

Department of Nutrition and Dietetics, University of North Florida

NutriNews

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Featuring Guava

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In the *News*



Child Nutrition Reauthorization Recommendations for 2015

By Tara Kessinger

The United States Department of Agriculture's nutrition assistance programs authorized through the Child Nutrition Reauthorization provide an integrated system of nutrition support for millions of America's children when they are at school, in other supervised child care settings, and – through WIC – for infants, very young children and their low-income pregnant mothers. Services are provided through over 100,000 of America's public, private and parochial schools, 42,000 community food sites, 57,000 child care centers, 122,000 home day care sites, and over 1,900 local WIC agencies in 10,000 WIC clinic sites in low-income community settings. Yet, the diets of many children continue to fall short of current recommendations for good health. Currently, more than one in five American households still experience food insecurity. Unfortunately, at the same time, childhood obesity rates that began rising in the 1990s have led to one in three children in the U. S. being overweight or obese, with the highest rates seen in children from racial, ethnic, and low income groups.

The early onset of chronic disease associated with childhood obesity adds new strain to the current health system while also reducing the quality of life and future prospects of today's children. In response, authoritative reports call for an aggressive, comprehensive, and multi-sector approach-using the school as the keystone-to reverse the epidemic of childhood obesity. In reaction to widespread public concern, in 2010 the Healthy Hunger-Free Kids Act authorized long overdue changes in Child Nutrition Programs and WIC that have been slowing introduced over the last five years. Currently, the

Academy of Nutrition and Dietetics recommendations support the meal pattern changes that have been implemented while also addressing the areas that have been identified as potential structural supports for the updated meal patterns. At this time, the Academy of Nutrition and Dietetics thinks that the 2015 reauthorization must take the next step by building on foundations laid in 2010 and strengthening it with other long-overdue improvements.

Listed below are the current recommendations that the Academy endorses in moving forward with the Child Nutrition Reauthorization legislation of 2015.

Nutrition Education:

- Assure that strong, comprehensive nutrition education is included in the authorizations for all Child Nutrition Programs, including the National School Lunch Program, the School Breakfast Program, the Summer Meals Program, the Child and Adult Care programs for day care and after school settings, the Fresh Fruit and Vegetable Program, Farm to School and other initiatives for children
- Provide funds to help all states build a state-level leadership infrastructure for comprehensive nutrition education in which every state with an approved nutrition education plan, created by a state---level Team Nutrition professional, would promote, coordinate, and provide nutrition education and leadership training in all Child Nutrition programs.
- Continue to support WIC Nutrition Education,

including breastfeeding support, as a vital component to early health and development of the child and continuing care of the mother

- Continue to support research that provides evidenced---based improvements for comprehensive, nationwide nutrition education approaches that foster healthy behavior, educational attainment, and lifelong health for all children.

The National School Lunch and Breakfast Programs:

- Maintain current evidenced-based meal and nutrition standards to help assure the health of American children

- Support Academy school nutrition members who are leading the way in implementing improvements to school meals

- Provide adequate funding for schools to purchase healthy, quality foods for school meals and snacks

- Provide adequate funding to USDA to continue their mission to provide training and technical assistance to schools and staff for implementation of standards, including support for implementation of the proposed, soon to be final, rule which outlines the standards of the school nutrition profession and details the skills necessary to run a successful program

- Increase funding mechanisms for updated infrastructure and equipment to school kitchens

- Require USDA to monitor the paid meal pricing requirement and student participation in the programs and report back to Congress

- Support implementation of provisions from the 2010 Healthy Hunger-Free Kids Act that still need to be phased in (i.e., wellness policies, professional standards for school nutrition)

- Investigate the need in populations and settings, such as Residential Child Care Institutions, that supply the total daily dietary requirements for youth and adolescents, recognizing that most juvenile facilities, or those feeding juveniles, serve approximately 3000 – 3500 calories per day in three meals and a snack to meet the nutritional needs and activity levels of these children in their rehabilitation process.

The Summer Food Service Program:

- Improve access to and participation in the Summer Food Service Program

- Authorize developmentally-appropriate nutrition education and physical activity within the summer

meals program to foster appropriate growth and development and academic readiness for the new school year.

The Special Supplement Nutrition Program for Women, Infants and Children (WIC):

- Support nutrition and breastfeeding counseling as successful cost-effective healthcare services

- Support the evidence-based, prescriptive WIC food package

- Continue to support programmatic efficiencies already in place

- Examine new policy supports that would optimize a woman’s health before and between pregnancies

The Child and Adult Care Food Program (CACFP):

- Support adequate funding for CACFP nutrition and wellness education and other training efforts led by qualified staff

- Provide adequate reimbursement to implement the new proposed improved meal patterns and nutrition standards

- Streamline access to healthy meals for young children in child care, such as those identified in the CACFP Paperwork Reduction Report Recommendations

The Farm to School Grant Program:

- Provide funding and support for expansion of the grant program to include preschool, summer, afterschool, and tribal communities

The Fresh Fruit and Vegetable Program:

- Continue to support the successful Fresh Fruit and Vegetable Program (FFVP) for elementary students from predominantly economically disadvantaged families to support a reduction in chronic disease through improved dietary quality.

For more information on the Child Nutrition Reauthorization Recommendations or to find out how to become an advocate please visit: <https://www.eatrightpro.org/resource/advocacy/lifecycle-nutrition/school-age-students/child-nutrition-reauthorization-issue-brief>.

Local Healthy Haunts



Featuring: Sweet Theory Baking Company

By Lexi Rossow

Even though sugar has been the enemy for a couple decades now—shoved to the top and smallest section of the food pyramid—my review this month is based on it. Hold tight to your sweet tooth, because it's going to be causing some sugary cravings by the time you read the last sentence.

Tucked beside a homey deli, Sweet Theory Baking Company resides with all this glorious sweet treats just waiting to be devoured.

Sweet Theory Baking Company does not only serve the best cinnamon streusel coffee cake in the world—which it does—Sweet Theory Baking Company serves the best cinnamon streusel coffee cake in the world without any dairy in it. Or gluten, or soy, or eggs.

To eat a balanced diet, sugar must be restricted. That does not mean it has to be done away with completely though, ergo, when the sweet tooth does attack, treat it well, and treat it healthily. With no dairy, gluten, soy or eggs, people with dietary restrictions or those who want ingre-

dients that agree quietly with their stomachs (unlike bubbling lactose or bloating gluten) can be served some cake, and eat it too!

Sweet Theory Baking Company has a great selection of cashew ice cream, gourmet doughnuts and gluten free cookies. This rustic bakery has such a welcoming feel that I thought that I would see my grandma standing behind the counter serving me some fresh gluten free ganache brownies.

So if you have some leftover calories in your MyFitnessPal log for the day, or a birthday coming up that can only be quenched with some strawberry doughnuts, Sweet Theory Baking Company is there to fill you with everything except gluten, soy, dairy or eggs.

Sweet Theory Baking Company is located at:

1243 King Street, Jacksonville FL 32204



Fit and Fueled

Beat the Heat

By Casey Kiernan

Not-So-Subtle Summer

The southern summer, by all means, is not-so-subtle; it comes quickly and lingers harshly. Here in Florida, it is apparent that warmer months outnumber the cooler ones. This being said, the heat factors into many areas of daily life, including outdoor activities/exercising. A major risk of the hot weather is dehydration. This serious condition can lead to more serious issues, such as heat stroke, but can easily be prevented by exercising safely and hydrating sufficiently.

Stay Active, Stay Cool

Those training for a marathon as well as those attempting to run a mile for the first time both need the same level of exercise-environment awareness. One must be aware of the conditions of their environment and the effect it has on their health in order to be safe while exercising. For these sweat shedding summer days, outdoor exercise is risky and should be brought inside to the gym, but if that is not an option, then vigorous outdoor exercise should be limited to the early morning and evening when the sun's intensity is subdued. Because of time restraints or scheduling for outdoor activities and team sports, mid-day heat can not be avoided. If this is the case, remember that staying hydrated is vital.

Hydrated and Happy

By staying hydrated, the risk of heat-related illnesses drastically decreases. Hydration is vital even when not exercising, therefore its significance is obvious for when exercising, especially in elevated temperatures. Hydration should remain a continual pursuit for its unhindered level of homeostasis. This is most popularly achieved by drinking water, but there are other contributing beverages and foods.

Understanding sufficient hydration for yourself is simple as long as you have conception of the subject and your body. According to the Mayo Clinic staff, "The Institute of Medicine determined that an adequate intake (AI) for men is roughly about 13 cups (3 liters) of total beverages a day. The AI for women is about 9 cups (2.2 liters) of total beverages a day." Moreover, "An extra 1.5 to 2.5 cups (400 to 600 milliliters) of water should suffice for short bouts of exer-

cise, but intense exercise lasting more than an hour (for example, running a marathon) requires more fluid intake."¹ The easiest way to assess your status of hydration is thirst level and urine color. Dehydration is accompanied by feelings of thirst, dark yellow urine, and fatigue.

Other than water, coconut water is preferred by some because of its electrolyte content. Aside from their plentiful vitamin and mineral contents, watermelon, celery, cucumbers, strawberries, and lettuce contain 92% or more, making each of these an excellent contender for hydration. The extra vitamin and minerals from these foods work as electrolytes to help achieve sufficient fluid balance. If you're hydrated then your heart will not have to work as hard to pump blood throughout your body. PlasticsInfo states these simple steps for staying hydrated:

- "Have something to drink when you first get up in the morning.
- Carry a plastic water bottle with you during work hours and when you are away from home for long periods of time.
- Try to drink something before, during and after exercising, especially in hot weather. Drink water every 15 minutes as you exercise.
- Remember to drink before you get thirsty.
- Try to limit caffeinated and sugary beverages. Caffeine acts as a diuretic and can cause you to lose fluids quickly. In addition to having extra calories, the fructose, or natural sugars, in fruit juice can slow your body's ability to absorb fluids.
- Monitor your fluid intake, factoring in foods. Most of what we eat contains some water, especially fruits and vegetables. Packing ready-to-eat fruits in sealable plastic bags can be a great way to restore fluids and vitamins during outdoor activities.
- Keep a glass, cup or plastic bottle of water next to your bed.
- Learn the signs and symptoms of dehydration."²

Enjoy this summer weather, be safe in and out of the sun, and stay hydrated!



Coming Fall 2015! A New and Exciting Opportunity for UNF Dietetic and Nutrition Students!

By Tara Kessinger

The Produce for Better Health (PBH) Foundation has named its Store Tour Training Grant Program recipients for this year and the UNF Dietetics and Nutrition Department has been awarded one of the grants beginning this Fall 2015 Semester! Earlier this year Ms. Shank read an article about the Produce for Better Health funded pilot program at Appalachian State University, which had been implemented by Kyle Thompson, the dietetic internship director, and so she decided to apply for the grant. The grants spur collaboration between supermarkets and university nutrition and dietetic programs, focusing on training students to deliver grocery store tours of produce departments. Appalachian State University partnered with Lowes Foods and trained their dietetic interns to conduct grocery store tours focused on educating shoppers about vegetables and fruits. The outcome results were very positive and PBH was able to offer grants up to \$5000 to other undergraduate dietetic/nutrition programs. The amount received at UNF was the full amount we requested- \$4966.

This Fall UNF will be partnering with two local grocery stores, Native Sun (Baymeadows Rd) and Earth Fare, to begin implementing the grant and hosting the tours. The grant allows our program to educate not only the UNF students but also the public about the general health benefits of eating more fruits and vegetables. Some of the UNF undergraduate nutrition seniors will be trained to conduct the supermarket tours.

The project will be embedded in our current Nutrition Education course, HUN4601C, with the help of DND instructors Ms. Jenna Braddock and Ms. Jill Snyder. It is a perfect fit since this course delves into the mechanics of educating others about nutrition. The senior students who participate in this project will not only satisfy some of their course requirements, but will also learn how to conduct a professional supermarket tour from A to Z.

Besides including the senior Nutrition Education students as the key players in this project, the DND staff have also decided to bring other students into the project as well. Students enrolled in FSS1202 Food Fundamentals typically complete a unit on fruits and vegetables, so one of the assignments for this unit will be to attend one of the supermarket tours and write a short reflection paper or blog about their experience. Students enrolled in HUN2201 Basic Principles of Human Nutrition will also be encouraged to participate and possibly be offered extra credit as an added incentive. In an effort to involve non-nutrition majors on campus, the department hopes to promote the supermarket tours during the UNF Market Days held each Wednesday at the Student Union Plaza.

The UNF DND is very excited about this project and looks forward to spreading the word about the benefits of eating fruits and vegetables daily. This grant is a wonderful opportunity for all!

Photos from FAND 2015



Eat your Veggies



By Tara Kessinger

Bok Choy

What is Bok Choy?

Unlike many members of the cruciferous vegetable family, bok choy is a special type of cruciferous vegetable in which the leaves of the plant do not form a head. For this reason, it is often referred to as "non-heading" and you will sometimes see bok choy being referred to as "non-heading Chinese cabbage." The literal translation of bok choy in Chinese means "white vegetable" so you may also hear it being referred to as "white cabbage" or "white-stem cabbage." However, as a practical matter, not all bok choy is white-stemmed. While often white or cream-colored, bok choy stalks can also be varying shades of green. (In fact, it is also possible to find yellow-stemmed and purple-stemmed bok choy.) But regardless of stem color, you can recognize bok choy as a non-headed cabbage with distinct individual leaves that cluster together in a way that is similar to celery stalks.¹

History

Bok choy, as well as other forms of Chinese cabbage, has been enjoyed in China and other parts of Asia for over 1,500 years. In North America, bok choy has been cultivated and appreciated for over 100 years. Florida, California, Hawaii, and New Jersey are key,



within the U.S., in the commercial production of both headed and non-headed Chinese cabbage, including bok choy. About 4,500 acres of these Chinese vegetables are grown in Florida each year.¹

Selection and Storage

Choose bok choy that has firm, bright green colored leaves and moist hardy stems. The leaves should look fresh, be unwilted, and be free from signs of browning, yellowing, and small holes. Wilting and yellowing of the leaves will negatively affect the flavor. Bok choy is available throughout the year, but is more available at its peak season which is from the middle of winter through the beginning of spring.

Bok choy will keep for about 1 week if properly stored. To store, place bok choy in a plastic storage bag removing as much of the air from the bag as possible. Keeping bok choy cold will keep it fresh and help it retain its vitamin C content.

Preparation Tips²:

- * Crispy, sweet bok choy stalks can be eaten raw, added to salads, sandwiches, and burgers.
- * Its stalks can be mix well with cabbage in cole-slaw.
- * Baby bok choy can be a very attractive addition to salads and stir-fries.
- * In korean peninsula, it is employed much like napa cabbage in the preparation of "bok-choy kimchi".
- * In China and other East Asian regions, it is used much like cabbage in stew fries with added onion, garlic, bell pepper, and green chillies mixed with steamed rice and soy/chilli/tomato sauce to prepare chowmein.
- * Bok Choy is one of the wonderful vegetables used generously in modern-day recipes like stir fries, soups, stuffing...etc.
- * It mixes well with cabbage, chilies, capsicum, onion, ginger, garlic, rice, tofu, seafood, meat.

For Spicy Bok Chow in Garlic Sauce Recipe visit:

<http://allrecipes.com/Recipe/Spicy-Bok-Choy-in-Garlic-Sauce/Detail.aspx?evt19=1&referringHubId=17172>



Nutrient Value ²

Principle	Nutrient Value	Percentage of RDA
Energy	13 kcal	<1%
Carbohydrates	2.18 g	1.5%
Protein	1.5 g	3%
Total Fat	0.20 g	1%
Cholesterol	0 mg	0%
Dietary Fiber	1 mg	2.5%
Vitamins		
Folates	66 µg	16%
Niacin	0.500 mg	3%
Pantothenic acid	0.088 mg	1.5%
Pyridoxine	0.194 mg	15%
Riboflavin	0.070 mg	5%
Thiamin	0.040 mg	3.5%
Vitamin A	4468 IU	149%
Vitamin C	45 mg	75%
Vitamin K	45.5 µg	38%
Electrolytes		
Sodium	65 mg	4%
Potassium	252 mg	5%
Minerals		
Calcium	105 mg	10.5%
Iron	0.80 mg	10%
Magnesium	19 mg	5%
Manganese	0.159 mg	7%
Phosphorus	37 mg	5%
Zinc	0.19 mg	1.5%
Phyto-nutrients		
Carotene-a	1 µg	--
Carotene-β	2681 µg	--
Lutein-zeaxanthin	40 µg	--

Research *Connection*

By Tara Kessinger



Dementia or B Vitamin Deficiencies?

Dementia is a general term for a decline in mental ability that is severe enough to interfere with or alter general activities of daily living. Dementia is not a specific disease but an overall term that describes a wide range of symptoms associated with a decline in memory or other thinking skills that affect one's ability to function normally on a daily basis. Alzheimer's disease accounts for 60 to 80 percent of all cases of dementia, and vascular dementia, which occurs after a stroke, is the second leading type of dementia; however many other conditions can cause symptoms of dementia, reversible or non-reversible. Vitamin deficiencies are one suspected cause of dementia, specifically vitamin B deficiencies.¹

Because B vitamins have been suggested as one cause of dementia, researchers have suggested diet as one area of potential intervention. Historically, vitamin B₁₂ deficiency has been associated with negative neurologic outcomes, especially in the elderly due to gastric malabsorption,

vitamin and pharmaceutical interaction, *H. pylori* infection, and poor appetite; however recent research has suggested an association between lower levels of not only vitamin B₁₂, but also an association and possible interplay between low levels of B₁₂, vitamin B₆ and folate and cognitive impairment.

Vitamin B₁₂, chiefly available in animal proteins, serves as a cofactor for methionine synthesis by transfer of a methyl group to homocysteine. Simply put, this transfer of a methyl group is important for the synthesis of DNA, the synthesis of myelin, and the maintenance of neural integrity and regulation of neurotransmitters. Vitamin B₆ and folate are also key factors in the homocysteine cycle. Disruption of this homocysteine cycle can lead to elevated homocysteine levels which have been found among individuals with dementia.²

Traditionally, health practitioners have focused on low levels of vitamin B₁₂ as the main

culprit of diet related dementia, yet several cross sectional and longitudinal studies have showed mixed results and inconsistencies in associating only vitamin B₁₂ as the sole contributor of adult cognitive decline. Agnew-Blais et al., in researching folate, vitamin B₆, and vitamin B₁₂ intake and mild cognitive impairment and dementia in the Women's Health Initiative Memory Study, suggests that low levels of folate intake (below the RDA), may increase risk for mild cognitive impairment and dementia later in life. In her research, low folate intake was more indicative of cognitive alterations and increased risk of incident of probable dementia. Interestingly, her findings showed no significant association between vitamins B₆ and B₁₂ and probable dementia, nor any evidence of an interaction between these vitamin and folate intake.³

Similarly, in studies performed by Nilsson et al. and Joosten et al., high homocysteine levels were seen in patients with neuropsychiatric dementia who had both vitamin B₁₂ deficiencies and low folate levels. Equally, in the Oxford Project to Investigate Memory and Aging, high homocysteine levels were seen in patients with dementia and were accompanied by both low serum folate and low B₁₂ levels.⁴

Another intriguing observation noted in the Rotterdam Scan Study was the presence of an adverse interaction between B₁₂ status and folate status. In patients with low vitamin B₁₂ status and serum folate levels below the 80th percentile, an almost twofold prevalence of anemia and cognitive impairment were observed versus patients with a low B₁₂ status but normal plasma folate levels. Additionally in patients with a normal B₁₂ status and a higher folate level there was a lowered prevalence of cognitive impairment exhibited compared with patients who had both normal B₁₂ and folate levels.⁴

Recently, research has uncovered new concepts in vitamin B₁₂ deficiency. As we know, vitamin B₁₂ deficiency is primarily associated with the hematological feature of megaloblastic anemia. Throughout the 20th century health care professionals assumed that hematological evidence of a B₁₂ deficiency preceded any neurological abnormalities; however within the past few decades it has been noted that this may not be the case. In a retrospective study of 369 B₁₂ deficient patients, Helaton et al. found an inverse correlation between the degree of anemia and the extent

of neurological involvement. Further investigations found that the presence of nervous system findings of B₁₂ deficient patients was not related to the overall severity of deficiency of the vitamin, and also concluded that most patients will either exhibit the hematologic or neurologic dysfunction predominately. This finding suggests that the presence or absence of macrocytic anemia should not be used as the sole criterion for detecting neurological involvement of a B₁₂ deficiency as some patients will present with normal hematology results.⁵ A possible explanation for this phenomenon presented by McCaddon is that the process of vitamin B₁₂ depletion causes inflammation and damage to the neural cells within the brain, and that the damage to the neurons from the inflammation may occur before the hematologic indicators detect a full blown vitamin B₁₂ deficiency. If this is the case, then new measures may need to be put in place to determine a depletion in serum Vitamin B₁₂ levels rather than deficiencies.⁵

Taking all the new research into consideration, as always, prevention, early detection, and management of vitamin B₁₂, B₆ and folate deficiencies is of profound importance; however, as a practicing dietitian it is paramount that we look at "the whole picture" so to speak in determining the occurrence of vitamin deficiencies and neurological impairment. As can be seen with the research cited above, it is still unclear as to which B vitamin contributes to cognitive impairment or if a combination of factors contribute to mental decline. Vitamin B metabolism is a defined entity that can be measured at all levels; hence more studies in the area of the aging brain and one-carbon metabolism need to be explored. It is of utmost importance for us as practitioners to keep abreast of emerging research in this area and also to assess patients using many diagnostic tools as some may not present with "classical" B₁₂ deficiency symptoms.

References of page:

Got *Meat*?



7 Healthy Grilling Tips

By Lindsay Pappas

What's more fun than a Summer Picnic? Family, friends, and firing up the old Bar-B-Que Grill. But beware, some unknown risks may ruin a perfectly good picnic.

When meat is cooked at high temperatures (above 350 F), some carcinogenic compounds called heterocyclic aromatic amines (HCAs) are produced. Researchers have found that HCAs cause cancer in humans and animals e.g., tumors of colon, prostate, lungs, skin, breast, liver and gastrointestinal tract are associated with the consumption of meat containing HCAs¹. Their formation is dependent on various factors such as cooking method, cooking time, cooking temperature, type of meat, and fat contents.

This doesn't mean you have to ban grilled foods forever. Following our tips, you can minimize your risk and enjoy grilled foods that are flavorful and safe.

1. Marinate Your Meat

A marinade acts like a barrier between your meat and carcinogens. The American Institute for Cancer Research says marinating meat for at least 30 minutes can reduce the formation of HCAs². The type of marinade might even be a factor, according to researchers from Kansas State University and The Food Science Institute who found a steak cooked in a Caribbean marinade had an 88 percent drop in HCAs, while an herb marinade accounted for a 72 percent drop and a Southwestern mixture had a 57 percent drop in bad compounds.

2. Partially Pre-Cook

Using a microwave oven to cook meat prior to exposure to high temperatures can also substantially reduce HCA formation by reducing the time that meat must be in contact with high heat to finish cooking³.

3. Clean Your Grill

With a dirty rack, you run the risk of transferring those leftover chemicals to your food next time you grill. Make sure to scrub down your grill before AND after grilling food to get rid of that carcinogenic residue that can build up.

4. Flip at the right time

Frequent flipping means neither side has time to absorb or lose too much heat, so the meat cooks faster and outer layers end up less overdone—and presumably with fewer HCAs.

5. Size Matters

Cube or slice meat into smaller portions to speed up the cook time or choose a quick-cooking option like shrimp or fish. Then, mix these small bits of meats with veggies, as with shish kabobs. The cancer protective phytochemicals of veggies may help to counteract the carcinogenic yield of the meats.

6. The Faster the Cook Time, The Better

The faster foods are cooked, the less likely they'll develop dangerous charring. Don't cook meat past its goal temperature: 165 degrees for ground poultry; 160 degrees for ground red meats or mixtures and fresh pork; or 145 degrees for steaks or fish.

7. Beyond Meat

You can still enjoy that smoky, grilled flavor and reduce your cancer risk by swapping meat for veggies, veggie burgers, or even fruits, like pineapple and peaches. These are all safer choices because HCAs form in animal muscle proteins. Bonus: Studies have shown that the phytochemicals found in fruits and vegetables may actually **REDUCE** certain types of cancer.

References on page:



National Conference of Insurance Legislators (NCOIL) supports obesity treatment

The executive committee for NCOIL met on July 19th, 2015 and passed a resolution regarding obesity by a 13-3 vote. The committee consists of members from across the country, who showed huge support for increases in obesity pharmacotherapy and bariatric surgery in regards to Medicaid, Health Exchanges, and other state insurance programs. The goals of NCOIL are to make obesity treatment and prevention a high priority, and to reduce obesity related problems such as worker absenteeism and production. The resolution passed includes measures to: increase state's exchange plans to include a range of treatment options for obesity, including wellness and preventative plans, pharmacotherapy, and bariatric surgery; increase state's implementation of chronic disease management especially for obesity; and incentivize state exchanges to include full coverage for obesity prevention and treatment. This is the first resolution passed by NCOIL that directly focuses on a single disease.

Texas Biomed establishes the TOPS Nutrition and Obesity Research Center

Texas Biomedical Research Institute, in combination with Take Off Pounds Sensibly (TOPS), a Wisconsin non-profit organization, established the TOPS Nutrition and Obesity Research Center. The goals of the research center include: conducting research regarding the causes of obesity, the health risks of obesity, and treatment for obesity. Some focuses of the research to be conducted at the TOPS research center are the role of genetics in metabolic changes, appetite regulation, nutritional preferences, and food intake, choice, and incidence of obesity-related illnesses. TOPS is a network of thousands of weight-loss support groups who will now be available to Texas Biomed researchers. The researchers now have the opportunity to work with volunteer patients who have had information collected on them for periods in the past through TOPS. This enables researchers to evaluate weight loss struggles over several years, and evaluate their ability to control food intake. Texas Biomed hopes to discover genetic linkages to obesity to further help the obesity epidemic in America.

Scientists say they've isolated the taste of fat, and it's terrible. Why?

Scientists suggest fat has its own distinct taste, independent of the five basic tastes of bitter, salty, sour, sweet, and umami. Volunteers, with their noses clipped so aroma did not interfere with taste, sampled a series of basic tastes and fatty acids, the components of fat. The study found that short chain fatty acids tasted sour, while the medium and longer chain fatty acids tasted more bitter. The surprising fact is that fats taste bad. Fat is typically gratifying, and adds to texture and mouthfeel of food, while fatty acids have now been discovered as displeasing. One possible explanation for this is that fatty acids accumulate in rotting foods when fats break down which may serve as a signal not to eat something that may make you sick. Keep in mind though that tastes are often full of contradictions, such as the unpleasantness of a bitter flavor, yet the large consumption of coffee.

Though odds of losing 5 percent body weight were better, three-quarters gained it back in five years

Can obese people ever reach a normal weight, and if so, will they keep it off? In a study of British adults, obese men had a 1 in 210 chance of obtaining a normal weight, and women had a 1 in 124 chance. This study included over 176,000 adults. Losing five percent of body weight shows increased health benefits such as lower blood pressure and lower blood sugar. In the study, losing five percent of body weight was much more attainable than dropping to a normal weight. The odds of losing five percent of body weight were 1 in 12 for men and 1 in 10 for women. Unfortunately, three-quarters of the participants gained the weight back within five years. One downfall to the study however was that the information was based on medical records. There was no information on how people tried to lose weight, such as a fad diet or a formal weight loss program. This result suggests that current strategies are not effective for the majority of people in helping them lose weight. Some suggest focusing on preventing further weight gain and maintaining any weight lost, over obtaining a normal weight.

Scientists identify possible binge eating gene in teenagers

Of the American population, about ten percent of adults and teenagers binge eat. The condition is most common in overweight or obese individuals, and is characterized by excessively over eating and feeling out of control in how much they are eating. Binge eating was thought to have genetic and environmental factors that lead to the condition, and the University College London's (UCL) Institute of Child Health found a variation of a gene they believe will help explain why this condition develops, as well as preventative treatment strategies for the disorder. The UCL study involved 6,000 participants aged 14-16 with a higher BMI. If a young person had a certain variation in the FTO gene locus, they had a 20% higher risk of binge eating. This development will hopefully help future adolescents and adults in determining the likelihood of binge eating, as well as increase preventative strategies before the individual becomes overweight or obese.

Scientist keep finding more evidence that bacteria in your stomach are connected to your mood

Bacteria cover the body inside and out, and have been linked to relationships with digestion, obesity, and skin conditions, however, can bacteria affect the brain? Mark Lyte has been studying the association between the gut-brain connection for over thirty years. He has found that certain bacteria may actually cause mental disorders such as depression and anxiety, while other bacteria are linked to hyperactivity and autism. Recently the National Institute of Mental Health provided over one million dollars for four studies looking into the connection of gut bacteria and mental health. If an association is found between a certain bacteria and disease, treatment could include altering bacterial colonies in the gut to treat mental disorders. Lyte's research has found that bacteria in the stomach produce dopamine and serotonin, which are neurochemicals that affect the brain. Studies on mice show that certain bacteria can make them less anxious or less likely to give up, and reverse autism like symptoms. Bacterial treatment is also currently being tested in humans with psychological and neurological disorders. One final note: over the counter probiotics are not necessarily suggested as a remedy for mental disorders.

Meet UNF's DND Sum



Jean-Christophe GREAUX was born in Guadeloupe, the French West Indies. He is an upcoming graduate student at the University of Poitiers in the Bioengineering and Computer Sciences program. His career goal is to become a bio-informatician. Aside from his studies, Jean-Christophe enjoys computer surfing, reading news on science, high tech and informatics, and working out at the gym. He loves the University of North Florida for our beautiful buildings and surrounding greenery, which includes many types of trees, flowers, and bamboo. He is also enjoying the weather in Jacksonville and, the beach, of course!

Melanie CAILLE was born in a small city called Châteauroux in France. She currently holds a bachelor's of science degree in both Ecology and Animal Biology; however, she is earning her second degree in Bioengineering and Computer Science. She is very interested in animal and human physiology as well as clinical trials. In fact, Melanie's goal is to work in the field of pharmacology in order to invent and test new drugs.

Melanie loves to travel. Because of her interest in animal biology, she enjoys exploring nature preserves and photographing the wildlife. She is enjoying Jacksonville's summer weather as well as UNF's campus. She says, "My favorite thing about UNF is the environment – all of the buildings are beautiful, it is a green campus, and truly a place I like to come and work!"



Summer Exchange Students

Joffrey BOGGIO is an undergraduate student double-majoring in the biology and computer science at the University of Basic and Applied Science of Politiers, France. Specifically, his focus is on bioinformatics, the application of computer technology to the management of biological information. He says, "My interest is especially on nanotechnology to treat directly from within the body, as well as immunology and finally how our system interacts with the environment." Joffrey plans to get a Master's in this area as well.

Joffrey enjoys sports, music, general science, and multiplayer online games. He is both a tennis player and piano player since the age of 7. He finds musical inspiration from composers and music producers like Hans Zimmer, whose works include *The Lion King*, *The Dark Knight Trilogy*, and the *Pirates of the Caribbean* series just to name a few.

Joffrey has always wanted to come to America. He says, "The fact of not being in a city like New York has allowed me to better see life as it really is here and not just the tourist aspect." He is smitten with



Jacksonville, FL because of our weather, nature, the beautiful University of North Florida campus, and the beach. Joffrey says, "It's true. I love life here; it's a little paradise..."

Zeynep GAZI is from Turkey. She is a sophomore at the Sifa University in Izmir studying nutrition and dietetics. She has always wanted to study the health sciences and its social benefits. She is interested in health science research and would like to continue this interest professionally. The field of Nutrition and Dietetics is very new in her country, so Zeynep feels that this is a very good area for her to develop her professional ambitions; for this reason she decided to come to UNF to study with Dr. Ali as to broaden his skills and improve upon her knowledge. Zeynep is enjoying her time at UNF and is impressed by the beautiful campus. She is having a lot of fun both on and off campus and is excited to be here at UNF and in Florida.



Fruit of the Month *Club*



Guava

By Meghan Moholland

Nothing beats guava, the delightful tropical fruit that we all know and love. But how well do we really know guava? Or do we really know it at all? Think about it. You've tasted a plethora of tropical juices and smoothies that have guava listed in the ingredients. You may have snacked on the guava wafers made by Goya at some point during your childhood. You slightly remember the taste of those guava-flavored candies you tried once, but what about the real deal? Have you ever eaten a guava?

Let's introduce you to your new favorite fruit. Guava, also known as *Psidium guajava*, has been cultivated for thousands of years. Due to this long history, its origin is unknown, but it is safe to assume its home lies in the areas of southern Mexico and Central America. Guava is common in tropical America, the West Indies, southern Florida, and surrounding areas ¹ Now that you've met, let's really get to know guava.

Lucky for you foodies out there, the guava is entirely edible. From the yellow-green skin to the pink flesh all the way down to the yellow seeds at the center of this tropical gem. We're not leaving any leftovers for the compost pile with this one. Good thing, too; these fruits are jam-packed with nutrients. One cup of raw guava contains nearly six times the daily value of vitamin C, about 20% of the daily value of potassium, and levels of lycopene ri-



valing those of a tomato². If you've been looking for a sign, this is it. Go eat some guava.

When searching for your perfect guava, it is best to be educated. While guavas are mostly available year-round, keep the seasonality of the fruit in mind to ensure the best quality. Guavas tend to be in season in the late spring, summer, and early fall. When choosing your guava, be sure to choose one that is free of blemishes and is firm but has a slight give to pressure. The feeling should be similar to choosing the right avocado. If the fruit is too firm, it's likely not ripe enough yet. You can ripen guavas by leaving them out on the counter for a day or two. Once ripe, keep them in your fridge for up to four days or freeze them and

Nutrient Value⁵

keep them for up to eight months!³

Don't be afraid to explore the different ways guava can be eaten. You've worked hard to pick the perfect guava; you deserve to enjoy it however you want. While guavas can be eaten right out-of-hand, they are often served seeded and sliced. If not eaten raw, they may be cooked and added to a variety of dishes. More often than not, cooked guava is served with a dessert. From pie to ice cream to jelly, guava can do it all ¹.

As an alternative to raw guava, try cooking with it! Guava jam is a great place to start. Jam is fun and easy to make, and the shelf life is significantly longer than that of the raw fruit. Add guava jam to bread or serve with cheese for a yummy snack that's sure to satisfy.

While any guava will work, blitch guavas are perfect for making jams and jellies, while patillo guavas are good for general cooking. Be sure to explore the different types of guavas, as they will each provide a unique experience¹.

All you need for guava jam is:

Ripe Guavas, 1.5 to 2 pounds

Sugar, 1 cup

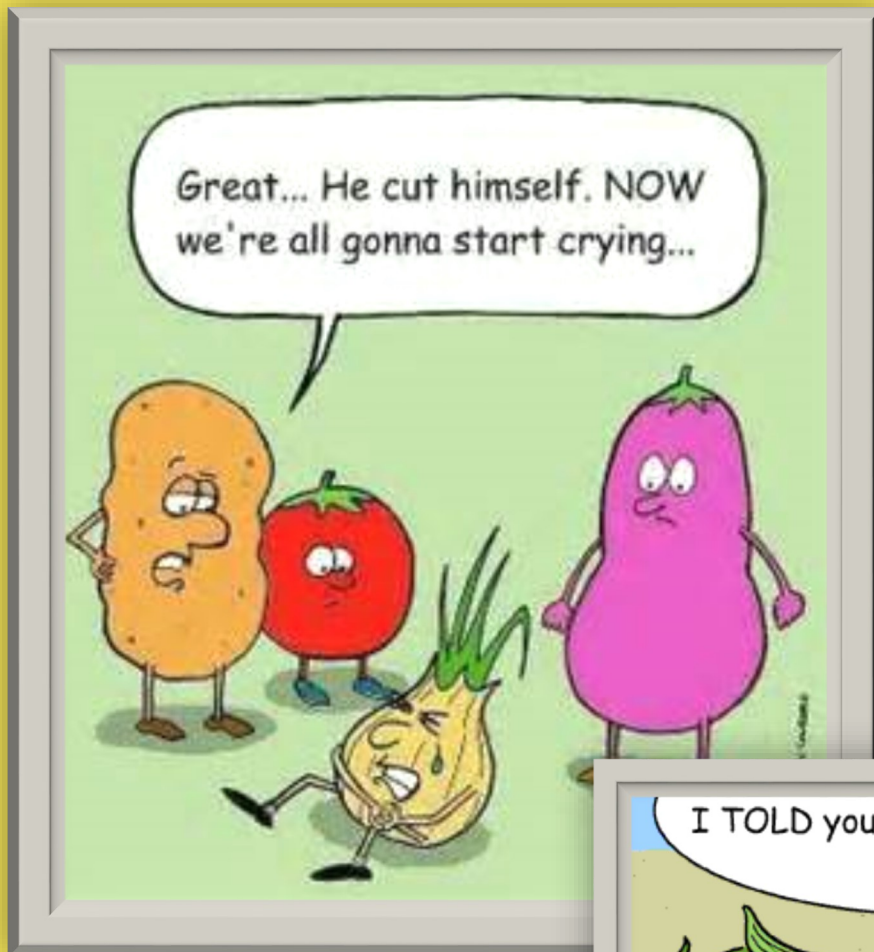
Lemon Juice, 2 tablespoons

First, cut the guavas into quarters without peeling. Fill a small pot with 2 tablespoons water, fill with guavas, and cover. Cook on medium heat for 10 minutes, stirring occasionally until the guavas become mushy. Once done, spoon the guavas into a bowl through a mesh strainer to remove the skin and seeds. Clean the pot and add the guavas along with the sugar and lemon juice. Bring the mixture to a boil and cook for 10 minutes. The natural pectin in the guavas will help thicken the mixture at this point. Once the mixture has a gel-like consistency, it is done. Spoon into sterilized jars and store in the fridge for best results. ⁴ Enjoy!

Recipe adapted from <http://www.sbcanning.com/2011/05/guava-jam-new-variety-at-least-to-me.html>

Principle	Nutrient Value	Percentage of RDA
Energy	68 Kcal	3.5%
Carbohydrates	14.3 g	11.5%
Protein	2.55 g	5%
Total Fat	0.95 g	3%
Cholesterol	0 mg	0%
Dietary Fiber	5.4 g	14%
Vitamins		
Folates	49 µg	12.5%
Niacin	1.084 mg	7%
Pantothenic acid	0.451 mg	9%
Pyridoxine	0.110 mg	8.5%
Riboflavin	0.040 mg	3%
Thiamin	0.067 mg	5.5%
Vitamin A	624 IU	21%
Vitamin C	228 mg	396%
Vitamin E	0.73 mg	5%
Vitamin K	2.6 µg	2%
Electrolytes		
Sodium	2 mg	0%
Potassium	417 mg	9%
Minerals		
Calcium	18 mg	2%
Copper	0.230 mg	2.5%
Iron	0.26 mg	3%
Magnesium	22 mg	5.5%
Manganese	0.150 mg	6.5%
Phosphorus	11 mg	2%
Selenium	0.6 mcg	1%
Zinc	0.23 mg	2%
Phyto-nutrients		
Carotene-β	374 µg	--
Crypto-xanthin-β	0 µg	--
Lycopene	5204 µg	--

NutriNews Comics





Summer Treats



Summer Corn Salad

Ingredients

- * 6 ears of corn, husked and cleaned
- * 3 large tomatoes, diced
- * 1 large onion, diced
- * 1/4 cup chopped fresh basil
- * 1/4 cup olive oil
- * 2 Tbsp white vinegar
- * Salt and pepper to taste

Directions

1. Bring a large pot of lightly salted water to a boil. Cook corn in boiling water for 7 to 10 minutes, or until desired tenderness. Drain, cool, and cut kernels off the cob with a sharp knife.
2. In a large bowl, toss together the corn, tomatoes, onion, basil, oil, vinegar, salt and pepper. Chill until serving.



From the



Academy of Nutrition and Dietetics

The Champions for Healthy Kids grant empowers Academy members to provide nutrition and physical activity programming to nonprofit organizations. The grant, provided by the General Mills Foundation, helps support grassroots programs that promote healthful eating and active lifestyles targeted to kids and families. Past recipients have provided testimonials to showcase how the grant has affected them and their communities.





The Academy's position paper on "Vegetarian Diets" is being removed to address issues that were discovered after the paper was published in the May 2015 Journal of the Academy of Nutrition and Dietetics. The Academy Positions Committee became aware of some inaccuracies and omissions critical to the paper that need to be addressed. The APC is working to make revisions and publish the paper in the future.

The 2015 America's Health Rankings Senior Report was recently released, and provides information on 35 measures of senior health. Measures of interest for Older Americans Act programs are Home-Delivered Meals, Food Insecurity, and Diabetes Management, among others. The report also shows the number of older adults with multiple chronic conditions within a state. This data is extremely useful for Academy members, and can be used to demonstrate the importance of re-authorizing the Older Americans Act.



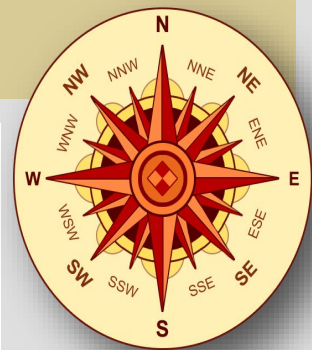
Article Highlights and *Text Links*

— — **Do fat cells have a sense of direction?** How does a fat cell know if it is supposed to be located on the abdomen or on the hips? Exciting new data from Dr. Fried has shown that fat cells in the abdomen and the buttocks have different DNA — regardless of whether these fat cells come from men or women — and different functions depending on whether they are in the upper or lower body. These fat cells appear to know where they were born and how they are supposed to behave.

<http://onlinelibrary.wiley.com/doi/10.1002/oby.21133/abstract>

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--Can saturated fats, polyunsaturated fats, or mono unsaturated fats affect gut microbe health and inflammation?

Yan Y. Lam et al. examined the effect of different dietary fats (lard, sunflower oil or fish oil) on metabolic parameters, colonic barrier function, inflammation and microbiota in mice and found that differential fats can in fact affect gut permeability, inflammation, and gut microbe health. To read more visit:

<http://onlinelibrary.wiley.com/doi/10.1002/oby.21122/abstract>



--Will having a glass of wine before dinner cause you to gain weight?

Women who consume alcohol before a meal will eat more and have a different brain response to food aromas compared with women who do not drink alcohol. In a randomized, single blind study using functional MRI to measure the blood oxygenation level dependent responses to food aromas in women who received an IV infusion of alcohol, researchers found that women ate more food at lunch after receiving alcohol compared with women who received an IV infusion of saline solution.

Read More: <http://www.healio.com/endocrinology/obesity/news/online/>



The Supplement Shelf


Probiotics

By Natalie Wrightson

The word 'probiotics' is a generalized term used to classify certain strains of microorganisms. The Food and Agricultural Organization of the United Nations defines probiotics as "live microorganisms that, when administered in adequate amounts, confer a health benefit to the host." Specifically, probiotics are bacteria that promote the growth of the good bacteria, or normal microbiota, found in and on our bodies. Probiotics are naturally found in and on our bodies but they can also be found in dairy products, keifer and fermented goods. Supplemental forms of probiotics are also available in nutrition stores as well as many drug stores and grocery stores in the health section. Probiotics found in

stores are either *Lactobacillus* bacteria or *Bifidobacterium* bacteria. Most probiotic products contain *Lactobacillus* strains. These strains are typically found in fermented products as well as yogurt. *Bifidobacterium* strains are not as common but can still be found in other dairy products.^{1,2,3}

In general, probiotics are thought to support overall good health but the FDA has not approved any health claims related to probiotics. However, there have been many studies done on the beneficial effects of probiotics. These studies produced promising evidence that links probiotics to different health benefits that vary based on the strain of probiotic being

The background of the page is a microscopic cross-section of plant tissue, likely a stem or root, showing various vascular bundles and cellular structures. The image is tinted with a warm, orange-brown color. The text is overlaid on this background.

tested. Most studies involved the effect probiotics have on the GI tract because the GI tract contains over 400 species of normal microbiota making it more susceptible to probiotics compared to other areas of the body with less microbiota. That being said, normal microbiota inhabit all parts of the body and other studies have linked probiotics and health benefits unrelated to the GI tract. The evidence from these studies is strong but the varying results from the trials shows that generalized statements cannot be made about the benefit of probiotics due to the wide variety of bacterial strains that are probiotics.^{1,2,3}

The normal microbiota function to prevent pathogens from getting into our bodies and colonizing within us. It does this by through outcompeting pathogens for living space, creating chemicals that are toxic to pathogens, and creating an acidic environment that does not support pathogen growth. On top of that, the microbiota found in the GI tract aid in digestion and are responsible for the synthesis of certain vitamins, metabolizing nutrients and medications, and enhancing the immune system. Naturally, if our normal microbiota does all of this and probiotics promote the growth of the normal microbiota, it is safe to assume that probiotics do have a beneficial effect on our health.⁴

An article published in *The American Journal of Clinical Nutrition* evaluated probiotic use in clinical settings. The authors concluded that there are some specific clinical scenarios where the evidence supporting probiotic use is very strong and very sound but probiotics are being used in many different situations for many different reasons where the evidence is not very well established. Overall, the science behind how probiotics work inside of us it not very clear and the mechanism of action is still unknown. On the bright-side, this study also concluded that probiotics are safe for use by the healthy individual so even though all health claims of probiotics are not fully supported, they will not harm the person taking them as long as that person in healthy.⁵

References of page:

For More Information and New Res

Recipe for Flavorful Tomatoes: Heat Before Chilling



Tomatoes are often picked green and then stored at low temperatures to slow ripening during and after transport. They are then ripened about 68 °F before being placed on store shelves. That process makes them easier to ship and extends their shelf life but could be the reason why "supermarket tomatoes" often taste bland. An Agricultural Research Service chemist found a five-minute heat treatment before chilling stemmed the loss of several flavor volatiles known to contribute to the fruity and floral scents of tomatoes, and treated tomatoes had more flavor than tomatoes that were only chilled.

For details, contact: [Jinhe Bai](#), (772) 462-5880, [Citrus and Other Subtropical Fruits Research](#), U.S. Horticultural Research Laboratory, Fort Pierce, Florida.

A New Spanish Peanut Variety for Consumers, Growers



A new Spanish peanut variety that packs high levels of healthful oleic acid has been released by Agricultural Research Service scientists and university cooperators. The new variety, called OLé, could provide producers and consumers with a peanut that has heart-healthy qualities as well as disease resistance and longer shelf life. Oleic acid is a beneficial monounsaturated fatty acid, and the high oleic acid levels in the peanut make its oil a heart-healthy one for consumers. Growers like the new variety because of its disease resistance and potential for high yield and grade.

For details, contact: [Kelly D. Chamberlin](#), (405) 624-4141 ext. 225, [Wheat, Peanut and Other Field Crops Research Unit](#), Stillwater, Oklahoma.

search visit: www.usda.gov



New Berries from ARS

Two new berries have been developed by Agricultural Research Service researchers and their collaborators. Sweet Sunrise (U.S. PP 25,223) is a new high-yielding strawberry cultivar that ripens in June. It produces large, firm attractive fruit having excellent quality. Yields are comparable to, or higher than, those of other recent releases such as Charm, Valley Red and Sweet Bliss or the industry standards Tillamook, Totem and Hood. They also developed Columbia Star (U.S. patent applied for), a thornless, trailing blackberry cultivar from the same breeding program as Sweet Sunrise. It is a high-quality, high-yielding, machine-harvestable blackberry with firm, sweet fruit that when processed is similar in quality to, or better than, fruit from the industry standards Marion and Black Diamond. Both of these new berry cultivars will be good additions to the fresh- and processed-fruit markets.

For details, contact: Chad Finn, (541) 738-4037, Horticultural Crops Research Unit, Corvallis, Oregon.

Get *Involved!*

DONATION DRIVE



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Help Brooks College of Health give back to UNF's students!

All donations will be given to our student food pantry, Lend-A-Wing.

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- Canned Fruits
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- Rice
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July 31th- August 17th

Donation drop boxes will be conveniently located throughout Brooks College of Health.

Building 39:

- 2nd Floor room 2031 (Advising Office)
- 3rd Floor room 3042
- 4th Floor room 4033

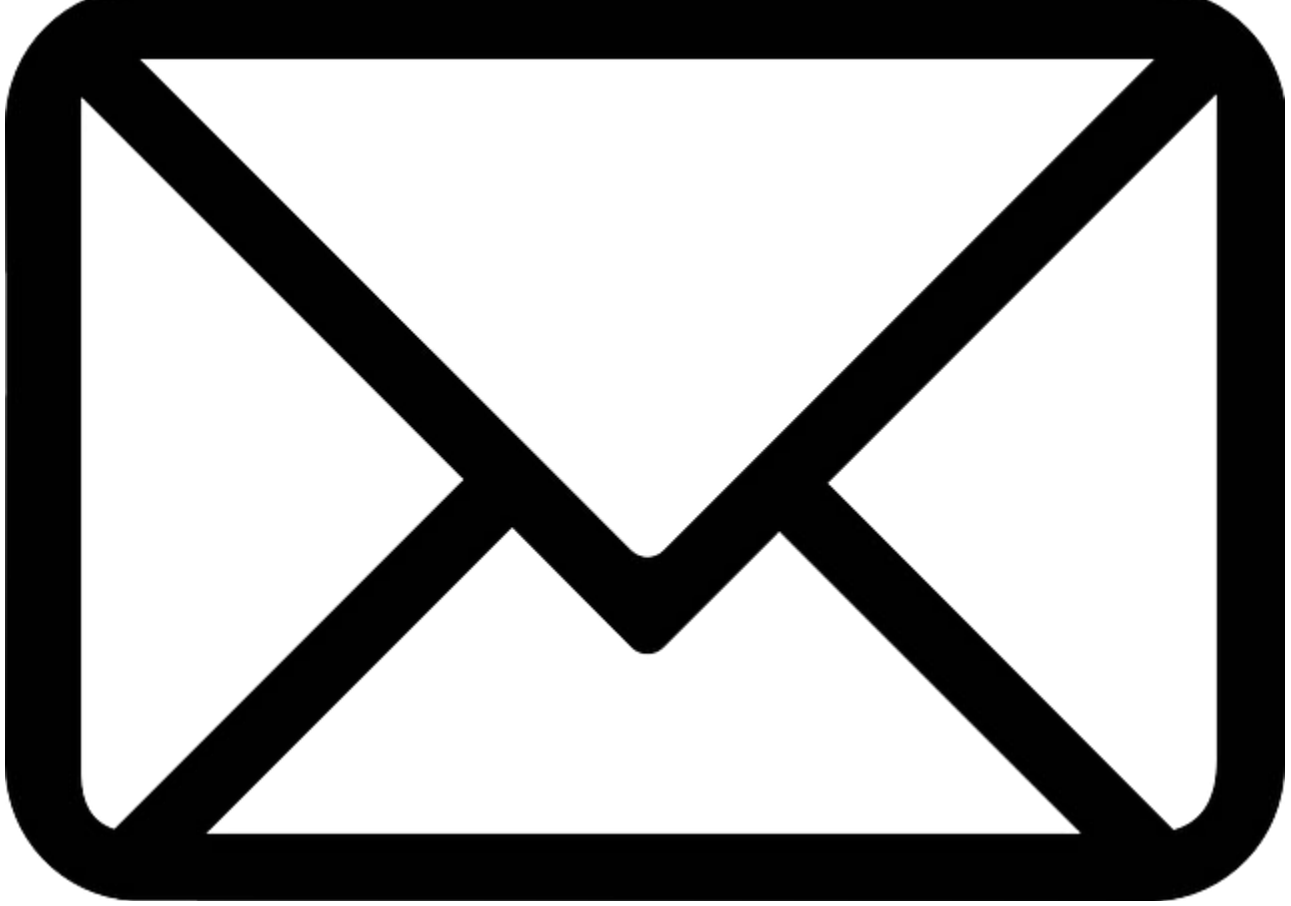
Building 39A:

- Room 3090C
- Room 2098 (Student Clinic Waiting Room)



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Have any questions/comments?

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