NutriNews
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Nutraceuticals

On the Job Training

There's An App for That!

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**Announcements**

**Congratulations!** FCAND was selected to receive the award for “Most Creative Activities during National Nutrition Month: presented by FAND. Thank you to all the RD;s and students who helped with this year’s NNM theme. And a huge thank you to Doretta Leung for being our NNM Committee Chair and organizing this year’s events. The electronic scrapbook can be seen at www.eatrightjax.com.

**The U.S. Department of Agriculture**, the Florida Department of Agriculture, and many other organizations throughout the state have teamed up to create and promote local meal sites during school break.

The non-profit organization 211 Palm Beach/Treasure Coast is helping local students find meals during the summer break when they may not have access to free food at school. Florida families can now get help finding local meal sites this summer by calling 2-1-1 or visiting SummerFoodFlorida.org.

**Mark your calendar!** August is Kids Eat Right Month. During this month we focus on shopping smart, cooking healthy, and eating right to help the health and well-being of our children. More details can be found about the initiative at http://sm.eatright.org/KERM2015pr.

**Start getting excited for FNCE 2015.** This year it is in Nashville, TN! For more program details and registration dates and deadlines visit. www.eatright.org.
The Academy of Nutrition and Dietetics is asking us, as the food and nutrition experts, to let our voices be heard on Capitol Hill. Now you can join the voices of 350 Academy members who are attending the Public Policy Workshop 2015, by sending your Senators and Representatives an email urging them to support these three crucial bills:

1. **The Older Americans Act**: Congress passed the Older Americans Act (OAA) in 1965 in response to concern by policymakers about a lack of community social services for older persons. The original legislation established authority for grants to States for community planning and social services, research and development projects, and personnel training in the field of aging. The law also established the Administration on Aging (AoA) to administer the newly created grant programs and to serve as the Federal focal point on matters concerning older persons.

   Although older individuals may receive services under many other Federal programs, today the OAA is considered to be the major vehicle for the organization and delivery of social and nutrition services to this group and their caregivers. It authorizes a wide array of service programs through a national network of 56 State agencies on aging, 629 area agencies on aging, nearly 20,000 service providers, 244 Tribal organizations, and 2 Native Hawaiian organizations representing 400 Tribes. The OAA also includes community service employment for low-income older Americans; training, research, and demonstration activities in the field of aging; and vulnerable elder rights protection activities. We as nutrition and dietetics professionals are pleased asked to support the bipartisan reauthorization of the OAA to ensure that qualified nutrition staff, including registered dietitian nutritionists, are included in the bill at all levels of the aging network.

2. **Treat and Reduce Obesity Act**: The Treat and Reduce Obesity Act provides Medicare beneficiaries and their healthcare providers with meaningful tools to reduce obesity by improving access to weight-loss counseling and new prescription medications for chronic weight management. The bill also requires within one year and every two years afterwards, the Secretary of Health and Human Services to make recommendations to Congress to combat the obesity epidemic. Support of this bill will allow registered dietitian nutritionists to independently bill for obesity counseling to Medicare patients.

3. **Preventing Diabetes and Medicare Act**: The Medicare Diabetes Prevention Program (National DPP) to eligible beneficiaries determined to be at high risk for type 2 diabetes. This legislation has the potential to slow or halt the diabetes epidemic which impacts millions of Americans and their families and which cost our nation $322 billion in 2012. Passage of this legislation would expand Medicare coverage of medical nutrition therapy to include people with prediabetes, helping to reduce health care costs and improve health outcomes among the Medicare population.

For more information please visit the following website: www.Eatright.org
CLA is the shorthand for a nutrient called conjugated linoleic acid. It is a group of isomers derived from linoleic acid, one of the essential fatty acids in our diet. There is a big hype around CLA and its effect on body composition. Based on extensive animal research, CLA can increase lean-tissue mass while decreasing body fat. CLA does this by reducing adipocyte differentiation. The isomers of CLA that have this effect on body composition are the cis-9, trans-11 CLA isomers and the cis-12, trans-10 CLA isomers. The cis-9, trans-11 isomer is the most abundant, naturally occurring CLA isomer. It can be found in most meat and dairy products. The supplemental form of CLA contains an equal mix of the cis-9, trans-11 isomer and the cis-12, trans-10 isomer. The supplemental form of CLA can be found at any general nutrition store.

CLA has been extensively researched through both animal studies and human trials to test its effect on body composition. The animal research that has been done shows that CLA had a drastic effect on the animals’ body composition. The animals in the studies that were given CLA ended up with increased lean-tissue mass and decreased body fat at the end of the studies. The majority of the animal studies produced the similar dramatic effects and researchers wanted to see if CLA would have the same effect on humans as it did with animals. There has been multitude of clinical trials done that involve humans to determine the answer. Unfortunately, the human trials did not produce the same dramatic results that the animal studies did. They resulted in inconsistent and insignificant results. Due to their insufficient conclusions, the topic of the undetermined effect CLA has on human body composition has become quite controversial.

There are a lot of research studies out there concluding that CLA does not affect human body composition. The meta-analysis Efficacy and safety of dietary supplements containing CLA for the treatment of obesity: Evidence from animal and human studies, published in the Journal of Lipid Research in 2003 found there to be no significant difference in body weight or fat mass between the placebo group and the CLA user group. A review published in Molecular Nutrition & Food Research in 2008, Anti-obesity effects of conjugated linoleic acid.
acid, docosahexaenoic acid, and eicosapentaenoic acid, came to the conclusion that most studies do not support the hypothesis that CLA helps decrease body weight. The Journal of Obesity published a review containing Randomized Control Trials in 2011 titled An evidence-based review of fat modifying supplemental weight loss products. This review also concludes that CLA use yields little to no change in body weight loss products. This review also concludes that CLA use yields little to no change in body fat.

That being said, there are many studies out there that do show small reductions of body fat mass in CLA users. The meta-analysis, Efficacy of conjugated linoleic acid for reducing fat mass: a meta-analysis in humans published in the American Journal of Clinical Nutrition focused primarily on studies that supported the hypothesis of CLA improving body composition in humans. The discussed results show a small reduction of body fat in CLA users. This study concludes that even though the fat loss is small, CLA does have a positive effect on body composition in humans that, in the long run, will prove to be beneficial. The minimal weight loss will be beneficial over time because the average American adult gradually gains weight over the years so with the gradual weight loss effect of CLA, this ‘natural’ weight gain can be counteracted.

The inconsistency between the animal studies and the human trials could be a result of a few main factors. First, there were differences in the age and the gender between the animals and the humans. Most animal research was done on young animals that were still growing where the human trials typically involved older, overweight women. Second, the CLA isomer used and the dosage of the CLA differed between the animal studies and the human trials. Lastly, most of the human studies were 12 to 24 weeks long which may have not been enough time to show results in humans. It has been suggested that if the studies were carried out for longer periods of time, more results would be shown.

Even though the end results differed between human trials and animal studies, they both determined which isomer was the most effective in weight loss; the trans-10, cis-12 CLA isomer. There is a downside to taking supplements containing only this single isomer though. According to an article published in Diabetes Care titled Treatment with dietary trans10cis12 conjugated linoleic acid causes isomer-specific insulin resistance in obese men with the metabolic syndrome utilizing CLA supplements that only contain the trans-10, cis-12 isomer can lead to insulin resistance. According to Conjugated linoleic acids reduce body fat in healthy postmenopausal women published in the Journal of Nutrition; CLA isomers have the potential to increase insulin resistance and can have a negative impact on blood lipids. CLA supplementation has also been associated with GI distress. Fortunately, CLA supplements that contain a mixture of trans-10, cis-12 isomers and trans-9, cis-11 isomers drastically reduce the risk of serious adverse effects. The proper dosage of CLA has not yet been determined and it is unclear if higher doses produce greater results. According to the animal studies, CLA doses higher than 6.8g produced greater weight loss than lower doses. In human trials, however, no sufficient data was produced to determine whether or not a higher dose of CLA would yield greater weight loss. Even though the animal tests showed that higher doses can be associated with a greater outcome, their findings cannot be translated to humans because dosage scales between animals and humans has not yet been determined.

Based on research studies, articles and reviews, the hype about CLA being effective in increasing lean-tissue mass and decreasing body fat in humans should be stopped. This effect was observed in animal studies where CLA supplements had a drastic effect on the animals’ body composition. The human trials testing to see if CLA would have the same effect on humans produced inconsistent results. Overall, they did not produce any significant data to support the claim. Taking CLA as a supplement will more than likely not help someone lose weight; rather it would help someone maintain their weight over the years by preventing weight gain; which would require taking the supplement for years. That being said, future research may prove that CLA does increase lean-tissue mass and decrease fat mass in humans when optimal dosage and composition of CLA isomers have been determined for humans.

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What are nutraceuticals? According to the first definition coined by Dr. Stephen DeFelice, founder and chairmain of the Foundation for Innovation in Medicine, a nutraceutical is a food, or parts of food, that provide medical or health benefits, including the prevention and treatment of disease. Nutraceuticals can include but are not limited to dietary supplements, functional foods, multi-functional foods, and medicinal foods. Additionally, nutraceuticals can further be classified on the basis of their natural sources, (plants, animals, mineral or microbial sources), their pharmacological conditions, or per their chemical constitution (vitamin, mineral, amino acid, fatty acids, herbs, or reagents).

The current global demand of nutraceuticals is growing rapidly. Currently, the sales of nutraceuticals within the United States is over 117 billion U.S. dollars, and is growing at a global rate of 18% (over the last 3 years). One of the main reasons for this rapid emergence of nutraceuticals is that consumers are dissatisfied with drug costs and conventional healthcare within the United States. Patient use of nutraceuticals in place of or in addition to conventional medicine is estimated at about 40% within the United States, and may be even higher due to patient under-reporting.

Fortunately, nutraceuticals have proven health benefits, and their consumption may and can help keep diseases at bay and allow humans to maintain overall good health. For this reason, a tremendous amount of research has focused on the benefits, efficacy, and safety of nutraceuticals within the diet. Researchers agree that nutraceuticals may represent a novel therapeutic approach to prevent or attenuate diet-related disease in view of their ability to exert anti-inflammatory responses, and influence the regulation of the adipocyte life cycle. This article will focus on some of the latest research and food sources regarding the current research regarding these diet-related conditions.

Anti-inflammatory response: In Western and westernized societies, an increased intake of hyper ca-
loric food together with a sedentary lifestyle have greatly contributed to a higher incidence of diet related diseases. Many of these diet related conditions share as a common feature a state of low grade inflammation induced by the presence of over nutrition and inactivity. Polyphenols, bioactive compounds naturally occurring in plants as secondary metabolites, have been presented as an example of a natural product that can decrease the amount of inflammatory markers within the body associated with cardiovascular disease.

The bioactive components of polyphenols such as those contained in wine, olive oil, and strawberries may help modulate endogenous mechanisms of defenses and delay the onset of postprandial metabolic stress. Studies have found that in healthy individuals, the consumption of a high fat diet enriched in extra virgin olive oil for weeks reduced plasma concentrations of some soluble cell adhesion molecules (important biomarkers for signal the onset of the inflammatory process). Additionally, in healthy individuals, extra virgin olive oil was able to reduce serum levels of the inflammatory markers, TXB2 and LTB4, after a high fat meal. Resveratrol, found in red grape skins and more commonly red wine, has also been shown to reduce postprandial inflammatory markers IL-1B in healthy subjects. Interestingly, the consumption of a strawberry beverage with a high fat meal reduced the levels of high-sensitive CRP (a common inflammatory marker) in not only healthy individuals but overweight individuals as well.

The polyphenols contained in red wine, strawberries, and olive oil are by no means the extent of bioactive substances that can influence inflammatory markers; however, they have been the most extensively researched and reported. Unfortunately, data from human trials are scarce, still controversial, and need to be conducted on a wider range of food sources, and isolated food sources. Additionally few studies fail to measure the amount of circulating levels of polyphenols after the consumption of a high fat/high carbohydrate meal; more studies in the future are needed within this area.

Regulation of the adipocyte life: With an estimated 700 million obese people in 2015, the increasing incidence of obesity is becoming one of the most important medical problems. The causes of obesity are complex and interactions between genes and between genes and environment are involved in the onset and progression; yet, a large body of evidence suggest that bioactive components available in plant extract may have effects on adipose tissue that can decrease lipogenesis or increase lipolysis and/or decrease preadipocyte differentiation and proliferation.

Caffeine, a xanthine alkaloid commonly used in anticellulite treatments, has been shown to reduce the accumulation of lipids in adipocytes and enhance lipolysis by inhibiting phosphodiesterase activity. Additionally further research demonstrated that caffeine, in combination with other phytochemicals can inhibit lipid absorption and can activate lipid metabolism in mice and rats. Moreover, caffeine was also demonstrated to prevent insulin dependent glucose uptake in mature adipocytes, while additionally, decreasing the expression of genes related to adipogenesis.

Polyunsaturated fatty acids can play a central role in suppression of fatty acid synthesis and in regulation of adipocytes differentiation. A popular polyunsaturated fat class, omega-3 fatty acids, has been shown to down regulate mRNA expression of the genes associated with fatty acid synthesis by suppression of promoter regions. Specifically, docosahexaenoic acid (DHA), which is present if fish oil, has demonstrated inhibitory effect on adipogenesis in adipocytes, explicitly 3T3-L1 adipocytes. Cells treated with DHA for 48 hours had minor lipid accumulation in droplet size and percentage of lipid concentration. Additionally, in studies where DHA and EPA were combined into a concentrate and given to mice fed a high fat diet and antiadipogenic effect was noted. Researchers suggest this may be caused by the enhancement of beta oxidation and by an increase in mitochondrial biogenesis induced by the concentrate.

Again, limitations exist. First, most of the effectiveness of nutraceuticals in reducing and altering adipocyte proliferation has been tested on the 3T3-L1 cell model, whose life cycle is well known. Secondly, all evidence accumulated has only been tested in vitro in animal studies. It has yet to be determined if similar effects will be seen in humans. Clinical trials are still necessary to determine the in vivo doses and efficiency. Additionally, if similar effects are seen, researchers and manufacturers need to determine the most active supplementation way of these nutraceuticals and determine consumer safety.

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An Introduction to Protein

According to www.nutritiondata.self.com, proteins are formed by amino acids, come in many forms, and they are the basic components of food that make life possible.¹ They are made up of carbon, hydrogen, oxygen, nitrogen and function as the structure and contraction capabilities of muscles. Proteins provide collagen to the tissues of the skin, hair, and nails, which makes them longer, stronger, and enhances their overall health. Proteins provide for the transport of nutrients, oxygen, and waste throughout the body. Protein is found in food and supplement form. Foods containing protein include meats, legumes, dairy, eggs, soy, and usually minimal amounts in fruits, vegetables, and grains. Protein supplements such as whey, casein, and soy powders, along with protein bars can contain high amounts of protein. There may seem to be confusion about which type of protein is more effective and when is the best time to take protein supplements, pre- or post- workout. Here, you might be able to build your own beliefs on what might work best for you on your muscle building endeavors.

How Much To Take

It is first necessary to assess your protein needs, which can be done by converting your body weight in pounds, to kilograms, which can be done by diving your weight by 2.2. Next, multiply that number by 0.8 if you live a minimally active lifestyle, 1.0 for an averagely active lifestyle, or 1.2 if you are an athlete. This end number will give you the daily amount of grams of protein your body needs.

Types of Protein to Take

It is best to obtain your protein intake through a balanced diet, but protein supplements can be sufficient and helpful for those who need a greater amount of protein to build more muscle quicker. Protein supplements are usually taken in the powder or bar forms. Protein powders include whey, as well as casein, and soy. These usually average 20 grams of protein per scoop. Whey isolates which are parts of the whey and is quickly absorbed in the body, making it a great candidate for post-workout recovery, although it is not a good choice when not working out because it will not contribute to muscle building, but in this case, whey concentrate is the better option. Casein is a protein separated from milk that enhances muscle growth and immune health. Casein functions differently than whey, as it releases the amino acids at a consistent rate over a longer period of time. Moreover, soy proteins are incomplete proteins and do not have a high bio-availability. This makes it less beneficial than whey or casein, but soy has shown itself in possibly reducing the risk of hormone-related cancers, as well as reducing cholesterol levels.²

Protein bars are made out of the different kind of proteins and have added textures, flavors, sugars, and fats. Some bars are made to eat as a snack during the day or with a meal, but others are designed as meal replacements, and in turn, they have a large number of calories and fat that you need to be conscious of.
Studies on When to Take Protein

In Dr. Ahmed’s study, “The Effects of a Pre- and Post- Exercise Whey Protein Supplement on Protein Metabolism and Muscular Strength Among Elite Wrestlers,” he states, “Purpose. Whey protein is a high-quality dairy protein that contains all the amino acids the body requires for muscle protein synthesis. Evidence suggests that whey protein, found naturally in milk, increases muscle protein synthesis that in combination with resistance exercise can improve body composition. The aim of this study was to determine the effects of a pre- and post-exercise whey protein supplement on protein metabolism and muscular strength among elite wrestlers. Methods. Eighteen male wrestlers volunteered to participate in this study. Subjects were randomly divided into supplement pre-exercise (S1; n = 10, 21.3 ± 2.9 y, 175.7 ± 4.9 cm, 86.7 ± 9.8 kg) or supplement post-exercise (S2; n = 8, 20.8 ± 2.03 y, 172.6 ± 5.7 cm, 85.3 ± 7.9 kg). subjects were tested for maximal strength (1-RM) on the squat, chest and arm exercises. S1 and S2 were consumed the whey protein (optimum) 1.4 g/kg.bw/day supplements after immediately following of training session for Si group and 40 minutes prior to training session for S2 group, all subjects for a period of twelve week, three days weekly. Results: There was a significant difference between the two experimental Groups (S1 and S2) in total protein, albumin, urine and creatinine and muscular strength for S2 group. Conclusions: The best way to supplement the whey protein was immediately following the training workout.”

In a second study called, “Muscle Strength Gains During Resistance Exercise Training are Attenuated With Soy Compared With Dairy or Usual Protein Intake in Older Adults: A Randomized Controlled Trial,” Thompson et al. Focused on whether increased dairy or soy protein intake combined with resistance training enhanced strength gains in older adults. The methods of the study resided in, “179 healthy older adults (age 61.5 ± 7.4 yrs, BMI 27.6 ± 3.6 kg/m2) performed resistance training three times per week for 12 weeks and were randomized to one of three eucaloric dietary treatments which delivered >20 g of protein at each main meal or immediately after resistance training: high dairy protein (HP-D, >1.2 g of protein/kg body weight/d; ~27 g/d dairy protein); high soy protein (HP-S, >1.2 g of protein/kg body weight/d; ~27 g/d soy protein); usual protein intake (UP, <1.2 g of protein/kg body weight/d). Muscle strength, body composition, physical function and quality of life were assessed at baseline and 12 weeks. Treatments effects were analyzed using two-way ANOVA.” The results of the study coincided with the, “83 participants completed the intervention per protocol (HP-D=34, HP-S=26, UP=23). Protein intake was higher in HP-D and HP-S compared with UP (HP-D 1.41±0.14g/kg/d, HP-S 1.42±0.61g/kg/d, UP 1.10±0.10g/kg/d; P<0.001 treatment effect). Strength increased less in HP-S compared with HP-D and UP (HP-D 92.1±40.8%, HP-S 63.0±23.8%,UP 92.3±35.4%; P=0.002 treatment effect). Lean mass, physical function and mental health scores increased and fat mass decreased (P≤0.006), with no treatment effect (P>0.06).” This being said, “Increased soy protein intake attenuated gains in muscle strength during resistance training in older adults compared with increased intake of dairy protein or usual protein intake.”

Conclusion

Each of us has a different starting point and destination on our journey to our ‘perfect body.’ Protein is a vital nutrient, but supplementing with protein and adequate resistance training exercises will help tone and build muscle. It has been proven that whey, casein, and soy are sufficient candidates for this. In relation to the biological value and bioavailability of whey, casein, and soy, whey and casein are more quickly and efficiently processed to help build muscle. Studies have shown that the consumption of whey protein directly after a workout is best for the process of building muscle. It is important to only consume the amount you calculate for yourself because too much protein could pull calcium from your bones, resulting in weaker bones/osteoporosis, and impaired renal, or kidney function. Be conscious of what you put into your body and how it affects you, doing this will help you reach your personal goals!

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On the Job Training

Dietetic Technician
Mayo Clinic, Jacksonville, FL

With Kacie Ray,
B.S. Nutrition and Dietetics

Before being hired as a Dietetic Technician, I had been working as a fitness center manager and certified personal trainer. I wanted to advance my knowledge base in a clinical setting, so I applied to Mayo Clinic. I’m so glad that I did! If you’ve ever wondered exactly what the job of a Diet Tech entails, I’m going to explain a little bit in this article.

There are two main components to what we do as Diet Techs: first, we screen all hospital patients for nutritional risk. We do this by using a set of criteria, which helps us to determine the patient’s level of risk and if he or she needs to be seen by a Registered Dietitian. Second, we take patients’ meal orders, ensuring that they fit within the guidelines of the patient’s diet order, which is usually prescribed by the doctor. Without going into too much detail, these tasks allow you to further your understanding of medical nutrition therapy as well as medical terminology. For example, you will become very familiar with the various therapeutic diets: cardiac, renal, diabetic, etc.

This job is very service-oriented and will definitely help to develop your patience and communication skills. For instance, a patient may not understand why he can or cannot have a certain type of food. This can be very confusing and/or frustrating for him, and you will need to display empathy and professionalism in educating the patient. Not only are you assisting patients of all different backgrounds, but you are working with nurses, doctors, dietitians, kitchen staff and other diet techs—all aiming toward a common goal, which is the care and safety of the patient.

I have been working at Mayo Clinic for just over a year, and I am still learning every day! I feel that the learning experience of being a Diet Tech goes hand-in-hand with what we learn in school. It is an amazing job for a Nutrition student. It may also give you a better idea of what the realm of clinical nutrition is like, if this is an area you’re interested in.
Local Healthy Haunts

By Lexi Russow

It's easy to get lost in the world of healthy choices, and going to a regular grocery can add to the confusion. You have made it to the produce aisle, because you at least know that apples beat packaged cookies in the health department, but you are bombarded with hundreds of other issues: Which fruit has better vitamin sources? What are vitamins, and which ones should I eat? Apples or oranges? And if apples, organic or conventional apples? Green or red apples? It is an absolute maze and the broad, directionless variety in a superstore does not help at all.

Luckily, on March 1 of this year, your Beginner's Guide of health choices opened up in the form of Sunrise Smoothie, a smoothie and juice bar by the LA Fitness on Atlantic Boulevard. Health choices can be easily made here, and the knowledge and ingredients in every juice and smoothie can be purchased and brought home with you for re-creation.

The postmark Sunrise Smoothie, which was by far the most flavorful smoothie I tasted on the menu, had a tropical blend of fresh banana, strawberry, papaya juice and coconut milk—perfect for any summer day, or any day for that matter. The Buttercup smoothie had a unique quench to it, made of banana, almond milk, cocoa and local honey; sweet, smooth and scrumptious.

Not only does Sunrise Smoothie blend smoothies splendidly, but they blend some nutritious juices as well. Carrots being my favorite carotene source, I chose the Juicy Carrot: carrots, apples, the freshest kale, romaine and lemon juiced to a savory refreshment, and refreshing it was on that 101 degree Florida afternoon.

Sunrise Smoothie blends and juices superbly, but their main distinction isn't that: it's their grocery products. All their ingredients they use are provided in their store, as well as local Lake City honeys, coffee blends from Gainesville, vitamins, vegan produce and health alternatives. Sunrise Smoothie offers a personalized order form to receive the freshest fruit and vegetables from the largest organic produce provider, Global Organic. You can submit the form to the store with your requests, and they will process and complete the order for you.

Sunrise Smoothie's costumer service was astounding—I felt like an old friend visiting on a summer day. They even blended a delicious smoothie a good friend of mine with a strict dietary restriction, avoiding any cross-contamination or hidden ingredients (that's their specialty—there aren't any hidden ingredients). They are accommodating to every dietary need, and will point you in the right direction with any nutrition question you have. If you are every lost in your health quest, or a fresh smoothie or juice is what you are craving, skip the chain stores and visit Sunrise Smoothie for a local taste and a friendly, nutritious chat.

Sunrise Smoothie
1013 Atlantic Blvd, Atlantic Beach, FL 32233
(904) 372-7221
From the Capitol:

Treat and Reduce Obesity Act

The Treat and Reduce Obesity Act (HR2404) was introduced May 18th, 2015 to expand the Medicare benefits for intensive behavioral counseling. The Centers for Medicare and Medicaid Services would have the authority to allow other health care providers to offer the intensive counseling. The bill would also expand Medicare Part D allowing it to cover FDA approved prescription drugs for chronic weight management.

Chronic Disease Working Group

The Senate Finance Committee formed a working group to explore new solutions to improve the outcomes for Medicare patients that require chronic care. This bipartisan working group lead by Johnny Isakson (R-Ga.) and Mark Warner (D-Va.) will also consult healthcare stakeholders for their comments.

Poor Sleep for Kids May Lead to Obesity Later in Life

In 2012 roughly one third of children were overweight or obese. A major factor in obesity in children is lack of sleep. Sleep is important for the immune system, heart health, good growth, as well as good behavior and the ability to focus. Massachusetts General Hospital conducted a study on children from six months old to seven years old regarding their sleep quantity. Those with the least amount of sleep had more body fat than those receiving more sleep. This may be caused by many factors including the increased availability to consume calories the longer one is awake, and the lack of appetite suppressing hormones released during sleep. Eating too much causes obesity, as well as high blood pressure, diabetes, and heart disease. Normal sleep for children ranges from 16-18 hours for newborns, 11-12 hours for preschool aged children, and around 10 hours for school aged children. To ease bedtime frustrations, create a routine to help them wind down and create good habits. This can include taking a bath, reading them a book, brushing their teeth, and helping them to bed. Sleep is not the only factor in obesity, and should be monitored along with nutrition and activity for prevention.

Study Suggests Diabetes Linked to Bacteria

The University of Iowa conducted research on rabbits, and were able to cause symptoms of type 2 diabetes, insulin resistance, glucose intolerance, and inflammation all by exposing staph bacteria toxins to the animals over a period of time. Staph toxins, or superantigens, can cause inflammation by affecting fat cells and upsetting the immune system. The inflammation then causes insulin resistance and other symptoms of type 2 diabetes. Staph bacteria can colonize in the body, and those gaining weight are more susceptible to these bacteria due to the increase in the amount of skin they have. Type 2 diabetes prevention or treatment could be possible through eliminating staph bacteria or neutralizing the superantigens they produce. Further research into these therapies is needed.

http://www.healthcentral.com/dailydose/cf/2015/06/02/study_suggests_diabetes_linked_to_bacteria

San Francisco Cracks Down on Sodas, Approves Health Warning on Sugary Drink Ads in U.S. First

Supervisors in San Francisco unanimously approved a warning to be placed on ads for sugary sodas and a few other drinks, and will be the first city in the US requiring this warning if it receives approval from the Board of Supervisors and the mayor. A member of the board of the American Heart Association John Maa lobbied for the ordinance in San Francisco, and would like to expand the warning beyond the city if it passes. Sugar sweetened drinks are defined by the ordinance as “drinks with more than 25 calories from sweeteners per 12 ounces”. No calorie drinks would not require a warning, like Coca-Cola Zero, however regular Coca-Cola would have the warning. The warning also applies to sports and energy drinks, vitamin water, and iced tea that exceed the 25 calories per 12 ounces. Milk and natural fruit or vegetable juices are exempt from the warning. The warning would read “WARNING: Drinking beverages with added sugar(s) contributes to obesity, diabetes, and tooth decay. This is a message from the City and County of San Francisco.” The warning applies to advertisements on billboards, walls, taxis and busses, however does not apply to newspaper, circular, broadcast outlets, or internet ads. They warning would also not be on the actual soda cans or bottles themselves. A statewide warning failed to pass earlier this year as did a city measure to impose a tax on sugary drinks. The Board of Supervisors should be voting on the warning by next week.

For every moment of life, there’s an app for that. A virtual and untouchable provider of powerful, downloadable little squares, the App Store gives access to hundreds of games and organization tools by just a quick download. It’s like a friend with all the answers, or a secretary with all the resources, at the touch of your fingertips.

Most importantly, the App Store delivers one of the greatest “pals” of all time: MyFitnessPal, the most accountable workout buddy you will ever partner up with. Anyone can download the free app and begin logging the food they eat and the exercise they do throughout each day, while the app adds up the calories burned and consumed into an easy-to-read diary, graph and pie chart format. And if logging daily exercise is a hassle for some, fitness trackers like the Jawbone and Fitbit can be hooked up to the app via Bluetooth and track burned calories that way instead.¹

The user inputs his or her weight, age, height and activity level, and the app provides the daily caloric intake the user should be aiming for. As the user logs their calories, the app uses the simplest of equations to show how many calories they have left to eat for the day: Caloric Goal – Food Calories + Exercise Calories = Remaining Calories.

MyFitnessPal has been around since 2009, slowly building a database of 3.5 million different foods’ calorie and nutrition facts. Mike Lee, the creator of MyFitnessPal, simply wanted to invent an easier way to track his calorie consumption while losing weight before his wedding, and now, this pre-wedding weight shredder app has over 80 million users worldwide. Under Armour recently bought the app for $475 million, and has been renovating it to be more dynamic with the help of registered dietitians, graphic designers and programmers. ¹
Since its creation, the app has evolved to become educational and community-focused, instead of only a calorie counter. MyFitnessPal can be adjusted to count in prominence whatever the user would like, whether it be nutritional content, macronutrient counting, or just calories in general.

The community-aspect of MyFitnessPal allows you to connect with other people and watch their weight loss progress as well as your own with a Newsfeed on the homepage of the map, much like Facebook’s Newfeed. In respect to the original idea of simplicity though, the user can opt out of making their profile public, and remain completely invisible to count their calories personally. The versatile privacy caters to the needs of those who thrive with encouragement of others, or those who excel in their own personal endeavors.

The app also publishes short and educational blog posts about healthy snacks, fitness tips, beginner work outs and nutritional facts written by registered dietitians, writers for health blogs and many other certified nutrition educators.

All other extra aspects aside though, MyFitnessPal does great at what it was created for: tracking calories.

To lose weight, a person must create a caloric deficit so that the body begins to use fat stores that have built up from excess calories consumed over the years. The most direct way to do this would be to track the calories consumed and burned daily using a journal, notebook or tracker. With MyFitnessPal, a physical notebook is replaced with an app on your smartphone, something that is always on with you anyway. That way, there is never any excuse not to log what was eaten, and it can be logged as soon as the food is consumed, so what is eaten is never forgotten. Calorie counting, as the success stories from MyFitnessPal have proven, is a very effective way to shed off pounds in an efficient way, while becoming aware of the food you are eating at the same time.

Calories are great measurement tools for the amount of food you are consuming, but what happens if you are measuring a little too closely? When you begin looking at an apple and see 160 calories instead of the great fiber it provides, calories have become a little too important. Calorie counting can be taken to the extreme, causing obsession and can make a person more malnourished than if they had been overeating calories. Food with healthy fat, like avocados and nuts, can get cut out of a diet just because of their high caloric amount, which in turn cuts out the benefits that those calories could have to a healthy body. Maintaining a caloric reduction of 40 percent more over a long-term period can cause bone loss, libido and infertility.

MyFitnessPal though, does not just count calories. Using either the barcode scanner or searching the food on the online database, the calories and nutritional facts are counted into the virtual food diary as well. Graphs and charts show either calorie or macronutrient counts, so that calories are not the only focus for a diet. Health and weight loss is not all about “how much you eat” or “what you eat”—it’s both of types of moderation working together.

Since Under Armour has bought out the app, MyFitnessPal now provides Premium MyFitnessPal addition, with the monthly payment of $9.99 or $49.99 per year. This Premium update will provides access to better food analysis, improved macronutrient counting, advanced exercise settings and daily-customized goals.

MyFitnessPal as a whole provides previously unattainable information about the daily eating patterns the average person implements. This wealth of information has the ability to revolutionize the diet industry, because real people are updating their diets without any bias or scrutiny: it’s their diet diaries.

More importantly, MyFitnessPal has become a portable, simple, easy way for people of all activity levels to track their food, exercise and health without the hassle of carrying a physical notebook around, or guessing what their lunch really had in it. MyFitnessPal is tracking the evolution of the western human diet personally, nationally and portably. It’s the perfect app for that.

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The American Heart Association is working to organize community awareness, education and outreach on the Healthy Food Financing Initiative regarding healthy food access and food deserts in Duval County.

As you may know, many Jacksonville residents live in lower income communities underserved by grocery and supermarkets. These families suffer from access to healthy produce, whole grains and low-fat dairy options.

Included below is with a link for an electronic letter regarding food access and food deserts in Duval County. Please sign and pass along the link to help spread awareness and show your support.

https://docs.google.com/forms/d/1UwJUjF5aixP8K1p7arwQSbjKW-KBSvHfalbuVrFxoLg/viewform?c=0&w=1

Thank you for your support!
**Summer Treats**

**Kiwi Popsicles**

**Ingredients**

- 4 ripe kiwi
- 1½ cups pineapple juice, naturally sweetened
- ½ teaspoon sugar *optional* (you could also use honey, agave or more pineapple juice to make it sweeter naturally)

**Instructions**

Carefully slice the kiwi in half and spoon out the flesh.

Place the kiwi into a food processor. Pour in pineapple juice.

Blend on low speed for a few seconds. Be careful not to over blend to avoid the seeds breaking or it will produce a bitter taste.

Pour the mixture into the popsicle mold. Insert popsicle sticks. Freeze for 6 hours or until completely frozen.
USDA Secretary Testifies on Importance of Child Nutrition Programs

The House Education and Workforce Committee recently held a hearing on child nutrition assistance programs, with testimony from Agriculture Secretary Tom Vilsack. He detailed the integrity and successes of the programs, such as 95 percent compliance with new standards, increased fruit and vegetable consumption and increased participation in breakfast and summer food programs. The Academy encourages members to participate in the Child Nutrition Re-authorization Call-in Day.
Preventing and Treating Chronic Disease: Academy Offers Solutions:

The Academy has submitted comments to the Senate Finance Committee Chronic Care Reform Working Group detailing the value and significance of including nutrition counseling and medical nutrition therapy in any meaningful reform of chronic disease care. The letter urged the Working Group to include RDNs in care coordination teams, and showed the effectiveness of nutrition services to prevent and treat numerous chronic diseases.

Academy Meets with CMS: 'Better Care, Healthier People, Smarter Spending'

The Academy's Policy Initiatives and Advocacy and Nutrition Services Coverage teams met with representatives of the Center for Medicare & Medicaid Innovation to explore the role of nutrition and the value of registered dietitian nutritionists in initiatives that encourage delivery of better care at lower cost.
Two animal studies initiated at the beginning of the year are finally coming to an end. Dr. Ali’s animal study will end the first week of July while the graduate student’s study will continue for the next few weeks. The studies will examine plasma glucose, insulin, and intake regulatory hormones (CCK, GLP-1, PPY (peptide YY), ghrelin). The gene expression of leptin, gherkin, neuropeptide Y (NPY) and propiomelanocortin (POMC) receptors in hypothalamus and cholecystokinin-1 (CCK-1), glucagon like peptide-1 and 2 (GLP-1 and GLP-2) receptors in gastro-intestinal tract will be measured. For more details please visit:

References

Nutraceuticals


Protein Proven in Muscle Madness


Conjugated Linoleic Acid


There's an App for That!


Have any questions/comments?

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