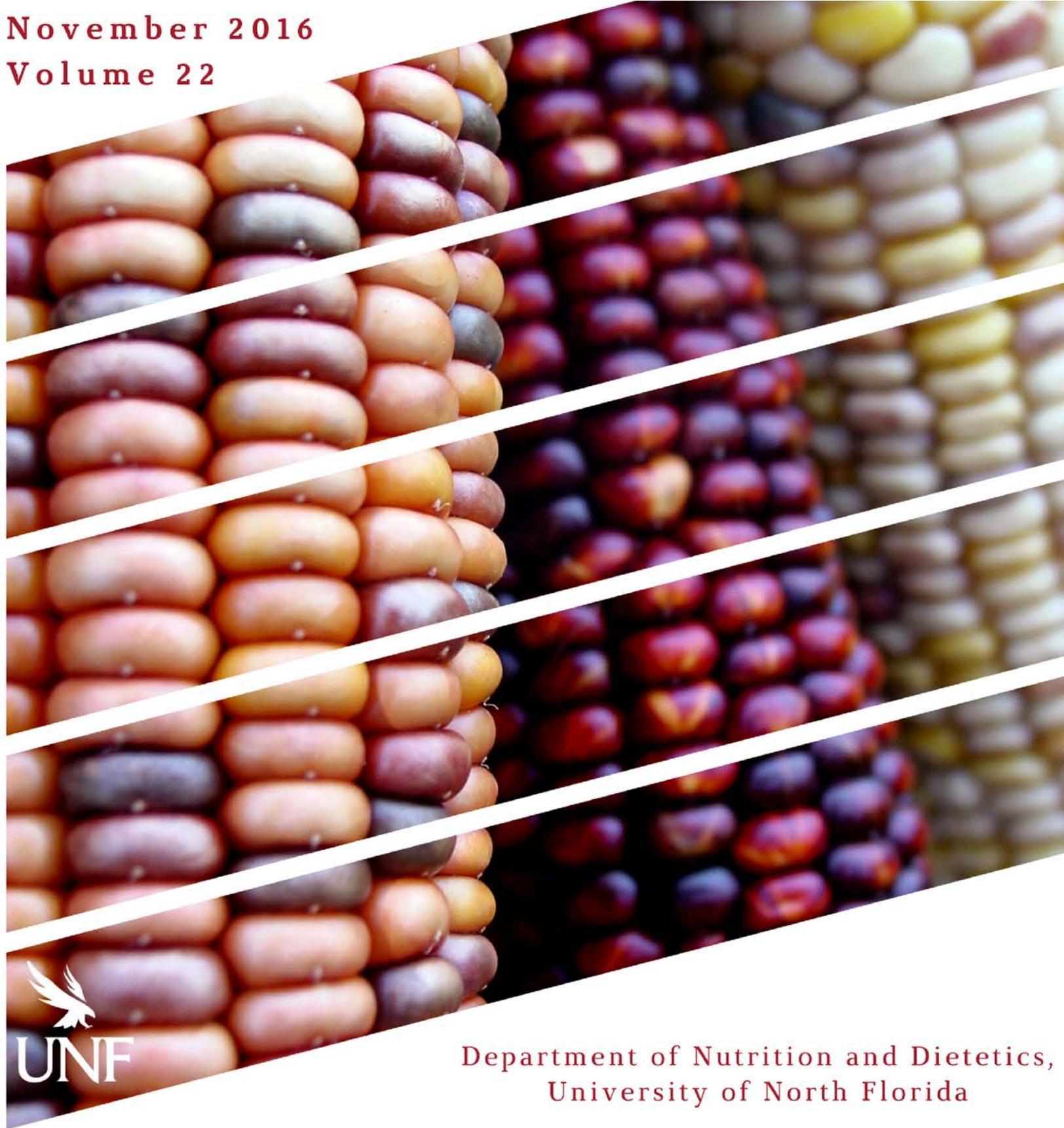


November 2016  
Volume 22



Department of Nutrition and Dietetics,  
University of North Florida

# NUTRI*NEWS*



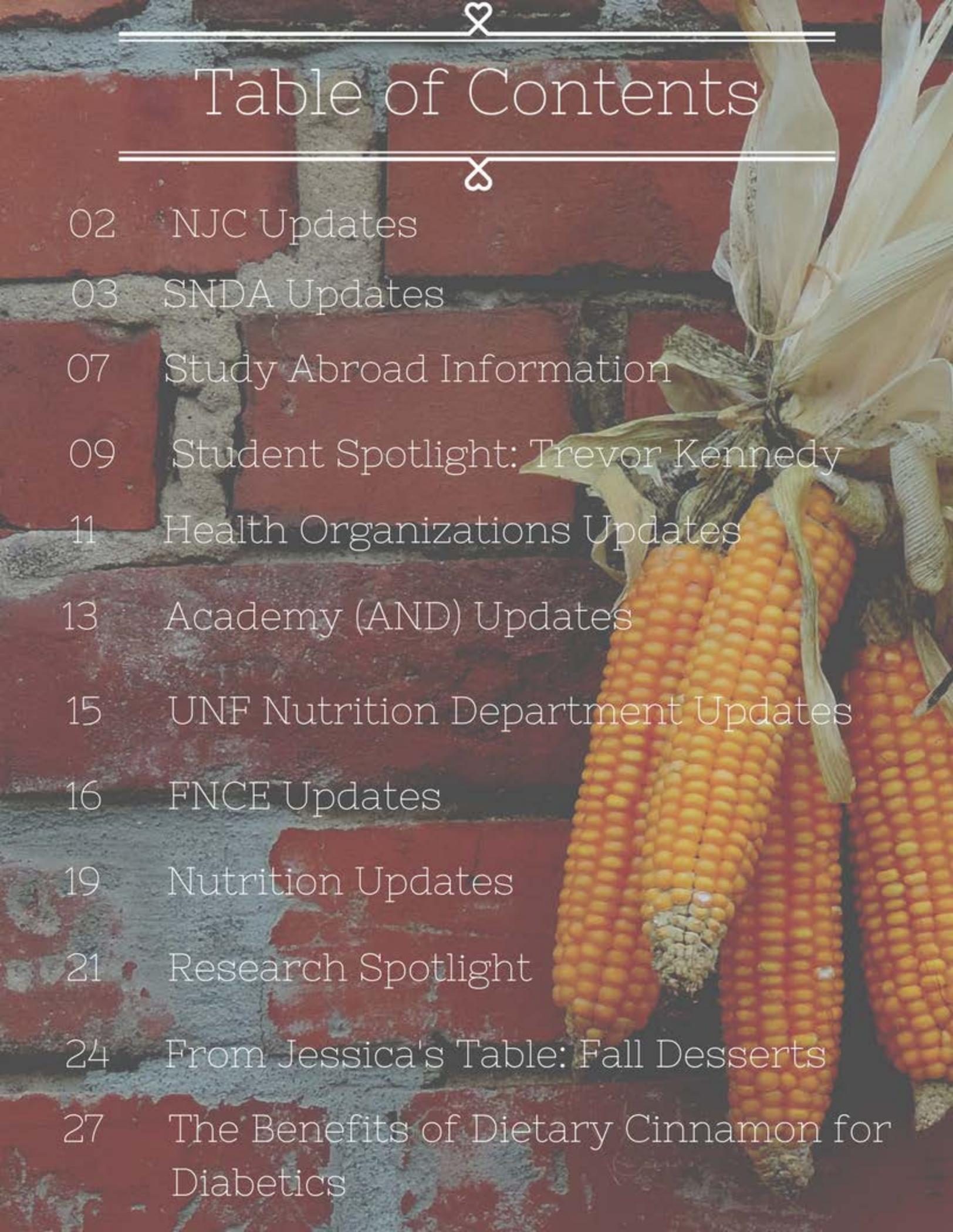
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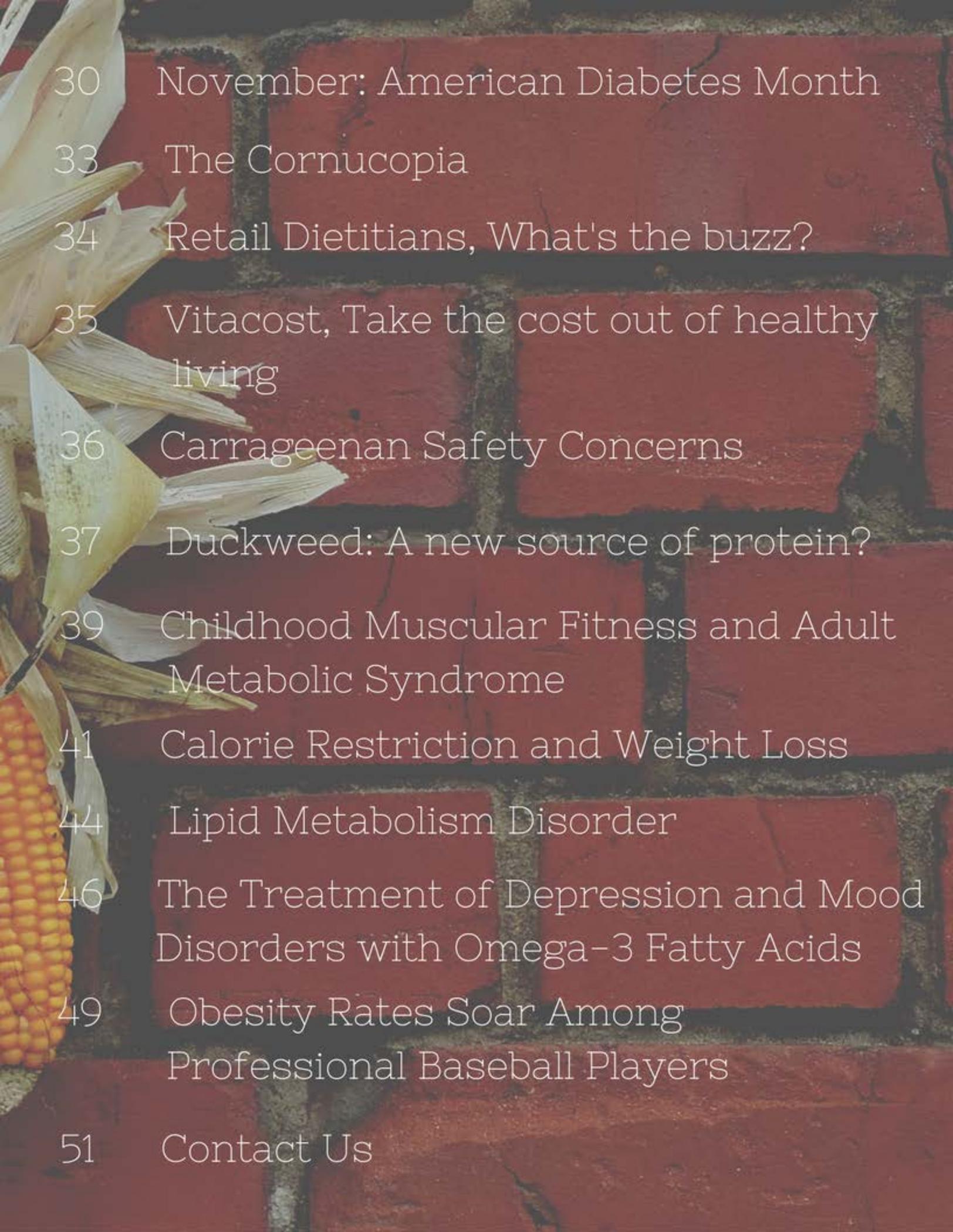
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# Nutrition Journal Club

November Update

## Hello Ospreys!

We hope you are all doing well this semester. We have some exciting news for you all, but first, a big thank you to all of you who came out on October 25th! We are working on getting a talon painted for our club by Addie Steele, NJC Secretary. Pictures will be posted on social media after it is painted. Please, check us out on [Facebook](http://www.facebook.com/unfjournalclub) ([www.facebook.com/unfjournalclub](http://www.facebook.com/unfjournalclub)) and [Instagram](#) (search: unf\_njc).

Our initial club meeting date this month was canceled due to Hurricane Matthew, but we knew that the show must go on! So it was rescheduled and the topic was on the frequent consumption of sugar in beverages and its association with an increased risk of metabolic syndrome.<sup>1</sup> This study was conducted in a Mediterranean population with a high risk of cardiovascular disease.<sup>1</sup>

We would also like to announce Emma Garrett, RD will be our next and last guest speaker this month Thursday, November 17, 2016 at 11:30 AM – 12:30 PM in room 2704, also known as the Student Auditorium. She is a solid organ transplant dietitian who works at the Mayo Clinic and works primarily with heart and kidney transplant patients. She works in pre- and post-transplant care. Ms. Garrett was a Division 1 college gymnast and graduated in 2009 from Southeast Missouri State University. She completed her dietetic internship at the Mayo Clinic. A big thank you to Marla Morgan, NJC Treasurer, for inviting her to our community here at UNF. As always, be ready for an informative hour and to also ask Ms. Garrett lots of questions!

Thank you everyone for coming out and we will see you at our next NJC meeting on November 16th at 11 AM to 12 PM in the Student Ballroom, Sections A & B (3rd floor of the Student Union Building). Refreshments will be available, as always.

PS- Below are bonus photos from our first guest speaker meeting. Thank you again, Dr. Lauri Wright!

Thank you,

Jessica Lindamood

Nutrition Journal Club President



# Student Nutrition and Dietetics Association Updates

## Hello Ospreys!

With the semester coming to a close, the SNDA officers would like to thank **ALL** of you for being so patient and understanding as we transition into these new roles. We would also like to thank everyone who has attended our meetings and who are participating in the Mentor/Mentee program. We are beyond excited for how far it has come and where it is going.

Please keep a look out for our upcoming events planned for the month of November!

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## Updates

- November 10th - Make up meeting!
  - SNDA will collaborate with NJC to offer a better understanding on how to dissect research articles!
- November 15th - General Meeting
- November 22nd - FRIENDSGIVING! Come and hang out with us for our Thanksgiving party! Bring your favorite dish and socialize with your classmates!
- Next Mentor/Mentee gathering - Time and date still TBD!

# SNDA'S HALLOWEEN PARTY

Winner of the dessert contest  
will be announced at our next meeting!!

THANK YOU!





# Study Abroad: Paris & Amsterdam

May 15-22, 2017

Hi Ospreys!

Are you interested in studying abroad? Then look no further than “Study Abroad of Dutch and French Food and Culture” in Paris and Amsterdam. It will be an experience unlike any other, where you will be traveling and exploring 2 countries in 8 days! The goal of this program is to review social, historical and cultural aspects of Dutch and French societies with focus on factors influencing their diets. Students will have this opportunity to become familiar with Dutch and French food systems with emphasis on social and cultural aspects that have an impact on nutrition and dietetics practice. Moreover, students will visit researchers and students in the departments of nutrition and dietetics in Netherlands and France. It will be a unique opportunity for students to exchange their knowledge and experience based on their social and cultural values. In addition to visiting universities, a cheese factory and a dairy farm, a tour to historical and cultural sites will be provided: Visiting Louvre museum, Eiffel tower, Amsterdam canals, traditional wind meals, Notre-Dame and Anne Frank house are included. Both Amsterdam and Paris are in the list of the most diverse cities in the world. Visiting Amsterdam and Paris will provide an exceptional opportunity to explore various cultures and ethnicities in one place. It will help students to formulate new ideas for their own research and practice.

This trip will cover your DIE 4931: Special Topics in Nutrition and Dietetics. This course is a study abroad course that covers social, historical and cultural aspects of Dutch and French culture that impacts their diet and foods. Students will become familiar with Dutch and French food systems that have been developed through centuries. Students will complete 4 assignments, a 1500 word essay, and a group presentation. The assignments will be focused on research, dietetics, nutrition education, and cultures and cultural foods. The class meets two-three times to discuss course objectives and assignments.

The cost of the program is approximately \$3,000.00 and it includes: Airfare, lodging, most meals, excursions, and local transportation. It does not include: tuition, some meals or spending money. The cost for undergraduate and graduate students is the same. The total estimated cost is based on current information and can be affected by some changes that may occur prior to trip. Students can apply for the \$1,500 SAILS Scholarship via International Center.

If you have any questions or concerns, please do not hesitate to contact me at [Jessica.a.lindamood@gmail.com](mailto:Jessica.a.lindamood@gmail.com). To enroll online, or for additional questions, visit [www.efcst.com/1844767TS](http://www.efcst.com/1844767TS) or call the Travel Support Team at 877-485-4184 (open Monday – Friday, 9 – 5 PM). Thank you,

Jessica Lindamood



# Lend-A-Wing Food Drive

*Promoted by SNDA* 

 **Donate the most: Win 2 FREE Jaguar Tickets**

**November 1st - 21st**

Lend-A-Wing Hours:

Monday 3:00 - 6:00  
 Tuesday 12:00 - 6:00  
 Thursday 12:00 - 6:00

Items Needed: (Nonperishable)

- Granola Bars
- Oatmeal
- Cereal
- Pasta
- Canned tuna/chicken
- Peanut Butter
- Canned Fruit
- Ramen



Bring your donations to the pantry.  
 Hicks Hall, Bldg 53/Room 1202



**\*Be sure to mention that you are with SNDA!**



# Student Spotlight



This month, I had the pleasure to sit down and talk to Trevor Kennedy who is widely active within the Brooks College of Health! He talks about his triumphs and how this program has benefitted him for the better and has impacted his life for years to come!

**Sara Boyd**

**SB: Everyone has different reasons for wanting to pursue the nutrition and dietetics route. What made you want to begin this process and what was your goal you wanted to achieve by doing so?**

TK: After I lost interest in my first degree, I wanted to do something that would help people and be beneficial to the society. I think that the Community area of nutrition provides a great platform to do just that. I also enjoy anything that involves science so when I found out that a nutrition degree had a ton of science was involved, I was all in.

**SB: What are some of your greatest accomplishments this far within the program?**

TK: I have many different accomplishments that I am proud of. I think my best accomplishment so far has been my ability to excel in the classroom. Before coming back to school, I was a less than average student, but I think my grades now show the interest I have for the subject. Because of excelling in the classroom, I think it has helped form the relationships I have made while in the program. I've met some of the best friends I've ever had here and will cherish them long after graduation. I also helped start a nutrition education program at a local rehab facility for the Garden U Bridge project which, I think, will help people in the facility with their recovery. At the beginning of my senior year, I became an officer of the Nutrition Journal Club and started a new research project with Dr. Arikawa which is going to hopefully have really interesting results.

**SB: I know you are involved in a research projects with Dr. Arikawa. What are you researching and what do you hope to gain by the end of it?**

TK: We are researching the lycopene content of different tomatoes. More specifically, the lycopene content in organically grown tomatoes vs. conventionally grown tomatoes. We all know the environmental and chemical benefits of organic food but there is little research on the micronutrient content of these foods. By the end of the experiment, I hope to have some reproducible results but most of all - the experience. Research is something that I have been interested in for a while and I am using this experience to see if it is something I would like to pursue.

**SB: Are you involved in any other extracurricular activities within the Brooks College of Health? What would you suggest to other students who are interested in joining clubs or research while taking full time classes?**

TK: Yes, I am involved in the Nutrition Journal Club and I also tutor a couple students for Advanced Nutrition. I think there are two things you need to do when thinking about extracurricular activities. Number one would be to start early. If you start early with a couple things, then you can carry those things through your senior year and be great at them. With the internship looming, we all feel like we need to cram as much experience as we can into a small time period. If you start early it eases some of that pressure. Secondly, seek leadership roles. It's not enough to just be part of a club. Instead seek officer positions or create something yourself that you can show results for.

**SB: After graduation, what field of nutrition do you hope to be a part of or what do you hope to accomplish?**

TK: Right now, I am not sure what field I would like to be in. I enjoy the research aspect but I also like working with kids, so it's all up in the air. The most important thing for me to accomplish would be to make a difference in people's lives. On the day I retire, if I can say I helped people better themselves then I would say I have accomplished what I set out to do.

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*"I've met some of the best friends I've ever had here and will cherish them long after graduation."*

# Organization Updates

Michelle Wolff

## *The Academy of Nutrition and Dietetics*

The Academy of Nutrition and Dietetics Foundation was established in 1966 and is one-of-a-kind being that it's the only charity that works directly towards promoting nutrition and dietetics. They aim to do this while utilizing registered dietitian nutritionists' expertise and promoting the vision *We All Eat Right*.

One way the Foundation executes its mission is by providing funding to different programs to further optimize their potential. One main source of funding is given through dietetic scholarships which provided 384 students with funding over this past year. They also give awards to those who are already in their profession, such as registered dietitians, to enhance their career. Furthermore, the foundation gives awards to those who have done something significant in the area of food and nutrition. Funding is also provided to researchers which in turn helps registered dietitians and others in the nutrition field keep track of the ever changing facts of nutrition. In addition to funding, the Foundation also serves to educate the public through programs such as Kids Eat Right, Guide for Effective Intervention and Education, and the Future of Food initiative. All of these programs aim to educate those, of all ages, about nutrition to better improve their health and knowledge of food. The Kids Eat Right program is especially important as it starts nutrition education at an early age which helps to prevent disease and better prepare them for the future. One can be involved in the Foundation either by donating or participating in one the many volunteering opportunities they provide. In addition, the Foundation holds events each year such as the Food and Nutrition Conference Expo where one can experience many education and social events.

The logo for 'eat right' features the word 'eat' in a dark green, sans-serif font with a red dot above the 'a', and the word 'right' in a lighter green, sans-serif font with a red dot above the 'i'.

Academy of Nutrition  
and Dietetics

## *The Obesity Society*

The Obesity Society has specific programs to award those doing great things in the field of research related to obesity treatment and prevention. They present awards and grants each year that help researchers to further their studies and make advancements that are beneficial not only to the Obesity Society but to the community as a whole. The Award Program aims to promote and encourage research in the field of obesity by giving out awards. These awards are given for various accomplishments including detailed research advancements, major contributions to the basic science, and



treatment and prevention of obesity. These awards are presented at the society's annual conference, the *Obesity Conference* that takes place in fall every year.

The Grant program was made similarly to encourage research in the field of obesity, but applies more to those who are finding it difficult to get funding. They provide pilot grants of up to \$25,000 for a one year period to help inspire new research ideas in areas of investigation related to obesity. Some of their grants include the *Early Career Grant Challenge* and the *Weight Watchers Karen Miller-Kovach Grant*.

## *The American Society for Nutrition*

The American Society of Nutrition Foundation is relatively new as it was founded only three years ago in 2013. Its main objective is to support the growing field of nutrition through advancements in research and practice, as well as providing funds to those working to do this. The American Society for Nutrition itself already plays an important role in distributing nutrition resources to the public health and clinical practice world, and this foundation further enhances it. This makes the society's role of being a leader of health, nutrition, and wellness even more valued.

The foundation does a great deal to support those learning and working in the field of nutrition and do so through multiple programs. They work to promote interest in nutrition science careers, support up and coming scientists, as well as help to provide the most resources to the investigators and institutions. The foundation offers support for researchers by granting predoctoral fellowships and travel awards. They have other programs devoted primarily to enhance scientists' publishing potential which have been



**American Society  
for Nutrition**  
*Excellence in  
Nutrition Research  
and Practice*

implemented in countries such as China. All their programs focus not only on nutrition but on health and wellness as a whole which is essential for the ability to address the health challenges currently being faced in the world.

Currently the Foundation offers more than two dozen scientific awards including the *David Kritchevsky Career Achievement Award* and the *Peter J. Reeds Young Investigator Award*. Since the Foundation is still very new, they do not have grants, but plan to add start-up-grants in the future. In addition to providing grants, they hope to expand scholarships, provide opportunities for undergraduate students, and establish mentorship programs in the future.

References:

<http://eatrightfoundation.org/who-we-are/>

<https://www.nutrition.org/contribute/asn-foundation/>

<http://www.obesity.org/resources/grants-awards/obesity-society-grants>

# FROM THE ACADEMY

Tara Kessinger

## USDA Grant Funding

The USDA announced more than \$113 million in grants to strengthen local and regional food systems, support farmers markets, minority and veteran farmers, organic research and offers funding opportunity for specialty crop research. The \$26 million Farmers Market and Local Food Promotion Program will provide for more than 100 projects that support rural economies, increase market opportunities for farmers and help close supply chain gaps in communities across the country. The \$21.4 million Organic Research and Extension Program will provide for 26 projects that help organic farmers and ranchers improve business operations

and bring more organic food to the table for consumers. Community Food Projects will be allotted \$8.6 million to provide for 33 projects that help make healthy, nutritious foods available to people from low income neighborhoods. The funding will also provide for support systems based research and extension activities that accelerate science based solutions and new technology for the specialty crop industry by providing \$48.1 million towards Specialty Crop Research Initiatives. Finally, \$8.4 million will provide funding for programs in 24 states that provide training outreach and technical assistance for socially disadvantaged, tribal and veteran farmers and ranchers.

There are few naturally occurring sources of Vitamin D, especially for those who choose a vegetarian or vegan meal pattern. Mushrooms that are cultivated in the wild have historically contained higher amounts of vitamin D when compared to those grown in a commercial setting. The outdoor exposure to ultraviolet light helps to improve the vitamin D content of wild mushrooms; however, ultraviolet light after harvesting can also increase the amount of vitamin D in commercially grown mushrooms. A recent systematic review and meta-analysis confirmed that the number of randomly controlled studies examining the bioavailability of vitamin D and its effectiveness in raising serum 25-hydroxyvitamin D levels have been few in number and produced inconsistent findings. Several trials referenced white or brown button mushrooms; however, the amount of vitamin D obtained through UV exposure and the preparation of mushroom used by the participants varied, as did the duration of the trials, seasonality, and methods used to measure serum levels. While it is evident that some varieties of mushrooms could be regarded as good source of vitamin D, not all types will meet the criteria, yet mushrooms provide other valuable nutrients and are naturally low in calories and make a great addition to the overall diet to help compliment other good sources of vitamin D.

## Mushrooms and Vitamin D levels

## Apple vs Pear

Body fat distribution is an important risk factor for obesity-related disorders. Individuals who have a primarily upper-body fat distribution (characterized by an android or apple shape) are at increased risk of type 2 diabetes, cardiovascular disease and death, even after controlling for BMI. In 2013 the Guideline for the Management of Overweight and Obesity in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the Obesity Society was published. It was determined that the available evidence for waist circumference measurements of  $>102$  cm [ $>40$  in] in men and  $>88$  cm [ $>35$  in] in women) was inadequate to address the relationship between current cut points and CVD outcomes. Therefore, expert opinion was used to recommend the measurement of waist circumference at annual visits or more frequently in overweight and obese adults. The RDN, in collaboration with other health care professionals, administrators, and/or public policy decisionmakers, should ensure that all adult patients have the following measurements at least annually: height and weight to calculate BMI; and waist circumference to determine risk of CVD, type 2 diabetes, and all-cause mortality.

# The Department of Nutrition and Dietetics

Jenn Wihlborg

## **Faculty Accomplishments:**

Dr. Rodriguez is newly appointed to an international board of directors.

## **Volunteer Opportunities Within Our Clubs:**

- The Bridge of Northeast Florida is always looking for helping hands! This is a wonderful organization that helps out inner-city kids and teaches garden and nutrition education right in the heart of downtown Jacksonville. Volunteers are needed on Tuesdays and Thursdays from 4-5 pm. Contact Natalie Lowe for more info ([natalielowe2013@gmail.com](mailto:natalielowe2013@gmail.com))
- Market Days always need volunteers to help out with tabling. This is a great way to share our knowledge with fellow Ospreys! Contact Natalie Lowe for more info ([natalielowe2013@gmail.com](mailto:natalielowe2013@gmail.com))
- The Nutrition Journal Club will have upcoming volunteer opportunities. For those interested, contact Trevor Kennedy ([N00633978@ospreys.unf.edu](mailto:N00633978@ospreys.unf.edu))

## **Want to Study Abroad?**

Our wonderful professors have some wonderful learning opportunities this summer:

- Amsterdam and Paris
- China
- Italy
- Brazil

Check out the Special Experiences folder in the SNDA blackboard page for more info!

# FNCE 2016 - Boston, Ma

## Conference Highlights and Recap

Jessica Glosson, B.S.

Didn't manage to make it to FNCE this year? No worries, I've got you covered. I packed my carry-on as light as I could October 13th and jetted off to Boston, the location for this year's nationally attended Food and Nutrition Conference and Expo (FNCE). While the initial cost of attending and traveling to the conference may seem like a daunting barrier, I promise it's well worth it. The ability to network with RDNs, nutrition-related companies, and other students, educators, and speakers from across the United States is an invaluable opportunity you ought to experience. The location for the conference changes each year; last year's FNCE was held in Nashville and 2017's FNCE is scheduled to take place in Chicago (in case you want to start planning!). My objectives for attending this year's conference were fueled by the great experience I had at my first FNCE last year and my desire to network more efficiently with professionals based in the northeast. I'd also be lying if I said that the Boston location wasn't a major driving factor as well. Boston is an bustling city full of history, charming character, and amazing food; you don't have to wander far to find fresh seafood and great atmosphere. Wanderlust musings aside, FNCE was hosted this year at the Boston Convention and Exhibition Center, which is located in the Seaport District within close proximity to historic sites such as the Old North Church and the Boston Tea Party Museum.

FNCE lasted 4 days, all of which were jam-packed with special events, lectures, socials, and of course, a grand expo. RDNs are drawn to the event for networking opportunities and the ability to earn in-person CEUs from attending certain lectures and educational workshops. Undergraduate students and interns attend the conference as well to present research, network with internship programs, and meet dietetic professionals who currently practice in the field. Here's a recap of some of the major events I attending throughout my time in Boston and at FNCE!





1. **The Grand Expo:** The Grand Expo took place Sunday through Tuesday during FNCE from 9:00 am-2:00 pm. This well-attended event featured booths from over 400 nutrition-related vendors that each offered promotional materials, samples, and literature on respective products, brands, or services. Popular booths included Chobani, PepsiCo, Abbott, and the Hass Avocado Board. A complete list of the participating vendors can be found through the FNCE website at:

<http://s19.a2zinc.net/clients/Academy/FNCE2016/Public/Exhibitors.aspx>.

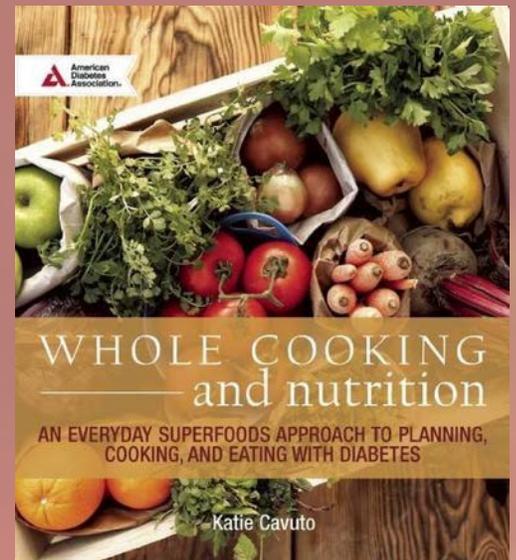
This portion of the conference is what I was most looking forward to; I love the chance to learn about new food products, network with companies and their brand reps, and of course...get free stuff! Here's a pro-tip for all of you who are considering FNCE for next year: bring an empty duffle bag to check in on your flight home (you'll thank me later). Seriously though, the amount of free samples, coupons, and products you get from attending the expo is insane. Also, you'll save money on breakfast and lunch during these days; the Chobani booth gave out full size yogurts, smoothies, and freshly prepared dishes and the Quaker oats booth within the PepsiCo complex offered a "make your own" oatmeal station.



This year I noticed that many vendors featured fun photo booths for participants to take pictures in and share to social media. I was also pleased to receive high-valued coupons for products I normally purchase on a weekly basis, such as Silk Almond Milk and Siggi's yogurt. Some of my personal favorite booths this year were those from the Avocado Association, The Sarcastic Nutritionist, KIND Snacks, and Quaker Oats (I got a free mason jar and recipe list for overnight oats!). Unfortunately, I had to limit myself on the free loot I was able to take back home on my return flight- you can only cram so much into one suitcase (pretty sure security thought I was some sort of weird food-hoarder).

## 2. Free Book Signing with Katie Cavuto:

Shortly after entering the convention center on Sunday (the second day of FNCE), I was handed a flyer that was good for a free signed copy of Katie Cavuto's new cookbook titled "Whole Cooking and Nutrition". I was further instructed on the time for her meet and greet and book signing later that morning. Katie Cavuto is an extremely successful and inspirational dietitian. I had in fact met her earlier in the year at the Today's Dietitian annual symposium in Orlando; she gave a lecture on intuitive eating that I found to be very thought provoking. In addition to being an author and a chef, Katie is the official dietitian for the Philadelphia Phillies baseball team and Flyers hockey team! At FNCE, the first 200 people in line for Katie's book signing received a free copy of her new book and got the chance to briefly speak with Katie and have their book personally signed by her. The book lists evidence-based information on intuitive eating, macronutrients, and every day "superfoods" along with over 40 different nutrient-dense recipes that I'm very eager to experiment with.



**3. Educational Sessions:** I was lucky enough to catch a portion of the educational session "Ethical Dilemmas on Recommending Supplements and Over-The-Counter Medications" by RDNs Kathryn Hamilton and Kelly Leonard. The objectives of this session included analyzing the decision criteria used by RDs in practice for recommending supplements to patients and evaluating ethical dilemmas that could arise with patient use of supplements. The presentation discussed an RDs scope of practice in application to supplement use and recommendation, gave several scenarios detailing ethical dilemmas with supplement use or recommendation for different patient populations, and concluded with several major points concerning ethical and legal considerations on the subject. I found this session to be very interesting and applicable to my future practice as an RD. Although I was not able to attend the full duration of the session, I was able to download the corresponding slides for the lecture from my smartphone via the FNCE website. This is a feature of the conference that is truly fantastic. If you're not able to attend a session or wish to have a copy of a presenter's lecture slides or reference list, the FNCE website offers pdf and word formatted handouts for each session offered at the conference!

In summary, FNCE 2016 was a great experience hosted in a fantastic location. As previously mentioned, this conference experience offers many benefits to dietetic students, interns, and practicing professionals alike. The exposure to new products, ability to sample trending food and beverage items, and opportunity to learn from and network with some of the most influential RDNs within the country is invaluable. I hope to see you next year in the windy city of Chicago for FNCE 2017!

# Nutrition Updates

Jessica Glosson, B.S.

Find out what's currently trending on supermarket shelves, social media, and within the world of nutrition and dietetics.

## Food products:

### **SORGHUM**

Sorghum is a gluten-free whole grain that serves as a good source of fiber, protein, and thiamin.<sup>1</sup> Sorghum is considered to be an environmentally friendly crop : it is water efficient, biodegradable, and requires little fertilizer.<sup>1</sup> In the nutrition world, sorghum has quickly gained popularity and can be found in cereals, flours, protein bars, and popped snack products (as pictured).

### **CHIA SEED PUDDING**

Chia seeds offer beneficial amounts of polyunsaturated fat, fiber, and magnesium.<sup>2</sup> The recent growth in popularity for the food has inspired the creation of chia-based recipes and uses; chia seed pudding has become one of the more popular creations. Chia seed pudding is made by combining chia seeds with milk or a milk alternative along with desired flavors such as cinnamon or vanilla. The chia seeds absorb the added liquid and create a gel-like product. Retail products like Chia Pod (pictured) are now available in major grocery chains for around \$4 each.

### **MONK FRUIT**

A monk fruit is a sub-tropical melon whose juice is noted to be twenty times sweeter than other fruits. The low calorie and antioxidant rich nature of monk fruit has contributed to its growing use in foods as a sugar-alternative. Monk fruit extract is used in over 800 products worldwide in order to replace calories and sugar without compromising sweetness.<sup>3</sup> Popular products that utilize monk fruit include Artie Zero, Chobani 100 yogurts, Zevia soda, and nearly all Vitalicious food products.

### **GOURMET NUT BUTTERS**

Peanut butter has been taken to the next level with products from gourmet nut butter companies like Betsy's Best (Florida based!), Peanut Butter & Co., and Justin's. These companies offer multiple flavor varieties of peanut or almond -based butters; popular favorites include Justin's Maple Almond Butter and Peanut Butter & Co.'s Cinnamon Raisin Swirl peanut butter. These products can be pricey, with a jar of Justin's Almond Butter costing as much as \$14! From a nutritional standpoint, these products should be consumed with portion control in mind, seeing as they can contain as much as 9 grams of sugar and 11 grams of fat per serving.

## Nutritional Supplements

# ENSURE ENLIVE

Ensure Enlive is a new nutrition supplement product from the Abbott company that was first released earlier this spring. Ensure Enlive is marketed as the first complete and balanced nutrition drink in the US and is noted to contain 20 grams of protein and HMB ( $\beta$ -hydroxy  $\beta$ -methylbutyrate).<sup>4</sup> The unique ingredient of HMB is thought to aid in muscle regrowth and prevent muscle loss for aging adults or those with chronic illness.<sup>4</sup>

Compared to traditional Ensure, Ensure Enlive contains 11 additional grams of protein along with three grams of prebiotic fiber. Ensure Enlive is quickly gaining popularity in hospital formularies and can be recommended by RDs to patients at risk for muscle loss or protein energy malnutrition.



## In the Kitchen:

# SPIRALIZERS

In light of the growing trends of gluten-free and low-carb products, spiralizers have skyrocketed in popularity and use across the country. A spiralizer is a kitchen tool that can be hand-cranked in order to turn whole vegetables into spiraled shaped ribbons that are noodle-like in appearance. Common vegetables used in spiralizers include zucchini, yellow squash, sweet potato, carrots, and butternut squash.

Zucchini noodles (aka “zoodles”) have become the most popular product of the spiralizer craze; a recipe for 5-ingredient spinach parmesan zoodles can be found through the following link:  
<http://www.twopeasandtheirpod.com/5-ingredient-spinach-parmesan-zucchini-noodles/>



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4. ABBOTT INTRODUCES ENSURE® ENLIVE®, PAIRING THE LATEST IN SCIENCE AND NUTRITION TO IMPROVE HEALTH. Abbott Press Release. <http://abbott.mediaroom.com/2016-03-29-Abbott-Introduces-Ensure-Enlive-Pairing-the-Latest-in-Science-and-Nutrition-to-Improve-Health>. March 29, 2016. Accessed October 22, 2016.



# Research Spotlight

By: Adriana Gonzalez

One of the most appealing things about the field of Nutrition & Dietetics is the ability to participate in primary research studies to gather and develop findings about topics that currently affect our population. It's often frustrating when mainstream news sources draw and spread conclusions about certain topics based on subjectivity. This is why it's important for us future professionals to determine the difference between subjective and objective material. It gives us the opportunity to further investigate the literature and answer our future patients with research-based answers. Conducting our own research is beneficial in this profession because it allows us to think critically and to determine why certain phenomenons occur.

At the University of North Florida, we have professors who have a pronounced background in nutritional research and are currently determining the data of their current studies. Dr. Andrea Arikawa, a professor who currently teaches Advanced Nutrition 1&2, has a particular interest in nutrition and its influence on chronic disease prevention. At the University of Minnesota, she began her Ph.D. examining the effects of cruciferous vegetables on the prevention of colon cancer using lab rats. Currently it's known that cruciferous vegetables including broccoli, kale, cauliflower, and cabbage can inhibit the development of cancer in mice. However, at the time data was limited. In this study, the rats were injected with a carcinogen called dimethylhydrazene where it can convert to a compound that can damage cells and mutate DNA. Once the rats

developed precancerous lesions called aberrant crypts, they were fed different concentrations of cruciferous vegetables. Dr. Arikawa's study confirmed that when consuming these vegetables it could decrease the amount of aberrant crypts by 40%! Studies that have followed have shown that the reason for these chemo protective properties is due to its glucosinolates. This natural component is found in every cruciferous vegetable and when metabolized it causes this protective occurrence. After receiving her Doctorate, she continued her research at the University of Minnesota with emphasis on the preventative cancer. She continued to measure its chemo protective effects on inflammatory markers, energy balance and exercise using larger based clinical trials.

Now at the University of North Florida she has focused more on teaching foremost but still continues to conduct research studies related to inflammation and chronic disease. Currently, Dr. Arikawa and students are finishing two Vitamin C studies. The first study examined the different vitamin C content found in Floridian orange juices. Students compared different brands, its type of farming methods and the location where the oranges originated. In the second study, students looked at vitamin C loss in different methods of cooking. Both studies are in its final process.

She also is finishing another study with the department of psychology that examines if individuals can maintain their body weight if they are sent different messages via email. In this study subjects of the UNF community were

put into three groups. The first group was the control group that received no other content besides weight control. The second group received messages regarding prevention and the third group received messages about the promotion of health. At the end of this study subjects will complete a questionnaire to see if they are more oriented towards prevention or promotion. It will be interesting to see the findings of this study because weight is a subject majority of individuals are concerned with and in this study we will be able to see how psychology can play a role in nutrition and health. The data for this study will be analyzed in March 2018.

Another professor who has a profound interest in research is Dr. Alireza Jahan-Mihan, who currently teaches Nutrition Therapy 1&2. His focus has been in epigenetics, metabolic syndrome, food intake regulation and protein. At the University of Toronto, he began his Ph.D. in the field of epigenetics and obesity determining why 90% of individuals who had hypertension were idiopathic. This was interesting because for the most part these idiopathic individuals contained good health. Dr. Ali explained that in the last 50 years there hasn't been a change in genes but rather the interactions with the genome and environment has changed (diet). As a result, he commenced a study comparing soy protein versus casein in normal weight and pregnant rats. He found that in offspring, casein protein had a more favorable effect on health markers than soy protein. These offspring contained lower blood glucose levels, lower blood pressure and experienced lower body weight when compared to the soy protein diet. Based on this study, it demonstrates how epigenetics can influence the life of an offspring.

Since his arrival to the University of North Florida, Dr. Ali has focused both on both clinical and animal studies. His first clinical study involved research coordinated with the department of exercise science that examined how the intensity of exercise could influence food intake and appetite. In the post exercise period they found high intensity exercises decreased appetite and moderate intensity exercises increased appetite. The reason for this occurrence was due an inflammatory marker called Interleukin 6. This mechanism is found in protein synthesis and when high

intensity is performed, it can be increased thus having the ability to decrease appetite. This study was interesting because it demonstrated that when using different energy systems it had the ability to create different metabolic responses.

Dr. Ali also has focused on animal studies using wistar clinical rats. His most recent studies focused on how dietary proteins during pregnancy and lactation can influence the risk of metabolic syndrome in both the mother and her offspring. In fetal programming, it is believed the nutrition a mother consumes during her pregnancy and lactation can influence important physiological parameters of her offspring. The first study students conducted focused on intact proteins versus amino acid based proteins. In this study they received mixed results, however, in general it was found that intact proteins had more favorable results in all health markers in comparison to the amino acid based protein diet. This was a result of its bioactive peptides, digestion kinetics and other parameters in its structural component. Currently Dr. Ali and students are finishing a study where they compared a high protein diet versus a normal protein diet in pregnant obese rats. With the obesity epidemic rising, it's alarming to see the negative physiological effects both the mother and children can experience post gestation. Women who are overweight can increase their chances of experiencing glucose intolerance and diabetes and can increase the prevalence of their children becoming diabetic. It will be interesting to see the results for this study.

The Department of Nutrition and Dietetics wants to involve students in research to allow students to develop critical thinking. Both Dr. Arikawa and Dr. Ali believe that conducting research studies are fascinating because it allows for students to answer a question to an occurring event. Not only are there research opportunities in the department of nutrition and dietetics, but there is also a club called the Nutrition Journal Club that discusses the new findings found in the nutrition field. It also gathers guest speakers and researchers that come in and talk about their experiences. The next meeting will take place on November 16th and 17th.

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From Jessica's Table:

# FALL DESSERTS

By: Jessica Glosson

Desserts often get a bad rep; many contain high amounts of processed flours, sugar, artificial flavorings, and saturated fat. It's become common knowledge to limit our consumption of desserts and enjoy them in careful moderation. In the coming winter months and holiday seasons, it's easy to throw caution to the wind and indulge in whatever amazing looking dessert you set your eyes on at family get-togethers. But who says all desserts have to be guilt inducing? Here are some sweet recipes that feature more nutrient rich ingredients, such as almonds, quinoa, and coconut. By adding in more healthful ingredients to replace high amounts of fat or sugar, you can truly have your cake and eat it, too.

## Flourless Honey-Almond Cake



### Directions:

- Preheat oven to 350 °F. Coat a 9-inch springform pan with cooking spray. Line the bottom with parchment paper and spray the paper.
- Process whole almonds in a food processor or blender until finely ground. Beat the 4 egg yolks, 1/2 cup honey, vanilla, baking soda and salt in a large mixing bowl with an electric mixer on medium speed until well combined. Add the ground almonds and beat on low until combined.
- Beat the 4 egg whites in a separate bowl with the electric mixer on medium speed until very foamy, white and doubled in volume (about 1 to 2 minutes).
- Gently fold the egg whites into the nut mixture until just combined. Scrape the batter into the prepared pan and bake the cake until golden brown, about 28 minutes. Let cool in the pan for 10 minutes. To serve, drizzle the top of the cake with honey and sprinkle with the toasted almonds slices.

### Ingredients:

- ▶ 1 ½ cups whole almonds, toasted
- ▶ 4 eggs at room temperature, separated
- ▶ ½ cup honey
- ▶ 1 teaspoon vanilla extract ½ teaspoon baking soda
- ▶ ½ teaspoon salt
- ▶ For topping: 2 tablespoons honey ¼ cup sliced almonds, toasted



## Ingredients:

- ▶ ¼ cup unsalted butter or margarine ¾ cup almond butter
- ▶ 2 eggs
- ▶ ¾ cup packed light brown sugar
- ▶ 1 tsp vanilla extract
- ▶ ¾ cup quinoa flour (can be found in the alternative flour section of a specialty store or make it yourself by grinding whole quinoa grains into a fine powder)
- ▶ 1 tsp baking powder
- ▶ ¼ tsp salt
- ▶ 1 cup semisweet chocolate chips

# Gluten-Free Almond Butter Quinoa Blondies



## Directions:

- Preheat oven to 350 °F. Line an 8-inch-square baking pan with parchment paper (or foil), and coat with cooking spray.
- Beat butter and almond butter in a mixing bowl with an electric mixer until creamy. Beat in eggs, brown sugar and vanilla.
- Whisk quinoa flour, baking powder and salt in a small bowl. Mix the flour mixture into the wet ingredients until just combined. Stir in chocolate chips.
- Spread the batter evenly into the prepared pan. Bake 25 to 35 minutes and let cool in the pan for 45 minutes. Using the parchment (or foil), lift the whole panful out cut into squares for serving.

# Frozen Pumpkin Mousse Pie

## Directions:

- Preheat oven to 350 °F. Coat a 9-inch deep-dish pie pan with cooking spray.
- For the crust: Combine gingersnaps and raisins in a food processor and pulse until finely chopped. Add oil and pulse until blended. Press evenly into the bottom and up the sides of the prepared pan. Bake the crust until set, about 10 minutes. Cool completely.
- For the filling: Combine pumpkin, sugar, cinnamon, ginger and nutmeg in a large bowl and mix well. Add ice cream and stir until blended. Spoon the mixture into the cooled pie crust. Freeze until firm, at least 2 hours. Let the pie soften slightly in the refrigerator for 20 to 30 minutes before serving.

## Ingredients:

(For the crust):

- ▶ 30 small gingersnap cookies
- ▶ 2 tbsp raisins
- ▶ 1 tbsp canola oil

(For the filling):

- ▶ 1 cup canned pumpkin puree
- ▶ 1/3 cup packed brown sugar
- ▶ 1/2 tsp ground cinnamon
- ▶ 1/4 tsp ground ginger
- ▶ 1/4 tsp freshly grated nutmeg
- ▶ 2 pints (4 cups) frozen low-fat vanilla ice cream, softened



# Vegan Apple Crisp

## Directions:

## Ingredients:

(For the apple filling):

- ▶ 7 cups sweet-tart apples, peeled, cored, and chopped
- ▶ 1 tablespoon lemon juice
- ▶  $\frac{3}{4}$  cup organic sugar or organic light brown sugar
- ▶ 1  $\frac{1}{2}$  teaspoons cinnamon
- ▶  $\frac{1}{2}$  teaspoon nutmeg
- ▶  $\frac{1}{8}$  teaspoon cloves
- ▶  $\frac{1}{8}$  teaspoon salt
- ▶ 1  $\frac{1}{2}$  tablespoons arrowroot or cornstarch
- ▶  $\frac{1}{2}$  cup water

(For the crumble topping):

- ▶ 1 cup all-purpose flour
- ▶  $\frac{3}{4}$  cup quick oats
- ▶ 1 cup organic brown sugar
- ▶  $\frac{1}{2}$  cup chopped pecans or walnuts
- ▶  $\frac{1}{4}$  teaspoon salt
- ▶ 1 teaspoon ground cinnamon
- ▶  $\frac{1}{2}$  teaspoon ground ginger
- ▶  $\frac{1}{2}$  cup melted coconut oil

- Preheat oven to 350° F. Place the apples in a large mixing bowl and toss with the lemon juice, sugar, cinnamon, nutmeg, clove, and salt. Place these ingredients into a greased 9 x 13-inch baking dish.
- Whisk together the arrowroot and water, and pour the mixture over the apples. Toss lightly with hands to coat everything with the arrowroot.
- Place the flour, oats, brown sugar, nuts salt, cinnamon, and ginger in a food processor; pulse several times. Add the coconut oil and pulse ingredients quickly until large crumbs form. Sprinkle the topping over the apples. Bake for 40 to 55 minutes, or until the apples are bubbly and the topping is golden brown. Serve.



## Sources:

Flourless Honey-Almond Cake-

Recipe developed by EatingWell Magazine; Recipe and image reproduced from:  
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Gluten-Free Almond Butter Quinoa Blondies-

Recipe developed by EatingWell Magazine; Recipe and image reproduced from:  
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Frozen Pumpkin Moose Pie-

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Vegan Apple Crisp-

Recipe developed by Gena Hamshaw; Recipe and image reproduced from:  
<https://food52.com/recipes/31435-vegan-apple-crisp>.

# BARKING UP THE RIGHT TREE?

## The Benefits of Dietary Cinnamon for Diabetics

By: Connor Dawedeit

According to the Centers for Disease Control and Prevention<sup>1</sup>, about 28 million Americans are currently struggling with diabetes<sup>4</sup>. With its numbers increasing, it is largely due to the influence of sedentary lifestyles, overeating, and poor nutrition. These factors do not directly cause diabetes, but it does increase a person's risk of becoming diabetic. Poorly managed diabetes can increase an individual's risk of developing cardiovascular, renal, and other diseases, due to their lack of blood glucose control or from high blood lipid content<sup>2</sup>. Many diabetics follow a treatment plan that includes a nutritious dense diet consisting primarily of fruits, vegetables, whole grains, and lean meats followed by an exercise regimen. However, even individuals who diligently manage their diabetes can experience complications and may look for other methods to maintain their health and well being. One method is using a spice derived from the bark of a *Cinnamomum* tree, more commonly known as cinnamon. In a study, researchers investigated the effects of a daily dose of cinnamon in Type 2 diabetics and discovered daily cinnamon supplements taken over a 40 day period decreased fasting blood glucose, triglycerides, and LDL cholesterol levels<sup>3</sup>. Furthermore, HDL cholesterol levels were not affected, which is beneficial as HDL prevents cholesterol accretion in arteries<sup>4</sup>. Besides the effects of the cinnamon supplements on blood glucose and lipids, two significant observations were made. Although the experimental groups in the study consumed a range of daily

cinnamon doses (1, 3, and 6 grams), similar effects were observed across all three groups, indicating that cinnamon is beneficial even when not eaten in large quantities. Additionally, twenty days post-study, participants' blood glucose and lipid levels indicated the effects of cinnamon were sustained, demonstrating it's not necessary to eat cinnamon every single day in order to reap its benefits.

Diabetes is characterized by the body's inability to self-regulate blood glucose and if left untreated it can induce severe effects. Over time, sustained hyperglycemia, or high blood glucose, can cause damage to blood vessels in the body. In extreme cases, it can cause a condition called diabetic retinopathy where the blood vessels in the retinas can lead to blindness. Hyperglycemia also increases one's risk of developing mild to severe kidney damage and nerve damage (neuropathy) over time. These dangerous consequences are avoided most effectively with early preventative actions and diligent monitoring of one's blood glucose. The benefits of taking such actions were demonstrated in the Diabetes Control and Complications Trial (DCCT). In this randomized clinical trial, they observed the effects of intensive versus conventional management of type 1 diabetes. Researchers found risk factors for developing retinopathy, kidney damage, arterial damage, and cardiac events (such as heart attacks) were markedly lower in the group receiving intensive therapy, which achieved a much lower hemoglobin A1c level (an indicator

of average blood glucose) than the “conventional therapy” group<sup>5</sup>. Eight years after the study, the “intensive therapy” group displayed significantly less progression of developing kidney and cardiovascular disease<sup>5</sup>.

Control of blood lipids is important for any individual, but it is also critical for those with diabetes who are at a much higher risk of developing cardiovascular diseases<sup>4</sup>, such as high blood pressure, atherosclerosis, and heart failure. These diseases are caused by an accretion of fats in arterial walls when high concentrations of LDL and triglycerides are present. Diabetic individuals will therefore benefit greatly from maintaining healthy blood lipid levels and will also benefit from maintaining healthy HDL levels. For this reason, cinnamon is a doubly beneficial dietary component for these individuals. As it lowers total cholesterol without negatively affecting HDL levels.

Although many Americans may be most familiar with cinnamon being used in baked goods, there are many delicious ways to include it in one’s diet. For a simple and nutritious breakfast, one can prepare delicious apple cinnamon oatmeal:

### **Ingredients**

1 cup water

½ cup rolled or steel-cut oats

1 teaspoon cinnamon

½ apple, chopped

### **Directions**

Pour the water into a medium-sized saucepan, add the apple pieces, and bring to a boil. Add the oats and cinnamon, reduce heat, and simmer the uncovered pan until the oatmeal reaches the consistency you prefer, with occasional stirring. If desired, lightly sweeten with brown sugar, honey, or maple syrup. Milk, chopped nuts, or Greek yogurt could also be added for additional flavor.



**"Control of blood lipids is important for any individual, but it is also critical for those with diabetes who are at a much higher risk of developing cardiovascular diseases.."**

To prepare a dinner with cinnamon as well as many other delicious flavors and nutritious ingredients, try this chicken curry recipe<sup>6</sup>:

### Ingredients

2 boneless, skinless chicken breasts, sliced  
1 onion, chopped  
2 cloves garlic, minced  
3 tablespoons olive oil  
3 tablespoons curry powder  
1 teaspoon cinnamon  
1 teaspoon paprika  
1 bay leaf  
½ teaspoon freshly grated ginger (or 1/8th teaspoon ground ginger)  
½ teaspoon sugar  
1 tablespoon tomato paste  
1 cup plain yogurt  
¾ cup coconut milk  
Juice of ½ lemon (about 1 tablespoon)  
½ teaspoon cayenne powder  
Salt

### Directions

Add the olive oil to a large skillet over medium heat. Add the onion and sauté until it begins to caramelize and turn brown, about 4-5 minutes. Add the garlic, ginger, curry powder, cinnamon, paprika, bay leaf, sugar, and a dash of salt. Stir the contents of the skillet for two minutes. Stir in the chicken, tomato paste, yogurt and coconut milk. Bring the mixture to a boil, reduce heat, and simmer uncovered for 20-25 minutes. Remove the bay leaf and stir in the lemon juice and cayenne. Makes four servings. Remember to taste before serving and add additional salt, lemon juice, cayenne, or other flavors to your taste. This curry can be served over rice, however for diabetics and for individuals watching their glycemic load can replace the rice with roasted cauliflower, squash, carrots, or with sautéed spinach. This is a highly versatile dish, and can be made to each chef's preferred tastes!

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# November is American Diabetes Month

Written by: Jenn Whilborg



 **American Diabetes Association**

It seems that everyone you ask could name at least one person they know who is a diabetic. This is because 1 in 11 Americans have diabetes today. Diabetes is a chronic disease, although many people do not think of it this way. There are two types of diabetes: Type 1 and Type 2. Type 1 diabetes results from the impaired synthesis of insulin by the pancreas. This means that the pancreas is not producing the insulin that our body needs to lower our blood glucose levels. Type 1 diabetics may also have issues with the suppression of glucagon release, which leads to hyperglycemia - a hallmark indicator of diabetes. Type 1 diabetes is usually diagnosed at a young age, and currently accounts for just five percent of diabetics. That means that 95 percent of diabetics are Type 2. Type 2 diabetes has a very strong genetic component, meaning that one should be aware of their family health histories. In Type 2 diabetics, the body becomes resistant to insulin. Eating a healthy diet low in added sugars paired with regular exercise and maintaining a healthy weight are the simple steps to reduce your risk of diabetes, even if there is a family history of diabetes! Treatment for the two differ, as Type 1 diabetics need exogenous insulin, while Type 2 diabetics may be treated with diet and physical activity. If this does not help, medication to increase insulin sensitivity is needed for T2DM (Type 2 Diabetes Mellitus) patients.

Diabetes is a very important disease that needs to be taken seriously. Currently, it is the 7th leading cause of death, making it a higher risk than AIDS and breast cancer combined. Complications resulting from uncontrolled diabetes include, but are not limited

to, heart disease, eye problems (including glaucoma, cataracts, and diabetic retinopathy), diabetic neuropathy (pain and burning of feet, hands, and other body parts), and gum disease. Diabetes is also the leading cause of kidney failure of adults in the U.S. To prevent these life-threatening and debilitating complications, diabetes can be easily managed with the proper education. Registered Dietitian Nutritionists (RDNs) are the experts that can help teach diabetics how to read food labels, find good diabetic cookbooks and make food substitutions (since dietary changes will be necessary), offer nutrition counseling, and more. With a new diagnosis of diabetes being made every 23 seconds in the U.S, it is critical that the general public is made aware of this disease, especially during the month of November.



As Thanksgiving approaches, it is common for many diabetics to find it difficult to enjoy the day with their family as most are concerned with their management plan throughout the day. Thanksgiving is centered on sharing food with family and friends, but often families tend to forget that those with diabetes can't enjoy most of the foods that the rest of the family can. Most Thanksgiving staples are full of carbohydrates, sugar, and fat. Diabetics can help reduce this conflict by taking these few quick steps prior to making Thanksgiving dinner plans:

- Give family members a gentle reminder about your disease. Make them aware that you shouldn't be eating things high in sugar or carbohydrates
- Make a game plan - ask what people are going to be bringing or serving, and decide what and how much you are going to have to eat in advance
- Bring or suggest diabetes-friendly recipes, including low-carb green bean casserole and reduced or sugar-free pies or other desserts



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# The Cornucopia

By: Jenn Wihlborg



In Thanksgiving, the cornucopia is the most common symbol of a harvest. The cornucopia is a horn shaped container, overflowing with “an abundance of the Earth’s harvest,” typically including fruits, vegetables, and grains. It is also known as the ‘horn of plenty,’ due to its Latin derivation where “cornu” means horn and “copia” means plenty. We can often recognize the cornucopia, but not many know the story behind it. Originally, the cornucopia was made of a real goat’s horn, rather than the common woven wicker ones we see today. This comes from the Greek legend which states that Zeus, the Father of Gods and men, had to be banished to a cave so his cannibal father didn’t eat him. While in the cave, a goat named Amalthea watched over Zeus. As Amalthea was nursing him, Zeus accidentally pulled off her horn. Zeus promised that the horn would always bring her what she wanted and it has since represented plenty and prosperity.

# RETAIL DIETITIANS,

# WHAT'S THE BUZZ?

By: Stephanie Jean

Dietitians in the supermarket. Yay, or nay? Either way, this trend is quickly becoming a suggested practice for grocery stores nationwide. Realistically, what better way is there to be directly involved with the decisions and choices that people make concerning their food? Dietitians are expanding their expertise in the nutrition field and can be utilized for new roles, such as a retail dietitian. A typical day for a retail dietitian in a grocery store can include leading cooking workshops and wellness seminars, one-on-one consultations, and community outreach<sup>1</sup>.



Grocery stores such as ShopRite are employing registered dietitians to help customers shop and decode food labels<sup>1</sup>. In a world today where there are so many health claims and dietary suggestions circling around us, it is important to differentiate between overly exaggerated myths and solid facts. Retail dietitians are able to directly intervene with customers suffering from various nutritional related problems, by suggesting food items from around the store that will help to promote better health.

Recently, I visited Winn-Dixie on Beach Blvd for a grocery tour assignment. I was very pleased with the design and layout of the store, specifically the produce section. I noticed the special attention that was given to explain certain products, such as peppers, and to divide the organic produce from the conventional produce.



It is initiatives such as this, that aim to continually support health and nutrition. Supermarkets are taking on the lead of becoming more concerned with the health of their customers, and quite likely there will be an increase in the demand for retail dietitians across the nation.

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## TAKE THE COST OUT OF HEALTHY LIVING

By: Jenna Wallace

One of the most common thoughts about a healthy diet, is that it can be expensive; especially the packaged health alternatives. But what if I told you there is a website that has your favorite health food items for major discounts 365 days a year, with no membership fee? Would you believe me? Well, rest assured, you can. Vitacost is one of the most extensive health product websites out there. But they don't stop at health food products! Their website includes various departments like vitamins & supplements, beauty & personal care, and sports & fitness just to name a few! Plus, in addition to the already everyday low prices, they also offer constant sales on various products or brands. For instance, right now in the "Promo Pocket" they have an "Extra 15% off on your \$60 purchase of select proteins" coupon.

### So what's the best way to utilize this amazing health food service?

- ▶ Sign up for their newsletter/discount & sale emails
- ▶ Browse the various categories for your favorite brands
- ▶ Fill your cart with at least \$49 of products and receive free shipping! (trust me this is NOT difficult to do)

### The main categories of this website's products are:

- ▶ Food & Beverage
- ▶ Sports & Fitness Nutrition
- ▶ Natural Home products
- ▶ Herbs & Botanicals
- ▶ Vitamins & Supplements
- ▶ Beauty & Personal Care
- ▶ Kids & Pet Products

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source: <http://www.cvidesign.net>

# Carrageenan Safety Concerns

by: Heather Allen



Carrageenan, or CGN, is a common additive that acts as an emulsifier in many common foods such as ice cream, cottage cheese, and soymilk. CGN consists of polysaccharides extracted from red seaweed. There have been studies in the past that have brought concern about the safety of carrageenan as an additive. The possible problems that have been correlated to CGN include activating inflammatory signaling in the intestines, inhibit insulin signaling pathways in the liver, and cause toxicity in cells.<sup>1</sup> More recent research has shown that the original results finding CGN harmful are not reproducible and are in direct conflict with other research. Therefore, the negative claims against CGN should be looked at with caution.

The original concerns of carrageenan caused many consumers to attempt to stay away from the ingredient. Conversely, the recent alterations in the concerns have not played a major role in having these consumers start buying products containing CGN once more. In order to gain more consumers of the product, manufacturers using CGN have stated that carrageenan has a number of different benefits including “a healthy, diverse, and sustainable food supply.”<sup>2</sup>

Carrageenan is considered to be a safe food additive that is important to the composition of many different products on our shelves today. In the most recent study, researchers wanted to know more about any possible concerns found in the original study. The concerns were proven to be not reproducible. This leads other researchers to wonder if something went wrong in the initial study that brought about these safety concerns. At this point, carrageenan will continue to be used in foods in order to keep a consistent texture and composition. While safety concerns should not be dismissed, they should not keep anyone from consuming this additive that is considered common in the United States.

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# DUCKWEED: A NEW SOURCE OF PROTEIN?

ARLO TAYLOR

Duckweed, an aquatic flowering plant found in wetlands, has been considered as an alternative source of food for humans and livestock for quite a while. Duckweed is a very fast growing plant that can double in size in less than 24 hours.<sup>1</sup> The plant provides much more protein than soy and is

rich in vitamins C, A, B6, and Niacin. Unfortunately, duckweed is not a complete protein with all of the essential amino acids.<sup>3</sup> The plant is rich in leucine, threonine, valine, isoleucine and phenylalanine. They are usually low in cysteine, methionine, and tyrosine. The amount of nutrients depend on how well the

**"..CONTAIN 20% PROTEIN, 44% CARBOHYDRATES, AND 5% FAT."**

popular among many animals. One problem is that certain animals cannot digest it as well as others. For example, tilapia love duckweed protein but pigs cannot digest it as well as soybean protein.<sup>2</sup> According to many scientists and farmers, the problem is very minor and duckweed is still considered an amazing alternate form of food for livestock. A wide range of animals still benefit from this plant.

Human consumption of duckweed is common in many Asian countries. In Burma, Laos and Thailand, a certain genera of duckweed called *Wolffia Globosa* is commonly used as a vegetable. *Wolffia Globosa* contain 20% protein, 44% carbohydrates, and 5% fat. They also contain

plant was grown. The quality of the environment matters.<sup>4</sup>

Like many leafy green vegetables, calcium oxalate, a salt that can be toxic in high dosages is prominent in duckweed. Certain studies claim that it is not high enough to worry about, but it is still good to keep that in mind. There are cases of people being diagnosed with stones in their kidney from too much calcium oxalate. Depending too much on duckweed can cause harm in the long run.<sup>4</sup>

This plant has been tried to be grown under the farmer's and scientist's ideal condition but has failed many times. It grows the best in nature. The problem is that nature is not so clean and contain debris.

There is a patent that is out on a new way to grow duckweed under sanitary conditions.<sup>4</sup> Finding a way to mass produce duckweed for livestock feed would save plenty of money and provide more nutrients for the animals.

Besides the macronutrient content, duckweed is used in medicine. Duckweed has been shown to help with upper respiratory inflammation, jaundice from liver problems, and arthritis.<sup>5</sup> Also, because of how fast the plant reproduces, duckweed is being researched on because of its availability as biodiesel (They have about 5 times more starch than corn).<sup>3</sup> This little plant is definitely a potential source of food, fuel, medicine, and possibly a lot more. In a constantly changing world where many resources run the risk of depleting, readily available plants like duckweed is a blessing to our society. It is a very versatile plant that should be used more often.

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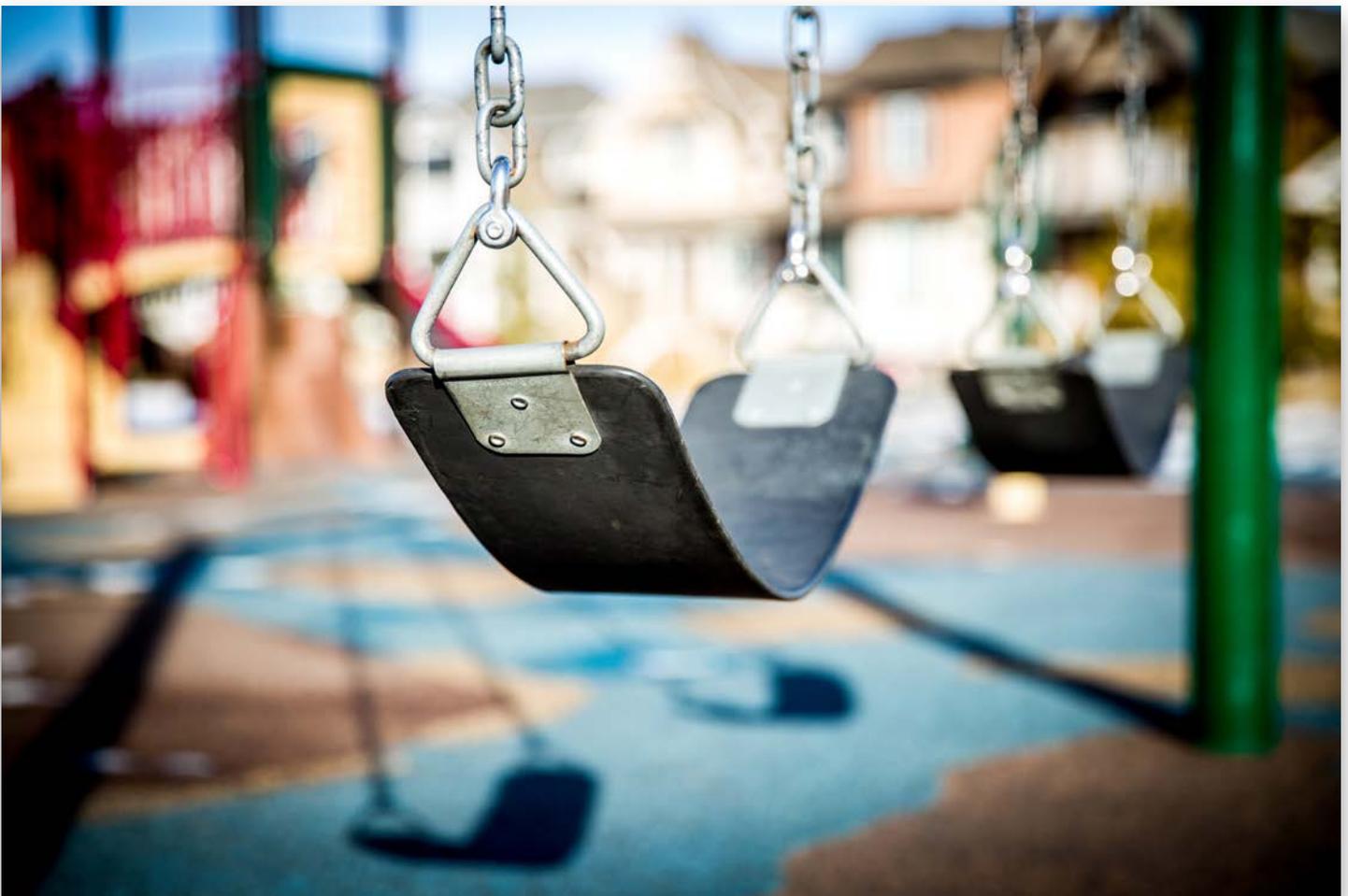
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# CHILDHOOD MUSCULAR FITNESS AND ADULT METABOLIC SYNDROME

**By: Shannon McCarthy**

According to the National Institutes of Health, adult metabolic syndrome (MetS) is the name for a group of risk factors that raises your risk for heart disease and other health problems, such as diabetes and stroke. You must have at least three of the following risk factors to be diagnosed with MetS: a large waistline, high triglyceride levels, low HDL cholesterol levels, high blood pressure, or high fasting blood sugar. This syndrome is also linked with obesity and lack of physical activity. Metabolic syndrome is becoming more prevalent in today's society as the rise in obesity continues as well.



Childhood muscular fitness phenotypes are strength, endurance, and power. This can be measured in many ways like; handgrip strength, core exercises, push-ups and pull-ups. 1 Childhood fitness and health have been a focus in today's studies due to the increase in childhood obesity. Experiments have been completed to find out the long-term effects of obesity childhood. Since childhood obesity is relatively new and we are not sure what the future will be like for this generation, many studies do not have proof and are still ongoing. According to Science Daily, research suggests that higher levels of childhood muscular fitness might protect against development of metabolic syndrome in adult years.

Many schools have cut out physical education programs and recess, and instead have been focusing on test taking. This is not allowing children to release energy and obtain that needed daily exercise. Children are not seen playing in the streets or parks anymore, instead they are inside watching Netflix or playing Xbox. Children are on a downward and quiet frightening spiral of not meeting daily nutrient requirements, sedentary lifestyles and becoming overweight.

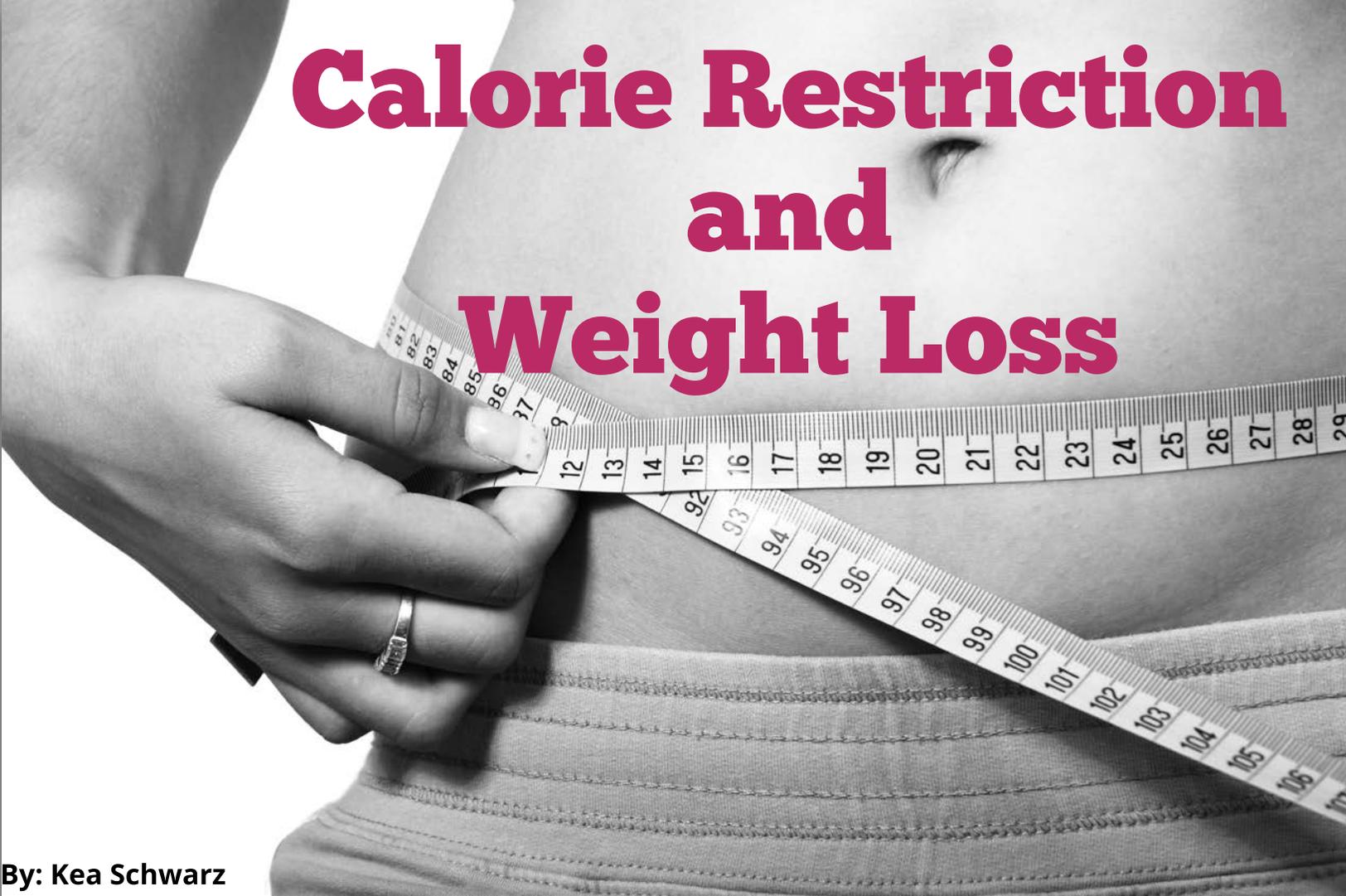
Children with higher levels of the combined muscular fitness score, muscular strength, and muscular power had lower risk of adult MetS.<sup>2</sup> Most studies suggest that with a combined effort of strength, fitness and decrease in adiposity, is a correlation with decreased risk of adult metabolic syndrome. Eating right, exercising and increasing strength may be hard for children that have already fallen into the overweight and sedentary lifestyles. With a healthy lifestyle, it is possible to delay onset and/or prevent MetS. This lifestyle change is a lifelong commitment requiring effort support of family and health care providers.



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# Calorie Restriction and Weight Loss

By: Kea Schwarz

It is widely accepted that America is facing an obesity epidemic. It is also understood that people struggling with obesity are more likely to have heart disease, diabetes, arthritis, Alzheimer's, and some cancers.<sup>1</sup> That being said, anyone who has ever been on a diet knows that it is not exactly easy to lose weight. Aside from trying to avoid your natural hunger cues and the desire to consume foods in a hedonistic fashion, there are also environmental variables that play a part in food consumption. Currently, food availability, variety, energy density, and portion size are all taken up in excessive amounts. Many people are generally unaware of how many calories they are consuming, either due to lack of satiation or emotional reasons. With the increase in fast food availability and convenience items, weight loss is now more difficult than ever. What it boils down to is modifying dietary choices. In order to lose weight a negative energy balance must be achieved. To do this, there needs to be a decrease in the consumption of energy. In other words, fewer calories consumed means greater weight loss. Although this is true, a person's health status and nutrient needs should be taken into consideration, and a consultation with a registered dietitian is advisable when trying a new dietary approach that reduces energy intake. With that being said, there are multitudes of simple dietary tactics that aid in the reduction of energy intake.<sup>2</sup>

## **Small changes = Big results**

Even the smallest decrease in energy balance could have a big impact on weight in the long run. Simply decreasing caloric intake by 100 to 200 calories per day can lead to healthy weight loss over time. This is a very slow, but sustainable calorie restriction method. Simple behavior changes may be the only adjustment needed to create a shift in the intake of calories. For example, reducing the intake of added sugars and sweetened beverages such as a soda can have a positive, long-term effect on body weight composition.<sup>2</sup>

## **Eating in terms of energy density**

Energy density is the amount of energy (calories) within a food compared to its weight. This number is often determined by the water, fat, and fiber content in foods and beverages. The more water or fiber present in a food item, the lower the calorie density. Foods with lower energy density, in general, have fewer calories, allow for greater consumption and may assist in appetite control. A perfect example of low energy foods is fruits and vegetables. Fruits and vegetables have a naturally low calorie density, meaning you can eat more without worrying about weight gain. They also increase satiation, are loaded with vital nutrients, and can help decrease overall food intake. A plant based diet, centered on whole plant foods, is an optimal way to consume a lot of food that is high in nutrients and low in energy density. Similarly, the Mediterranean diet is another example of a diet focused on the principle of calorie density.<sup>2</sup>

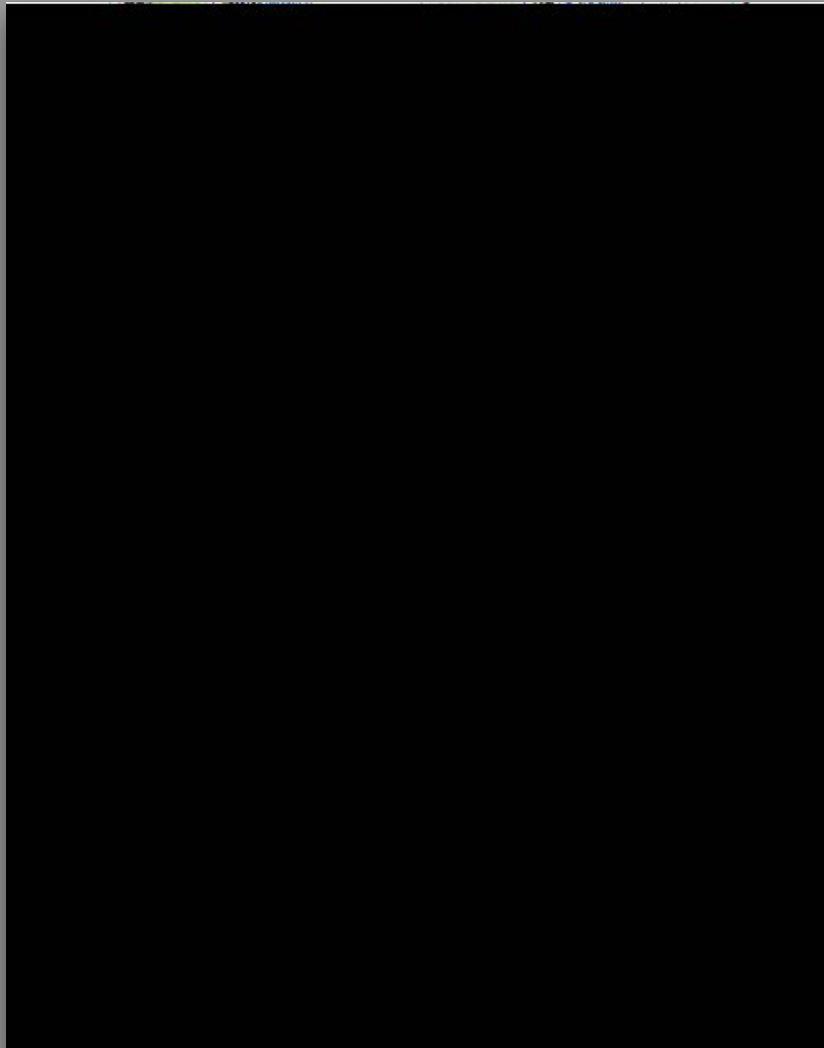
## **Intermittent fasting**

Intermittent fasting is a fairly new method of calorie restriction that has shown to have benefits beyond weight loss such as extension of life span and the reduction of some diseases. In addition, fasting may potentially increase the body's responsiveness to insulin. This will help to regulate blood sugar, which helps to control food cravings and hunger.<sup>3</sup> There are a few different methods to practice intermittent fasting. "Eat stop eat" works by fasting for 24 hours twice a week. This method of eating will reduce your overall calorie intake over the course of time, ultimately leading to weight loss. Another method involves setting a 16-hour fasting window, including time spent sleeping, which results in an 8-hour eating window. This method is best for people trying to gain muscle and lose fat with the addition of gym workouts, but this leads to an overall decrease in caloric intake in the long run even without additional exercise. These methods can seem a bit daunting and intermittent fasting isn't for everyone. For those who do decide to take on intermittent fasting, it is important to consider personal goals and lifestyle when determining which method will work best for you.<sup>4</sup>

## Physical activity

It is important not to forget physical activity. It is essential to move your body at every age. Exercise alone is not the best strategy for weight loss, but a sedentary life has been linked to higher rates of obesity. Including light to moderate exercise 1-3 days a week is great for your health and can help to shed a couple extra pounds.<sup>2</sup>

In summary, eating a calorie deficit is the primary way to lose weight. There are a variety of different methods of decreasing energy balance and the fewer calories that are consumed the more weight a person can potentially lose. With that, it is important to remember even the simplest changes can lead to positive results. Weight loss is a process and you have to stick with it to see results.



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# Lipid Metabolism Disorder



**Sarah Boroski**

Many people believe that the only way to obtain energy for the body is from carbohydrates but, in actuality fats (lipids) are another great way to get energy for the body. Lipids function in cell membranes, lubricants, provides 85% of the energy generated by the body, and has the ability to signal cells to work. Lipids are continuously getting broken down and built up through lipid synthesis (building) and lipid oxidation (breaking down). In order for these two processes to work, certain enzymes have to be present in the body. Abnormalities can occur in enzymes and can lead to lipidoses which is an accumulation of fatty substances. Lipidoses can potentially be harmful for organs and the body. Enzymes used to convert energy to fats can also malfunction, causing problems to the body known as, Lipid Oxidation Disorders.

Most Lipid metabolism disorders are rare due to the majority of them being hereditary. Although, like with all diseases/ disorders, people should be informed of what can happen to the body. The most commonly known lipid metabolism disorder is Gaucher disease and can be characterized by having a built up of glucocerebrosides. Glucocerebrosides are found in non neuronal tissues and are a products of fat metabolism in mostly Eastern Europeans. Having this accumulation can lead to enlargement of the liver and spleen causing a brownish pigmentation to the skin. If seen in the eyes, yellow spots called pingueculae start to show. If glucocerebrosides accumulation is found in the bone marrow causes pain and will start to destroy the bone.

Another disease that is caused by accumulations of fats is Fabry's disease which caused by glycolipid build up in tissues. Fabry's disease can cause skin growths, pain in the extremities, poor vision, fevers, and kidney or heart failure. Because the defective gene for this rare disorder is carried on the X chromosome, the full-blown disease occurs only in males. The accumulation of glycolipid could cause a

develop kidney failure and heart disease, although most often, they live into adulthood. Kidney failure can lead to high blood pressure, resulting in stroke.

Unfortunately, this disease cannot be cured or treated directly but researchers are looking into a treatment where the deficient enzyme is replaced by transfusion. The treatment would consist of taking analgesics to help relieve pain and fever or

*"Most Lipid metabolism disorders are rare due to the majority of them being hereditary."*

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noncancerous skin growth that develops on the lower part of the abdomen. The corneas become cloudy giving this particular person poor vision. Sometimes, a burning pain may develop in the arms and legs. If this develops in children, they may have episodes of fever more so than older men. Sadly, children with this disease eventually

develop kidney failure and heart disease, although most often, they live into adulthood. Kidney failure can lead to high blood pressure, resulting in stroke. anticonvulsants. People with kidney failure may need a kidney transplant.<sup>1</sup>

As you can see by these two diseases, having even one enzyme not function properly can cause departmental problems. This just proves to show how sensitive the body truly is. That one little mishap can create a catastrophe.

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# The Treatment of Depression and Mood Disorders with Omega-3 Fatty Acids

By: Michael Callahan

Omega-3 fatty acids have numerous health benefits and function in many important areas of our body. They are particularly important for brain and heart health, as well as proper central nervous system functioning. Omega-3's are not synthesized in the body, and therefore must be eaten. Many people today consume far less omega-3 fatty acids than is recommended, and increasing uptake could yield potential benefits to health; particularly mental health.

Omega-3 fatty acids have been known for their health benefits, particularly in the past for heart health. More recent research has led to claims of some of the potential health benefits omega-3's can also have on the brain. Treatment of depression and bipolar disorder with omega-3 supplementation has been studied and observed and yields positive results. Omega-3 intake has dropped in the last

50-100 years; depression rates, coincidentally, have risen in the last 50-100 years. This has led to many studies seeking to understand if there is a correlation between omega-3 intake and improvement in treatment of patients with depression and bipolar disorder.

Omega-3 fatty acids are considered essential nutrients, indicating we must get these nutrients from the food we eat. So, what are Omega-3's exactly? An Omega-3 Fatty Acid is composed of a hydrocarbon chain (hydrophobic) along with a hydrophilic carboxylic acid tail. Saturated fatty acids contain all single bonds within its hydrocarbon chain; where as unsaturated fatty acids contain double bonds within their hydrocarbon chain. One way fatty acids are named are by indicating the position of the first double bond in the molecule, starting from the omega, or methyl

end. Omega-3, for example, indicates a double bond between the 3rd and 4th carbon in the hydrocarbon chain. Linoleic acid (LA), for example, is an omega-6 fatty acid. Scientific nomenclature classifies this molecule as 18:3n-6, meaning it contains 18 carbons within its hydrocarbon chain. The first double bond, indicated by n-6, shows the first double bond from the omega end is between carbons 6 and 7. The number 3 indicates there are 3 double bonds, which will always be located 3 carbons down the chain. Similar to LA,  $\alpha$ -linoleic acid (ALA), is an 18 carbon omega-3 fatty acid. While such slight changes in molecular configuration of these fatty acids may seem unimportant, it confers specificity to these fatty acid molecules, influencing their physical and chemical structure and function in the body. Humans do not contain enzymes necessary to insert cis double bonds at the n-6 or n-3 position, indicating ALA and LA are essential fatty acids that must be consumed. Humans are able to synthesize some fats in the body such as saturated and monounsaturated fatty acids from carbon groups in protein and carbohydrate sources.

Significant bodies of research, along with cohort studies and randomized controlled trials have suggested omega-3 fatty acid intake is associated with decreases in coronary heart disease, as well as decreased risk of heart attack, or cardiovascular disease. Other claims include omega-3 fatty acids can

reduce the risk of blood clots, protect against abnormal heart rhythms, and reduce triglycerides and arterial plaque. It is also widely supported that Omega-3's also play an important role in the central nervous system. Studies are becoming much more common today on the impact of diet on our mental health. According to Omega-3 researcher David Mischoulon (MD, PhD, director of research in the Depression Clinical and Research Program at Boston's Massachusetts General Hospital), EPA AND DHA of omega-3's are natural antidepressants.

Omega-3 fatty acids play an extremely important role in the body, and may potentially be a viable treatment method for those suffering from depression and other mood disorders. Research has shown that Omega-3's come in three varieties: Docosahexaenoic acid (DHA),

Eicosapentaenoic acid (EPA), and Alpha-linolenic acid (ALA). DHA, often found in salmon, mackerel, tuna and other cold water fish, plays an important role in membrane function of brain cells, as well as work at synapses. These are long-chain fatty acids, making them more fluid-like and flexible. EPA, also typically found in cold fish, plays an important role in maintaining a healthy mood. EPA is able to do this by balancing out metabolic pathways in the brain and reducing inflammatory response in the brain. EPA, for this reason is particularly important in studies

**"Omega-3 fatty acids play an extremely important role in the body, and may potentially be a viable treatment method for those suffering from depression and other mood disorders."**

observing omega-3 and depression. According to Gretchen Vannice, MS, RD, treatment of depression requires more than DHA. ALA is typically found in nuts and seeds such as flaxseed, chia seed, pumpkin seed, walnuts and salad greens. ALA plays a role in maintaining heart health. Most Americans get enough ALA, but not nearly enough DHA and EPA. The recommended dosage of DHA and EPA daily is 500 mg, which would be equivalent to eating fish twice a week. Most people are not even getting to 100 mg daily. There is also a correlation in people with depression having lower DHA and EPA levels. This indicates the potential importance of Omega-3's, particularly DHA and EPA, on brain function.

Omega-3 fatty acids have been supported for many health claims ranging from heart health, to central nervous system function,

to brain function. It is impossible to ignore the positive results seen in many of these studies. Due to widespread low consumption of omega-3 fatty acids, observable changes following increased omega-3 intake are much easier seen. Future research has potential to reinforce the power of omega-3's, and their importance for overall brain and heart health.

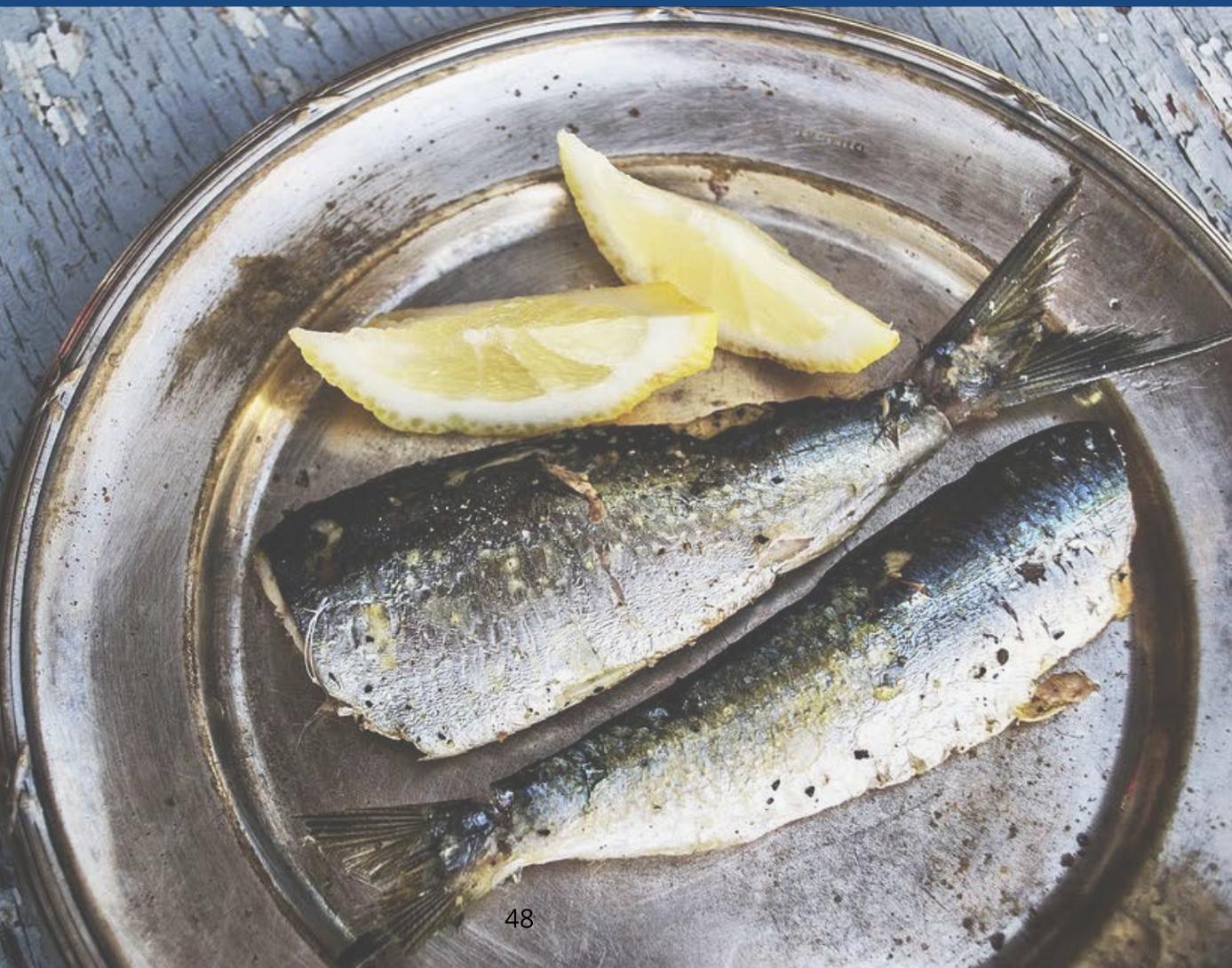
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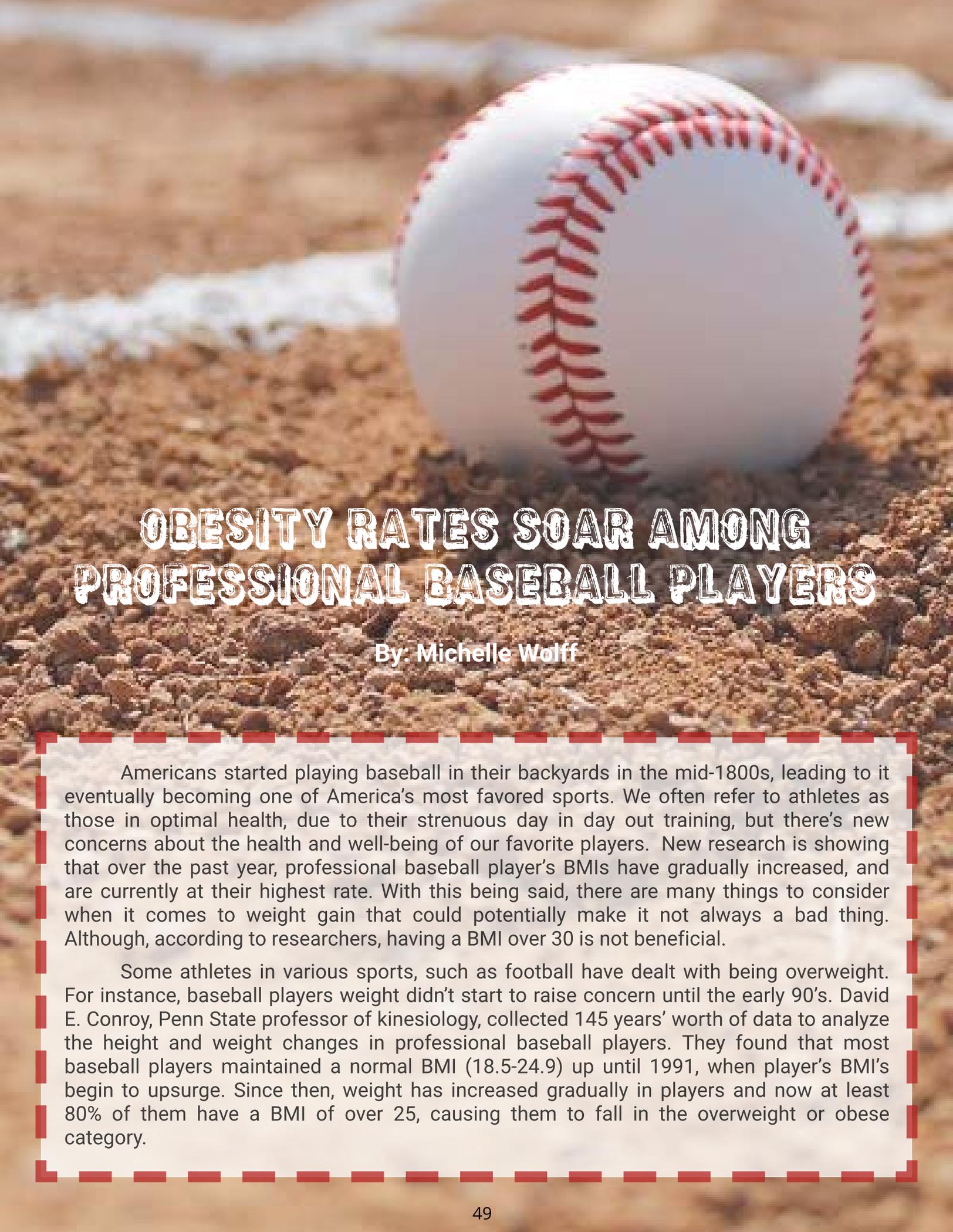
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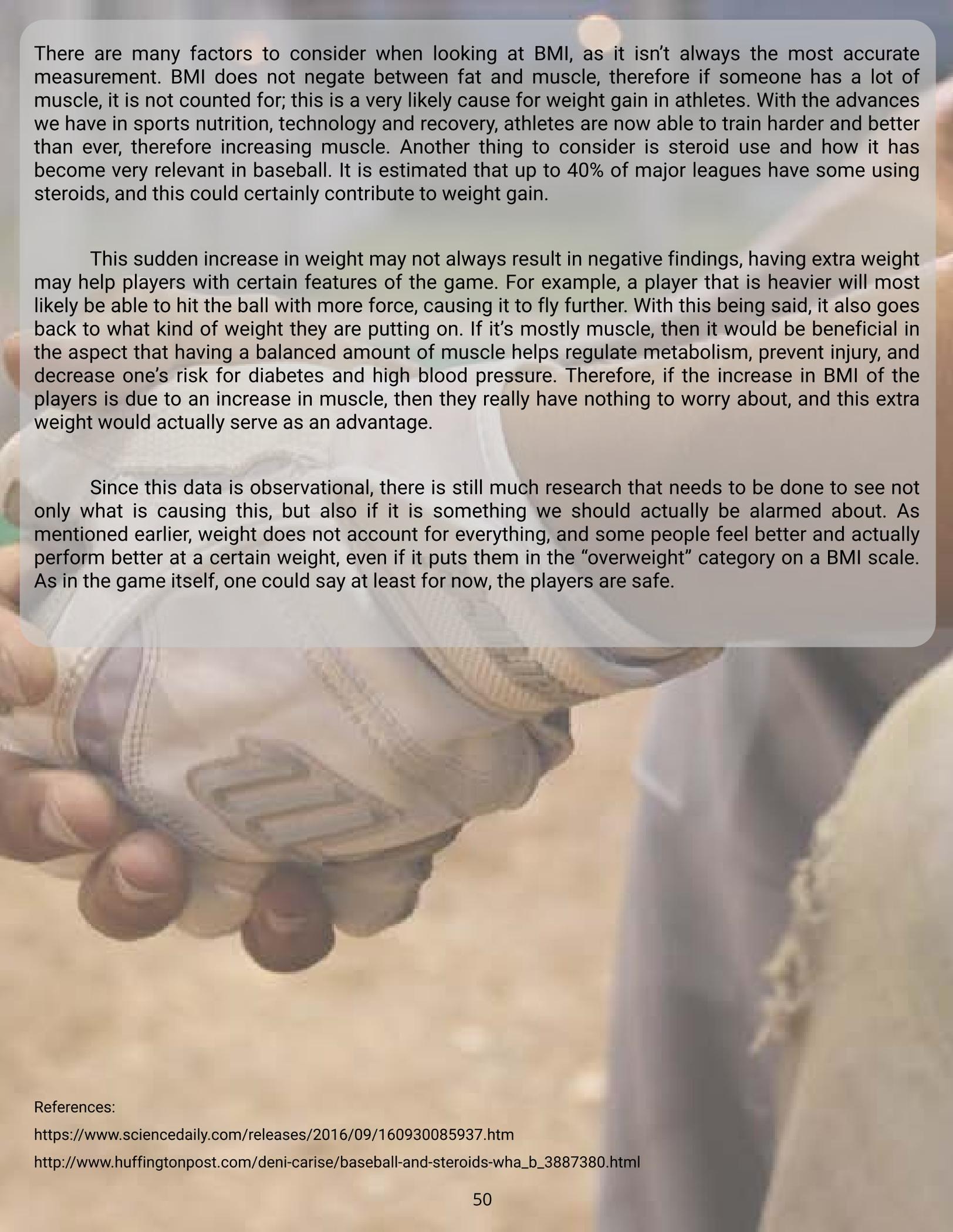


# OBESITY RATES SOAR AMONG PROFESSIONAL BASEBALL PLAYERS

By: Michelle Wolff

Americans started playing baseball in their backyards in the mid-1800s, leading to it eventually becoming one of America's most favored sports. We often refer to athletes as those in optimal health, due to their strenuous day in day out training, but there's new concerns about the health and well-being of our favorite players. New research is showing that over the past year, professional baseball player's BMIs have gradually increased, and are currently at their highest rate. With this being said, there are many things to consider when it comes to weight gain that could potentially make it not always a bad thing. Although, according to researchers, having a BMI over 30 is not beneficial.

Some athletes in various sports, such as football have dealt with being overweight. For instance, baseball players weight didn't start to raise concern until the early 90's. David E. Conroy, Penn State professor of kinesiology, collected 145 years' worth of data to analyze the height and weight changes in professional baseball players. They found that most baseball players maintained a normal BMI (18.5-24.9) up until 1991, when player's BMI's begin to upsurge. Since then, weight has increased gradually in players and now at least 80% of them have a BMI of over 25, causing them to fall in the overweight or obese category.



There are many factors to consider when looking at BMI, as it isn't always the most accurate measurement. BMI does not negate between fat and muscle, therefore if someone has a lot of muscle, it is not counted for; this is a very likely cause for weight gain in athletes. With the advances we have in sports nutrition, technology and recovery, athletes are now able to train harder and better than ever, therefore increasing muscle. Another thing to consider is steroid use and how it has become very relevant in baseball. It is estimated that up to 40% of major leagues have some using steroids, and this could certainly contribute to weight gain.

This sudden increase in weight may not always result in negative findings, having extra weight may help players with certain features of the game. For example, a player that is heavier will most likely be able to hit the ball with more force, causing it to fly further. With this being said, it also goes back to what kind of weight they are putting on. If it's mostly muscle, then it would be beneficial in the aspect that having a balanced amount of muscle helps regulate metabolism, prevent injury, and decrease one's risk for diabetes and high blood pressure. Therefore, if the increase in BMI of the players is due to an increase in muscle, then they really have nothing to worry about, and this extra weight would actually serve as an advantage.

Since this data is observational, there is still much research that needs to be done to see not only what is causing this, but also if it is something we should actually be alarmed about. As mentioned earlier, weight does not account for everything, and some people feel better and actually perform better at a certain weight, even if it puts them in the "overweight" category on a BMI scale. As in the game itself, one could say at least for now, the players are safe.

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