California State University Northridge

SDFSA newsletter

FALL 2007

INSIDE THIS ISSUE:

President's Message

Dear Fellow Students, SDFSA Members, Faculty, and Alumni:

Welcome returning students, new students, and faculty. The semester has begun with two exciting lecture series presentations and collaborations between different organizations across the campus.

My name is Anna Abulyan and I'm pleased to serve as president for 2007-2008 for Student Dietetics and Food Science Association of Family and Consumer Sciences Department. As many of you know, SDFSA has been growing exponentially and has developed into a very active association.

All of our members will continue to ensure that SDFSA fulfills its mission to "provide framework for meaningful student involvement, to stimulate professional interest, and to develop channels of communication between students, advisors, faculty, the Family Consumer Sciences Department, and the community in the areas of Dietetics, Food Science and related fields." My journey into the Nutrition and Dietetics field began at a young age with the desire to educate the community on the benefits of healthy eating. I came to California State University, Northridge as a transfer student to fulfill my dream in the field. In Spring 2006, I took the position of one of the co-vice presidents and discovered my passion for this Association.

There are many exciting annual events planned for this coming year. We will continue to have our exciting programs: the Dietetic Internship Symposium in the Fall, the Career Symposium and the Iron Matador in the Spring, and the lecture series throughout the year. My goal is to incorporate three key elements: passion, purpose, and priority, which will provide the base to a successful and productive association. SDFSA exemplifies *teamwork.*

On behalf of the entire SDFSA, we thank you for your continued support and wish you continued health and happiness.

Sincerely,

Anna Abulyan

SDFSA President

Advisor's Message

"People rarely succeed unless they have fun in what they are doing." -Dale Carnegie, 1888-1955

And nothing spells success and fun better than SDFSA. Our tremendously active and successful Student Dietetic and Food Science Association continues to set the world on fire because of our dedicated and enthusiastic members. This semester, our membership has grown to new heights, with each member being a mover and shaker, here to make a difference, while having fun.

Take a look at our fabulous new website (http://hhd.csun.edu/sdfsa), and you will see for yourselves! How can one group accomplish so much?

It is an honor to be associated with every **SDFSA** member, to see how much you accomplish as a cohesive team. Congratulations to all!

Dr. Terri Lisagor,
Faculty Advisor

Judges, Geri Lorenzana and Dr. Fajardo-Lira chow down.!

Iron Matador

By Sabrina Kim

On May 10, 2007, the Student Dietetic and Food Science Association (SDFSA) held the first "Iron Matador" competition in Sequoia Hall, room 112. This SDFSA event was a spin on the Food Network's "Iron Chef" and was organized to engage food science majors and to attract those considering membership into SDFSA.

The competition was structured similarly to "Iron Chef" and even included the famous secret ingredient! There were three teams of two members: Hal Ellison & Anthony Rizzo, Cathy Fusano and Maryam Yakhashi, and Euka Johnson & Vaughn Sulukyan. Each team was required to make an appetizer, main entrée, and a dessert. And of course, this would not have been Iron Matador without the secret ingredient! There were three secret ingredients: yogurt, dates, and oranges. "Each team was asked to choose only one of the three secret ingredients to incorporate into one of their dishes", said Lisa Calanni, 2007-2007 SDFSA president. The room was filled with students, parents, and professors as they cheered on their favorite team. There was so much excitement in the room that when asked, all of the teams agreed that they were feeding off of the crowd's energy and enthusiasm!

The judges for this event were Geri Lorenzana, SDFSA treasurer, Dr. Claudia Fajardo, food science professor, and Dr. Allen Martin, Consumer Affairs professor. Each team presented their dishes to the judges and was evaluated on presentation, texture, and overall taste.

In the end, Anthony and Hal won the competition and have the privilege of saying that they are "Iron Matadors"! The second annual "Iron Matador" is scheduled to be held in March of 2008 and SDFSA is currently seeking volunteers to serve on the planning committee. If you are interested, please contact Anna Abulyan, 2007-2008 SDFSA president at anna_abulyan@yahoo.com

Join SDFSA Today!

***SDFSA membership: $10**

***DI Sypmosium: $10**

***SDFSA T-shirt: $5**

***Long lasting friendships and networking opporunities: priceless**

New SDFSA members are always welcome! Get connected to the world of dietetics and food science; join SDFSA today! Membership is only $10 a semester and worth every penny! For more information please contact SDFSA president, Anna Abulyan, at anna_abulyan@yahoo.com or visit out SDFSA website: http://hdd.csun.edu/sdfsa . We look forward to seeing you at the next meeting!

Upcoming Events

Nutrition Lecture Series: Becoming an RD

Thursday, November 15, 2007

See page 11 for details!

Dietetic Internship Symposium

Saturday, November 17, 2007

See page 15 for details!

***LAST* SDFSA Meeting of the Semester**

Tuesday, November, 27 2007

8:00 a.m., Room SQ 112

Kids Cooking Fun!

By Cheri Kaczmarek

Two of participants proudly show off their creation.

For five weeks this summer, twenty children ages 7-12 participated in the first ever cooking class held during the Summer Academic Program for Elementary School Students (SAPESS) at California State University, Northridge. Led by Graduate student Rania Dabboussi and Dietetic Intern/ Graduate student Arlyn Sabado, this course provided students with the opportunity to learn the basics of nutrition, reading recipes and preparing everything from omelets to sushi.

Each day began with a short nutrition lecture followed by a demonstration of that day's recipe given by guest Chef, Cecilia deCastro. Chef deCastro has worked side-by-side with the world famous Wolfgang Puck, and she is is an instructor at the Westlake Culinary Institute. Chef deCastro made working with ingredients an entire sensory experience. Fresh herbs were passed around to smell, blind taste tests were conducted, and finished recipes were colorfully displayed and presented. Each student was able to take a turn at being Chef's "Assistant" during the demonstrations.

The children were split up into groups of five, each overseen by a student assistant. These Assistants included John Chang, Amanda Monforte, Danny Rogers, Amanda Degnan, Angela Tse, Kristin Henson and myself. Within these groups, the children learned to work together, splitting tasks to create a recipe. Whether it was chopping, mixing, reading the recipe, or throwing out the scraps, each student had his/her favorite task. For some, this was their first experience working in the kitchen. Many also tried new foods for the first time. The teamwork that I observed was incredible, and the students were so proud of their creations.

The five weeks concluded with a Graduation Banquet, entirely prepared by the children. Attending the banquet were nearly 100 friends, family and faculty. The menu was an international affair, with Italian, Asian, and Mexican cuisine. Dessert included homemade ice cream, cupcakes and fruit kabobs. A special thank you goes to Jae-min Mindala, Marketing Supervisor for Whole Foods Market in Porter Ranch who donated all of the ingredients that made this course a huge success! A news clip from the banquet can be seen two minutes into the video at the following web address:

http://www.la18.tv/video.aspx?vid=b7e08895-9d91-4fb4-8a84-0829076b1b9a

Did You Know?

Here are some fun facts that may surprise you:

- Hunter-gatherers in the Australian outback today live on **800** varieties of plant foods. Modern Americans live principally on **three**: corn, soy and wheat.
- One third of Americans get **47 percent** of their calories from junk foods**.**
- The average American is eating **300 more** calories each day than he or she did in 1985. Added sweeteners account for 23 percent of those additional calories; added fats, 24 percent.
- In real dollars, the price of fresh fruits and vegetables has *risen* nearly **40 percent** since 1985. In real dollars, the price of soft drinks has *dropped* **23 percent**
- Ten cups per day of green tea delayed cancer onset 8.7 years in Japanese women and three years in Japanese men.
- Maternal *limitation* of seafood consumption to less than 340 grams per week during pregnancy did not protect children from adverse outcomes. In contrast, this observational study [Avon Longitudinal Study of Parents and Children] showed beneficial effects on child development when maternal seafood consumption exceeded 340 grams per week, with no upper limit of benefit.
- Chocolate may have a mild hypotensive [blood-pressure lowering] effect.

Author, Brad Lemley, has compiled all the above facts based on research carried out by valid organizations. For more information and fun facts visit the website: http://www.bspcn.com/2007/06/15/10-surprising-nutrition-facts/

Be Fiberful!

By Daniella Lavi

The picture above displays some of the many fiberful foods!

When most people think about fiber the thought of constipation, gas, and Fig Newtons ™ come to mind. What many people don't realize is that fiber provides many other health benefits besides prevention and relief of constipation. Dietary fiber has also been linked to fight against heart disease, high blood pressure, cancer, high cholesterol, and even preventing obesity (1).

Dietary fiber is derived from plant cells and is categorized as either soluble or insoluble depending on which part is eaten. In general, soluble fiber is found in the flesh of fruits and insoluble is found in the skin of fruits. Foods high in fiber include fresh or dried fruits, vegetables, legumes, whole grain products, and hot/cold cereals. Fiber stands out from other food sources fiber is made up of components that are resistant to hydrolysis by human digestive enzymes (3). In other words, our bodies cannot digest fiber for energy use in the human body.

Instead, fiber in our body acts as a bulking agent. Added bulk increases fecal volume and speeds up the rate at which waste material pass thru the colon; reducing the time for toxins to accumulate in the colon and cause cancerous cells (3). As fiber exits the GI system it binds to bile, which is then fermented by colonic bacteria to produce propionic acid. The combination of bile excretion via fecal matter with propionic acid contributes to lowering cholesterol (3). High blood cholesterol is a major risk factor for developing high blood pressure and heart disease- the leading cause of death in Americans since 1900. Therefore a diet high in fiber reduces the risks for high cholesterol, high blood pressure, and heart disease.

Added bulk also causes delayed emptying of foods from the stomach, making you feel full sooner and longer, thus controlling your appetite (1). This property unique to fiber may help in the prevention of obesity. High fiber diets are also low in calories and fat which is important for those who are trying to lose weight.

To obtain the many health benefits of fiber, consume the daily recommended amount of fiber which is about 25-35 grams. Those with high cholesterol are recommended to consume up to 50 grams of fiber per day (3). To accomplish a high and balanced fiber diet, eat a variety of foods from the following groups listed in the chart below. Be fiberful by making fiber a priority in your diet today!

Whole Grain Products (wheat, oats, rye, corn) Whole grain breads, whole grain crackers, whole grain muffins, whole grain pasta, corn tortillas, popcorn	Vegetables Carrots, peas, potatoes, green beans, corn, spinach, broccoli, cauliflower, cabbage, squash
Cold Breakfast Cereals 100% bran cereal, shredded wheat cereal, puffed wheat cereal	Fresh Fruit Pears, peaches, apples, strawberries, figs
Hot Breakfast Cereals Oatmeal, wheat germ	Dried Fruit Prunes, raisins, figs, apricots, pears, peaches, apples
Cooked Grains Brown rice, barley	Legumes Pinto Beans, navy beans, black beans, kidney beans, dried peas, lentils, garbanzo beans

References

1. American Dietetic Association. (2006). *Dietary fiber: An important link in the fight against heart disease.* Retrieved September 25, 2007, from http://www.eatright.org/cps/rde/xchg/ada/hx.xsl/nutrition_350_ENU_HTML.htm

2. California Department of Health Services. (2007). *Is Your Child Constipated?* Pamphlet from WIC Supplemental Nutrition Branch.

3. Torabian, S. (Fall 2006). *Dietary Fiber.* FCS 307 Powerpoint presentation presented by professor Torabian of California State University Northridge, Northridge CA.

Roasted Butternut Squash Soup

Recipe Created by Shani Verchick

Here is an easy and nutritious recipe that you can make all year long. This soup has a wonderful creamy texture, yet without the cream. Try topping your bowl of soup with a dollop of yogurt, fresh chopped cilantro, fresh pesto, or roasted walnuts to each bowl of soup for added flavor and texture.

Enjoy!

Ingredients

3 lbs butternut squash, halved lengthwise and seeded

1 can (14.5 oz) chicken broth (or vegetable broth)

1 large onion, chopped

2 tablespoons extra virgin olive oil

2 medium apples, peeled and chopped

1 tablespoon finely grated and peeled fresh ginger

½ teaspoon cumin

Directions

1. Preheat the oven to 400 degrees and arrange rack in the center: lightly oil a shallow baking pan. Place squash, cut side down , in a pan and roast until tender, about 1 hour. Turn the squash over. When cool enough to handle, scoop out flesh into a bowl and mash.
2. While the squash is roasting, bring broth and 3 cups water to a simmer in a small saucepan. Remove from heat and keep warm, covered.
3. Heat Olive oil in a large pan over medium heat. Add onion and cook, stirring occasionally, for 5 minutes. Add chopped apple and cook for an additional 7 minutes.
4. Remove pan from heat. Stir in ginger, coriander, cumin and squash until combined well. Blend together squash mixture and broth in batches until smooth.
5. Puree mixture in a food processor of power blender.
6. Heat soup over moderate heat. Season with salt and pepper. Add additional water if need to reach desired consistency. Ladle soup into bowls and serve.

Serves 6

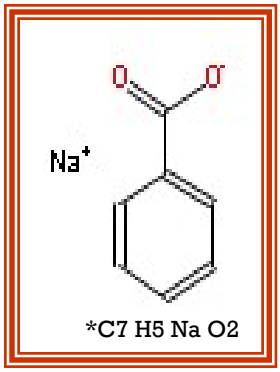
(Note: This soup freezes very well!)

FYI: What is Sodium Benzoate?

By Sarah Kang

Sodium Benzoate is a colorless or white crystal-like, aromatic chemical compound, C7-H5-Na-O2. It is also called E211 or benzoate of soda. Sodium benzoate is soluble in water and used as a preservative for various products, most commonly used in foods and drinks. Some of the products that integrate sodium benzoate are "margarine, salsas, maple syrups, pickles, preserves, jams and jellies" (1,2). Sodium benzoate is also used in many soft drinks. Besides foods and soft drinks, sodium benzoate is used in the process of manufacturing dyes, antiseptic medicine, and even in plastic (polypropylene)(1-7).

Sodium benzoate has a bacteriostatic characteristic, which ceases the growth of microorganisms, and therefore extends the shelf life of many products (1,2). This is why many manufacturers use sodium benzoate in their products. There has been some controversy in the past because studies have not been in conformity. Some studies say that sodium benzoate is not harmful and it is found naturally in cranberries and prunes. On top of that, the Food and Drug Administration (FDA) monitors the amount of sodium benzoate in a product before it is released to the public. On the other hand, a study conducted by the Food Standard Agency (FSA) shows that there might be a connection between impulsive behaviors in children and food additives, which includes sodium benzoate. The FSA is aware that hyperactive behavior is complicated because there are other factors to consider such as "...genes, being born prematurely, environment, and



... Sodium Benzoate Continued

upbringing," but they say, "Hyperactive children might benefit from fewer additives" (3). Although this is not the first study to make this statement, there is no conclusive outcome because there are other factors to consider.

Another claim that was made in public was that when sodium benzoate and vitamin C interacted it forms a carcinogenetic substance, which may lead to cancer and other diseases. A UK scientist claims that the soft drink industries are aware of the potential dangers of this chemical compound, and they are depending on outdated resources. The UK scientist said he wanted updated studies to be done on food additives such as sodium benzoate. Countering these negative claims about sodium benzoate, a faculty member from Cornell University says that, "75-80% is excreted within 6 hours, and the total dose leaves the body within about 10 hours" (4).

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5. FLEXNEWS (2007). Food and drink industry with new health issue: UK scientist points out towards use of potentially dangerous preservative – E211. Retrieved on October 3, 2007 from www.flexnews.com
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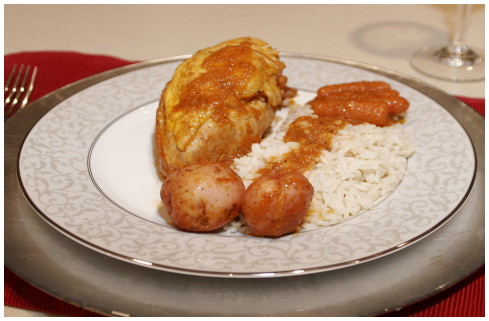
*Picture from www.sciencebase.com

Fricase de Pollo

Recipe Provided By Sanam Esfahani



Directions:

Prep Work:
- In small food processor, mince the onion (and fresh garlic if using).
- Peel and Cut Carrots and Potatoes and set aside (place potatoes in cold water to prevent browning).
- Sprinkle Chicken with kosher salt on both sides
- start cooking your rice and have all other ingredients out and ready for use.

Heat oil in large pan with high sides over medium-high heat. Brown chicken on both sides. Brown in batches and add more oil, little by little, if necessary. Once Chicken is browned and removed from pan, sauté onions until translucent, about 3 to 5 minutes. Add broth, tomato sauce, wine, oregano, cumin, salt & pepper to taste (about 1 -2 tsp of each). Return chicken to the pan. Add potatoes, carrots and cover. Reduce temperature to medium to medium-low and cook for about 30 minutes or until chicken is done. Alternatively, use a pressure cooker and cook under pressure for about 10-15 minutes. Serve chicken with carrots, potatoes and sauce over a bed of rice on each plate.

Recipe from: Hortensia Rodriguez and Betty Rodriguez-Hakes

(http://goumetbetty.com/Recipes/fricasedepollo.htm)

Ingredients:

1 small onion
4 carrot
2 small potatoes
3 tablespoons Roasted Garlic Olive Oil, (* If using regular Olive Oil, add 2 cloves of fresh garlic to onion mixture)
salt and pepper, to taste
3 large chicken breast half without skin, with rib bones
1 cup tomato sauce
1/2 cup chicken broth
1/4 cup white wine
1 1/2 tablespoon oregano
2 teaspoons cumin
2 cups cooked White Rice

Diabetes Food Pyramid

By: Dulce Osornio

As you can see this looks similar to the USDA food guide pyramid but in actuality it is the Diabetes Food Pyramid. Major differences between the two pyramids are that the Diabetes Food Pyramid separates foods based on their carbohydrate and protein content instead of their usual classification as a food. Portion sizes are different; the goal is to have about the same carbohydrate content in each serving. For example, cheese is found in the meat group in the Diabetes Food Pyramid instead of the milk group in the USDA pyramid. Potatoes and beans are found in the grains group in the Diabetes Food Pyramid instead of the vegetables group in the USDA pyramid. A serving of pasta or rice is 1/3 cup in the Diabetes Food Pyramid instead of ½ cup in the USDA pyramid. Fruit juice is ½ cup in the Diabetes Food Pyramid instead of ¾ cup in the USDA pyramid. The Diabetes Food Pyramid has 6 food groups that include grains and starches, vegetables, fruits, milk, meat and meat substitutes, fats, sweets, and alcohol.

Grains and starches are at the base of the pyramid meaning they have the largest number of servings of 6-11 servings per day, and the highest carbohydrate content. Some foods in the grains section are bread, cereal, rice, pasta, potatoes, peas, corn, black eyed peas, lima beans and pinto beans.

Examples of a serving size from this group are:

1 slice of bread
¼ of a bagel (1 ounce)
½ an English muffin or pita bread
1, 6 inch tortilla
¾ cup dry cereal
½ cup cooked cereal
½ cup potato, yam, peas, corn, or cooked beans
1 cup winter squash
1/3 cup of rice or pasta

The second level up on the pyramid is vegetables and fruit meaning that the 2nd largest number of servings should come from these two food groups. These two groups have the 2nd highest carbohydrate content among the 6 food groups.

From the vegetable group 3-5 servings per day is recommended. Spinach, chicory, sorrel, Swiss chard, broccoli, cabbage, bok choy, brussels sprouts, cauliflower, kale, carrots, tomatoes, cucumbers, lettuce, greens, carrots, chilies, and peppers are some of the foods that fall in to the vegetable category.

Examples of a serving size from this group are:

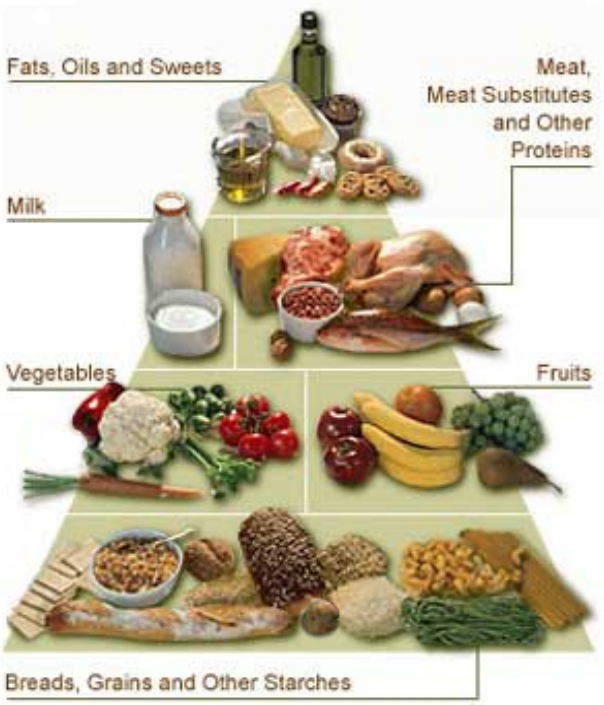
1 cup raw
½ cup cooked

From the fruit category, 2-4 servings per day is recommended. A few of the foods that are in the fruit section include blackberries, cantaloupe, strawberries, oranges, apples, bananas, peaches, pears, apricots, and grapes.

Examples of a serving size from this group are:

½ cup canned fruit 1 small fresh fruit
2 tbs dried fruit
1 cup of melon or raspberries
1 ¼ cup of whole strawberries

The third level from the bottom of the pyramid is the milk and meat groups. The recommended number of servings of milk is 2-3 servings per day. Some examples are different fat contents of milk and yogurt.



http://www.diabetes.org/nutrition-and-recipes/nutrition/foodpyramid.jsp

Examples of a serving size from this group are:

1 cup non-fat or low-fat milk
1 cup of yogurt

The recommended amount of meat and meat substitutes is 4-6 ounce per day divided between meals. Some examples include beef, chicken, turkey, fish, eggs, tofu, dried beans, cheese, cottage cheese, and peanut butter.

Examples of a serving size equal to 1 oz of meat are:

¼ cup cottage cheese
1 egg
1 Tbsp peanut butter
½ cup tofu

Fats, sweets and alcohol is the last and highest layer from the bottom of the pyramid, with serving sizes small and to be consumed on special occasions or not at all. Some examples are potato chips, candy, cookies, cakes, crackers, and fried foods.

Examples of a serving size from this group are:

½ cup ice cream
1 small cupcake or muffin
2 small cookies

The Veggie Blues By Stefania Koziol

It seems that being a vegetarian today isn't much easier than it was ten years ago. Although there has been some expansion in the vegetarian market, it is still an uphill battle. Why is it that highly processed foods are still cheaper than fresh fruits and vegetables? Why aren't there fruits and vegetables placed at a child's eye level or even in the check out isle by the latest edition of People? At least that way, while you're checking out the latest gossip about Brittney, you can eat an apple instead of a candy bar. Is this just wishful thinking? I hope that society has not accepted this as the norm and given up on trying to change it. Adopting a vegetarian diet is one way you can help change these stagnant practices. By simply using our right as consumers to purchase high quality fruits and vegetables we can begin a shift in the paradigm.

One obstacle that's prevents many individuals from adopting a vegetarian lifestyle is their worry about adequate nutrient consumption. By nutrient consumption I mostly mean protein. Protein is the number one concern many have; perhaps the past Atkin's craze has something to do with this. I have first hand experience with this concern. You would think that my protein eating habits were printed right by Angelina and Brad's breakup headlines. For those who have shown alarm in the past, I will answer your question for the last time; yes I am getting enough protein in my diet.

The American Heart Association and the Harvard School of Public Health also believe that the average vegetarian gets plenty of protein on a daily basis. The American Heart Association specifically states that, "Plant proteins alone can provide enough of the essential and non-essential amino acids, as long as sources of dietary protein are varied and caloric intake is high enough to meet energy needs." The average daily amount of protein needed is 50 grams. This amount is easy to obtain, for example , cereal with milk for breakfast, a peanut butter and jelly sandwich for lunch, and a piece of fish with a side of beans for dinner adds up to about 70 grams of protein. Even if you are vegan getting enough protein in your diet is easily attainable (although you have to be more careful).

To clear up any confusion, a vegan does not consume any animal or animal derived products, an ovo-vegetarian eats eggs but doesn't eat meat or dairy, a lacto-vegetarian eats dairy but doesn't eat meat or eggs, a lacto-ovo vegetarian eats dairy and eggs but doesn't eat meat, and a semi-vegetarian eats dairy and eggs and sometimes meat. This is actually easy to remember if you think ovo = egg and lacto = dairy. So from the above example even if the piece of fish and milk are substituted with vegan friendly alternatives the daily protein requirement is still easily met.

Complementary protein combining is also not necessary at every meal like once thought. Combining proteins is necessary because only proteins from animal sources are complete. There are nine essential amino acids your body must get from food sources. These essential amino acids are isoleucine, leucine, lysine, threonine, tryptophan, methionine, histidine, valine and phenylalanine. Vegetarians can get all nine essential amino acids by combining different plant proteins so that by the end of the day you have ingested all nine. This can easily be accomplished by combining nuts and legumes, nuts plus seeds and legumes, or corn and legumes.

Vegetarianism is not a new concept; many influential people were vegetarians: Plato, Plotinus, Pythagorus, Socrates and Einstein. The first indisputable vegetarian movement was organized during the early nineteenth century along with the first all vegetarian cookbook. Vegetarianism has its deep roots, but we seem to be pulling away from them. Even though the health benefits of vegetarianism have long been known, just the mention of a vegetarian diet still intimidates most people. Many people think that they will not be able to stick to a vegetarian diet, or that if they "cheat" and eat meat, all of their hard work will be for nothing. Adopting a vegetarian lifestyle doesn't have to be so black and white. If you find yourself falling off the wagon don't worry, making small changes away from a complete carnivore diet is beneficial as well.

There are many reasons for becoming a vegetarian. Personally I practice a vegetarian lifestyle for the environmental benefits along with the health benefits. I don't mind the negative labels associated with being green friendly (although they seem completely absurd to me) or the pressures from others to eat meat. Although I do think that it is our job as dietitians and food scientists to make it easier and more acceptable for others to enjoy a diet low in meat, whether you are vegan or just cutting back.

Sources:
http://www.hsph.harvard.edu/nutritionsource/protein.htmlhttp://www.americanheart.org/presenter.jhtml?identifier=4777

Fortification and its Fight against the "Hidden Hunger"

By Elena Dan

Fortification and Enrichment are two terms that are commonly used interchangeably. Although they are similar it is significant for you to be able to distinguish between them.

Enrichment adds nutrients to food that has lost them during processing. For example, when wheat is milled, bran and germ are lost during the process. The wheat can be enriched by adding bran back in to the final product. Fortification adds nutrients that did either not originally exist in the food or existed only in very small amounts. An example for this would be adding iodine to salt or adding vitamins A and D to milk.

Even though it is fundamental for a professional in the Food and Nutrition Science Industry to understand the difference between these two terms, it is also necessary to understand that both processes have a common goal: "To improve the nutritional value of food" (1).

The main reason for fortification of food is to decrease micronutrient deficiency, which is also often called "hidden hunger". Despite the fact that micronutrients are only needed in very minute amounts by our body, approximately one out of three people globally suffer from micronutrient deficiencies. The most prevalent micronutrient deficiencies especially among populations in developing countries are deficiencies of iodine, vitamin A, and iron. Some of the most common, yet easily preventable results of these deficiencies are: Mental retardation due to lack of iodine; Blindness or even death from lack of vitamin A; and Anemia with associated mental or physical retardation due to lack of iron. The process of fortification has been proven to be successful in eliminating micronutrient deficiencies such as iodine, or folic acid deficiencies in the United States and can be considered a preventive, cost-effective, relatively quickly implemented and population based approach. For a fortification program to be successful there are many factors to consider. The following are some important points that may determine how effective a fortification program of a food will be:

A food that is chosen to carry the specific fortified nutrient is called a food vehicle and for best results should:

- Be a major food source of the target population
- Stay unchanged in appearance, taste, and smell after fortification
- Be free of any ingredients that could interfere with the fortified nutrient's stability or bioavailability

Not increase its market price after it has been fortified

Food science and technology has proven to be capable of breaking the cycles of nutritional problems and challenges such as micronutrient deficiencies (2). A variety of institutions representing the United States such as universities, food companies, volunteer programs, and professional and scientific associations have been engaging in sharing their knowledge with similar organizations and industries in developing countries. If you are interested in alleviating dietary deficiencies, there are many areas you could get involved in. Research, technology, education and politics are among the avenues one can take. The following are examples of programs that are involved in eliminating micronutrient deficiencies (3):

- UNICEF
- Centers for Disease Control & Prevention
- World Health Organization (Department of Nutrition for Health and Development)

The Global Alliance for Improved Nutrition

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Got Calcium?

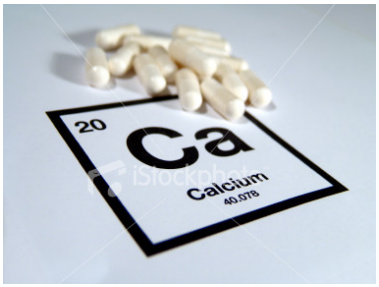
By Krista Petty

"Calcium is a very important mineral necessary for normal growth and bone mass throughout a lifetime, from childhood through adulthood."

-Kritsta Petty

Osteoporosis, a bone-related disease, is characterized by bone loss and deterioration of skeletal mass, which increases the likelihood of bone fractures. Any bone in the body can be affected by osteoporosis; however, hip and spine fractures are of most concern because of the resulting physical inhibition (1). This disease is a worldwide health problem, especially prevalent in elderly women. Adequate calcium intake is important at all ages, but especially crucial in childhood and adolescence. Children and young adults that regularly achieve optimal calcium levels will store calcium more efficiently in their bones which will help to build a strong skeletal mass and resist bone loss that comes with aging (2). Dairy products such as milk, yogurt, and cheese are good sources of calcium. For individuals who do not or cannot consume dairy, there are alternatives such as fortified soy products and calcium supplementation (1).

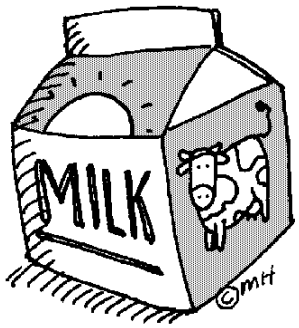
Time of Calcium Supplementation



Calcium is an important mineral for the body. Women need to be especially conscious of their calcium intake due to the risk of osteoporosis. Consumption of adequate amounts of calcium is important at every age and yet, questions remain regarding the best time during the lifespan for calcium absorption and skeletal mass maintenance. Studies have found that higher levels of calcium stored within bones will help to keep bones strong and able to withstand bone loss that accompanies the aging process (2). A correlation exists between low dairy consumption in childhood and adolescence and low bone mass density of the hip in adulthood. Results of one study show the positive effects of increased calcium intake both before and during puberty (3). Increased bone mass and bone density in adulthood has been observed in people who consumed adequate amounts of calcium throughout childhood and adolescence . Women over the age of 50 who consumed low amounts of milk in childhood have twice the risk of fractures. According to the results of the Barger-Lux, Davies, and Heaney (2005) study, within the third decade of life, skeletal form is set and can no longer build up bone mass or bone density.

Diet Restrictions

Calcium can be found in many foods, but it is especially abundant in dairy products like yogurt, milk, and cheese. Zhao, Martin, and Weaver (2005) report that, "More than 70 percent of dietary calcium in the United States comes from dairy products," (p.2379). Therefore, most omnivorous diets can easily include



efficient amounts of calcium. However, there are people who are lactose intolerant, people who do not like dairy products, and people who choose not to consume dairy. In a recent study, children with diets void of dairy products like macrobiotic, vegetarian, or vegan diets have increased risk of developing cobalamin deficiency and reduced bone mass. Cobalamin deficiency can lead to pernicius anemia, which is a risk factor for osteoporosis. These children have three to eight percent lower bone mass when compared to children who consumed omnivorous diets (6). Soymilk is one alternative for those people who do not consume milk. Normally, soymilk has 1000mg/L less of calcium when compared with cow's milk, but calcium fortification compensates for the difference. According to one report, calcium absorption in premenopausal women was found to be similar in calcium carbonate fortified soymilk and cow's milk (5).

Calcium Supplementation

Supplementation is one way to increase levels of needed vitamins

and minerals when not achieving adequate amounts through the diet. Questions remain about whether calcium supplementation provides the body with the same quality and benefits as compared with dietary calcium. There have been many studies done to attempt to determine which form of calcium is better. One such study conducted by Barger-Lux et al. (2005) demonstrated that, "Calcium supplementation did not exert a measurable effect on bone mass accrual," (p. 2365). In another study by Stear, Prentice, Jones, and Cole (2003) bone mineral status was examined to see the affect of calcium supplementation and exercise. The results found that calcium supplementation alone helped to increase the bone mineral content. The results also found that within the exercise group, significant growth was documented at the hip and trochanter, which is where the hip and thigh muscles attach. In another study, Cheng et al. (2005) tested the difference between calcium and vitamin D absorption when taken in pill form or through diet. The results of this study showed that the group who ate cheese (consumed the calcium through diet) gained slightly more bone mass than the other groups. The benefits of consuming calcium through diet include better absorption due to the presence of lactose or caseinphosphopeptides found naturally in dairy products, the distribution of calcium consumed throughout the day versus one large dose of calcium, and the higher amount of protein, magnesium, or other micronutrients that are found in dairy products (2).

Summary

In conclusion, calcium is a very important mineral necessary for normal growth and bone mass throughout a lifetime, from childhood through adulthood. In fact, the amount of calcium a child consumes affects the amount of bone mass and bone density in adulthood. Issues of personal preference or lifestyle choices can potentially determine the amount of dietary calcium consumption; however, solutions like fortified soy products and supplementation can help to offset the potential calcium deficiency.

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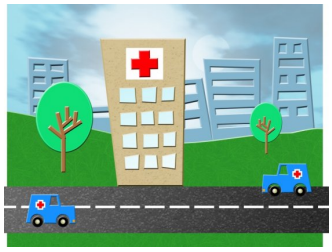
Everything You Wanted to Know About Becoming a RD...



But Were Too Afraid to Ask!

Aaron Flores, RD & former CSUN Nutrition & Dietetics student, will speak about his internship experience and answer any and all questions regarding the RD process!!!

This is sure to be a very informative & interactive session – don't miss out!

WHEN: November 15, 2007

WHERE: SQ 103

TIME: 4:30pm-5:30pm

Roasted Pumpkin and Sweet Potato Pilau

Recipe Provided By Bray Stubblefield

This hearty side's pumpkin, sweet potato, and brown rice offer about 10 percent of your daily fiber needs and is loaded with vitamins, minerals, and antioxidants.

CALORIES 200 (11% from fat)
FAT 2.5g (sat 0.4g,mono 1.4g,poly 0.5g)
ROTEIN 5.9g
CHOLESTEROL 0.0mg;
CALCIUM 45mg;
SODIUM 428mg;
FIBER 3g
IRON 1.3mg
CARBOHYDRATE 38.8g

Ingredients

2 cups (1/2-inch) cubed peeled fresh pumpkin (about 12 ounces)
1 1/2 cups (1/2-inch) cubed peeled sweet potato (about 1 medium)
Cooking spray
2 teaspoons olive oil
1 cup diced onion (1 small)
1/3 cup diced celery (about 1 rib)
2 teaspoons minced garlic
4 cups fat-free, less-sodium chicken broth
1 cup brown rice
2 teaspoons chopped fresh sage
1/2 teaspoon freshly ground black pepper

Directions

Preheat oven to 400°.

Arrange pumpkin and sweet potato in an even layer on a jelly-roll pan coated with cooking spray. Bake at 400° for 35 minutes or until tender and just until vegetables begin to brown, stirring after 18 minutes. Remove from oven, and set aside.

Heat oil in a large saucepan over medium-high heat. Add onion, celery, and garlic to pan; sauté 3 minutes or until onion is tender. Add broth and remaining ingredients to onion mixture, stirring to combine; bring to a boil. Cover, reduce heat, and simmer 50 minutes or until rice is done and liquid is mostly absorbed. Remove from heat; discard bay leaf. Add pumpkin mixture; stir gently to combine.

Benefits of Eating Pumpkin

By Bray Stubblefield

It's autumn again and it's time to make room for holiday meals and treats. When you think of pumpkin you probably think of jack-o-lanterns and pumpkin pie but pumpkin can also be used in savory dishes. One cup of cooked pumpkin has just 49 calories and is loaded with vitamins, minerals, fiber, and antioxidants that make it a nourishing food to include on your lunch or dinner plate (1). The color of a fruit or vegetable is an indication of potential health benefits and pumpkin acquires its orange color from the carotenoid beta-carotene, which is converted to vitamin A in the body. Vitamin A plays a role in cell development, boosting the immune system, and promoting eye health. It is better to get vitamin A from food sources such as pumpkin, rather than using supplements, because supplements can cause vitamin A toxicity (1). Large quantities of dietary carotenoids from foods, such as beta-carotene from pumpkins, do not cause any harmful effects.

When choosing a pumpkin it is important to select a pumpkin that is firm and heavy. The best pumpkins to use for cooking are the smaller sugar pumpkins (2). The larger pumpkins are good for carving, however they lack the sweetness and flavor of their smaller counterparts. Pumpkins are typically only available in the autumn months around Thanksgiving and Halloween, but one can substitute butternut squash in recipes that call for pumpkin (2). Canned pumpkin is always available and is useful for thickening soups or replacing the fat in some baked goods such as brownies. Therefore, you can harvest the health benefits of pumpkin all year-round!

Noteworthy Nutrients

(one cup fresh pumpkin, boiled, mashed)
Calories: 49
Vitamin A: 12,230 IU (245% DV)
Potassium: 564 milligrams (17% DV)
Fiber: 2.7 grams (11% DV)
Beta-carotene: 5,135 micrograms
Lutein & zeaxanthin: 2,484 micrograms
IU = International Units
DV = Daily Value

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Eat More Blue!

By April Brasher

Step aside apples, there is a new fruit keeping the doctor away. Blueberries are more than just a tasty treat, they are quickly racking up a list of health benefits, including improving eyesight, cardiovascular health, dental health, diabetes, brain damage, inflammation, cancer, ulcers and more (1). The secret behind blueberry power comes from the plant pigments tucked inside the skin, known as **anthocyanins,** which not only produce the blue color found in blueberries, but can also produce red, violet, and purple found in the skin of many fruits and vegetables (2).

Literally meaning "blue flower", anthocyanins belong to a much larger group of phenolic compounds known as flavinoids. While there are thought to be over 400 anthocyanins in nature, only 16 naturally occurring ones are known. Anthocyanins are classified according to the number of hydroxyl groups, the type(s) of sugars attached, and the type(s) of aromatic acids belonging to the sugars(3). Long before humans started eating berries, anthocyanins helped plants by using the colorful pigments to attract pollinators, serve as antibacterial agents and provide an antioxidant shield (3).

As science is constantly researching ways to combat free radical damage, anthocyanins have shown to have potent antioxidant capabilities. Free radicals are pirates of the cellular world, plundering electrons as they go. Anthocyanins, however, have a positively charged oxygen atom with electrons to spare, which are given to neutralize the free radical (3).

Cancer research has stumbled upon the potential use of anthocyanins to stop cancer cells in their tracts. Studies have shown the anthocyanins in black raspberries can halt the proliferation of colon and liver cancer cells, as well as signal apoptosis in skin cancer cells. Freeze dried strawberries have also been shown to inhibit esophageal cancer (2).

As mentioned before, anthocyanins have an antibacterial function in plants, which researchers are rolling over to help human bacterial infections. H. pylori is a nasty little bacteria that has already infected over 50% of the world's guts, sometimes leaving victims with stomach ulcers or worse, gastric cancer (2). Studies using "Optiberry" a mixture of blueberry, bilberry, elderberry, cranberry, strawberry, and raspberry have shown to inhibit the growth of H. pylori, which is a hopeful avenue as H. pylori is now growing resistant to the commonly used antibiotic *clarithromycin* (2).

Anthocyanins are even working to keep our brains healthy and strong to the very end. Neurodegenerative diseases, such as Alzheimer's Disease, are thought to be caused by "nitrated tyrosine, [which] block nerve growth factor receptor sites, thus preventing new neural growth and inhibiting repair" (4). Blueberries have been shown to reverse these aging pathways. At the end of a two month blueberry diet, elderly rats were found to have the "greatest reduction of age effects" and researchers concluded that "nutritional intervention with fruits and vegetables may play an important role in preventing and reversing the deleterious effects of aging on neuronal function" (4).

While it may be tempting to go home and overdose on blueberries after gaining all of this knowledge, doctors say just 1 cup of blueberries a day is enough (they can be fresh, frozen or freeze-dried) (5). Other sources of anthocyanins can be found in egg plant, black currant, blackberry, cherry, cranberry, orange, radish, raspberry, red currant, red grape, red onion, red wine (yay!) and strawberry (6).

The best advice? Start eating anthocyanins now! Anthocyanins are more effective when used preventively. Degenerative diseases, by their very nature are chain reactions. It is best to stop the deterioration at the beginning of the chain, rather than trying to reverse the entire process near the end. Rather than treating a disease acutely in one large dose, researchers believe it is more beneficial to prevent disease by eating a regular amount of anthocyanins every day throughout a person's lifespan (4). So eat more blue!

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Dietary Treatment of Behavioral Disorders in Children

By Lisa Calanni

Medical nutrition therapy has been widely used in treating patients with chronic diseases, such as cardiovascular disease and diabetes, as well as for those with special nutritional needs, such as cancer and trauma patients. Current research and attention has been on the role of nutrition in behavioral disorders, such as autism and attention deficit hyperactivity disorder (ADHD), in school-aged children. Therefore, dietary intervention, in addition to the other therapies, is being considered by more parents and professionals.

An estimated 4-10% of school-aged children have been diagnosed with ADHD (1). Characteristics include hyperactivity and/or a persistent pattern of inattention, more prevalent than in children of comparable age. Most cases are treated with Ritalin, an amphetamine-like drug which studies have demonstrated to improve behavior. However, this drug is highly addictive and has many side effects. The disorder appears to have multi-factorial etiology (1).

In addition to social, biochemical, and environmental factors, dietary factors are major contributors. Possible causative factors include antibiotic residue from commercially raised meat, mercury and pesticides (1). ADHD children have significantly low levels of specific amino acids, suggesting a deficiency in transport and/or both. This affects dopamine levels and neurotransmission. Supplementation may include tyrosine or phenylalanine, folic acid, zinc, niacin, iron, vitamins C and B_6. Low nutrient dense, refined foods, and oxidized fats, very common with the American diet, contribute to a nutritional imbalance. Deficiency in minerals, B vitamins, and essential fatty acids is common and has been shown in repeated studies to be important in brain function among ADHD children. For example, deficiency in essential fatty acids has been associated with learning and behavior abnormalities. Pumpkin seeds, walnuts, tuna, trout, and even breast milk can be excellent sources. Magnesium supplementation has been shown to decrease hyperactivity. And iron deficiency, the most common among school-aged children, has been associated with decreased attentiveness and attention span. Children may experience food allergy-induced ADHD symptoms with wheat and dairy products. Nutrition may even have a role in the genesis of ADHD in those with genetically heightened requirements for certain nutrients (1).

According to the Autism and Developmental Disabilities Monitoring Network, in 2007, reports showed one out of every 150 (less than 1%) of children in the United States were diagnosed with autism (2). Autism research is fairly young. The disorder is not fully understood, and includes a spectrum of disorders. However, continued research is helping the medical community become more aware of signs and symptoms. According to the Autistic Society of America, supplements may help with symptoms. Vitamin C may help in brain function, depression and confusion. Cod liver oil, rich in vitamin A and D, has been linked with improved eye contact. Vitamin B is one of the most common supplements used to treat autism. It is needed by certain enzymes to break down compounds which may interfere with cell signal transmissions. Gluten-free/casein-free diets are also being studied (2-3).

It is important for dietitians, parents, and physicians to understand the difference between peer-reviewed findings, anecdotal evidence, and undocumented claims. It is also critical for dietitians to understand the role of the supplements and counsel the parents on adequate and safe levels. Ask parents where there are sensory issues relating to food intake and encourage a positive feeding relationship between the parents and child. This includes offering a variety of healthy foods to the child, serving as good role models, and having family meals (2). A diet including organic fruits and vegetables, whole grains (if allergies or intolerances are not present), essential fatty acids, and void of additives, preservatives, colorings or pesticides is recommended (1,3).

Evidence of efficacy and safety of supplements on growth and development are limited and all warrant future investigation. Reporting from parent is often a problem, as is following the recommended diet well. Sample sizes are small and not all experiments are double blind (3). Therefore, patients will receive nutritional therapy on an individualized basis. So it will help to ensure an appropriate plan.

Studies are showing an association between nutrient deficiency and an increased risk of developing behavioral disorders and/or exacerbating the symptoms. Although continued research is needed to demonstrate the efficacy of supplementation, an individualized dietary approach, in addition to other therapies, is essential in improving symptoms of autism and ADHD.

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Zucchini Banana Bread (Vegan)

Recipe created by Shani Verchick

One taste of this delicious zucchini banana bread and you'll think it was made with eggs and butter. However, here is a version of your favorite sweet bread without the saturated fat. I developed this recipe for a vegan café here in Los Angeles. I know you'll love it and you'll even get plenty of omega-3's with the plentiful supply of walnuts. With the holidays around the corner, try doubling the recipe and bake extra loaves as gifts for your family and friends! P.S. If you are a chocolate lover, try sprinkling the loaf with chocolate chips before baking the bread for an extra special treat. Enjoy!

Directions

1. Preheat oven to 350 degrees.
2. Lightly grease and flour two 8x4 inch loaf pans
3. Combine wet ingredients in a mixing bowl.
4. Combine dry ingredients in a separated mixing bowl.
5. Add wet ingredients to the dry ingredients.
6. Evenly divide the mixture into loaf pans.
7. Bake at 350 degrees for 30 minutes. Then turn oven down to 325 degrees for 24 minutes. Remove from pans and let cool completely.

Makes 2 loaves

Ingredients

Dry	
Unbleached all purpose flour	3 cups
Sugar cane	2 cups
Sea salt	1 tsp
Baking soda	1 tsp
Cinnamon	1 tsp
Walnuts – ground	1 cup
Wet	
Zucchini – grated	11 oz
Bananas – ripe and mashed	6 oz
Canola oil or rice oil	1 cup
Vanilla extract	1 tsp

A heavenly recipe that everyone can enjoy!

"I know you'll love it and you'll even get plenty of omega-3's with the plentiful supply of walnuts."

-Shani Verchick

Dietetic Internship Symposium

WHEN: Saturday, November 17, 2007

TIME: 8:00 AM-4:30 PM

WHERE: CSU Northridge, Nobb's Auditorium, Sequoia Hall 104

Pre-registration is $10 for SDFSA members and $15 for non-members before November 13th. After November 13th, it is $15 for everyone. Register early! Price includes a Continental Breakfast and Lunch. Check-in begins at 8:00am. Please be advised that parking is $5 on Saturday.

For more information, please visit our website: **http://hhd.csun.edu/sdfsa**

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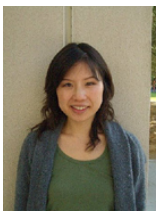

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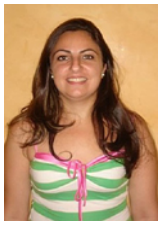

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