In the News — p. 3

Community Outreach Spotlight — p. 5

Volunteering Reflections — p. 7

The Supplement Shelf — p. 9

RD Spotlight — p. 11

Local Healthy Haunts — p. 13

Research Connection — p. 15

Fueled and Fit — p. 17

Alumni Reconnect — p. 18
This Issue

Faculty Spotlight — p. 19

Hot Topics and Current Trends — p. 21

FCAND 2015-2016 Board of Directors — p. 23

FCAND 2015-2016 Service Award Winners — p. 25

SNDA Updates — p. 26

Nutrition News — p. 27

References — p. 31
Proposed Changes to Nutrition Facts Labels

By Tara Kessinger

The FDA is proposing to update the Nutrition Facts label found on most food packages within our grocery stores. The original Nutrition Facts label was introduced 20 years ago in an effort to assist consumers in making informed food choices and preserve healthy dietary practices. If adopted, the proposed changes will benefit the consumer by (1) providing a greater understanding of Nutrition Science, (2) updating serving size requirements and package sizes of certain products, and (3) implementing a more “user-friendly” label design.

In an effort to provide a greater understanding of Nutrition Science, the proposed label changes will require more information about added sugars, update the daily values for nutrients like sodium, dietary fiber and vitamin D, require manufacturers to declare the amount of potassium and vitamin D on the label, make vitamin A and C dietary values voluntary, and eliminate the “calories from fat” column on the food label.

The proposed changes to the serving size requirements will reflect realistic portion sizes of how people eat and drink today. The original serving sizes were first established 20 years ago. Since this time, the amount of food consumers actually eat has changes significantly. Additionally, foods and drinks that are typically eaten in one sitting are proposed to be labeled as a single serving rather than 2-3 servings. On packages where one can eat the food/drink product in one setting or multiple settings, the manufacturers would have to provide dual column labels to indicate both per serving and package calorie and nutrient information.

In an effort to make food labels more user friendly to the consumer, the FDA label proposed changes suggest making calories and serving sizes more prominent to emphasize the parts of the label that may be more important in addressing public health concerns. Furthermore the FDA recommends that the footnote explaining the meaning of the Percent Daily Value be explained more clearly, as well as shifting the percent daily values to the left of the label rather than the right to emphasize the importance of a particular food source within the total context of the diet.

See page 4 for original vs. proposed label changes.

More information on these proposed changes can be found at:

### Nutrition Facts

**Original vs. Proposed**

#### Serving Size 2/3 cup (55g)

<table>
<thead>
<tr>
<th>Serving Per Container About 8</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories 230</th>
<th>Calories from Fat 72</th>
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</table>

<table>
<thead>
<tr>
<th>% Daily Value*</th>
<th>Total Fat 8g</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Saturated Fat</td>
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<td>5%</td>
</tr>
<tr>
<td>Trans Fat</td>
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<td></td>
</tr>
<tr>
<td>Cholesterol</td>
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</tr>
<tr>
<td>Sodium</td>
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<table>
<thead>
<tr>
<th>Total Carbohydrate</th>
<th>37g</th>
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<tbody>
<tr>
<td>Dietary Fiber</td>
<td>4g</td>
<td>16%</td>
</tr>
<tr>
<td>Sugars</td>
<td>1g</td>
<td></td>
</tr>
</tbody>
</table>

| Protein | 3g |

| Vitamin A | 10% |
| Vitamin C | 8%  |
| Calcium   | 20% |
| Iron      | 45% |

* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.

#### Calories

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<tr>
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<th>2,000</th>
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<tbody>
<tr>
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<td>80g</td>
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<tr>
<td>Sat Fat</td>
<td>Less than 20g</td>
<td>25g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>Less than 300mg</td>
<td>300mg</td>
</tr>
<tr>
<td>Sodium</td>
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<td>2,400mg</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>Less than 300g</td>
<td>375g</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>25g</td>
<td>30g</td>
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</tbody>
</table>

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#### Nutrition Facts

**8 servings per container**

<table>
<thead>
<tr>
<th>Amount per 2/3 cup</th>
<th>Calories 230</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>% DV*</th>
<th>Total Fat 8g</th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>Saturated Fat 1g</td>
</tr>
<tr>
<td>5%</td>
<td>Trans Fat 0g</td>
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<td>14%</td>
<td>Dietary Fiber 4g</td>
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<tr>
<td>4%</td>
<td>Sugars 1g</td>
</tr>
<tr>
<td>10%</td>
<td>Added Sugars 0g</td>
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</tbody>
</table>

| Protein | 3g |

| Vitamin D | 2 mcg |
| Calcium   | 260 mg |
| Iron      | 8 mg |
| Potassium | 235 mg |

* Footnote on Daily Values (DV) and calories reference to be inserted here.

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http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/
1. **What is Waste Not Want Not?**

*Waste Not Want Not* is a non-profit, volunteer-based organization whose mission is to prevent the discarding of food and other items that can be used to fight hunger and poverty. We do this by rescuing food daily from numerous sources for distribution to local charities and through other cost-effective initiatives. Since we, as a nation, discard one-fourth of all the food we produce each year, there is plenty for *Waste Not* to rescue.

2. **Who does Waste Not Want Not help?**

*Waste Not Want Not* helps groups ranging from large shelters serving thousands of meals a week, food pantries handing out groceries to hundreds of families, and church groups feeding dozens of homeless people in the woods, to charities mentoring and feeding small groups of children in afterschool and weekend backpack programs. Food rescued by *Waste Not* provides more than 4,200 meals a day to those in need in ten counties.

3. **How did Waste Not Want Not get started?**

In 1990, one woman decided to help the St. Francis Soup Kitchen by asking her neighbor-
hood grocery store to donate the bread approaching its “sell-by” date instead of throwing it away. From her idea and efforts, Waste Not Want Not emerged. Over the years, Waste Not has grown from a one-person effort, into an independent 501 ( C )(3) charity with two employees and close to 300 volunteers that rescue food 363 days a year.

4. How much food does Waste Not Want Not rescue?

In 2014, Waste Not Want Not volunteers rescued and distributed close to two million pounds of wholesome food that would have been discarded but for our efforts. Our volunteers make 135 scheduled rescues each week from stores, restaurants and vendors, rescuing perishable items such as baked goods, produce, meat, dairy products, fruit, and prepared food ranging from pizza to lobster tails. We focus on food rescue rather than food drives, because food rescue is a more cost-efficient way to fight hunger. A dollar used to buy a can of soup provides a single meal, but a dollar donated to Waste Not, multiplied by our volunteers’ efforts provides 14 pounds of food.

5. How does one become a volunteer?

We have an application online. Visit http://wastenotflorida.com/volunteer-app/. We need volunteers to rescue food, transport food, sort rescued food products, and allocate rescued food to organizations for food distribution.

6. Do you have any upcoming events scheduled for this year to help benefit Waste Not Want Not?

Right now we are organizing our Community Yard Sale that will be held on October 3, 2015, at the Orange Park Town Hall Park. We are currently looking for volunteers to help with the yard sale and also participants to rent spaces to sell their items. If anyone is interested in participating or volunteering they can contact us online or call us at (904) 215-3150.

7. Where is Waste Not Want Not located?

We are located in the town of Orange Park, but rescue food from Riverside to Middleburg and from Old St. Augustine Rd. to Branan Field Rd. As we continue to grow, we are always looking for more volunteers to help with food pick up and distribution. We love and appreciate all our volunteers. Without volunteers, Waste Not Want Not could not exist..
I remember sitting in Dr. Perkins “Life Span Nutrition” class in my junior year as an undergrad at UNF. We had a guest speaker from the Special Supplemental Nutrition Program for Women, Infants and Children (better known as WIC) share with us about what the health department does for woman and children within the community. I knew I wanted to work with that demographic, so after the lecture I asked the speaker for volunteering opportunities. Within the next weeks I found myself at the Nutrition and Chronic Disease Prevention Division at WIC.

After almost a year and a half later of volunteering with WIC, I can truthfully say there are so many valuable things that I have learned and been able to experience due to my time at WIC. I was able to shadow dietitians, help plan menu’s, learn how to properly gather height and weight information for clients, experience presenting to clients on important nutrition information, and most importantly, I was able to make wonderful connections and networking opportunities. Because of my volunteered time, I was introduced and able to become an active member with the First Coast Academy of Nutrition and Dietetics as their monthly journal editor. And this past March, I helped plan and implement events for National Nutrition Month.

If I could give undergraduates and upcoming students any advice on volunteering, I would have to say that I cannot stress enough how important it is for you to go out and find an experience that you enjoy. Don’t spread yourself too thin, but find one organization and truly dive in. Be fully present each hour that you give and do not be afraid to ask for more responsibilities. Invest in your volunteering experience and it will eventually invest in you.
Strawberry-and-Arugula Salad with Crispy Prosciutto

Ingredients

- 2 tablespoons balsamic vinegar
- 1 1/2 teaspoons honey
- 1 tablespoon extra-virgin olive oil
- 1/4 teaspoon salt
- 1/2 teaspoon freshly ground black pepper
- 1 1/2 cups strawberries, hulled and quartered
- 1/3 cup sliced red onion
- Olive oil cooking spray
- 4 thin slices prosciutto (about 2 ounces)
- 6 cups baby arugula (about 5 ounces)
- 2 ounces goat cheese or feta, crumbled

Preparation

1. Whisk together first 5 ingredients (through black pepper) in a large serving bowl. Add berries and red onion; let stand 15 minutes.

2. Meanwhile, lightly coat a seasoned cast-iron skillet or nonstick pan with cooking spray, and heat over moderately high heat. Add prosciutto in one layer, and cook, turning, about 5 minutes or until golden brown and crispy. Transfer to a plate to cool; crumble and reserve.

3. Place the baby arugula in a large serving bowl with the cheese; add the strawberries, red onion, and balsamic dressing, and toss gently until just coated. Divide the salad among 4 serving plates, and top evenly with the cooked prosciutto.
Hydroxycut is the name of a family of dietary supplements that are considered to be weight-loss aids. There are many different forms of Hydroxycut such as pills, protein shakes, protein bars, gummies, drink mixes, drops to be added to water, and even sprinkles to add to food. This article will focus on the dietary supplements in the pill form using the updated 2013 ingredient list.

The active ingredients in Hydroxycut are Lady’s Mantle Extract, Wild Olive Extract, Komijn Extract, Wild Mint Extract and Caffeine. These ingredients all possess thermogenic properties. This means that they speed up metabolism. Studies of the product have been shown to demonstrate lipid peroxidation activity. Lipid peroxidation is the oxidative degradation of lipids. In simpler terms; it is the process of stealing electrons from lipid cell membranes which causes damage the fat cells ultimately leading to their degradation. This may or may not aid in a weight loss effect from the product. Caffeine is the most potent of the active ingredients. It can increase a person's metabolism by as much as 3-11% as well as increasing the body’s capability of burning fat by 10-29%. These are only short term effects though, due to the fact that people build up a tolerance to caffeine. Caffeine also suppresses appetite. Hydroxycut does offer decaffeinated products so caffeine is not an active ingredient in all products.

There are also other minor ingredients that may or may not aid in the potential weight loss effects of Hydroxycut. The ingredients include blueberries, Golgi Berry Extract, Bilberry Extract, pomegranate and Acerola Concentrate. Most of these ingredients exhibit antioxidant properties. Blueberries, Golgi Berry Extract, Bilberry Extract and pomegranate are the ingredients that exhibit antioxidant properties. Blueberries also may have fat burning and metabolism boosting properties. Golgi Berry Extract may exhibit metabolism boosting properties as well. Acerola Concentrate is packed with vitamins and is specifically rich in vitamin C. It is used by many athletes for physical endurance.

There are two studies ‘proving’ that Hydroxycut may be beneficial for weight loss. One study was a twelve week study which showed that participants using Hydroxycut lost an average of 20.94 pounds. In an eight week study participants using Hydroxycut lost an average of 16.50 pounds. That being said the participants were also on a restricted calorie diet which may have enhanced the weight loss effects. The Hydroxycut website and labeling states the best results come from following a diet plan, an exercise plan as well as taking the Hydroxycut supplement. Another thing that should be noted is that the two studies mentioned were funded by the Hydroxycut Corporation.

In 2009 the FDA recalled Hydroxycut and it was not allowed on the markets until they altered their ingredient list to excluded ephedra. The FDA warned all users to immediately stop taking Hydroxycut because it had been linked to causing liver damage as minor as jaundice to as major as death, even when proper dosage was followed. There were also other health complications found to be associated with Hydroxycut that included seizures, cardiovascular disorders, and rhabdomyolysis which could cause kidney
new formula and put it on the market advertising it as still the number one weight loss supplement when in reality, the only active ingredient left was caffeine. As of 2013 the formula was altered again to include the ingredients listed above. A study published in the Military Medicine Journal shows that Hydroxycut is still linked to rhabdomyolysis due to the caffeine content of the pill. The 2013 formulas are still on the market along with newer products with a newer ingredient list containing different active ingredients.

Overall Hydroxycut products work for some people and don’t for others. The best results are found in those who add Hydroxycut to their restricted calorie diet and exercise regimen. There are some health risks that accompany Hydroxycut products so they should be used with caution. There is a warning label on Hydroxycut products that states people under 18, that are pregnant or that are lactating should not use the product. It is also advised to consult a doctor before use and to get medical help if any unusual symptoms occur. Hydroxycut, as any weight loss supplement, has risks and may not work for everyone. If a doctor deems it safe for your use you can try it out, just be cautious of side effects and keep in mind that it does not work for everyone.

References on page 31
Spencer Greenwood is a registered dietitian at the Wesconnett branch of Women, Infants, and Children (WIC)*, which is one of three WIC locations in Jacksonville. Spencer is a graduate of UNF’s Master of Science and Dietetic Internship program, and also serves as a preceptor to current dietetic interns who are in the program. He is a Jacksonville native and currently lives with his girlfriend Valerie and their Italian Greyhound, Penny.

– Tammy Baranowski, Graduate Dietetic Intern

**TB: What has your work experience been as a dietitian?**

**JSG:** I started working for WIC shortly after I became licensed and have been here ever since. I really wanted to gain management experience and that’s one of the great opportunities of this job. As a WIC dietitian, about half of my job is to see medical high-risk patients clinically and the other half is administrative or managerial in nature. I also do a lot of collaborating with high-risk patients’ medical team or primary dietitian to coordinate their care. The other dietitian here and I share the responsibilities of supervising the Nutrition Educators, Health Support Technicians, and Peer Counselors, as well as other administrative duties like scheduling employees, performing annual reviews, and maintaining inventory of specialty formulas. We have about 7,000 participants enrolled at this location alone that we see regularly, so things can get pretty crazy around here. Each day at work can be drastically different from the next, but I enjoy the challenge.

**TB: What is your favorite part about working for WIC?**

**JSG:** Other than sports nutrition, pediatric nutrition is my other main nutrition interest. I also just really love working with the kids. Especially the ones who are a little older and can come in and share their comic books with me or talk about all the cool cartoons that they like. I’m like a big kid myself in many ways, so we have a lot of fun. Also, since they stay in the program from birth to age five, it’s nice to get to know the families and see them grow over a period of years, which is something that usually isn’t possible in most nutrition settings. Interacting with the children who come here make my job so rewarding and fun. I wouldn’t mind one day working with even older children, like elementary age, because I think that’s the most important time to teach them about nutrition and the time frame that can make the greatest impact.

**TB: What is the most challenging thing about being a dietitian?**

**JSG:** I think the fact that our profession is still emerging and not really well known, it seems like we have to create a lot of our own job opportunities or work extra hard to prove our value in the medical community. A lot of dietitians do create opportunities for themselves, but then they have to figure a lot of things out on their own or be the first
person to do the job. That being said, I like knowing that I can work in so many different areas, and that I’m not penciled in to the same type of work forever like some careers are. There’s freedom in that.

**TB: What advice would you offer to either students or interns who aspire to be dietitians?**

**JSG:** I would say to be open minded about your job options when you graduate. There are not always a lot of opportunities out there, and if they get tunnel vision about a single area of dietetics they want to work in, they may miss some really great opportunities that could either turn out to be really enjoyable or that could lead to even greater opportunities. I would also say try to experience as many settings as possible during the internship so you can see possible jobs you may have not have considered otherwise. In terms of dietitians who would like to also go into management or community dietetics, communication is the absolute key. Of course, being able to communicate effectively is a large part of success in dietetics in general, but especially when dealing with a people of a wide variety of socioeconomic levels. If you are able to relate to your clients and talk to them in a way that makes them comfortable, you’ll be able to effectively gather the information you need to help them. Flexibility is also a huge requirement. Our clients have a wide range of challenging life situations and the ability to do what it takes to help them is really important.

**TB: What is your favorite part about being a preceptor to interns?**

**JSG:** I especially love being a preceptor at WIC so I can show the fun side of community nutrition. A lot of interns have a mental image of what WIC is when they come in and I like to watch them experience the positive side of it. Seeing the relationships we build with the families and seeing how appreciative they are is really a lot more rewarding than most interns would think before they experience it here.

**TB: Where do you see yourself in ten years or so?**

**JSG:** I would love to have my own business consulting or counseling athletes or sports dietetics. With all the new technology available and the probability of even greater communication technology in the future, the opportunities for reaching more clients virtually is growing and will continue to grow. I think it would also be cool to be a virtual consultant to members at one of the big gym chains that are nationwide and could therefore financially support having a dietitian on staff.

*WIC is under Florida’s Department of Health and provides nutrition education and counseling, infant formula, and supplemental foods to low-income or qualified applicants, including pregnant women, post-partum women, infants, and children up to five years of age.*
If you are looking for a healthy breakfast or lunch after a morning jog on the sand or a day of surfing, your answer is only a block from the beach.

On 6th Avenue North, a Southern pseudo-diner coffee shop called Delicomb delivers a delicious, wholesome breakfast sandwich or lunch wrap, as well as local coffee beans, baked goods and homemade kimchi.

Kimchi, a Korean side dish, is one of Delicomb’s unique menu items. To make kimchi, they ferment vegetables in jars with a slew of seasonings. Delicomb makes a variety of kinds: kraut, dill kraut, hot mexi, cucumber and white radish. If kimchi is not your coveted side dish, they provided garlic miso kale, black beans and corn dishes as well.

But, since I was a morning costumer, I decided to select an item off of their breakfast menu—though they do serve breakfast all day.

I ordered the Mr. Loco, a hearty breakfast sandwich with two eggs, pepper jack cheese, creamy avocado and strawberry jam on wheat toast. There is an option to put sriracha on your sandwich, but it tasted too good to alter the ingredients. The mixture of sweet jam and mouth-watering eggs, two different tastes, amazingly complimented each other. It was a great way to get some healthy fats and protein to start the day, and I even got some probiotics in after I washed the sandwich down with a Kevita, a probiotic drink with only 5 calories per serving.

Delicomb’s drink options range from organic coconut juice, Synergy drinks packed with Omega-3 and zero calorie Zevia soda. All of these beverages beat out any added-sugar fruit juices or sweetened teas.

But, if a sweet tooth is something you are trying to quench, fresh baked goods decorate the front counter, with selections that ranged from spinach feta scones to banana chocolate chip muffins to the most warm, gooey, melt-in-your-mouth cookies.

Even though it had the look of most independent breakfast cafes, with its chalkboard menu, mix-match furniture and local art on the walls, this Southern café stood out with its fresh ingredients that provided health benefits much greater than a bagel with cream cheese or a Frappuccino drowning in added sugar. I left the café with a full tummy, but not too full, and a lovely satisfaction that I just benefited my body with a healthy choice of restaurant.

Delicomb is Located at: 102 6th Ave N, Jacksonville Beach, FL 32250
Ph (904)372-4192
Email: www.delicomb.com

Local Healthy Haunts
Featuring: Delicomb
By Lexi Rossow
By Shawna Jenkins

As the research laboratory manager for Dr. Ali Jahan-mihan, I would like to take the time to thank all of the students who helped throughout the spring 2015 semester! A huge accolade is well overdue to Kristen Drake, Sara Perez, Elizabeth Ferrer, Scott Streitfeld, Alexandria Broadbent, Jennifer Wihlborg, Mulugeta Habte, Kristy Ponce, Acham Leon, and Dennis Yarizadeh. With all of their hard work and dedication, we have been truly successful this semester! Another huge KUDOS to my fellow classmates: Valeria Palamidy, Diana Maier, Christene Guirgess, and Lindsay Pappas; who worked with me in fabricating our own research study. I wish the best for them in their endeavors as I know they will all have prosperous futures.

Thank you all!
Due to the high prevalence of major depressive disorder, bipolar disorder and obesity, researchers are beginning to wonder if there is an associated risk between obesity and mood disorders. It has long been established that obesity and mood disorders are frequently associated. Recent statistics show that individuals with major depressive disorder and bipolar disorder have approximately a 50% higher risk of developing obesity when compared to the general population. Conversely, overweight and obesity have been reported to increase the risk of onset of significant depressive symptoms and manic episodes.1 Yet, to merely assume that obesity and mood disorders are comorbidities is simply and prematurely presumptuous. Instead, recent epidemiological, longitudinal, and clinical studies have reported that these illnesses do mutually influence each other; however the relationship between obesity and mood disorders is more bidirectional and convergent. For this reason, some investigators have suggested that this co-occurrence constitutes a distinct illness subtype termed “metabolic-mood” syndrome.1 This article aims to present to the reader the nature of the relationship between obesity and mood disorder to determine if the subtype identification of “metabolic-mood” disorder is an appropriate possible diagnosis in the future.

Concurrent Clinical/Empirical Associations:

The presence of obesity has been linked to a distinct and more complicated clinical presentation of mood disorders, especially in obese or overweight individuals with major depressive disorder. Individuals with major depressive disorder and who are obese or overweight exhibit more atypical features such as mood reactivity, increase in appetite, hyper-
somnia, leaden paralysis and sensitivity to interpersonal rejection. Although it can be postulated that the atypical features associated with mood disorders may lead to an increase in weight gain and possible obesity, results from longitudinal studies indicate the opposite.²

Additionally, evidence from clinical studies in individuals with bipolar disorder have found that the duration of depressive episodes tends to be longer and require more hospitalization in patients who were overweight or obese. Obese patients with bipolar disorder were at increased risk for suicide, displayed poor cognitive performance, had difficulty maintaining focus and attention, and had decreased psychomotor processing speed, in comparison to patients with bipolar disorder who were of normal weight.³

Lastly, obesity has also been suggested to negatively impact pharmaceutical treatment of anxiety and associated depressive disorders. Uher et al suggest that a higher BMI may be a predictor of poor responses to antidepressant medication in individuals with major depressive disorder.⁴ In the treatment of bipolar disorder, Kemp et al found that obesity was also associated with a poor response to lithium and valproate.⁵ Conversely comorbid depression has been shown to be a predictor of unfavorable outcomes in weight loss therapy to include nutrition interventions, weight-loss programs, and bariatric surgery.¹

Genetic Factors:

Mood disorders and obesity are thought to follow a polygenic mode of inheritance, with multiple genes contributing to the development of both. Recent genetic studies have found an overlap between the genetic risk factors of obesity and mood disorders suggesting a vulnerability for both conditions within the same family line, with some studies even proposing an interactive effect. For example, the FTO gene which has been shown to contribute to obesity has also been shown to be associated with depressive symptoms.⁶

Environmental risks:

Evidence from epidemiological studies report a high prevalence of adverse socio-economic situations in both obese and mood disorder patients. Childhood trauma, such as a history of physical, emotional, or sexual abuse is well established as one of the most impactful environmental risk factors in the development of mood disorders; and, now more recently, researchers have seen the same impact on the development of obesity and metabolic disorders.⁷

Developmental aspects:

Converging evidence indicates that mood disorders and obesity also share developmental pathways associated with intrauterine environmental conditions. An adverse intrauterine environment has been consistently associated with an increased susceptibility to metabolic syndrome in adulthood. Similarly, low birth weight and early childhood malnutrition have likewise been associated with a higher risk of depression during adolescence and into adulthood.⁸ Investigators submit that it is worth noting that epigenetic modifications that occur due to maternal obesity and depression during pregnancy are associated with an increased risk of childhood obesity and adult depressive disorder. Researchers within this field suggest the influence of maternal glucocorticoids and the hypothalamic-pituitary-adrenal axis hyperactivity and dysregulation, as a result to acute stress, may lead to dysregulation within the hypothalamic-pituitary-axis of the infant resulting in increased mood disorders and increased abdominal adiposity.⁹

Application to practice:

Overall, there is evidence to suggest that there is an actuality of a possible bidirectional effect of obesity and mood disorders supporting, the existence of the term “metabolic mood disorder”; however more empirical and direct evidence are still necessary to support the concepts discussed within this article. The validation and adoption of the term “metabolic mood disorder” has many clinical implications specifically in the management of overweight/obesity and metabolic syndrome. Treatment modalities may soon include the integration of fundamental neurobiological and psychological concepts within the management and possible prevention of metabolic syndrome. Similarly, understanding the connection between obesity and mood disorders may help improve the treatment of major depressive disorder and bipolar disorder. Despite the possible treatment outcomes, the information presented within this article and the current ongoing research more than suggest that psychopathology and metabolism are intrinsically connected, even if we are unsure of the exact mechanisms at the present time.

References on page 32
Here in Jacksonville, the beach is a popular location during our warmer months. The sun-kissed skin, salty hair, sandy toes, and joyful smiles are prevalent and plenty. But before we leave our dorm, apartment, or house, we have to suit up and put on that bathing suit or those board shorts. Many can attest to getting into their beach attire and looking into the mirror for some kind of approval before making their way out the front door. It could be true that the majority of us are not 100% comfortable in our own skin, whether it may be the want for a smaller waistline or bigger muscles, several of us have areas within our own minds-eye that we wish to improve. By any and all means, searching for areas for improvement within ourselves is not such a bad thing, as long as it is for the continual pursuit of a healthier and happier you!

Now, as the beaches heat up it’s time to get out there and enjoy Jacksonville’s little slice of heaven. Of course it’s better to be proactive about our health and fitness, but if you’re a couple months behind, don’t worry! A few simple steps in the right direction can pave a path for a positive future.

Eat Clean

First things try to avoid the unnecessary caloric additions to your diet and lifestyle. This may be obvious, but limiting fat, carbohydrate, and sugar intake will help to prevent excess adipose, or fat, tissue buildup. The summer time goes great with sweet drinks and fun foods, but eat these treats in moderation. Additionally, make sure that you are eating a “balanced diet”, with plenty of fruits and vegetables, lean proteins and dairy, and whole grains. If you are unsure about what a balanced diet may look liked for you, visit the SuperTracker site at http://www.choosemyplate.gov/supertracker-tools/supertracker.html for a more personalized dietary plan. Within this site you can enter your gender, age, weight, height, and lifestyle to obtain your recommended daily needs of various macro- and micronutrients.

Train Mean

Now we need to talk about getting that blood pumping! And, the best way to do that is to work out! The term ‘working out’ usually does not invoke the most appealing feelings, but the thought of feeling better should help motivate you to begin some sort of fitness plan. If you aren’t a gym-type person, then get that heart rate racing and those muscles moving by doing some fun sports and activities. According to www.choosemyplate.org, Adults should do at least 2 hours and 30 minutes each week of aerobic physical activity at a moderate level OR 1 hour and 15 minutes each week of aerobic physical activity at a vigorous level. Being active 5 or more hours each week can provide even more health benefits. Spreading aerobic activity out over at least 3 days a week is best. Also, each activity should be done for at least 10 minutes at a time. Adults should also do strengthening activities, like push-ups, sit-ups and lifting weights, at least 2 days a week. Have fun with your fitness plan and try new things, such as jujitsu or paddle out on a surfboard for the first time.

Summer wasn’t made for being sedentary, so don’t let it slip away. Delight in nutritious foods and enjoy the outdoors, and enjoy your healthy body.
I get a lot of odd looks when I tell people where I work. You see, I work for a plastic and reconstructive surgery office and I recently graduated with my post-baccalaureate BS degree in Nutrition and Dietetics. I must say, I didn’t automatically see the need for me to stay in this niche either until I had worked there for a few years. The patients that frequent my workplace are not unlike any other person who might visit a nutrition professional for assistance; they are trying to feel better about themselves and are taking measures to obtain this feeling. They are different because they are choosing to have surgery which will put their bodies in a stress situation increasing their nutrient needs. I hope to help these patients both preoperatively and postoperatively because many of them are lacking a nutrient-rich diet (like the majority of the nation) before their procedure. What better way to improve yourself and your postoperative results then through a nutrition overhaul?

It was the foresight of my superior to bring me on board for the benefit of their patients. (I truly wish I could say it was all my idea, but that would be a fib.) With the continued support from my office administrator and the surgeons, we will be incorporating my training into their practice. Once I complete my internship and become a licensed dietitian in the state of Florida, my services at the office will be better utilized. But, for now, I will educate our patients on proper nutrition and better food choices. I will be creating quarterly newsletters for our patients discussing current food trends and tying these into the practice’s other services such as skin care. Doing so will help them heal better, retain the results they had hoped for by having surgery, and overall better their lifestyle.

When I began the journey toward my new career in nutrition three years ago, I imagined myself in private practice but never thought it would be plastics. I never realized how much this particular patient pool would benefit from nutrition coaching. I know this sounds familiar, but my goal is to help our patients by giving them the tools to make healthier choices. By doing so, they will continue reaping benefits long after their procedure.
Faculty Spotlight

Alireza Jahan-Mihan, PhD, RD

Dr. Jahan-Mihan, or “Ali” as he prefers to be addressed by his students and peers, has been a professor of nutrition and dietetics in both graduate and undergraduate programs at University of North Florida since 2013. Aside from teaching courses such as medical nutrition therapy to aspiring dietitians, he is also a clinical researcher, specializing in obesity, hunger and satiety hormones, maternal epigenetics, and metabolic syndrome research. Ali lives in St. Augustine with his wife Marjan, and their daughter Yasmin, and son Daniel.

– Tammy Baranowski, Graduate Dietetic Intern

TB: So tell me a little about your path to becoming a dietitian.

AJM: I grew up in Iran, and I initially wanted to continue my education in the field of agriculture. A very good friend of mine convinced me that nutrition is the future, and after I did some investigation, I became obsessed with the field. I enrolled in a pilot program, which was the very first undergraduate cohort in nutrition and dietetics at Isfahan University of Medical Sciences in Iran. I was the student representative for my class and it actually helped to define and shape our program by serving on a committee that decided the necessary courses and activities for producing competent nutrition professionals.

TB: Where did you go after your time at the hospital?

AJM: I wanted to extend my knowledge into a different area of nutrition, so I decided to go into food industry as a Quality Control Manager for a food company that produced various fermented foods, pickles, fruit juices, and jams. I established the HACCP protocol for that company which was a major move forward for them in terms of food safety.

TB: When did you decide to continue your education?

AJM: At the same time I was working in the food industry, I completed a research-based master’s degree in nutrition. My research was in patients with gastrointestinal cancers, which was inspired by my supervisor who at the time was battling colon cancer. Thereafter, I established my own nutrition and diet patients. In order to help effectively meet patients’ nutritional needs and to find potential resources, I established an interdisciplinary nutrition committee, including nurse supervisors, hospital managers, accountants, and case managers. This committee helped us to improve nutrition care in the hospital dramatically. We also established a protocol for nutrition screening by nursing and trained selected nurses to alleviate the burden on our small nutrition department that worked perfectly. I was also the supervisor for all dietetic interns in the hospital.
clinic and it was a very successful experience. Eventually, my family and I decided to immigrate to Canada, where I completed my doctoral degree at University of Toronto with a research focus in food intake and appetite regulation, metabolic syndrome, and epigenetics. Specifically, I was looking at maternal protein sources and their impact on offspring. We were able to show for the first time that protein sources matter, even in nutritionally adequate diets. I was also working as a part-time clinical dietitian while completing my doctoral program.

**TB: What has role been at UNF?**

**AJM:** When I took the position as a researcher and professor, I found that the department was mostly community based and that there was a space to further develop animal and clinical nutrition research. So, with the help of some motivated students and generous grants, I was able to build an animal and clinical research program from scratch. It involved securing space in the animal laboratory on campus for our department, purchasing all equipment and supplies for sample analysis, and much more. Since then, my research students and I have successfully initiated several human and animal studies. My research group and I are even collaborating with other health and science based departments here on campus and with researchers at University of Florida on several projects, which promotes interdisciplinary collaboration. I really enjoy helping my students understand the research process and helping them to get published even at the undergraduate level. Of course I absolutely couldn’t have done it without the Brooks College of Health, and in particular our Dean, Dr. Chally, and also Drs. Christie and Rodriguez for supporting our research. I’m really grateful to them for that.

**TB: You also started the Nutrition Journal Club as well as NutriNews, this very newsletter, did you not?**

**AJM:** That’s right, I did! I believe every student has potential in certain areas and one our key responsibilities as faculty is to provide them the opportunities that can help them meet their potential. For example, NutriNews is an effective tribune for our department and also provides the opportunity for our students to practice writing professionally and to participate in leadership roles, whether it is as newsletter editor, designer, or reporter. Also, because the science in our field is always changing, Nutrition Journal Club helps keep students abreast of the most recent research and provides a way for them to think critically and discuss these subjects in a social setting. The skills they gain with these activities will help them to set themselves apart as they continue as professionals in our field.

**TB: Can you tell me about the international students you have brought to our department?**

**AJM:** Yes, I started last summer with just one student from France who wanted to come and learn to practice nutrition research in our lab. It was so successful, now this summer we will have five students, some from France, and some from Turkey. They will be involved in research in my lab, and also in participating in community nutrition work with other faculty here. It is a great experience for them to develop their knowledge and skills in both animal and clinical research. Besides, they will be exposed to our culture, and have the opportunity to practice their English speaking skills. My team and I learn from them as well, which is just as important to me. Being from another country myself, I really enjoy bringing students here from overseas and introducing new cultures to my current students. It also promotes our university on an international level, which increases the value of the degrees all of our graduates hold.

**TB: Do you have any hobbies outside of nutrition and research?**

**AJM:** I enjoy playing soccer and like to do amateur photography when I have free time. I have a Canon camera I really enjoy shooting photos with and utilize Flickr to share them. I also love to spend time with my family. Of course with a teenager and a four year old at home, my wife and I stay very busy!

**TB: If you could be paid to do any job in the world, what would it be?**

**AJM:** Truly, if I had a fortune of money at my disposal, I would still choose to do research. Research means finding out new things that adds to everyone’s knowledge. Even minor discoveries are really valuable and worthwhile. It’s amazing! I love to be a part
What does a pesticide taste like? You probably don’t know, considering you haven’t eaten some for dinner lately... or have you?

The definition of a Genetically Modified Organism (GMO) is “organisms in which the genetic material (DNA) has been altered in a way that does not occur naturally,” according to the World Health Organization.\(^1\)

With a growing population worldwide, farms are constantly being pressured to produce a larger produce yield per acre of land. Bugs, weeds and other natural factors were increasingly holding back the increasing yields, so the biotechnology industry decided to step in and help. They modified the DNA of the plants to resist herbicides, allowing the farmers to spray their fields with pesticides and not have to worry about killing their produce. Biochemists also modified the DNA to grow plants that are disease and insect resistant themselves, so that farmers do not have to spray their fields with pesticides that could get into water sources and natural preserves nearby.\(^1\) Today, 93 percent of U.S soybean fields, a common ingredient in many basic meals, are genetically modified, more commonly called, “GMOs.” These soybeans are either pesticide producers or herbicide resistors, the two different types of GMO seeds seed manufacturers brands are producing. So, maybe you have eaten a pesticide before, in the form of a genetically modified organism?
GMO foods can also be biofortified, which is when synthetic processes enhance the nutritional value of a food. Cassava, a plant that is the staple diet for large populations in Africa, was biofortified with β-carotene, iron, zinc, and protein. These additives fulfilled missing dietary needs in the population, and could save up to $81 million health costs in Kenya because of the enhanced crop.²

But, are they safe to eat?

The words, “modifying DNA,” sounds dangerous and foreign, and many consumers and dietitians are concerned of the nutrients and health benefits that might be stripped from the modified produce.

In 1987, when the genetic engineering field was just sprouting (no pun intended), the U.S Office of Technology Assessment did a national survey about GMO products. One of the most startling results of this survey showed that “sixty-one percent [of the general public] acknowledged the possibility that antibiotic-resistant diseases might develop [from GMO products]... and might produce birth defects in humans (57 percent).”²

Safety claims regarding possible health effects of GMOs are difficult to come by due to negative public opinions and “unintentional” destruction of data. A company called Advanced Genetic Sciences, Inc. was denied a request to harvest experimental produce vetoed by two counties in California, and at one point had their test plants pulled up and trampled during an impromptu football game on their test fields, along with many other protest attacks.² Fortunately, a few of the company’s test fields were uncompromised despite the protests, and positive outcomes came from the data about the safety of the GMO products.

After all of these protests and surveys, the Office of Technology Assessment declared that the general public was uneasy about GMO food and its effects. However, when surveyed, the general public still supported genetic modification, despite the risks it could possibly have to their health.²

Across the world, societies are worried about the effects of GMO products. Guillaume P. Gruère from the Indian Ministry of Science and Technolo-
2015-2016 FCAND Elections Results

Introducing our 2015 Board of Directors

- Dr. Claudia Sealy, PhD, RD, LD/N
- Dr. Corinne Labyak, PhD, RD, LD/N
- Katie Dienst, MS, RD, LD/N
- Marissa Waschka Zealter, MSH, RD, LD/N
- Shana Sumner, MS, RD, LD/N

President-Elect

President

Secretary

Nominating Committee

Congratulations Ladies!
Elections Results
2015-2016 FCAND Directors

Congratulations Ladies!

President
Dr. Claudia Sealy-Potts, PhD, RD, LD/N

Treasurer
Jill Snyder, MSH, RDN, LD/N

Treasurer-Elect
Doretta Leung, MS, RD, LD/N

Member-at-Large
Frances Siver, MS, RD, LD/N
Congratulations to our 2015-2016 FCAND Service Award Winners

Jamisha Leftwich, MS, RD, LD/N

Claudia Sealey-Potts, PhD, RD, LD/N

RECOGNIZED YOUNG DIETITIAN OF THE YEAR

Jenna Braddock, MSH, RDN, CSSD, LDN

EMERGING LEADER OF THE YEAR

OUTSTANDING DIETITIAN OF THE YEAR
Since May, SNDA experienced a leadership change and elected new officers; Andrea Schuck, Tonya Vo, Camille Thompson, Margaret Cruz, Brad Berghof Jr., and Heather Estep will represent UNF’s nutrition student body and serve as liaisons to Student Government. The new officers would like to congratulate the 2014-15 officers, as they were all successful in matching to a Dietetic Internship program!

Officers of the club are already discussing hot topics like the Food and Nutrition Conference and Expo (FNCE) October 2015 held in Nashville, TN, Florida FNCE, t-shirt designs and fundraising events scheduled for this Summer. Look out for volunteer opportunities and member points for attendance at car washes, tabling at farmer’s markets, painting of the SNDA Talon, and contribution to the SNDA Cookbook.

During July 12-15, the Florida Academy of Nutrition and Dietetics will be hosting Florida FNCE, in Orlando, FL. This is an excellent opportunity for nutrition students to network with other students, professional RDs and over 400 national vendors at the Expo. Many students elect to volunteer at this conference for the experience and waived registration. You must be an Academy member to qualify as a volunteer. For more information, please contact: Heather Estep (N00648192@ospreys.unf.edu).

Beginning Fall 2015, SNDA will continue the mentor-mentee program that pairs sophomores and juniors with seniors in the program. This was very popular last year as it fostered connections between Juniors and Seniors and helped strengthen UNF’s undergrad nutrition community, through the development of friendships. Sign-up for the program will begin Fall 2015. SNDA also plans to bridge connections between other relative clubs, such as Athletic Training Student Association and Pre-Physical Therapy, among others, to accommodate students interested in sports nutrition.

SNDA is working hard over the Summer to ensure a successful Fall semester!
Could fiber help reduce adiposity and impaired glucose tolerance caused by protein restriction during gestation? A new study by Hallam and Reimer suggests postnatal prebiotic fiber may help. In their study Wistar rats were given a normal protein diet or low protein diet during pregnancy. The male and female pups were then weaned onto a control diet of 5% fiber, 20% protein, or a high fiber diet of 21% fiber, 17.3% protein for weeks 4-10, then decreasing the fiber to 10% for weeks 10-24 with protein remaining the same. At the end of the 24 weeks glucose tolerance, body composition, satiety hormones, gut microbiota and intestinal permeability were measured. The offspring consuming the high fiber diet had lower body weight, lower body fat percentage, higher cecal bifidobacterium, and higher glucagon-like peptide 2 than those fed the control diet. The males had decreased insulin resistance by 81% compared to the control, and the females on the high fiber diet had higher plasma endotoxin and lower expression of colonic tight junction protein 1. While this study showed decreases in adiposity and insulin resistance in offspring of malnourished dams, more research needs to be conducted regarding the importance of the sex specific

A new study by Caldow, Digby, and Cameron-Smith show that bovine milk proteins may modulate growth in humans. Bovine derived acidic fibroblast growth factor-1 (FGF) and leukemia inhibitory factor (LIF) were used to determine their effect on transcription 3 (STAT3) phosphorylation in skeletal muscle cells. After acute exposure in vitro, FGF and LIF activated STAT3 in differentiating myotubes, however with chronic exposure, FGF and LIF reduced myoblast proliferation. FGF and LIF also increased MyoD and creatine kinase mRNA expression. Apoptotic genes were not altered with chronic exposure. These bovine proteins (FGF and LIF) only affected myoblasts during the proliferative phase, and had no effect in mature myotubes. This study concluded that FGF or LIF can reduce proliferation and stimulate early maturation
Does β-lactoglobulin have antitumor properties? Possibly. Fang, et al. looked at binding oleic acid and linoleic acid to β-lactoglobulin, similar to the whey protein α-lactalbumin binding to oleic acid, which has shown antitumor properties. Complexes of β-lactoglobulin with oleic acid and linoleic acid were prepared and evaluated regarding their structural features, antitumor activity, and thermostability. Both complexes showed similar antitumor activities, however the complex with linoleic acid had an increase in its thermostability, whereas oleic acid had little to no effect. In regards to the structural features, oleic acid enhanced the tertiary structure, but buried the hydrophobic regions in β-lactoglobulin after binding. There were also more binding sites for oleic acid compared to linoleic acid, and both acids interacted with β-lactoglobulin through van der Waals forces and hydrogen bonding. This study prompts further investigation into antitumor protein-fatty acid complexes.

The American Medical Association joined with the Obesity Society as well as several other leading health organizations in support of classifying obesity as a disease. A new survey assessed the opinions of the public regarding designating obesity as a disease. Of the respondents, 69% were not aware that the AMA classified obesity as a disease back in 2013. At least half (51-61.7%) of the surveyed adults agreed with the statements supporting the classification of obesity as a disease. This shift in classification may help with the stereotype in our society that blames the individual for being overweight. Hopefully this designation will encourage obese people to receive treatment, and inspire insurers to cover the costs associated with treatment.
Florida FNCE

Hyatt Regency Grande Cypress  Orlando

July 12 - 15

Earn 20+ hours of continuing education

View 80+ booths in the exhibit hall  Hear 30+ nationally and internationally recognized speakers.

Registration Begins June 1, 2015

http://www.eatrightflorida.org/index.php/fl-fnce-home
Florida Academy of Nutrition & Dietetics Scholarships

The Florida Academy of Nutrition and Dietetics Foundation (FANDF) offers scholarships and stipends to Florida Academy of Nutrition and Dietetics members. They are awarded to further education, obtain certifications, gain leadership skills and involvement in professional activities.

Application Deadline July 31st

FNCE Meeting Stipend:
Amount of Award: Early Bird Registration Fee
Number of Awarded: 3
Purpose: To assist members in attending the AND annual meeting to network and participate in educational sessions to grow in profession

For stipend application visit: http://www.eatrightflorida.org/index.php/students/scholarships
The Supplement Shelf


T0 GMO or Not to GMO?


References

Metabolic Mood Syndrome


Get Involved!!

June Community Events

- Riverside Arts Market-Every Saturday
- Jacksonville Landing Market-Every Saturday
- Jax Beach Art Walk-June 9th
- Healthy Jacksonville Coalition Meeting-
  June 12th
- Duval County Food Policy Council Mtg-
  June 25th
Contact Us

Have any questions/comments?
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