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All of us from the Nutrition Journal Club hope you all had a safe and relaxing winter break. Just a few exciting updates to give you this semester! You may have noticed that you have been added to our new Canvas portal! Therefore, any updates, meeting date and times, and other announcements will no longer be posted through the Student Nutrition and Dietetics Association via Blackboard. We are hoping this will lessen confusion and get important information out to students in a cleaner manner. If you have not accepted the portal request, we ask that you do so as soon as possible.

Another great feature about our new Canvas portal is that we will be able to add PowerPoints and link studies to students so that you can more easily review the material before attending our meetings. This portal is brand new and will be used for the first time this spring semester. That being said, any ideas, thoughts or general material you would like to see happen with our portal please email us at N00966320@ospreys.unf.edu, or send Jessica Lindamood a private message with your ideas.

Some other updates are listed below:

- NJC UNF Talon to be completed this semester
- There are at least 2 exciting guest speakers in the works
- Our first guest speaker will be an Undergraduate Research Workshop on March 1st, 2017 from 3 pm to 4 pm. All are welcomed! More details in next month's issue!
- We will be looking for juniors who will be graduating in the spring of 2018 and will be in MNT 1 in fall 2017 to fill officer positions. Training will begin soon. An announcement will be made sometime this month.

To recap our first meeting, which was focused on diabetes, the study chosen was the “Correlation of muscle/fat ratio with insulin sensitivity using hyperinsulinemic-euglycemic clamp in treatment-naïve type 2 diabetes mellitus.”¹ This study’s aim was to determine whether the muscle/fat ratio in an individual had any effect on their insulin resistance. Researchers had 61 untreated DM patients’ body compositions measured.¹ They then used a hyperinsulinemic-euglycemic clamp technique, which is the good standard, for assessing their insulin resistance. Results from this study showed a strong correlation in the muscle/fat ratio and insulin resistance.¹ It was concluded that measuring a patient’s body composition can give good insight when evaluating insulin resistance.¹ As always, thank you for reading and we look forward to seeing you all this year!

References:

Hello Ospreys!

We hope that everyone is having a great Spring semester so far! We have been working hard to bring you multiple events for this semester!

MARK YOUR CALENDARS

• We will be hosting a "Find Your Perfect Match" meeting on February 15th! During this meeting we will be discussing how to get matched and answer any questions that are holding you back from pursing your career!
• On March 1st, we will be hosting a RD Social! This is still in the works and is going to be AWESOME! We will have multiple Registered Dietitian's from the Jacksonville area to come and speak about the different things they do! This event will also be apart of National Nutrition Month.
• If anyone is interested in participating in the Ropes Course, please see Caitlyn Phelps! This is a leadership event and any person interested in becoming an officer is encouraged to participate. It is low cost and is a great experience!
  • CaitlynPhelps5@gmail.com
• Stay tuned in the March issue for all the upcoming events SNDA will be hosting as well as all the events being hosted by Healthy Ospreys for National Nutrition Month!
Volunteer Opportunities Within Our Clubs:

- The Bridge of Northeast Florida is in need of student volunteers at the Southside location! This is a great resume booster that will allow you to give back to our community. Volunteers are needed on Wednesday and Thursday evenings. Contact Kristina Mok for more info (mockamok@yahoo.com).

- The Bridge of Northeast Florida’s downtown community garden and nutrition education program is also looking for volunteers this upcoming semester. There will be an interest meeting on Monday, January 23rd at 4pm in the library room 1111. Contact Natalie Lowe (natalielowe2013@gmail.com) with any questions.

- Michelle Lynch, UNF alumna and Community Dietitian is looking for student volunteers to help with the St. Vincent’s Mobile Health Nutrition and Wellness program. If interested, contact her directly at Michelle.Lynch@jaxhealth.com.

- The Nutrition Journal Club will have upcoming volunteer opportunities. For those interested, contact Trevor Kennedy for more info (N00633978@ospreys.unf.edu).

Want to Study Abroad? Application deadlines are quickly approaching!

- Amsterdam and Paris
- China
- Italy

Check out the Special Experiences folder in the SNDA blackboard page for more info!
Founded on July 1, 1946, Centers for Disease Control and Prevention originated with a goal to expertise in field investigation, training, and control of communicable diseases. They started out relatively small with only one floor in a small building in Atlanta, but one year later bought 15 acres from Emory University to expand field stations and laboratories. With these expansions, the institution would now deal with all communicable diseases, and serve all the states by providing help whenever called on. The CDC serves to protect America from health threats that originate in the country as well as foreign. This includes diseases that are chronic or acute, curable or preventable, as well as expected or unexpected. They work not only to combat disease but to work with individuals in communities to educate the public. Doing this helps to protect the health of the U.S. by protecting citizens from health threats which in turn saves lives.

There are multiple actions the CDC takes to protect the health of U.S. citizens. First, they use the latest technology to compile numerous amounts of data on global disease threats. This is done through lab analysis and computing which gives the most accurate solutions in a timely manner. Furthermore, they will continue to track a disease to find out how it is making people sick and then figure out the best way to prevent the illness in the future. Through research they also look for the discovery of new germs to see if there is any correlation to potential diseases in the future. They use their knowledge not only to cure and prevent diseases, but also to educate the public on individual health care. Overall, the CDC works to ensure they have the best public health leaders not only at a national level but also at state and local levels to protect Americans from health threats.

To help the CDC accomplish everything they do, the CDC Foundation was made by congress as an independent, nonprofit organization. The foundation works to connect the CDC with private-sector organizations and individuals to establish health programs to make the world a safer place to live. With their help, new programs are created as well as expansions of existing programs, and funding is given to broaden scientific research. Since the CDC is a federal agency, all the scientific findings are available to the public, which allows anyone to review them. In the past 20 years, the CDC Foundation has provided more than $662 million to support the CDC's work and has initiated almost 900 programs around the world that are committed to supporting public health.

The CDC continues to be recognized around the world as a global leader in health promotion and prevention. Today, the CDC still works towards its original goal to prevent and control infectious and chronic diseases and environmental health threats. In addition to this goal, the CDC is now focusing on five specific areas: “supporting state and local health departments, improving global health, implementing measures to decrease leading causes of death, strengthening surveillance and epidemiology, and reforming health policies.”

Many individuals find sports nutrition fascinating because it specializes within the field of nutritional science and exercise physiology. To perform any kind of physical activity, it requires optimal nutrition to provide fuel and to enhance performance. It also allows for the repair and rebuild after strenuous work. Because growing research has shown the importance of between nutrition and performance, there has been an increased interest and demand in sports nutrition, thus leading to emerging career opportunities in this field.

In the department of Clinical and Applied Movement Sciences, Assistant Professor Ben Gordon focuses on energy balance, supplements and phytochemicals. After completing a bachelor’s degree in biology from the University of Miami, like many students, he questioned what his next steps in academia would be. Because he had worked at the wellness center as a senior fitness supervisor at the University of Miami, he decided he’d pursue a master’s degree in exercise science at the University of South Carolina. In 2008, he began his masters working as a graduate assistant and was guided by mentor Dr. Larry Durstine. The first research study he was a part of was a study that focused on a phytochemical called quercetin and its effect on downhill running recovery in mice. In their research they found that quercetin was effective in reducing the different scales of pain. In the spring of 2009, he was able to present his findings at the American College of Sports Medicine (ACSM) meeting. During this time period phytochemical research was vastly emerging and many individuals were interested in its cancer fighting abilities and health improving properties. He continued to do more studies on quercetin and in two years he completed his master’s degree.

In 2011, he began his PhD with an emphasis in Energy Balance, which is the relationship between food intake (energy in) and the calories used for daily energy expenditure (energy out). In his PhD, he began a human observational study with Dr. Gregory Hand. In this study, they measured the different markers of energy intake, energy expenditure and body composition in subjects that were 18-35 years of age. Every three months subjects would come in to get measured without having any intervention implemented. To make sure subjects would accurately know how to measure their food intake and servings, they’d meet with a dietitian. The purpose of this study was to find out what was causing the positive energy balance in Americans. In finalizing their data, they found that subjects had gained about 1kg of body weight yearly. However, they did find that the subjects in their study had a higher energy expenditure than the average American. Unfortunately, the study was not
published because subjects who had found themselves in different groups (i.e. positive energy balance, energy balance and negative energy balance) were in these groups for different reasons and characteristics. For example, there were subjects who were found in to be the positive energy balance group that had low energy intake but with their activities being sedentary. In research studies, it can be difficult to find subjects that are not entirely honest in their diet recalls as time progresses which can make it difficult for researchers to conduct their data accurately. However, their data did confirm that without intervention American’s were gaining weight on a yearly basis. After graduating with a Doctorate in Applied Physiology with a dissertation in energy balance and weight gain, he helped develop and open a wellness personal training program at the University of South Carolina. At this facility he was the manager of the personal training program, ran affiliated accounts and conducted the advertising.

On January 29th, 2016 he was hired to come on board as an assistant professor for the University of North Florida. Since then, he has enjoyed teaching classes such as exercise physiology and exercise prescription. He has recently applied for a research grant with Dr. Arikawa to perform a research study on supplements. If any of you have any questions about sports nutrition, exercise science and performance don’t hesitate to stop by Dr. Gordon’s office.
**Student Concentrations: Junior Interviews**

By: Brittany Mock

**Student #1:**

1. **As a junior, what do you like about this program?**
   
   My favorite component of this program is the diversity of the courses required. I really like that we are taking rigorous, science-based classes, like bioorganic chemistry and advanced nutrition science, in addition to cooking, community and counseling classes. It creates balance and I feel like a well-rounded student because of this sequence.

2. **What has helped you succeed in the program thus far? Any advice you can give to future/current students?**
   
   My main reason for success, to date, is my friends and support group. It is incredibly helpful to have a few people in your corner that are going through the exact same thing that you are going through. My advice for incoming students is to reach out and make your own community of people so that the late nights studying and stressing over finals are made a little easier and then you can all laugh about it when it is all over.

3. **Is there anything in the program you wish to see?**
   
   So far, I am happy with what this program has to offer. I am anxious to start my senior year simply because the whole DICAS process is a mystery to me. If there was one thing I would like to see, it would be more information about the application process earlier on in the program.

**Student #2:**

1. **As a junior, what do you like about this program?**
   
   The nutrition program is very involved, which is the most important thing to me. Whether you are working on campus or volunteering with peers on projects outside of campus, it is comforting to know you have a lot of people to ask for help or advice. The work is hard, however, the professors lay it out for you on day one. I really enjoy the classes in the program because they are useful in the real world and it is fun to learn something in class and then to practice it in my daily diet.

2. **What has helped you succeed in the program thus far? Any advice you can give to future/current students?**
   
   In order to succeed in the program, you must do the work. I am a big procrastinator and this program has showed me that it is very hard to be successful if you wait until the last minute. Even though I try working ahead of schedule, it is easy to find excuses to go on a run or cook dinner before studying. Another way I have been able to be successful is stepping out of my comfort zone and making friends in the program. You will notice that you will have the same classes with the same people for 2 years, so it is my advice to find people you can work well with (because there are a ton of group projects) and that you can study with. Study groups before tests saved me for Bioorganic and Advanced 1. Nothing is impossible and as long as you put the time in, it really isn't as bad as some people may say!
3. Is there anything in the program you wish to see?
As far as the program goes, I cannot think of anything I would change or like to see as of now. The professors are welcoming and always offering up their time to meet for help or advice. The program is continuously emailing out job and volunteer opportunities. It is extremely important to become involved. If you cannot work volunteering is the best way to get different types of experience in the dietetics world.

Student #3:
1. As a junior, what do you like about this program?
I like how challenging some of the coursework can be at times and how great all my peers work together to achieve more.

2. What has helped you succeed in the program thus far? Any advice you can give to future/current students?
Time management, collaboration, and a lot of coffee. I would recommend getting help in a class before it's too late. Your peers and professors (and Google) can provide a different perspective that can help you understand challenging material. Always ask any questions you have over any of the content.

3. Is there anything in the program you wish to see?
I'd like to see changes in some of the class times such as Advanced Nutrition Science to be offered twice a week.
SB: I heard you’re involved in a research project with Dr. Yu. Can you give me some background information on what it entails and what your role is?

BW: I have been involved in a couple with her actually. The main project I was assisting Dr. Yu with involved prescreening and the coordination of care for participants interested in her Web-based Binge Eating Disorder intervention study. I served as the contact person for the psychotherapists, registered dieticians, and participants in the study and monitored and documented their progress throughout. I took a training course to be able to work with human subjects, I familiarized myself with the HIPAA compliant telehealth software, administered, scored and coded a series of questionnaires, and compiled all the data for analysis. I also got to meet a bunch of really great people. When I came in on the project, Dr Yu was also at the completion of another project, so she allowed me to assist in formatting the manuscript for publication which gave me more practice in that area. She was also in the beginning stages of developing her next study, so she allowed me to do some of the literature searching and proposal drafting for that one. So basically I got to be involved in the beginning, middle and end of three different studies. It was really pretty fascinating!

SB: Outside of the research project, what do you do in your spare time or what are your hobbies?

BB: Spare time? What is that? Just kidding ;) I know we all feel like there is no such thing as spare time right now, but we also know that it is really important to make spare time for ourselves. So for me, it is usually a combination of volunteering or shadowing somewhere,
or some project around the house. My grandmother taught me how to sew and my grandfather gave me all his shop tools, so on the days that I feel overwhelmed by my workload, I make myself put it down and do something fun to reset. In my old neighborhood, I could just walk down to the kayak launch or take a bike trail somewhere but here I end up painting a room or just working in the yard so I don’t feel guilty walking away from my homework for too long.

**SB:** DICAS is right around the corner! Are you applying for internships? What are your plans after graduation?

**BW:** Yes, I am. I have written and re-written my letter and changed my mind on internships so many times that I am just happy to have some sort of closure soon. I am hoping to be able to complete my internship back in central Florida so I can make contacts in the area to be able to begin my career there. I actually used to work as a diet office supervisor for one of the hospitals in Orlando and am still in contact with some of my old bosses and co-workers, so I am really kind of hoping to be able to work with all of them again one day.

**SB:** hear you are a cheese expert. How did you become interested in this field and what opportunities has it brought you?

**BW:** I am. I got certified in 2013 and just recertified last year. People still giggle when they hear that there is such a thing and I can’t help but laugh myself; but that exam was no joke! It all started when I took a job behind a counter selling cheese. I loved eating cheese but there was a lot more I had to learn to sell cheese, so I just started reading and teaching myself about cheese. Eventually I became a buyer, and then a sales representative, and my company sent me to the America Cheese Society Conference that was in Wisconsin that year, to take their Certified Cheese Professional Examination. So I am a ACS CCPTM. I would have preferred fromagier, but I am not complaining because, regardless, it is an accomplishment that I am still very proud of. As for some of the best opportunities this certification has brought me, it is definitely the invites that I get to visit dairy farms and meet their cows and goats and sheep and cheesemakers. That is definitely my favorite part. Oh and the samples... who doesn’t love samples... so good!

**SB:** What advice would you give the upcoming nutrition and dietetics majors on how to be a successful college student?

**BW:** One thing I must say is it is a small world, and getting smaller. I never quite considered the fact that I would run into old bosses and coworkers since starting this program so thank goodness I always left on good terms. But that is good advice for anyone to always try to stay on good terms with people because you never know when you may run into them again. It is just a much more pleasant experience for everyone involved when you make a point to work hard and be respectful of others. You can learn something from everyone. And speaking of learning, pay attention now. When you take the time to actually learn the material, not just to get through the class, you will thank yourself later. It saves time being able to just brush up on a subject rather than having to relearn what you didn’t fully commit to memory before. In due time, everything will come full circle and remember, as Louis Pasteur said “Chance favors only the prepared mind”. On that note, I wish you all good luck!
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UNF UNIVERSITY OF NORTH FLORIDA
An Amazing Food Trend: Fermented Food

It is common for the average person to visualize stir fried vegetable, Greek salad with balsamic vinaigrette dressing, quinoa and baked sweet potato when someone mentions healthy food. While those are very healthy choices, but there are other foods that may not look as appealing but has amazing health benefits. Fermented food, at first glance, may look weird and smell unusually strong but how much it helps the body is incredible.

Fermentation in food is basically using live healthy bacteria to convert carbohydrates into organic acids. It is the same process that turns milk into yogurt or kefir, produces beer, leavens bread. Fermentation is used for many reasons but the main purpose is to produce highly nutritious food.1

The precise nutritional benefits are not exactly shown but studies prove that adding fermented food into one's diet improves weight maintenance, lowers risk of diabetes, intestinal problems, and heart disease. Some data even show that fermented food consumption alters brain activity which affects mood and cognitive thinking.2

Certain fermented foods and their health benefits were researched and scientists found positive results. For example, Kimchi, a common Korean dish decreased insulin resistance, and increased insulin sensitivity. Fermented soy products, commonly eaten in Japan led to improved total cholesterol, especially lowering low density lipoprotein (LDL).2

Kefir, a drink originating from Eurasia, is trending especially in the United States and is now found in almost every supermarket. Kefir is basically fermented milk that is made using certain type of bacteria and yeasts. The difference in the microorganisms turn milk into kefir instead of yogurt or cheese.3
Companies want to bring the best product out for their customers. In order for kefir to be healthy, the bacteria in the drink must survive being in the drink for long periods of time. A study done on freezing kefir (because this is required for safety and longevity reasons in most commercial foods) showed that freezing traditionally made kefir did not decrease the number of bacteria in the drink. This is important for food industries because other products such as kombucha tea and the like, can be sold without losing the health benefits produced by fermentation.

As a person growing up in Japan, eating fermented food was the norm. The food itself tasted great especially with rice, noodles or other ethnic dishes. Korean and Chinese people eat plenty of fermented food as well and Asians are known to live a very long life. One common problem that occurs in countries like Japan and Korea is that many fermented foods use salt and spicy ingredients as part of the fermentation process. This means that eating too much can be negative to one's health. Diseases like hypertension and stomach cancer or even just ulcers can appear from overeating. The best thing to do to benefit from fermented food is to eat in moderation. It is worth adding to a weekly diet routine. Fermented food has been trending for a while now and it is an amazing trend to follow.

References

2. Maria L Marco; Dustin Heeney; Sylvie Binda; Christopher J Cifelli, Paul D Cotter; Benoit Foligné; Michael Gänzle; Remco Kort; Gonca Pasin; Anne Pihlanto; Eddy J Smid; Robert Hutkins. Health benefits of fermented foods: microbiota and beyond. Current Opinion in Biotechnology. Apr 2017, vol 44 pg 94–102.
Not all families have enough time to sit down and eat dinner together, every night. In fact, some families are lucky if they have dinner together twice a week. While having family meals is the best method of including vegetables and fruits in a teenager's daily consumption, it is understandable with today's lifestyle that a family dinner is just not possible every night. Therefore, researchers have begun studying different methods that may increase the daily consumption of fruits and vegetables in adolescents. Once these methods are created and used within the household, it is more likely that they will be continued when the adolescent grows up and has a family.

Certain subtle tricks have been researched in observational studies in order to learn what does and does not have an impact on nutritional health. According to Watts et al.,1 family meals, fruit and vegetable availability and accessibility, parental models, and encouragement to eat fruits and vegetables all play a role in the number of servings consumed by an adolescent on a daily basis. Five servings of fruits and vegetables is the recommended daily amount required for a healthy lifestyle. However, kids who do not have family meals frequently reported eating only 3.3 servings a day.2 Some positive practices that you can begin in your family are having vegetables and fruits cut up and ready to eat, making them visible and easy to access, and eating vegetables with the younger population in the household so that they can learn by example. It is also important to have adolescents learn to prepare these vegetables and how to include them in meals for future application in their own lives. For those trying to save money, buying canned or frozen fruits and vegetables may be a better option. Remember to always keep an eye out for the nutrition panel on canned foods. Purchasing sale items labeled "Buy One, Get One Free" is another way to get more bang for your buck.

Overall, the combination of regular family meals and setting an example for the adolescents had the greatest positive impact on the amount of fruits and vegetables consumed2. As obesity becomes an epidemic in the American population, it is important to set food standards from a young age. Nutrition is one of the keys to good health. As such, beginning healthy practices at a younger age can set the stage for the future. This will hopefully decrease the rates of obesity, as well as many other diseases that occur from poor nutrition as age increases.

References


We’ve all said it before; Whole Foods, you mean Whole Paycheck. Consumers consistently associating high prices with healthier food is nothing new. However, what are the consequences of those thoughts and misconceptions? Based on new evidence, consumers not only think that healthier food equals higher prices, but they are acting on this misconception. This means that it is more than likely that when you’re in the grocery store, if you compare two identical products and are searching for the healthier one, you choose the more expensive one.

Even conscious consumers can make these mistakes. The assumption is that if the products are the same, the more expensive one is better because it has higher quality ingredients, more micronutrients, etc. The problem with this mentality is that food companies use it to their advantage. The price of products marketed for healthy consumers are being driven up because food companies feed off the consumer’s lack of knowledge. While, yes, some products are inherently more expensive no matter what brand you choose (i.e. almond butter due to environmental conditions), many products on the market have similar nutritional value with drastic differences in price ranging from affordable to astronomical. This causes consumers to value whatever the more expensive product is propagating. For example, let's say that you are presented with two identical products. One, is advertised as rich in prebiotics for a healthy microbiome and is far more expensive than the other. The other is advertised as rich in probiotics for gut healthy but marketed for less. Studies have shown that consumers are more likely to choose the first more expensive product, for a few reasons. Prebiotics and probiotics are both essential for gut health. However, prebiotics may be less familiar to the consumer and this lack of familiarity can cause consumers to lack judgment on how much such things should cost. Similarly, the wording (healthy microbiome vs. gut health) while essentially the same message, can make...
consumers believe that a “microbiome” is more important than gut health.

What is a consumer with healthy intentions to do? First, educate yourself on products you’ve been considering or are interested in. Walking into the health market with information and knowledge is essential, in a world of advertising that feeds into your lack of knowledge on specific health terminology or information. Then, compare ingredients and nutritional facts. Look at certifications like organic, non-GMO, certified gluten free etc. These labels require money from the company, so startups may be charging more to cover those costs. However, just because something is gluten free, doesn’t mean it costs an arm and a leg. For example, rice is naturally gluten free. A package of rice that says ‘gluten free’ should cost the same as an identical package that doesn’t explicitly say ‘gluten free’.

Finally, search around for the best price on your favorite products. From personal experience, even more affordable grocery stores can have increased prices on certain diet-specific items. I am vegan and can’t consume gluten so many products that I consume daily are more expensive at Publix simply because their clientele doesn’t consume huge amounts of veggie meat replacements and gluten free granola. Those same products generally cost less at health food stores, because they are focused on people like me with dietary restrictions. Also, don’t be afraid to buy some foods at one store and other things online at places like Vitacost. This website can be a great resource as well as health food market. There are tons of reviews from actual consumers on thousands of products that you see in grocery stores.

The best way to continue a healthy diet on a budget or just for a reasonable cost, is to stay educated and vigilant and vote with your dollar. Consumers have more control than they think, when it comes to dictating what we see in the grocery store and how much it should cost.

References
Everyone has heard of Meals On Wheels. I think most only know the general idea: meals for seniors in need. Meals On Wheels does much more than just feed these individuals. It provides comfort, security, and happiness to seniors. Some of these seniors cannot drive, do not have any company during the day, and cannot cook. They are limited to what they can eat and this may be detrimental to their health. Meals On Wheels provides a familiar face with a delivery service of healthy food. This organization has helped keep people out of the hospital by providing balanced nutritious meals and by often checking up on them.1 Meals On Wheels spends only about seven dollars a day to feed a person versus the one thousand or more dollars it would cost to stay in a hospital.1

This organization is non-profit and runs by people volunteering their time out of the kindness of their hearts. There is a dramatically increasing senior population and the average life expectancy is at a record high.2 This means the need for Meals On Wheels is increasing and volunteers in offices, preparing and delivering meals is needed. The company wants to expand and provide better care for this huge up and coming senior citizen population.

This organization recognizes that they do more than just feed seniors and they would like to expand further into health care. A new section of the company has just been launched to perform safety screenings along with delivering meals. These screenings check to see if the patient is alert, maintaining weight, and looks out for medical red flags. Meals On Wheels would be saving hospitals and clients thousands of dollars in medical bills by performing these daily screenings. The company plans to receive funding for the screening process from health care organizations and insurers.1

Meals On Wheels already provides great food and great care to senior citizens, so why not expand and do an even better job for even more people? Meals On Wheels clients report improved health, security, and independence.2 The organization will continue to save money, decrease hospital visits, and provide overall better care for their patients.

References
Today, Americans spend more than half of all food dollars outside the home, with one in every three children and 41% of adolescents eating fast food on any given day.1 This high frequency of consumption combined with excessively large portion sizes can have a significant impact on children’s total daily calories. It is, therefore, no coincidence that over the last 30 years, obesity rates have more than doubled in children and quadrupled in adolescents.1

The Institute of Medicine recommends that the average five- to ten-year-old child consume roughly 1800 calories per day1, with a maximum of 600 calories per meal. In consideration of legislation from the Affordable Care Act requiring restaurants to publish the calorie content of their menu items, a recent study analyzed the calories found in children’s menu items served at the top 200 US restaurant chains.3 As part of the study, a panel of 15 experts in childhood nutrition created recommendations for ideal portion sizes for children’s menu items from various categories, including entrees, side items, desserts, and beverages. They concluded that the maximum caloric content for a single serving of these items should be as follows: 300 calories for main dishes, 150 calories for most side items and desserts, and 110 calories for beverages, with no caloric limit placed on fruits and vegetables without added sauces or other ingredients. The panel also clarified that the only caloric beverage recommended for children was skim or low-fat, unflavored milk. However, the study found the calories in the menu items that were evaluated to be dramatically higher than these recommendations.

On average, the restaurant portions offered to children were 147% larger than the panel’s recommendations.3 Not surprisingly, fried potatoes were the biggest offender, at nearly triple the recommended calories for a single portion. Pizza and ice cream were also served in substantially...
larger portions, at more than double the ideal calories. The only items that were close to the calories that the panel recommended were vegetables and salads with sauces or dressing. Several specific items were found to be most likely to exceed 600 calories in a single serving – the amount actually recommended for an entire meal by the IOM. These items included pizza, burgers, and macaroni and cheese.

Despite the fact that publishing calorie content of menu items will soon be required, many adults still do not understand or make appropriate decisions based on calorie information, and many parents have insufficient knowledge of proper childhood nutrition and appropriate caloric intake. Researchers argue that rather than simply reporting calories, if restaurants were to adjust serving sizes and offer portions that were more aligned with current dietary guidelines, they would be taking significant and impactful steps to address the obesity epidemic, both in children and adults.

References
Resistant Starch: Everything You Need To Know

By: Kea Schwarz

The Majority of the carbohydrates that we consume in our diets are starches. It is found in foods like grains and potatoes. Starches are composed of long chains of glucose that provide us with sustainable energy throughout the day. There are instances where starch passes through the digestive system and it isn’t broken down. Instead it is turned into short chain fatty acids by intestinal bacteria. Many studies have shown how resistant starch can benefit our health, but what exactly is resistant starch?¹

There are four different types of resistant starch.

They are grouped based on structure or source. Type 1 is found in grains, seeds, and legumes. This type is inaccessible to digestive enzymes because it’s bound within fibrous cell walls. Type 2 is found in starchy foods, like raw potatoes and green bananas and high amylose starches. Type 3 is formed when starchy foods are cooked and then cooled. The cooling process turns digestible starches into resistant starches though a process called retrogradation. Type 4 is made through a chemical process. It sounds simpler than it is. Several types of resistant starch can be present in the same food. The preparation method of the food is the determining factor for how much resistant starch is available in the food.²

How does it work?

Most starches are broken down into sugar by enzymes in our small intestine and then absorbed into the blood, but as we know we have difficulty absorbing resistant starches. Instead that resistant starch passes through the small intestine and is fermented by intestinal bacteria in the large intestine. During fermentation short chain fatty acids (SCFA) like acetate and butyrate are produced. SCFA are absorbed or remain in the colon to be used by bacteria for energy. SCFAs are shown to stimulate blood flow in the colon, increase nutrient circulation, inhibit the growth of pathogenic bacteria, aid in the absorption of minerals, and helps to prevent the absorption of carcinogenic compounds. How much SCFAs present in our colon is dependent on the type of carbohydrate consumed. The more resistant starch consumed the greater the amount of SCFAs.³

What is it good for?

There are many potential benefits of resistant starch including improved blood fats, better satiety, better insulin sensitivity, improved digestion, better body composition, and improved immunity. Resistant starch may aid in lowering blood cholesterol and fats, while simultaneously
decreasing the production of new fat cells. Also, resistant starch can increase the amount of fat we use for energy because SCFAs can prevent the breakdown of carbohydrates in the liver. Resistant starch is also known to improve satiety. It can help us feel full because SCFAs can trigger the release of hormones such as leptin that decrease the desire to eat. This takes some time for your body to adapt. It may take up to a year, but the resistant starch will slow the amount of nutrients released into the bloodstream, which keeps one’s appetite stable. Resistant starch is also known to improve insulin sensitivity. Since resistant starch doesn’t digest into blood sugar our bodies do not release as much insulin in response. Another benefit of resistant starch includes improved digestion. Resistant starch acts similar to soluble fiber. It adds bulk and water to the stool and aids in regular bowel movements. SCFAs also help prevent the development of abnormal bacterial cells in the colon and increase mineral absorption. These factors may help alleviate irritable bowel syndrome, constipation, and ulcerative colitis. Furthermore, resistant starch may aid in weight control. Since resistant starch contains fewer calories per gram than other starches, it can help us eat less. We only extract 2 calories per gram of energy versus 4 calories per gram from other starches. This means that 100 grams of resistant starch is only worth 200 calories while other starches provide 400 calories per 100 grams. Foods high in resistant starch will fill you up, without filling you out. Lastly, consuming resistant starch may positively influence the production of immune cells and inflammatory compounds in the gut thus, thus improving immunity.

How to include resistant starches in your diet.

The two ways to add resistant starches to your diet are either through the food you eat or through supplementation. There are many foods you may already be eating that contain resistant starch including cooked then cooled potatoes, various legumes, cashews, and raw oats. These are all high-carb foods which may not be optimal for people following a low-carb diet. With that being said, you can still include resistant starch in your diet without adding any digestible carbohydrates. This can be done by purchasing raw potato starch. Raw potato starch contains about 8 grams of resistant starch per tablespoon and negligible amounts of usable carbohydrates. It tastes rather bland, but can be used by mixing it with water, putting it in smoothies, or sprinkling it on food. It is important to start slowly and work your way up, because consuming too much suddenly may lead to discomfort and flatulence. It may take about a month before you begin to notice all the benefits resistant starch has to offer.

References


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What is NutriRecipes?
The NutriRecipe column is a fun, easy way to teach people about how food can affect health/diseases. Through research studies, each writer will write a small segment on the topic and come up with a recipe containing a certain macro or micronutrient that correlates with the topic given.

What will each month entail?
Each month, each writer will receive a topic to be researched on how a certain diet or food group can alter diseases and overall health. A brief description will be provided as well as at least one recipe for people to try.
A staggering number of modern Americans are not getting enough sleep. About 30%, or 40.6 million individuals, sleep for less than 6 hours per night, whereas 7-9 hours of sleep per night are recommended for healthy adults\(^1\). This phenomenon can be attributed to late-night shifts, longer work days, and lengthy commutes. Not only does this disturb sleep patterns, but it leaves less time for everyday non-work-related tasks that should be taken care of during a time when an individual ought to be preparing for sleep. Research has also indicated that the blue light from electronic screens and indoor lighting may affect the body’s ability to regulate sleep patterns\(^2,3\).

One of the primary affecters of circadian rhythms (24 hour patterns of bodily functions) is the neurotransmitter melatonin, which is secreted from the pineal gland in the brain. It functions as an internal signal to the body during evening hours and preparation for sleep. Endogenous melatonin secretion increases in the late evening, hitting a peak in the early morning (2:00-4:00 A.M.) before returning to relatively low daytime rates\(^3\). Disturbance to the circadian rhythms of the body is considered a risk factor for many health complications, such as cardiovascular disease and obesity\(^3\). Even worse, sleep deprivation poses a serious public health issue; sleepy commuters may cause over 1,500 deaths and around 40,000 injuries in automobile accidents each year, according to the National Department of Transportation\(^4\).

Studies examining dietary effects on melatonin secretion and circadian rhythm is somewhat limited, and studies using rodent models are far more common than human clinical trials. Animal studies, however, have provided insight into how certain foods may affect physiological melatonin levels. Nutrients such as folate, vitamin B6, zinc, and magnesium act as cofactors for enzymes in the melatonin synthesis pathway, in which tryptophan is converted to serotonin and serotonin into melatonin. Deficiencies in folate, magnesium, and zinc have resulted in decreased serum melatonin levels in rodents, while levels increased with supplementation with zinc and/or vitamin B6\(^3\). Another rodent study demonstrated that a diet deficient in omega-3 fatty acids, which are highly concentrated in the pineal gland, resulted in decreased nighttime melatonin synthesis, an effect which was reversed upon supplementation with DHA (an omega-3 FA)\(^3\).
The relevance of these nutrients to melatonin secretion has not been sufficiently demonstrated in humans, although research has elucidated some dietary effects. All plant-based foods contain varying small amounts of melatonin, and some contain tryptophan. Including more vegetables in one’s diet (particularly those that are green and yellow colored) increases urinary excretion of 6-SMT, a byproduct of melatonin excretion in humans. Meat, although it contains tryptophan, induced a significant decrease in melatonin secretion.

The milk of all mammals contains melatonin, although no evidence suggests that it produces a physiologically beneficial response in human beings. However, high melatonin concentrations are common in milk produced in the evening, and it is hypothesized that this serves to induce sleep in mammalian infants. Therefore, further studies of the effects of milk may demonstrate its effectiveness as a sleep aid.

One experiment examined the differences in glycemic index (GI) of two varieties of rice and their effects on sleep onset latency (SOL), or the time between getting into bed and falling asleep. Jasmine rice (high GI) consumed 4 hours before bedtime reduced SOL by several minutes, as compared to low-GI rice and the same high-GI rice eaten an hour before bedtime. This phenomenon may be related to the hypothesis that a minimum threshold of bioavailable glucose exists for normal pineal gland function.

While certain foods may contribute to a healthy circadian cycle and promote melatonin synthesis and/or supply, not much evidence supports a significant dietary effect in humans. While nutritional deficiencies may affect sleep patterns, such deficiencies are rare in America and other Western countries. Healthy sleep behaviors as well as a nutritionally adequate and balanced diet are likely the best methods for maintaining the body’s “internal clock.” One popular method of sleep aid is supplementation with melatonin capsules, which on average do reduce SOL but do not induce a longer sleep. These capsules often contain about 10 times the necessary dose of melatonin and soon stop producing any physiological effects. Melatonin supplements can help fix disrupted sleep cycles in the short term (due to jet lag or a particularly late night spent working or studying) but are not a long term solution to irregular sleep.

For those who want to eat in a manner that promotes better sleep, plant-based foods and grains are an excellent choice. Rice is not only cheap and nutritious, but it can be paired with almost any combination of ingredients and flavorings. To cook jasmine rice without a rice cooker, use your heaviest saucepan or medium-sized pot with a heavy, tight-fitting lid (lightweight lids can be held down with anything from a brick to your roommate’s copy of Atlas Shrugged). Add 2 cups of rinsed jasmine rice (this is quite a few servings, but refrigerated leftover rice is perfect for making homemade fried rice later), and
enough water so that it reaches the most distal knuckle of your middle finger when the tip of the finger is touching the top of the rice. Add a pinch of salt, bring to a boil, reduce heat, and simmer for about 15 minutes. Then, remove from heat and let it rest (still covered!) for another 10 minutes. For perfect texture and aesthetics, lightly fluff the rice with a fork before eating. Mix the rice with steamed diced carrots, peas, corn, and turmeric powder for a delicious rice pilaf. Or, add soy sauce/tamari, sautéed bell pepper, green onion, garlic, and ginger for an Asian flair. The possibilities are only limited by your creativity, so make a dish best suited for your taste!

For a rice-and-milk-based dessert, try this rice pudding recipe from allrecipes.com:

Ingredients:

- ½ cup uncooked jasmine rice
- ¼ cup sugar
- 2 ½ cups milk
- ½ tsp cinnamon
- ½ cup coconut
- 1 tsp vanilla extract

Use a double boiler or a pot and a glass bowl that fits snugly on top, and preheat the oven to 300°F. Add all ingredients, minus the coconut, to the top section of the boiler or bowl. Fill the pot on the bottom with about half an inch of fluctuating levels of melatonin. Food Nutr Res., 56: 17252. DOI: 10.3402/fnr.v56i0.17252.

A few nights of tossing and turning or restless sleep, better known as insomnia, has gotten the best of us. It’s a multicausal, common sleep disorder that can wreak havoc on how our bodies normally function. Insomnia is known to cause lack of energy, depression, anxiety, daytime sleepiness, slowed motor control, and poor memory retention and recollection. Whether it is caused by stress, medications, or other primary diseases, evidence has shown that there are some plant-based foods that can act as a natural remedy to aid in a better nights rest due to their melatonin levels. Melatonin, a hormone naturally secreted from the pineal gland in the brain, has been shown to help improve and lengthen people’s sleeping patterns when taken exogenously. Tart cherry juice and almonds are great sources of melatonin and both tart cherries in whole and liquid form have been studied to aid in the treatment of this condition. Additionally, magnesium, a mineral that is abundant in almonds and also in tart cherries, has been proven to help aid in sleep efficiency due to its anti-stress properties as well as being a natural muscle relaxer. In addition to magnesium, almonds also contain tryptophan, an essential amino acid, which helps synthesize the sleep-aid neurotransmitters melatonin and serotonin. So, an hour or so before your bedtime, go ahead and enjoy a glass of tart cherry juice, chow down on a small palm-full of almonds, or try these recipes to help ease you into a restful night’s sleep.

**NUTRI RECIPES**

**Warm Cinnamon Almond Milk**

1 cup of Almond Milk
1 tsp of honey
1/8 tsp of vanilla extract
1 pinch of cinnamon

Heat up milk on stove top or in microwave until it begins to foam but not boil. Turn off heat and add honey and vanilla extract. Pour into a mug and sprinkle on the cinnamon. Enjoy!

**Tart Cherry Lime Gummies**

1/4 cup of tart cherry juice
1/4 cup of fresh squeezed lime juice (strained)
2 Tbsp of honey
3 Tbsp of unflavored gelatin

1. Heat juices on medium until warm but not boiling.
2. Lower heat to low and add in the honey till incorporated.
3. Add gelatin, one tbsp at a time, till dissolved.
4. Pour mixture into a silicone molds or a glass dish that is very light greased with coconut oil.
5. Freeze for 1-2 hours, depending on the type of container you used.
6. One set, take out and pop out of molds or cut into squares if using a glass dish.
7. Store in fridge for up to two weeks.

Adopted by Paleo Running Momma

http://www.paleorunningmomma.com/homemade-gummy-candy-paleo/

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