is definitely warranted, the results of that study and others targeting TBI provide promising preliminary results for DHA.

It can be argued easily that much more evidence is needed before we can definitively rely on a nutritional strategy such as DHA supplementation to mitigate the deleterious effects of sports-related head trauma. However, DHA has been well established to be essential for brain health and comes with no overt negative symptoms. So, what is the harm in proactively supplementing athletes with DHA?

AUTHORS’ BYLINES
Anthony J. Anzalone, MS, a recent graduate of Texas Christian University, is the research coordinator for the Sports Concussion Research Group at TCU. His research interests include examining novel tools for the detection and diagnosis of sports-related concussion as well as investigating potential nutrition strategies for the prevention of concussive and subconcussive injuries.

Jonathan M. Oliver, PhD, is Assistant Professor in Kinesiology at Texas Christian University, where he directs the Sports Concussion Research Group. The Sports Concussion Research Group conducted the only large scale trial examining the effectiveness of DHA on subconcussive injuries in American football athletes.

REFERENCES:
Food for Thought: Diet and Healthy Brain Aging

By Susan J. Vannucci, PhD, RD

Modern society is characterized by both a significant increase in average life expectancy and a rise in obesity to epidemic proportions. The percentage of populations characterized as elderly (ie, >65 years of age) is increasing in nearly every country, predicted to reach 30% (from the current 17.4%) worldwide. Meanwhile, measures of global obesity predict an incidence of 18% for men and 21% for women by the year 2025. As the incidence of dementia, with or without specific neurodegenerative diseases such as Alzheimer’s Disease (AD) or Parkinson’s Disease (PD), increases with aging, the question arises of how do obesity and obesity-related diseases, including type 2 diabetes (T2D) and metabolic syndrome, further affect brain health? Also, what nutritional interventions might be feasible to promote improved cognition and reduce neurodegenerative decline?

The fact that obesity and its related cardiometabolic diseases, metabolic syndrome and T2D, are major risk factors for cardiovascular disease, heart attack, and stroke is well established. Less well known, but now clearly established, is the significant impact of middle-aged obesity on age-related cognitive decline and dementia. Although the precise mechanisms underlying this relationship are unclear, numerous animal studies of diet-induced obesity (DIO) suggest that, in addition to the effect of increased adiposity and insulin resistance, the composition of the diet itself may also play a role. Experimentally, both high-fat diets and the Western diet lead to increased systemic and central inflammation, with clear effects on brain structure and function. In humans, obesity-related systemic inflammation, as measured by increased circulating C-reactive protein (CRP), is associated with brain abnormalities, such as decreased white matter integrity and decreased brain volumes, detected on MRI and evidence of reduced cognitive function on several standardized tests.

The question for all of us focused on promoting cardiovascular wellness is, what sort of interventions might promote positive brain health and cognition with age, regardless of body weight? The focus of preclinical and clinical research has been on diets and lifestyles consistently associated with healthy aging and reduced cognitive decline, as well as specific dietary patterns that have been shown to have adverse effects, such as excess calories, high calorie/high saturated fat/low dietary fiber, and low antioxidant nutrients. (A discussion of individual macro- and micronutrients is beyond the scope of this article; for extensive current reviews, see Wahl et al 2016 and Vauzour et al 2017.) It is not surprising, however, that much of the current focus on describing an optimal diet is derived from dietary plans that have been shown successful in reducing cardiovascular disease, obesity, and the comorbidities of T2D and metabolic syndrome, specifically the DASH (Dietary Approach to Systolic Hypertension) and Mediterranean diets.

Two randomized trials evaluated the effects of adherence to these diets on cognitive function, both with positive results. Based on the results of these studies, in combination with other current positive findings in the “diet-dementia” field, Morris and colleagues at Rush University Medical Center in Chicago devised a new diet aimed at neuroprotection with aging, the MIND (Mediterranean-DASH Diet Intervention for Neurodegenerative Delay) diet. Unique components of the diet are the greater emphasis on green leafy vegetables; a slightly reduced emphasis on fruit other than berries; increased consumption of whole grains; olive oil and nuts as sources of healthy fats; and fish, poultry, and beans for protein. The diet recommends reduced consumption of red meats, fried/fast foods, pastries and sweets, butter, and cheese. The researchers studied the diets of a large population of elderly individuals in more than 40 retirement communities and senior public housing in Chicago as part of the Memory and Aging Project (MAP). The results of this initial study demonstrated that a higher MIND diet score was significantly associated with slower cognitive decline in this population. Although these results need to be replicated, and an intervention trial is needed, they do provide a positive direction toward developing an optimal diet/lifestyle to protect the aging brain. Certainly with an increasing aging population, this is an area to watch!

AUTHOR’S BYLINE

Susan J. Vannucci, PhD, RD, is currently Adjunct Research Professor of Neuroscience in Pediatrics at Weill Cornell Medical College, New York, NY. She also has a private practice (susanjvannucci-phd-wellness.com) and is a nutrition speaker and author.

REFERENCES

An Interdisciplinary Perspective on Brain Health and Eating Disorders

By Leah L Graves, RDN, LDN, CEDRD, FAED; Lucene Wisniewski, PhD, FAED; and Vicki Berkus, MD, PhD, CEDS

To tackle the vast subject of brain health and eating disorders (EDs), we decided to get an interdisciplinary perspective from a team of expert professionals. In alignment with recommendations that EDs should not be treated in isolation but by a treatment team, we reached out to a SCAN DEED (disordered eating and eating disorders) registered dietitian nutritionist (RDN), a leading researcher and psychotherapist, and a board certified physician in psychiatry and neurology to answer this question:

“What one concept would you like professionals who treat eating disorders to understand about the brain as it relates to assessment, treatment, or prevention of eating disorders?”

From the dietitian:

Recent advances in neuroimaging have improved our understanding of the complexities of anorexia nervosa (AN). Investigators have demonstrated differences in reward circuitry and executive function, which may help explain AN behavior. Those with AN respond less hedonically to palatable food, even in a non-fueled state, while at the same time they have heightened executive function such that their decisions about eating are less intuitive in nature. Previously, nutrition intervention for AN focused on weight restoration and establishment of flexible eating patterns, focusing on internally directed eating. Newer information indicates using eating approaches that allow reliance on cognitive control for at least the first 18 months to 2 years of recovery may better assist patients with AN in consistently meeting nutrition needs. Following this structured approach, dietitians can assist patients with AN in developing eating strategies that allow exploration of internally directed eating, with additional focus on flexibility of food choice and potential hedonic pleasure from food.

From the psychotherapist:

A therapist, physician, or RDN must consider the brain at all stages of understanding and treating EDs. It is the brain and its interactions with the environment that either render individuals vulnerable to or protect them against the development of the illness. It is the brain’s response to change that can dictate progress or the lack thereof. It is the brain itself that is directly impacted by specific ED symptoms. A provider who chooses to work with a client who has an ED must be a specialist—one who has expert training in specific, evidence-based ED treatments. If your brain was attacked by a cancer, you wouldn’t settle for anything but expert care. Both EDs and cancer can be lethal. An ED professional must provide specialist treatment, so get training to be an expert or refer.

From the psychiatrist and neurologist:

The hardest part of working with patients with EDs is the separation of the person from the disease. The patient with an ED often presents with a malnourished brain from lack of nutrition. In consequence, their ability to retain material is poor, thus the development of an eating plan will most likely not be very productive until progress toward recovery has been made.

The best treatment is re-feeding, and this takes time. The lack of cognitive ability may look like resistance, anger, depression, a personality disorder, or lack of motivation.

The need for consistency, structure, and rapport in your relationship is crucial. Remember you are asking them to face their biggest fears several times per day. This level of fear is what you try to connect to and help manage. Can you connect, and how do you address your feelings around their behaviors?
Final thoughts

As ED professionals, we must view the brain as a double-edged sword. Brain function is reduced and brain activity changes as a consequence of malnutrition or ED symptoms, thus treatment becomes more difficult. However, when RDNs use evidence-based treatment, seek expert training and mentoring, and approach clients with understanding, the brain can allow us to achieve wonders in a client’s recovery.

AUTHORS’ BYLINES

Leah L. Graves, RDN, LDN, CEDRD, FAED, is Senior Director of Nutrition and Culinary Services Veritas Collaborative (Veritascollaborative.com).

Lucene Wisniewski, PhD, FAED, (www.lucenewisniewski.com) is Adjunct Assistant Professor of Psychological Sciences at Case Western Reserve, co-founder and past Clinical Director of the Cleveland Center for Eating Disorders, and a previous recipient of the Academy for Eating Disorders Outstanding Clinician Award.

Vicki Berkus, MD, PhD, CEDS, is Clinical Director of Nationwide Eating Disorder Programs and Medical Director for Eating Disorder Treatment at Sierra Tucson Facility and is Board Certified in Psychiatry and Neurology.

REFERENCES:


This quote by Albert Einstein closes the signature of e-mails sent by Kelly Pritchett, PhD, RDN, CSSD, and after hearing her story, it truly seems to embody her path into and through nutrition. Originally Kelly wanted to be a nurse. However, after a dietitian spoke to her collegiate swim team, she had the aha moment that nutrition was “an important part of the puzzle and that dietitians were highly underutilized in the collegiate realm at that time.” This fundamental idea of how nutrition science impacts sport performance led her to pursue a PhD in the field, followed by a career in teaching. Kelly, Director of the Nutrition Graduate Program and Assistant Professor in Nutrition and Exercise Science at Central Washington University (CWU), says she loves “the day to day variation and challenging young minds” and finds mentoring her graduate students and seeing their growth very rewarding. Seems Einstein was onto something.

Other ways in which Kelly has been working to broaden the comprehension of nutrition science is through her research focused on US and Canadian Paralympic athletes. “It’s exciting to see that paralympic athletes are now receiving more nutrition support. I have learned a lot about the nutritional challenges that these athletes face and look forward to furthering the sports nutrition research with this population,” she says. Additionally, Kelly works with the CWU athletics program and is a national media spokesperson for the Academy of Nutrition and Dietetics. Currently the SD-USA Fact Sheet Editor, her involvement in SCAN started about 8 years ago as SCAN’s Volunteer Coordinator. Like others in our organization, she says she has met many professionals through SCAN who have “inspired, challenged, mentored, and helped pave [her] way as a professional in the field.” These collaborations also helped push her out of her comfort zone to chair the 2016 Symposium. This would no doubt be why, when asked, she offered the following advice to newbies and veterans alike: “Always challenge yourself. Get involved, and take a leadership position.”

Want to know more about Kelly? Follow her on Twitter (@KPritchettRD) and continue the connection.

**AUTHOR’S BYLINE**

Rebecca Rivera Torres, MS, RD, is a registered dietitian and communications specialist. She is also Editor-in-Chief of *SCAN Connection* and can be reached at SCANConnection@gmail.com.
**Resources and Events**

**Ongoing/On-Demand Events**

CDR offers online continuing education modules in various areas and ongoing opportunities to become Board Certified in sports dietetics and obesity and weight management.

For information: https://www.cdrnet.org/products/assess-learn-online-continuing-education-modules and https://www.cdrnet.org/certifications/board-certified-specialist

IAEDP offers on-demand webinars

For information: http://www.iaedp.com/webinars-schedule/

Eating Recovery Center offers on-demand webinars

For information: https://www.eatingrecoverycenter.com/professionals/on-demand-professional-development

Jessica Setnick offers ongoing, in-person Eating Disorders Bootcamps

For information: http://understandingnutrition.com/store/store_results.php?Category=10&Section=Eating+Disorders+Boot+Camp

Molly Kellogg offers ongoing, in-person Counseling Intensives for Nutrition Professionals

For information: http://www.mollykellogg.com/professionals/events/

Nancy Clark's on-demand, home-study course *Nutrition for Sports, Exercise & Weight Management: What Really Works*

For information: http://www.nutritionsportsexerciseceus.com/

Renfrew Center offers ongoing, in-person conferences

For information: http://renfrewcenter.com/events

SCAN offers on-demand webinars

For information: https://www.scandpg.org/e-library/

**August 4-5, 2017**

9th Annual Eating Recovery Foundation Conference, Denver, CO

For information: https://www.eatingrecoverycenter.com/professionals/events

**August 4-5, 2017**

The Victory Program at McCallum Place Eating Disorders in Sport Conference, St. Louis, MO


**August 4-7, 2017**

American Association of Diabetes Educators Annual Meeting, Indianapolis, IN

For information: http://www.aademeeting.org/

**October 7-10, 2017**

American Association of Cardiovascular and Pulmonary Rehabilitation, AACVPR Annual Meeting, Charleston, SC

For information: www.aacvpr.org

**October 21-24, 2017**

2017 Food & Nutrition Conference & Expo (FNCE)—Centennial Anniversary, Chicago, IL

For information: eatrightfnce.org

SCAN events at FNCE: www.scandpg.org/fnce-2017/

**October 30-November 2, 2017**

Obesity Week, Washington, DC

For information: www.obesity.org/meetings/obesity-week

**November 10-12, 2017**

Annual Renfrew Center Foundation Conference, Philadelphia, PA

For information: www.renfrew.org

**Resources to Connect With Your Patients**

American Diabetes Association (www.diabetes.org)

- ADA’s annual update to its Standards of Medical Care in Diabetes is available at http://care.diabetesjournals.org/content/40/Supplement_1. View a summary of the revisions at http://care.diabetesjournals.org/content/40/Supplement_1/S4.

American Heart Association (AHA)/American Stroke Association (ASA) (www.heart.org)

- AHA’s Acute Myocardial Infarction Toolkit offers downloadable tools for health professionals to help patients after a heart attack. The materials include a Clinician Conversation Guide, Heart Attack Discharge Worksheet, a 4-part series on “After a Heart Attack,” and Cardiac Rehabilitation Referral Card. From the home page, search on the name of the toolkit.

- Go Red for Women has a new initiative called Go Red Get Fit, which encourages involvement in quarterly challenges such as “Less Salt, More Sweat” to limit sodium consumption and increase physical activity. For more details, refer patients to www.goredforwomen.org/goredgetfit.

American Medication Association (www.ama-assn.org)

- AMA provides online resources for health professionals to engage patients in preventing diabetes. Click on https://assets.ama-assn.org/sub/prevent-diabetes-stat/toolkit.html to access downloadable materials including a prediabetes risk test, a sample referral form to a diabetes prevention program, and algorithms on prediabetes identification.

National Institutes of Health (www.niddk.nih.gov)

- NIH offers resources to help older adults prevent and manage diabetes. From the home page, search on “Diabetes in Older Adults.”

National Stroke Association (www.stroke.org)

- To access the Act Fast wallet card on stroke warning signs (in English or Spanish versions), click on http://www.stroke.org/stroke-resources/resource-library.

Training & Conditioning (www.athleticsearch.com)

- *Training & Conditioning* is a publication for professionals involved in the training, conditioning, rehabilitation, and care of competitive athletes. Sports dietitians are frequent authors of *T&C* articles. Sign up for a FREE subscription at www.athleticsearch.com/subscribe2.html.