The Spring 2015 Semester in the Department of Nutritional Sciences was another successful and busy semester for students as they remained active on campus and in the community. Students throughout the department were seen volunteering for the Seed to Plate Program, Culinary Medicine, and at Baylor All Saints Hospital to name a few. Seniors proudly presented their research at the annual Senior Research Symposium presentation on April 17. # students also attended the Texas Academy of Nutrition and Dietetics Meeting in Houston on April 16 to present their research at the state level. Seniors Carly Benge and Connelly Weeks both matched for Dietetic Internships at the Massachusetts General Hospital Dietetic Internship and University of Arkansas Dietetic Internship respectively; congratulations!! Coordinated Program students all represented the university well at each of their clinical rotations throughout the semester. The semester also sadly marked the last for Dr. Gorman who will be missed dearly by students and other faculty alike. **We will miss you, Dr. Gorman!**

Emily Curlin, Editor
Student Involvement

The Department of Nutritional Sciences students not only take rigorous courses and volunteer within our department, but in addition they spend their free time working, volunteering, and interning around Fort Worth in the nutrition and health sciences fields. Four of these students include Julia Arnold, Dana Faris, Mollie Richardson, and Ismael Varela.

Julia Arnold is a senior food management major who has been working at Sprouts as a store manager throughout the Spring semester. Her tasks include opening and closing the store, checking in with department heads, helping customers, and aiding in checkouts when the store is especially busy. Julia loves working for Sprouts and listed many benefits she enjoys.

“I’ve learned a lot about food products and holistic approaches to medicine. Customers come to me seeking a better life and overall wellness and I help them by suggesting different products. I’m also learning about food retail and how to make sure everything looks nice on the aisles and in the entrance. I also am learning about managing people, delegating tasks, and the importance of good customer service.” Julia said when asked how working at Sprouts has enhanced her nutrition experience.

Mollie Richardson, senior in the Didactic Program in Dietetics, has been working at Simply Fit Meals since September. Mollie is a sales associate, educating customers about products and assisting them in making choices for their lifestyle, needs, and personal preferences.” Mollie admitted the difficulty she has experienced balancing a busy schedule with a desire to be healthy and treat her body well. Mollie said she loves working for Simply Fit Meals because “we provide people the opportunity to make that healthy choice despite the common excuse of not having the time.” Mollie has enjoyed the convenience of the microwavable meals at Simply Fit Meals that provide great nutrition with fresh ingredients and a balanced diet.

Ismael Varela, a senior in the Didactic Program in Dietetics, has worked as an Emergency Medical Technician (EMT) at John Peter Smith Hospital emergency department for the past four years. Some of Ismael’s responsibilities include basic EKG hook up and interpretation, and intravenous starts including difficult IVs that require using a sonosite. Ismael also aids in patient care as well as shows EMT/paramedic students, nursing students, and medical students the chaotic flow of their department. Ismael’s favorite part about his job is “seeing a broad spectrum of patient emergencies.” Working as an EMT has enhanced his nutrition experience through patient contact, nutrition assessments, and the department’s policy of handing out sack lunches to patients who haven’t eaten in days. Ismael makes sure provide more nutritious options by adding Ensure, fruit (when available), and a ham sandwich.”

Dana Faris, a senior in the Coordinated Program in Dietetics, works for a food truck as well as Dr. Sue’s Chocolate. Dana has worked for the food truck for three years preparing food, keeping the truck clean, serving customers, and driving the truck. Dana has also had the opportunity to work with the head chef on the truck to develop new recipes for their menu. This food truck in particular seeks to feed customers with dietary restrictions such as food allergies.

“Working at the food truck has allowed me to learn about alternative foods for vegetarians that I would have never been introduced to. It also introduced me to healthier alternatives for our every day dishes such as a pizza or tacos. I have learned about so many different allergies whether they be soy, gluten, or even nightshades and have learned how to think on my feet to put something together so that the customer has something they can feel safe eating,” Dana said.

Dana has also worked at Dr. Sue’s Chocolate as a chocolatier for the past year. Dana packages chocolate, sets schedules, keeps the store clean and samples filled, works the office, washes dishes, and a multitude of other tasks. Dana also does demos for stores such as Central Market, runs booths for various events, and teaches chocolate making classes at the store. Dana’s favorite part of working as a chocolatier is “doing the chocolate making classes and being able to also discuss a little bit of nutrition.” Dana said she has learned about phyttonutrients and other properties of chocolate that makes it healthy, and she enjoys sharing about this.

These four Nutritional Sciences students are gaining invaluable experience within the food and health industries that will benefit them in their nutrition careers. They are just a few examples of the work our nutrition students are doing outside of TCU. Whether students are working, interning, or volunteering, we are proud to call the students of our department, who seize these opportunities, our own.

-Maddie Settle, Sophomore Nutrition Major
Promoting Happiness and Brain Power

One might ask what's the health trick, the happiness potion? How are people achieving a happier mentality and certain areas in the world achieving lower depression rates? Are there ways to enhance brainpower, mindset, happiness, and overall health? Recent research has suggested incorporating healthy polyunsaturated fats: omega-3 and omega-6, as a means of reducing the prevalence of depression and enhancing mental health and happiness. Adding these healthy fats as well as living a well-balanced healthy life-style, one will improve their health, happiness and overall wellbeing.

Linoleic Acid, an omega 3 fatty acid, is one of two essential fatty acids, meaning it cannot be produced in the body. It is a polyunsaturated fatty acid that provides essential nutrients for achieving optimal health. We need omega-3 fatty acids for numerous normal body functions, such as controlling blood clotting and building cell membranes in the brain, and since our bodies cannot make omega-3 fats, we must get them through food. Omega-3 fatty acids are also associated with many other health benefits, including protection against heart disease and possibly stroke. Recent research and studies have shown that there are potential health benefits associated with the increased intake of omega 3 fatty acids. Both omega-3 and omega-6 fatty acids are definitely important and are not difficult to include in one's diet to carry through these health benefits.

Sources of omega 3 fatty acids in our diet primarily include: cold water marine fish, walnuts, flaxseeds, avocados, olives and green vegetables, such as Brussels sprouts, kale, and spinach. There are also omega-3 fatty acids found in some vegetable oils, however, oils are the primary source for the omega-6 fatty acids. Linoleic acid, an omega 6 fatty acid, is also a polyunsaturated fat that our body cannot produce on its own through other foods. Common sources include safflower, corn, cottonseed, and soybean oils.

Most Americans do not get enough omega-3 fats, but eat an abundance of omega-6 fats from vegetable oils that are found in a variety of popular American foods. To ensure adequate intake of omega-3 fat, consumption of one serving of an omega-3 rich food is recommended. A serving of fatty fish (such as salmon), a green salad with avocado and olives on top or a handful of walnuts or ground flaxseed mixed into your morning oatmeal are all great sources of omega-3 fat.

Omega 3 fatty acids are essential to health for many reasons. The fat is known to have anti-inflammatory benefits related to heart health. Some studies have also shown that specific areas of the world have a smaller incidence of depression and have higher levels of overall happiness as well as better focus, mindset, mentality and brain health related to eating more omega-3 rich foods. Other areas of the world naturally intake higher amounts of omega-3 fatty rich foods such as fresh cold water fish and green vegetables. The American diet may be easily modified to include many of these same foods with a bit more effort.

Americans can improve their overall health by striving toward increasing omega-3 consumption. Some steps toward improved consumption include focusing on which foods you like that may contain omega-3 and which omega-3 rich foods may pair well with your lifestyle and foods you already enjoy. A healthy stride toward happiness, focus, and health can be achieved simply through a few dietary modifications.

-Annie Kate Genasci, Sophomore Nutrition Major
**Healthy Dorm Room Snacks**

It’s ten p.m. on a weeknight and you’ve been studying that chemistry for hours now. Your stomach lets out a dull roar and you anxiously look around for the closest food substance available. Realizing that your only options are Oreos, Pringles, or that tempting jar of Nutella, you end up going with Nutella because hazelnut is healthy right? I’ve often found myself in this situation and after finishing off a whole sleeve of cookies and feel regretful. This pain-staking decision can be alleviated with a trip to Kroger and a few easy and nutritious recipes you can prepare yourself in your dorm room.

Microwaves are an extremely useful kitchen appliance that can be used to make something more than popcorn or to heat up leftovers. Here are a few microwave recipes for breakfast, dinner, and quick snacks.

For breakfast a nutritious and easy recipe to prepare is Microwave Cinnamon Maple Breakfast Quinoa. It only takes 10 minutes and will provide you with a complete protein to start out your day.

**INGREDIENTS:**
- 1/2 cup quinoa
- 1 cup cold water
- 1/2 teaspoon cinnamon + more for garnish
- 2 teaspoons butter
- milk or cream, to taste
- maple syrup, to taste
- banana slices

**DIRECTIONS:**
Place quinoa in water and rinse well. Drain quinoa, then stir in 1 cup cold water, 1/2 teaspoon cinnamon and 1 teaspoon butter. Microwave on high for 4 minutes. Stir and microwave 3 more minutes. Remove from microwave, cover with foil and sit 2 minutes. Fluff quinoa and stir in remaining butter. Divide between 2 bowls and top with milk, maple syrup, banana slices and cinnamon to taste.

For those days when you’re too busy to leave the dorm for dinner, a great recipe is the One-minute Microwave Quiche in a Mug. This will provide you with a great source of protein from the egg and vitamins and minerals from the tomatoes. With a total prep time of 2 minutes and a cook time of 1 minute this makes for a quick meal.

**INGREDIENTS:**
- 1 large egg
- 1 1/2 tablespoons whole milk (substitutes: half and half or heavy cream)
- 1 teaspoon melted unsalted butter
- Pinch of salt
- Pinch of freshly ground black pepper
- 4 small grape tomatoes, halved
- 1/8 cup torn pieces of fresh bread
- 1 tablespoon grated cheese (e.g., cheddar cheese, mozzarella, etc.)
- 1 teaspoon chopped fresh herbs, plus more for garnish (e.g., green onions, Italian parsley, chives, etc.)

**DIRECTIONS:**
In a microwavable mug, add egg, milk, melted butter, salt, and pepper and whisk until thoroughly mixed and egg whites are completely broken up. Add halved grape tomatoes, torn bread, grated cheese, and chopped herbs on top of egg mixture, making sure ingredients are evenly dispersed and have not settled to bottom of mug. Ingredients will stay settled within the quiche mixture better if you do not whisk ingredients into egg mixture. Place mug in microwave, and cook on high for 1 minute, just until egg is completely cooked and quiche is slightly puffed. Garnish with fresh herbs and serve immediately.

In case you don’t have the proper measuring utensil, here are some conversions with readily available items. 1 cup of fluid is about 1/2 of a 16 oz. water bottle. 1 cup of dry ingredients is roughly 4 palms full. A regular cereal spoon is good for measuring tea spoons, and 3 of those make up a tablespoon. As far as the 1/8 cup bread that’s about 1/4 of a slice of bread. If you don’t have tin foil for the quinoa recipe, you can cover your quinoa with a plate as well.

**A good snack to prepare for yourself is roasted chick peas.** Chick peas are a great source of fiber and B vitamins. All you have to do is drain and rinse the chick peas, season them with a little salt and pepper, and microwave them for one minute. After the minute is up, pull the chickpeas out and turn them. Repeat this microwave procedure three to four times until the chickpeas are at a desired texture. This will give you a filling snack that will also help curb your instinct to reach for those Pringles.

**When your roommate comes back to the dorm hacking up a lung, or when you’re sitting in lecture next to someone with the sniffles and you’re worried about catching the plague, check out this recipe for an Immune System Boosting Smoothie.** Though this one may require a trip to the BIJUU smoothie bar, these ingredients are usually readily available there.

Your smoothie needs to be composed of the following: frozen raspberries, frozen strawberries, an orange, yogurt, and almonds. Between the antioxidants and vitamin C provided by the berries and orange, the probiotics in the yogurt, and the minerals (Magnesium, Zinc, and Iron) in the almonds you’ll be ready to fight off whatever comes your way.

Now armed with a few simple recipes you can provide yourself with some more nutritious food for your dorm room hunger pangs and a reason to stay away from those Oreos!

-Nicholle Benedict, Sophomore Nutrition Major
One of the greatest obstacles people face when striving toward healthier eating habits is selecting foods that are both nutritious and affordable. Luckily, there are many resources available at our fingertips. Whether you have a smartphone or prefer looking online, check out these helpful tips.

**Key Ring**

This app originally was created to consolidate shopper loyalty cards, from Kroger to Express and beyond. The app, which is available on both Apple and Android devices, provides access to sales and coupons. It has the weekly circulars for every nearby store and allows you to search for specific products and compare their prices at the selected stores. It also enables users to create shopping lists from scratch or from sales circulars and offers. No printing is necessary, which makes this app usable in any place at any time. Though there is a website, it does not have the same resources or capabilities.

**Favado**

Featured in a 2014 Forbes article, Favado is one of the most recent and useful apps when it comes to saving money on groceries. It is a nationwide app with weekly savings for over 65,000 grocery and drug stores. Users select stores they use and are then able to compare weekly ads, locate the best deals, and create shopping lists. Any item that has a coupon available has it listed within that weekly ad so there is no need for additional searching. The user can create a favorites list and elect to get notifications for new sales in selected stores. As with Key Ring, no printing is required. The website is similar to that of Key Ring in that it has a blog and tips, but not the same savings capabilities as does the app.

**Coupons**

Whether you prefer an app or a website, Coupons can satisfy your needs. Both coupons.com and its affiliate app have hundreds of coupons available every day. Unlike Key Ring and Favado, users must print their coupons beforehand. The app, however, allows you to print your coupons to a wireless printer.

**Choose My Plate Website**

The USDA’s ChooseMyPlate.gov features an entire section on healthy eating on a budget. It has tips for creating a grocery game plan, how to shop smart and fill your cart, and preparing healthy meals. It also features recipes and sample menus. While it does not have coupons available, the shopping tips will help you save money on your next grocery bill.

**Store Specific Savings**

Many stores have websites and apps that allow you to further increase your savings. Both Tom Thumb and Kroger, for instance, have coupons available online. Users can choose to print them or to load them to their loyalty cards. Target has coupons online that consumers can print. The store also has an app, Cartwheel, where users can select from a variety of savings. The app allows consumers to scan items while shopping to locate coupons and discounts. It will often suggest similar products (such as the same product but a different brand) that has a coupon so that users optimize their savings.

Don’t feel like using an app, a loyalty program or the internet to save money? Look for these healthful, low cost foods:

- Brown rice
- Whole-wheat pasta
- Beans
- Lentils
- Oats
- Frozen vegetables
- In-season produce
- Canned tuna/salmon
- Popcorn (whole kernels)

Mary-Catherine Stockman, Junior-Coordinated Program in Dietetics
Dietetics is a field that is not only growing with the preventative healthcare movement, but it is also offering a broader scope of career options than ever before. The US Bureau of Labor and Statistics predicts that the employment of dietitians and nutritionists will increase 20% from 2010 to 2020 and offer employment opportunities beyond the clinical setting.

A nutrition degree alone, or through a Didactic or Coordinated Program in Dietetics such as those offered to students through the Department of Nutritional Science at TCU all offer bright and diverse job outlooks. The direction each student chooses to go is as broad or narrow as they choose. Students in the Coordinated Program are able to sit for their RD exam soon after graduation and enter the work force almost immediately. Didactic Program students may apply for Dietetic Internships with a wide range of nutrition emphases, pursue master’s degrees in a new subject of their choice, or may use their qualifications to work as Registered Dietetic Technicians. Nutrition majors or students in either of the two programs may also consider pursuing Medicine, Nursing, or Masters in Public Health.

As Registered Dietitians, students will enjoy an array of career options, particularly with the newest Patient Protection and Affordable Care Act allowing for insurance reimbursement for dietitians who provide preventative services. Doctors will likely be more receptive to coordinating care with Dietitians, making necessary referrals, and allowing increased RD autonomy. According to Today’s Dietitian, dietitians initial responsibility is raising public awareness of the preventative services available.

Until recently preventative health has ironically been an afterthought when addressing chronic diseases related to obesity such as type II diabetes, heart disease, cardiovascular disease. Reforming the way Americans approach healthcare and encouraging use of preventative services is another area in need of dietitians such as those entering the field. From outpatient and inpatient clinical dietitians, to food scientists and corporate wellness managers, students face few limitations in career opportunities post graduation. With the array of experiences offered to students in the Department Nutritional Sciences students are well prepared for whichever direction they may choose.

-Emily Curlin, Senior - Didactic Program in Dietetics

I am curious to dig deeper on how saturated fat leads directly to atherosclerosis. What is the specific cascade of events that causes dietary saturated fat to build up in the arterial walls?

“Saturated fat does lead to atherosclerosis, but it is not actually saturated fat that is building up in the arterial walls, it is oxidized cholesterol. However, a diet high in saturated fat will increase the bad plaque-forming type of cholesterol in the blood, known as LDL cholesterol. Saturated fat inactivates cell receptors that are responsible for allowing LDL cholesterol to enter the cells. When these receptors are inactivated, it inhibits cholesterol from entering the cells and the cholesterol stays in the blood stream, thereby elevating blood cholesterol. Elevated blood cholesterol levels are a silent, symptomless risk factor for heart disease. The underlying cause of most heart disease is atherosclerosis, which is a narrowing of the arteries caused by a buildup of cholesterol-containing plaque. When cholesterol levels in blood are high white blood cells (sometimes called scavenger cells) begin to uptake the cholesterol and form something called a “foam cell.” These foam cells make up the fatty streak that is the beginning of an atherosclerotic plaque.

In short, high saturated fat intake prevents cholesterol from being able to enter the cells, which results in high blood cholesterol, accumulation of cholesterol in the lining of arteries results in plaque formation in arteries.”
Health on a Budget

Apparently, when health sciences students team up, incredible things can happen. “This experience definitely showed me how important a holistic view of health is,” said sophomore Nutrition major Maddie Settle of her involvement with the project “Health on a Budget.”

Members of the Student Nutrition and Dietetic Association collaborated with nursing students Audrey Kromer and Autumn Hackett for their Chancellors’ Leadership Program (CLP) senior legacy project. CLP is a three and a half year program that seeks to instill leadership and social change. Towards the end of the program, students team up to develop a project that will serve as their legacy on TCU or the city of Fort Worth. Kromer and Hackett, who have experience at clinical shifts at local hospitals, decided to leave a legacy of increased nutritional education.

“We noticed in the hospitals that there was a lack of education on things that we would view as simple behaviors that would drastically improve people’s health if they knew about them,” Hackett explained. The nursing students said they “didn’t want to start from scratch.” They collaborated with the YWCA to create a class on health and proposed their idea to SNDA at a meeting in Fall 2014. A few of SNDA’s members volunteered their time and nutritional knowledge to help educate women in Fort Worth on ways to eat healthy while sticking to a budget. “We had ideas of what we wanted to teach, but we didn’t know how to teach it. The nutrition students helped us fill in those gaps and make the curriculum a lot richer than it would have been if we made it just us.” said Hackett. SNDA’s students helped prepare lesson plans on practical skills such as reading nutrition labels and simple diet substitutions, such as water for soda. Those involved experienced a picture of nutritional education in a real life setting.

“I learned how to break down basic information about nutrition into simple categories that could be easily understood by people without any previous knowledge about nutrition,” Freshman Nutrition major Maria Martinez shared. Settle added, “This experience also showed me how I will have to be creative and think on my feet in my future career because sometimes there are limitations or restrictions in life that cause your ‘Plan A’ to not work.” The benefits of this experience extended beyond its impact on TCU’s future dietitians and nurses.

The women who had the opportunity to take the health class left each session with practical nutrition knowledge that could drastically improve their well-being. Kromer and Hackett shared that the most rewarding part of the experience was the night they taught a zumba class and were able to see the relationships that had formed. “We laughed with them…I felt close to the women,” Kromer said.

The collaboration of Nursing majors and Nutrition students now is a promise for the holistic healthcare approach that they will experience in a professional setting down the road. The results of collaboration truly can make a positive difference.

-Sarah Kromer, Sophomore Nutrition Major

Current Diet Trends

In recent years diets have gained followers who have claimed both benefits and lack thereof. Some common diets include the gluten-free diet, the Paleolithic diet and Weight Watchers diet. A more scientifically supported diet that gained attention is the DASH diet, which was acclaimed for its safety, nutritional completeness and heart health benefits. Another popular diet is the TLC diet. TLC stands for Therapeutic Lifestyle Changes, and it is said to promote cardiovascular health. This diet requires a “do-it-yourself” approach, which may prove challenging for some. Some diets are inspired by other cultures, such as the Mediterranean Diet. This diet contrasts other diets such as the Paleolithic Diet by emphasizing limited intake of red meat. Fish, poultry, eggs, legumes, nuts and lower fat dairy have taken red meat’s place as protein sources in an effort to reduce cholesterol and saturated fat intake. Another popular diet trend is eating the high fiber, slow digesting grains such as quinoa, spelt, freekah, millet, faro, buckwheat and amaranth.

Those looking past the diets are learning to be more discerning in their food choices. Consumers have learned to follow guidelines such as eating foods with fewer ingredients such as fruits, vegetables, grains, legumes and nuts and seeds resulting in a much healthier way of eating. Consequently, consumption of packaged and processed foods on the inner aisles of supermarkets has been reduced by those seeking a healthier, balanced diet. Diet trends will continue to emerge as scientists continue to find the next healthiest food or diet trend, for now those seeking a healthy diet can focus on eating whole, natural foods and a diet rich in fruits and vegetables.

-Rachel Winter, Freshman Nutrition Major
Righteous Foods

Fort Worth’s food scene is continuously growing bigger and better each year. While the city is still greatly known for its classic restaurants such as Joe T. Garcia’s and Angelo’s Barbeque, one new restaurant is changing the game and making Cowtown a healthier place.

Lanny Lancarte Jr., the great grandson of Joe T. Garcia, opened up his new restaurant called Righteous Foods in fall of 2014. Lancarte is no amateur in the restaurant world; he also owned Lanny’s Alta Cocina Mexicana, but now Righteous Foods will take over that location on 3405 W 7th Street. On their website and on the wall when you first walk into the restaurant reads their manifesto, “Good for the body. Good for the soul. Great to taste.” That’s what Eating Righteously is all about. It’s a way of life that may mean a longer, healthier life too.

“Our ingredients come from only reputable and organic sources. “Nothing is processed – unless you’re talking about our cooking.” Their menus on their website are also described as “a healthy dose of friggin’ awesome”.

Lancarte’s “clean-eating” restaurant uses local organic foods and USDA-certified, natural ingredients, and they even grow their own herbs planted in wood boxes that are hung up on their patio setting. It doesn’t get much more locally grown that that. Their menu features breakfast, lunch, dinner, Saturday brunch, and happy hour features, all consisting of delicious, nutritious options. They offer options for both vegans and meat-lovers so that all customers can be happy with their healthy meal. Their breakfast features an Acai Bowl with coconut, house granola, organic banana and berries, and organic pineapple that is delectable and refreshing, or if you’re looking for something a little more savory, they have Swine Burritos made with organic eggs, Niman ranch chipotle, cheddar sausage, and a whole wheat flour tortilla. If you still want a breakfast burrito but are vegetarian or gluten-free, they also have Burritos for those who are Gluten-free or prefer to skip the meat. Lancarte also created a variety of detox beverages, house made cold pressed juices, and smoothies.

“Righteous Foods is a great new addition to the Fort Worth dining scene and Lancarte proves that healthy food can be savory, delicious, and affordable. Once you try it, you will most definitely become a fan of eating righteously.”

-Jordan Roland, Freshman Nutrition Major

If you are interested in writing in next semester’s Newsletter please contact Emily Curlin at Emily.curlin@tcu.edu.