Student Dietetics and Food Science Association NEWSLETTER

By Nicole Anderson and Pilar Chilet

Inside this issue:

Advisor's Message

Act as if what you do makes a difference. It does.
~ William James 1842 - 1910 ~

The author above, William James, must have imagined our 2009-2010 Student Dietetic and Food Science Association (SDFSA) members. We have so many committed, dedicated members – all who make a difference; all who know that what they do matters!

It's astounding to watch you take charge of any and all things; lead with style and grace; put your hearts and heads together to make the world a better place.

With appreciation,
Dr. Terri Lisagor,
Faculty Advisor

Dear Faculty, Alumni, and CSUN community,

On behalf of the students of SDFSA, it is with great pleasure that I welcome you to the 2009-2010 academic school year!

We traditionally start the school year by recognizing our student officers and annual events, but I would like to take a moment to acknowledge our dear advisor, Dr. Terri Lisagor. Dr. Lisagor was the recipient of the Matador Involvement Center's Advisor of the Year award for the 2008-2009 school year. This accolade is not only an honor for Dr. Lisagor, but also for our organization, as we know personally Dr. Lisagor's commitment to excellence in support of SDFSA. Amidst over 250 student organizations on the CSUN campus, Dr. Lisagor truly stands out as a shining example of leadership and goodwill.

This new year brings annual events, including the Fall Dietetic Internship Symposium, Spring Career Symposium, and Iron Matador cooking competition. We will also offer our nutrition lecture series, multiple volunteer and networking opportunities, and scholarship contests. As a result of last year's visit by former ADA President, Marty Yadrick, SDFSA is actively getting involved on the national level with like-minded student dietetic organizations. As always, SDFSA continues to provide an invaluable link between students and professional organizations. We encourage you to take advantage of these powerful networking opportunities.

When we hold our meetings, I see the rising stars of our program. I see the policy makers, food scientists, public health advocates, acute care and private practice dietitians. We are the future leaders in our respective fields and SDFSA is the foundation for our success. I am truly honored to serve alongside such a distinguished group of my peers. Together, we will build upon the hard work of previous boards and forge new relationships on a national level to extend our reach, improve opportunities for our members, and leave a lasting and positive impact on our community.

Warm Regards,
Carlen Loewenthal
President

PUMPKIN MUFFIN RECIPE

Pumpkin recipes are popular in the Fall! Enjoy this healthy alternative to a classic treat.

By Melody Murphy

Prep Time: 10 minutes
Cook Time: 20-25 minutes
Yield: 12-16 muffins

Ingredients:

2 cups muti-grain flour
2 teaspoons baking powder
1/2 teaspoon baking soda
½ teaspoon ground cinnamon
½ teaspoon ground ginger
1/2 teaspoon ground nutmeg
1/4 teaspoon salt
1 can (15-16 ounces) pumpkin puree
1/3 cup applesauce
1/2 cup of low fat milk
1/2 cup brown sugar, packed
1/4 cup granulated sugar
6 egg whites, beaten
1 teaspoon vanilla
1/2 of raisins (optional)
½ of walnuts (optional)

Preparation:

Preheat over to 375˚.

In a large bowl, combine all dry ingredients (flour, baking powder, ginger, nutmeg, baking soda, cinnamon, and salt).

In separate bowl, combine pumpkin puree, applesauce, low fat milk, egg whites, sugars, and vanilla. Mix thoroughly.

Next, stir pumpkin mixture into the dry ingredients slowly until moistened.

Optional: Fold in raisins and walnuts into pumpkin batter.

Grease or paper line muffin tins. Fill each tin about 3/4-full with the pumpkin batter.

Bake at 375˚ for 20 to 25 minutes.

FAT THAT COULD MAKE YOU SKINNY?

By Becky Stogsdill

Recent articles in magazines, medical journals, and newspapers have suggested that the activation of brown adipose tissue, also known as brown fat, in adults may lead to weight loss.

Brown fat is believed to primarily function as a heat producing agent when the body is unable to shiver on its own, such as in infants. Infants and hibernating animals usually have a significant amount of brown adipose tissue, but until recently it was believed that adults lose this tissue during young adulthood. Unlike the usual white adipose tissue, brown adipocytes contain additional mitochondria, which contain iron and give the tissue its brown hue. The excess mitochondria are believed to enable additional energy production which increases overall caloric expenditure by the body.

Recent PET (Positron Emission Tomography) scans prove that most adults do maintain some storages of brown adipose tissue, usually on their upper back. Overweight patients showed lower storages of brown adipose while some obese patients' PET scans showed no identifiable brown adipose tissue. To easily identify the brown adipose tissue it must be activated by cold temperatures or hormones. The ability to activate the tissue by ingesting a pill is being studied as a diet aid and calorie burner, but the effects on caloric expenditure has not been proven and continues to be scrutinized.

Although brown adipose tissue may be effective at burning fat, scientific studies have not identified a way to activate enough tissue to make a significant difference in calorie expenditure. Any side effects of activating the tissue remains unknown and the majority of the adult population with increased brown adipose tissue include people with hyperthyroidism and cancer. Until further research is completed, the general population should try to reduce their overall fat storages to maintain a healthy lifestyle, rather than rely on their brown fat storages.

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EATING HEALTHY ON A DIME

By Sharmiya Odeh

Due to our country's current economic crisis, many people feel the need to pull back on putting their health first due to the daunting prices of food. This article contains several tips as a guide to help you eat healthy and stay within your grocery budget.

1. Start a grocery list- this will keep you focused on the things that you need to buy and keep you from impulse purchases. A weekly grocery list should contain fruits, veggies, whole grains, and healthy protein options, such as low-fat dairy, bean and legumes, or lean meats.

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HUNGER IN LOS ANGELES

By Jessica King

Driving through L.A. traffic during morning rush hour, I do not confront the reluctant feeling that is associated with the obligations of work. As I step out of my car in an unfamiliar area, I am greeted by the smell of hot food and kind faces. A premature feeling of accomplishment comes over me because of the small, yet integral, role I play in feeding the hungry in my own backyard, Los Angeles. I am a "Home Delivered Meals" (HDM) monitor and I work within the county of Los Angeles to ensure quality and safety of food delivered to the "at risk" elderly population. HDM is a service provided by the Elderly Nutrition Program, authorized under Title III of the Older Americans Act.[1] The purpose of HDM is to maintain or improve the physical well-being of homebound older adults through improved nutrition.[1] Participants include homebound persons aged 60 or older and their spouses of any age. Persons under age 60 with disabilities who reside at home with older persons also qualify for meals.

Particular attention is targeted toward low income minority groups and older people living in rural areas because they are considered to have an increased social and economic need for assistance.[2]

The program provides participants with an initial nutrition screening and at risk individuals are visited by a Registered Dietitian.[1] Participants receive at least 5 or more nutritionally balanced hot or frozen meals per week and each meal provides a minimum of 1/3 of the recommended dietary allowances.[2] Participants are not required to pay for this service, but a donation of $1.50 to $2.50 per meal is suggested.[1]

As a HDM monitor, I encounter people within their communities making a difference one meal at a time. The drivers build meaningful relationships with participants, and often, voluntarily express an intrinsic motivation for delivering meals. Frequently, the driver is the only person a homebound participant visits with all day. Many participants live alone, are physically or mentally disabled, and are on fixed incomes. Therefore, the program does not only address the problems of dietary inadequacies in the elderly population, but also provides relief to the social isolation many of them experience.[2]

As students, we have the opportunity to explore our future careers, and the experiences we have will hopefully expose us to our passions and strengths as individuals and professionals. My work experiences, as a diet aide in a hospital and a HDM monitor, have given me a clarified perspective of the malnourished elderly population. I am able to see first-hand the positive effects that home delivered meals have on a person's physical and emotional well-being.

On the other side of the spectrum, I often see frail elderly patients discharged from the hospital, only to be readmitted a few weeks later. In fact, discharged patients that are homebound with little to no outside assistance may be at a greater risk for experiencing under-nutrition because of their already compromised health status.[3] The increased risk of malnourishment perpetuates the cycle of re-hospitalization. The HDM program is intended to terminate this cycle by providing nourishment to homebound individuals so they can stay at home, rather than going to institutions.

As future professionals, we are faced with a growing elderly population with increased health risks associated with nutrition. Government programs, like the Elderly Nutrition

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LACK OF VITAMIN D?

By Lauren Druss

Vitamin D, or the sunshine vitamin, has made mainstream news recently due to the rise of vitamin D deficiency. The recommended daily intake is set at 200 IU, but researchers are now suggesting raising the minimum to 400 IU, which currently is the intake suggestion for adults over 50 ("Dietary Supplement Fact Sheet: Vitamin D"). Dr. Ginde of the University of Colorado in Denver found that deficiency has risen from 2% of Americans between 1988-1994 to 6% from 2001-2004 (as cited in Zoler, 2009).

Why don't we get enough vitamin D anymore? Well, vitamin D is obtained from sun exposure and diet, and it naturally decreases with age. Along with less outdoor activities, our absorption of vitamin D is reduced due to sunscreens. According to a recent NHANES study, "Sunscreen with a sun-protection factor [SPF] of 15 cuts vitamin D synthesis by 99%," (Zoler, 2009). Decreased dairy (fortified with vitamin D) consumption has also contributed to the diminished amount of vitamin D.

All vitamins are essential to the body's functioning, but researchers are discovering links between low levels of vitamin D and disease. Studies have already noticed the importance of vitamin D for a healthy immune system and bones, but a new result suggests low levels of vitamin D correlate to diabetes, dementia, and cancer ("Research stresses importance of vitamin D," 2009).

So, what do you do if your blood tests show in low levels of vitamin D? Don't scrap the sunscreen all day (if you want to avoid skin cancer and pre-mature aging), but rather, limit your unprotected UV exposure. A UV calculator was released by the Norwegian Institute for Air Research (available at http://nadir.nilu.no/~olaeng/fastrt/VitD-ez_quartMED.html) and when I entered my data (Light-Skinned, Midday, Scattered Clouds, Northridge, CA), it suggested exposure of my face, arms, and hands would reach 25 mcg (1,000 IU) in about 5 minutes. While this tool is helpful, it should be taken with a grain of salt because I probably get at least 5 minutes in the hot San Fernando Valley sun sunscreen-free daily, yet my doctor has diagnosed me as vitamin D-deficient.

Another method of obtaining your daily required intakes is through your diet. 1 cup of fortified milk contains 105 IU of vitamin D (26% towards the 400 IU goal) ("Nutrition facts and analysis for milk, reduced fat"). Oily fish, like salmon and mackerel, are another of the few sources of vitamin D in the diet (Reinagel, 2009). According to the National Institute of Health, a 3.5 oz. portion of cooked salmon contains 360 IU- 90% of the 400 IU suggested!

So, ask your doctor to check your vitamin D in your blood work and look for vitamin D in your food!

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"Nutrition Facts and Analysis for Milk, reduced fat." Nutrition Data. Retrieved September 15, 2009, from http://www.nutritiondata.com/facts/dairy-and-egg-products/71/2

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"Research stresses importance of vitamin D (MERCHANDISING/SUPPLEMENTS) (Statistical data)." Chain Drug Review 31.12 (July 20, 2009): 36(1). General OneFile. Gale. California State Univ, Northridge. 15 Sept. 2009 http://find.galegroup.com.libproxy.csun.edu:2048/gtx/start.do?prodId=ITOF

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(cont. on page 6)

...LACK OF VITAMIN D? CONTINUED

Selected Food Sources of Vitamin D

Food	IUs per serving*	Percent DV**
Cod liver oil, 1 tablespoon	1360	340
Mushrooms, enriched with vitamin D, 3 ounces	400	100
Salmon, cooked, 3.5 ounces	360	90
Mackerel, cooked, 3.5 ounces	345	86
Sardines, canned in oil, drained, 1.75 ounces	250	63
Tuna fish, canned in oil, 3 ounces	200	50
Orange juice fortified with vitamin D, 1 cup (check product labels, as amount of added vitamin D varies)	142	36
Milk, nonfat, reduced fat, and whole, vitamin D-fortified, 1 cup	98	25
Yogurt, fortified with 20% of the DV for vitamin D, 6 ounces (more heavily fortified yogurts provide more of the DV)	80	20
Margarine, fortified, 1 tablespoon	60	15
Ready-to-eat cereal, fortified with 10% of the DV for vitamin D, 0.75-1 cup (more heavily fortified cereals might provide more of the DV)	40	10
Egg, 1 whole (vitamin D is found in yolk)	20	5
Liver, beef, cooked, 3.5 ounces	15	4
Cheese, Swiss, 1 ounce	12	3

*IUs = International Units.

**DV = Daily Value. DVs were developed by the U.S. Food and Drug Administration to help consumers compare the nutrient contents of products within the context of a total diet. The DV for vitamin D is 400 IU for adults and children age 4 and older. Food labels, however, are not required to list vitamin D content unless a food has been fortified with this nutrient. Foods providing 20% or more of the DV are considered to be high sources of a nutrient.

(Chart obtained from: U.S. Department of Agriculture, Agricultural Research Service. USDA Nutrient

...HUNGER IN LOS ANGELES CONTINUED

Program, are essential to provide necessary preventative care that will improve healthcare costs, the economy and society.

If you are interested in hunger issues in the United States and want to make a difference visit; http://www.usda.gov/documents/FINAL_Fight_Hunger_Initiative_toolkit.doc .[4]

References:

1. CRS Web. Older American Act Nutrition Program. http://www.nationalaglawcenter.org/assets/crs/RS21202.pdf. Updated April 24, 2004. Accessed October 1, 2009.

2. Los Angeles County Area Agency on Aging Information & Assistance. http://css.lacounty.gov/Aaa/Nutr/docs/Nutritionfact.pdf. Accessed October 1, 2009.

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4. USDA. Secretary's Fight Hunger Initiative Toolkit. http://www.usda.gov/documents/FINAL_Fight_Hunger_Initiative_toolkit.doc. Updated October 20, 2008. Accessed October 1, 2009.

...EATING HEALTHY ON A DIME CONTINUED

2. Cook at home-this cuts calories and cost. Many prepackaged meals tend to be extremely high in sodium. By preparing your own meals, you can lower your sodium intake and save yourself a pretty penny.
3. Go generic- the generic brands are usually right next to the name brand product in the grocery stores. If you compare the ingredients of the name brand to the generic brand you will see that they are usually the same. Save yourself a few pennies and get the generic brand. This will really add up in the long run.
4. Try lean meats- for those of us who eat meat and poultry, such as chicken and ground turkey, they are on sale at your local grocery store every other week. Feel free to stock up on these items and freeze them.
5. Go with the season- always buy your fruits and vegetables according to the current season. This way you will get the optimal quality for your fruits and vegetables at an optimal price.
6. Add water to the menu- drinking plenty of water daily flushes out toxins and keeps you hydrated. Strive to drink 8 cups of water daily. Making water your choice beverage will help cut out calories and sugars that you would get from other beverages. Plus, by purchasing water by the case or filling up a sports bottle from your home filtered water system, it will cut the cost you would usually spend on drinks.
7. Store general brands- dried beans, legumes, canned food, and frozen food are always great to have stored in your home. These items are usually inexpensive and very convenient when you need to put together a quick and simple meal.

Hopefully these tips are helpful when it comes to stretching your grocery dollars.

BENEFITS OF DIACYLGLYCEROL (DAG) OILS

By Crystal Bodossian

With the rise in obesity levels throughout the United States, many people are searching for a change. As a result of the increased levels of obesity, diseases caused by obesity are increasing as well, such as diabetes, hypertension, hyperlipidemia, and a higher risk of heart disease. Although low fat options for foods may be less popular for many, healthier cooking oils that still add flavor are being explored. Traditionally, cooking oils are comprised mainly of triacylglycerols (TAGs), or triglycerides. Since high levels of blood triglycerides have been linked with such problems as atherosclerosis, the need for a healthier variety of oils to cook with is increasing.

Thankfully, recent studies have been done on diacylglycerols (DAG) and its role on weight loss in obese Americans. Diacylglycerols have similar characteristics with respect to taste, appearance, and functionality, but have been reported to possess qualities to reduce body fat in consumers (Kawashima et al., 2008). In a 16-week study of diacylglycerol intake by Japanese men, abdominal fat and overall weight loss was seen when compared to the same ingestion of triacylglycerol (Kamphuis, Mela, & Westerterp-Plantenga, 2003). Furthermore, a 24-week study on American subjects comparing intake of diacylglycerol vs. triacylglycerol yielded high levels of weight and fat mass loss in obese and overweight subjects. In other studies, it has been discovered that intake of DAG vs. TAG has shown to increase fat oxidation, which is linked to appetite control and energy balance (Kamphuis et al., 2003).

When used in conjunction with diet therapy, individuals with type II diabetes and hypertriglyceridemia reported lowered triglyceride serum levels when taken over a longer period of time.

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WOULD YOU LIKE SOME SUGAR WITH THAT?

By Melissa Sartoris

Americans are getting fatter. Despite the idea that eating fat is what makes you fat, in truth, excess of any nutrient causes weight gain. Recently, researchers are looking into added sugars as contributors to obesity. According to the USDA, added sugars are the sugars and syrups added to foods and beverages in processing or preparation, not the naturally occurring sugars in fruits or milk. These sugars may appear on food labels as brown sugar, corn sweetener, corn syrup, dextrose, fructose, fruit juice concentrates, glucose, high-fructose corn syrup, honey, invert sugar, lactose, maltose, malt syrup, molasses, raw sugar, sucrose, sugar, or syrup. These sugars are added to everything from sweetened juices and sodas to breakfast cereals to baked goods to jarred spaghetti sauce.

According to the USDA food consumption tables, consumption of high fructose corn syrup increased over 1,000% between 1970 and 1990, which correlates with the upward trend of obesity in the nation. With high-fructose corn syrup being the only caloric sweetener in soft drinks in the United States, it has received most of the blame for these statistics. Recent commercials have come out by the Corn Refiners Association defending high-fructose corn syrup as a sweetener, claiming it is "fine in moderation". Multiple studies have been done on caloric sweeteners, finding that fructose is particularly dangerous because of its ability to bypass many of the body's satiating signals and increase uric acid levels, which in turn promotes hypertriglyceridemia. Although "fructose" is the named added sugar in high-fructose corn syrup, it actually only contains 42 – 55% fructose, and the rest is glucose. A study published in the April 2009 Journal of Nutrition concluded that "the data suggest that high-fructose corn syrup yields similar metabolic responses to other caloric sweeteners such as sucrose".

With all that said, these findings are not license to go chug a liter of Coca-Cola. The tried and true message of everything in moderation, yes, also applies to added sugars. Since foods high in added sugars are typically low in nutrient density, the Dietary Guidelines for Americans 2005 suggests "…consuming a variety of nutrient-dense foods and beverages within and among the basic food groups while choosing foods that limit the intake of… added sugars…" The USDA suggests limiting added sugars to 40 g (10 tsp) per day for a 2,000 calorie diet. For perspective, there are 6 teaspoons of sugar in 8 ounces of soda.

If these added sugars are so pervasive in the US food supply, then how do we limit them? In addition to the traditional nutrition messages of consuming whole grains, fruits, and vegetables, the Center for Science in the Public Interest (CSPI) suggests these "Sweet Tips for Consumers":

- Check nutrition and ingredient labels for added sugars. Choose "no sugar added" items when available.
- Cut back on soft drinks and fruit "drinks", "beverages", "ales", and "cocktails". Drink water, seltzer, or non-fat milk instead.
- Limit candy, cookies, cakes, pies, doughnuts, granola bars, pastries, and other sweet baked goods. Eat fruit instead.
- Look for breakfast cereals that have no more than 8 grams of sugar per serving.
- Watch out for sweets served in restaurants. Their huge portions can provide a day's worth of added sugar.

References:

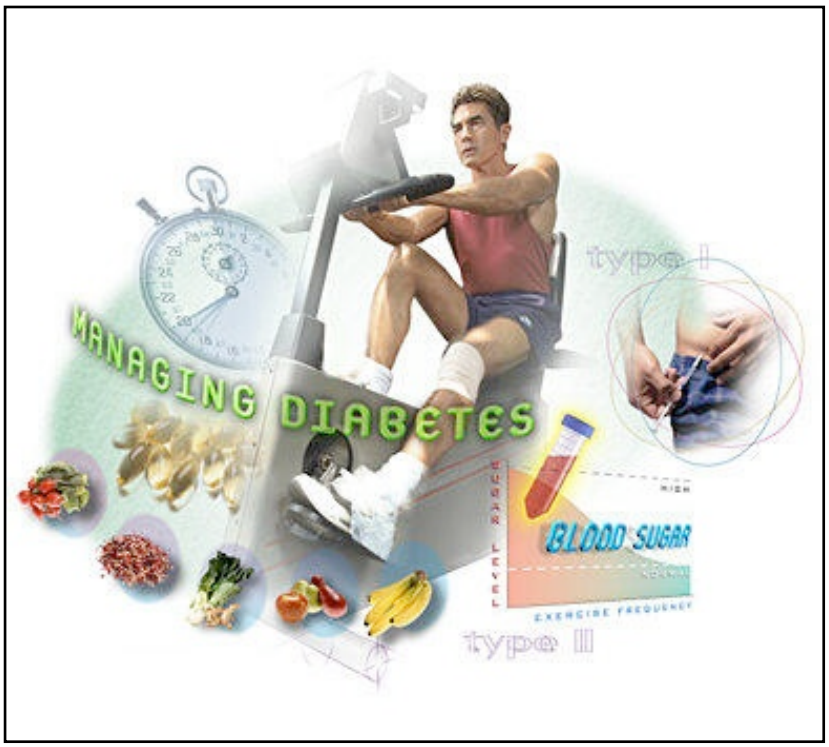
Angelopoulos, T., Lowndes, J., Zukley, L., Melanson, K., Nguyen, V., Huffman, A., et al. (2009). The Effect of High-Fructose Corn Syrup Consumption on Triglycerides and Uric Acid. Journal of Nutrition, 139(6), 1242S-1245S. http://search.ebscohost.com, doi:10.3945/jn.108.098194

Dietary Guidelines for Americans, 2005. http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2005/2005DGPolicyDocument.pdf

CSPI "Sweet Tips for Consumers". http://www.goodnutrition.org/reports/sugar/sweettips.html

PACKING DIABETES TO COLLEGE

By Elga Zagmoosakhanian



Diabetes (DM) is a condition that can be well managed by controlling the blood glucose level and eating healthfully, eating the right amount of food, and at the right time. Being a college student with diabetes can be much more challenging than being a high school student with DM. For high school students with DM, parents are more likely to be involved with the school to make a diabetes care plan, known as the 504 Plan. For the high school student, diabetes control is helped because of regulated lunchtime or snack times.

In college it is not the same. There is no rigid scheduling of breaks for food consumption, and the campus is not required to educate staff members about diabetes. It is the responsibility of the student to notify the school via the Office of Disability Services (ODS) regarding the student's DM. Once identified by the ODS, a student can ask for any assistance in allowing the student to do such things as getting permission to take a break during long hours of exams (e.g. to test blood glucose or drink juice. On campus, one of the best sources of support can come from the college health services, especially ones that have certified diabetes educators and/or diabetes support groups. (California State University Northridge offers several free visits per academic year for such students).

It is also always good to remember that sharing information about DM and its associated risks with a roommate or classmate will benefit both students. Trusting friends and educating them will be like having a safety net to make it easier to manage this condition on campus.

References:

(Call 1-800-DIABETES if you are experiencing discrimination at college)

"On Campus and on Course", Diabetes Forecast, August 2009.
www.diabetes.org/safeatschool

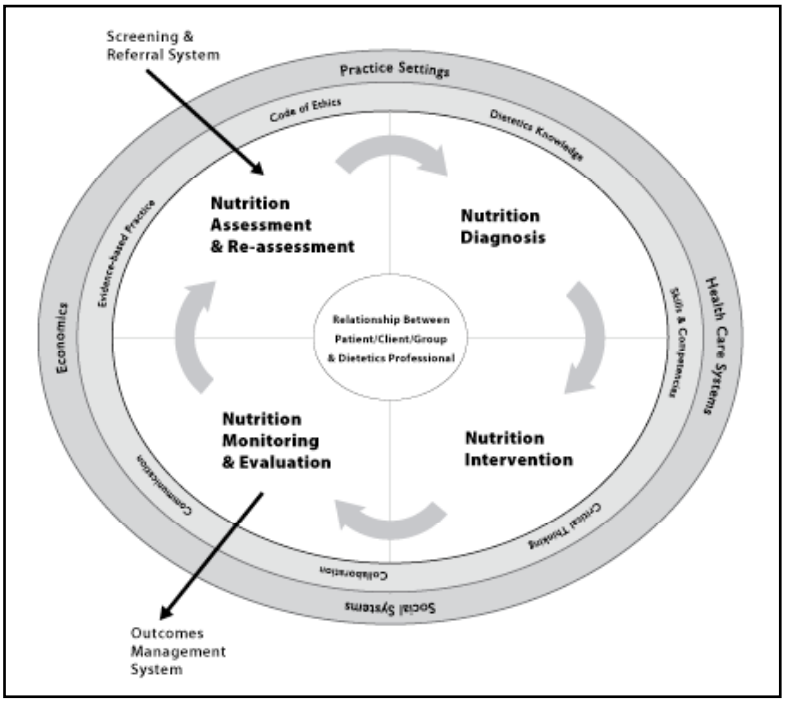
WHAT IS NUTRITION CARE PROCESS?

By Diana Tanus

The Nutrition Care Process (NCP), created by the American Dietetic Association (ADA), is a systematic process describing how dietetic practitioners provide care to patients (ADA, 2008). The NCP is designed to improve the consistency and quality of individualized care for patients and the predictability of patient outcomes.

NCP, commonly referred to as **A-D-I-M-E,** is composed of four steps:

Step 1. Nutrition **A**ssessment
Step 2. Nutrition **D**iagnosis
Step 3. Nutrition **I**ntervention
Step 4. Nutrition **M**onitoring and **E**valuation



Nutrition Assessment is a component of the model that is very familiar to the dietetic profession. This step involves the gathering, evaluation of, and interpretation of family, genetic, social, nutritional, herbal, and medical histories. It also includes a physical examination and laboratory data. This step is crucial in the selection of the correct nutrition diagnosis.

Nutrition Diagnosis involves the identification, prioritization, and documentation of the problem/need. When documenting the nutrition diagnosis statements or PES statement in the medical record, the statement is composed of three distinct components: the identification of the problem (P), the etiology (E), and the signs and symptoms (S).

Nutrition Intervention entails the specific actions used to treat a nutrition diagnosis that are intended to change a nutrition-related behavior, environmental condition, or aspects of nutritional health. This step involves two interrelated components: planning and implementing. This may include food and nutrition therapy, nutrition education, counseling, or coordination of care, such as providing referral for financial or food resources.

Nutrition Monitoring and Evaluation evaluates the amount of progress made and whether goals are being met. This step involves three parts: monitoring progress, measuring outcomes, and evaluating outcomes. Based on this evaluation, the dietician will be able to determine whether the nutrition intervention is or is not changing the patient behavior or nutrition/health status.

Reference:

American Dietetic Association, (2008). Nutrition Care Process and Model Part I: The 2008 Update. Retrieved October 16, 2009 from http://www.eatright.org/ada/files/NCP_Part_I(1).pdf

WHAT ARE SUPERFOODS?

By Karmen Ovsepyan

What are superfoods? Superfoods are referred to as, "…food[s] with high phytonutrient content that may confer health benefits as a result." In other words, they are nutritious foods which help maintain our health and well-being. Superfoods are colorful and usually contain many nutrients, including certain vitamins and minerals, omega-3 fatty acids, antioxidants, and fiber. These substances are what make superfoods beneficial for our health and why they are said to help prevent chronic diseases, such as hyperlipidemia, heart disease, and cancer.

Antioxidants help stabilize and protect the body against cell-damaging free radicals. These free radicals are produced by stress, excessive exercise, and unhealthy foods. At the same time, antioxidants help strengthen the body's immune system, skin, bones, and muscles. Some of the nutrients superfoods contain are vitamin C, vitamin A, folate, and the healthy fats, including omega-3s. Fiber, also present in superfoods, helps improve absorption of nutrients in the body, helps support digestion, and helps decrease risk of certain diseases. These components are what make superfoods "super."

Now that we know what superfoods are, where can we find them? These nutritious foods can

be found all around us, in supermarkets and local grocery stores. When you walk into the supermarket, look for blueberries, raspberries, strawberries, oranges, pomegranates, dark chocolate, soy, beans, oats, walnuts, broccoli, avocado, spinach, salmon, and the list goes on. There are two things you should keep in mind while grocery shopping:
1) superfoods are rich in color and
2) the more vibrant the color, the more nutrients and antioxidants it contains.
Like all foods, superfoods should be consumed in moderation, but they are very important to incorporate into your daily diet to maintain a healthy lifestyle. Chose a variety of these superfoods to obtain the benefits from all the different nutrients each one offers.

Reference:

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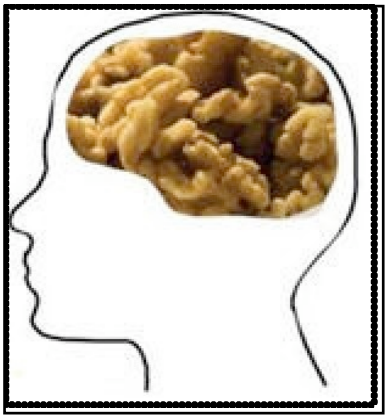
FOOD AND MOOD

By Maithili Bhagat

Do you often reach for a candy or chocolate bar to relieve stress? Do berries induce happy emotions within you? Many of us may answer "yes" to these questions because what we eat is influenced by how we feel. Conversely, how we feel can often be a result of what we eat. Food and body chemicals interact to keep us going. When our moods change, so do our body chemicals. For instance, stress often leads to a craving for carbohydrates because they boost serotonin, which is a neurotransmitter that regulates many of our feelings such as pain, tranquility, sleep, mood, and hunger. However, eating excess carbohydrates, especially when hungry, can lead to deleterious effects. Hence, choosing a variety of foods including carbohydrates, protein and fat, as well as portion control, is helpful.

The size of the meal and the time of day when it is eaten also affect mood response. Large meals containing high amounts of fat reduce mental alertness and performance. This results in drowsiness, sluggishness, and decreased ability to focus. The food-mood response is transient in nature. "Afternoon lows" are often a result of poor meal timing or food choices. Therefore, it is important to space meals three to four hours apart and choose low-fat protein and complex carbohydrates.

Aspartame, often found in artificial sweeteners, is hydrolyzed to aspartic acid and phenylalanine (an amino acid). These are also commonly found in a regular diet. After digestion, aspartame competes for entry into the brain, affecting brain function. This leads to changes in behavior, cognitive function, or mood.



Two other important brain chemicals that appear to be influenced by foods, dopamine and norepinephrine, produce a feeling of alertness, an increased ability to concentrate, and faster reaction times. Levels of dopamine and norepinephrine increase with the consumption of protein-rich foods, such as meat, nuts, and milk and dairy products.

Another group of chemicals that can influence mood and appetite are the endorphins. These are the body's natural opiate-like chemicals that produce a positive mood state, decrease pain sensitivity, and reduce stress. Endorphins are released when a person is in pain, starving, or exercising. A food substance related to endorphins is phenylethylamine, which is found in chocolate. This is probably why chocolate sales reach its peak during times of recession!

Research on the food-mood connection is primarily focused on understanding the effects of eating particular foods during particular mood states, as well as how foods can help to achieve a particular mood state. However, substantive research is required in order to assess to what degree food choices can influence worker productivity or alleviate eating-behavior disorders.

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IMPORTANCE OF BREAKFAST

By Sampada Zantye

"Eat breakfast like a king, lunch like a prince, and dinner like a pauper," so advised Adelle Davis almost half a century ago. Today's scientific research rings her words true. Rampersaud (2005), concluded that, breakfast consumption significantly contributes to whole-diet nutrient adequacy." [7] Studies have shown breakfast significantly improves nutrient intake. Breakfast consumers had 33% higher rates of fiber, 50% higher rates of vitamins, and 37% and 49% higher consumption of calcium and iron, respectively. [6] Studies have shown that breakfast intake significantly enhances cognitive performance, spatial memory, and auditory attention. [1] This in turn has a positive impact on children and adolescents' performance.

A healthy breakfast was also seen to be a significant tool in the prevention of obesity. The National Longitudinal Study of Adolescent Health found an inverse relationship between breakfast consumption during adolescence to BMI in young adulthood. [5]

Despite the significant benefits of eating breakfast, 20% of adolescents skip it. [2] This practice often starts in adolescence and continues in age with increased frequency of skipping. Lack of time, desire to sleep longer in the morning, and lack of appetite are the most common reasons cited for skipping the day's most important meal. [4] Skipping breakfast often results in eating more during the day and consequently increases chances of weight gain and heart disease. [8]

While eating breakfast is important, it is essential to ensure that it is an adequate and complete meal. An adequate breakfast should supply at least 300 calories and contribute toward meeting the day's nutritional needs. [4] The bulk of the energy from breakfast should come in the form of complex carbohydrates and not sugar. Protein is also another important component of a healthy breakfast as it provides satiety, and hence, prevents cravings in the hours following the breakfast. Breakfast containing an adequate supply of carbohydrates and protein ensures a steady supply of energy over a long period of time.

Examples of healthy breakfast options include:

- Single serving of whole grain, ready-to-eat cereal or granola with a glass of milk and a fruit.
- Vegetable-egg sandwich (whole wheat bread) with a fruit
- Granola – fruit – yogurt parfait
- Cereal bars with a glass of milk and a fruit.

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GO NUTS FOR YOUR HEART!

By Vilma Hernandez

Let your heart sing and go nuts - in moderation - by consuming heart-healthy nuts. Whether you enjoy having a handful of walnuts, almonds, pistachios, or a combination of them all, they are a great source of unsaturated fatty acids, fiber, and other nutrients that a bag of potato chips simply cannot measure up to.

Recent scientific studies suggest that nuts lower the low-density lipoprotein (LDL) or "bad" cholesterol levels in the blood. High levels of LDL cholesterol can damage the lining of the arteries. They also are the primary contributor of blood clot formation causing fatal heart attacks. Because of the healthy oils in nuts, they can improve the lining of the arteries and reduce the chances of a heart attack.

The Mayo Clinic addresses that the evidence for the heart benefits of nuts is not totally solid and that the Food and Drug Administration only allows companies to say, "evidence 'suggests but does not prove' that eating nuts reduces heart disease risk." Nonetheless, researchers believe that all nuts are packed with healthy oils and substances that contribute to a healthy heart. Depending on the type of nut, they may have the following substances in lesser or higher amounts:

Unsaturated fats: nuts are high in good the fats, monounsaturated and polyunsaturated, which are thought to lower bad cholesterol levels.

Omega-3 fatty acids: nuts are one of the best plant-based sources rich in these fatty acids, which help prevent dangerous heart rhythms that can lead to heart attacks.

L-arginine: scientists think that this substance may help improve the health of the artery walls by making them more pliable and less prone to blood clots that can obstruct blood flow.

Fiber: because all nuts contain fiber, they also help lower cholesterol. In addition, the fiber in nuts gives a satisfying feeling of being full longer.

Vitamin E: although still under study, researchers believe that vitamin E may help stop plaque buildup in the arteries. Plaque narrows the arteries, and also leads to chest pain, coronary heart disease, or heart attack.

Plant sterols: these can help lower cholesterol. It is a naturally occurring substance found in some nuts.

Even though the unsaturated fats and omega-3 fatty acids are beneficial to the heart, it is important to keep in mind that these are still fats and high in calories. Eighty percent of a nut is fat. This is why they should be eaten in moderation. Ideally, they should substitute the saturated fats found in meats, eggs, and dairy products.

According to the Food and Drug Administration, a daily amount of about 1.5 ounces or 1/3 cup of almonds, walnuts, hazelnuts, peanuts, pecans, pistachios, and some pine nuts, may reduce the risk of heart disease. And walnuts are the nuttiest of all! Studies have shown they contain high amounts of omega-3 fatty acids.

Like any other nutrient dense product, some of the benefits of nuts may be canceled by adding salt, sugar, or chocolate coatings; so be easy on these or just eat plain nuts.

Next time your heart craves for a snack, think nuts! Instead of adding salt, think moderation and exercise. Your heart will love you for that!

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(cont. on page 15)

...GO NUTS FOR YOUR HEART! CONTINUED

Nutrition information on common types of nuts. All calorie and fat content measurements are for 1 ounce, or 28.4 grams (g), of unsalted nuts.

Type of nut	Calories	Total fat (Saturated/Unsaturated fat)*
Almonds, raw	163	14 g (1.1 g/12.2 g)
Almonds, dry roasted	169	15 g (1.1 g/13.1 g)
Brazil nuts, raw	186	19 g (4.3 g/12.8 g)
Cashews, dry roasted	163	13.1 g (2.6 g/10 g)
Chestnuts, roasted	69	0.6 g (1 g/5 g)
Hazelnuts (filberts), raw	178	17 g (1.3 g/15.2 g)
Hazelnuts (filberts), dry roasted	183	17.7 g (1.3 g/15.6 g)
Macadamia nuts, raw	204	21.5 g (3.4 g/17.1 g)
Macadamia nuts, dry roasted	204	21.6 g (3.4 g/17.2 g)
Peanuts, dry roasted	166	14 g (2g/11.4 g)
Pecans, dry roasted	201	21 g (1.8 g/18.3 g)
Pistachios, dry roasted	162	13 g (1.6 g/10.8 g)
Walnuts, halved	185	18.5 g (1.7 g/15.9 g)

**The saturated and unsaturated fat contents in each nut may not add up to the total fat content because the fat value may also include some non-fatty acid material, such as sugars or phosphates.*

...BENEFITS OF DIACYLGLYCEROL (DAG) OILS CONTINUED

Overall, alternative options for oils are available and could be a helpful and possibly welcome alternative in palatability to long-term, low fat diets for some people.

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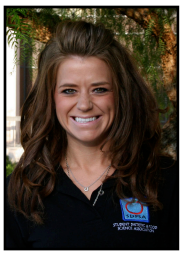
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