

**March 2012** 

#### Dear Reader:

March is National Nutrition Month and National Athletic Trainers Month—both of which we're spotlighting in this issue of *Active Bones*, our Orthopaedic Surgery and Sports Medicine Teaching and Research Foundation (OTRF) e-newsletter.

National Nutrition Month is an annual educational and informational campaign sponsored by the Academy of Nutrition and Dietetics, formerly the American Dietetic Association. The theme for this year's campaign, "Get Your Plate in Shape," focuses on the importance of making informed food choices and developing sound eating and physical activity habits. Because nutrition is such a vital component of fitness, growth, development and healing, I think it is important to include information that will help us play at the "top of our game." Therefore, I am pleased to introduce two new contributors, Carol Burtnack, RD, LDN, with Adventist Hinsdale Hospital, and Deborah Ward, MBA, RD, LDN, with the DuPage County Health Department and Adventist Hinsdale Hospital. They have agreed to be our resource for nutrition information, research, recipes and even answer questions. So if you have a question, feel free to email it to us at stevenchudikmd@gmail.com/.

"Athletic Trainers Save Lives" is the theme of the National Athletic Trainers Association (NATA) annual recognition and educational campaign this month. Every athlete that has been injured can appreciate the quick response, diagnosis and care they received from an athletic trainer—especially when injuries could have been life threatening. But not all athletes wear jerseys, which is why you'll find athletic trainers working away from the athletic sidelines in the performing arts, manufacturing, health care, education and business. With their expertise, they help workers avoid injuries and even help rehabilitate them after an injury or surgery. Within my practice, I have four athletic trainers, two of whom function as physician extenders—one of the newest career opportunities for an athletic trainer's knowledge and skills.

Because the role of physician extender is relatively new for athletic trainers, OTRF provides several educational opportunities for athletic trainers to gain experience as a physician extender in an orthopaedic clinical setting. If you are an athletic trainer, or know one, who might be interested in the OTRF program, please email *stevenchudikmd@gmail.com* for more information about the program and an application that must be submitted by April 6.

The educational experiences hosted by OTRF are funded solely through generous contributions to the OTRF Foundation. If you are interested in learning how you or your business might help us continue these programs, please contact me or one of the OTRF Board of Directors. As always, thank you for your interest in OTRF.

Sincerely,

Steven C. Chudik, MD President OTRF Orthopaedic Surgeon and Sports Medicine Physician

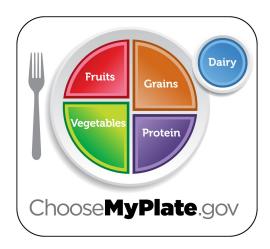




#### Get Your Plate in Shape®; Make MyPlate® Your Plate

By Carol Burtnack, RD, LDN and Deborah Ward, MBA, RD, LDN

The Academy of Nutrition and Dietetics, formerly the American Dietetic Association, is the world's largest organization of food and nutrition professionals. The organization and its members are committed to improving the nation's health, as well as advancing the profession of dietetics through research, education and advocacy. Every March, the Academy celebrates National Nutrition Month. This year's theme, "Get Your Plate in Shape®" focuses on the United States Department of Agriculture's (USDA) MyPlate® guidelines introduced last June.



MyPlate helps remind us to eat the recommended amounts and proportions of fruits, vegetables, grains, protein foods and dairy each day to ensure our body gets all the nutrients and "fuel" it needs. MyPlate guidelines replaced the popular Food Guide Pyramid® as the government's primary food group symbol that had been in use since 1992. The new, easy-to-understand, MyPlate is a visual representation of the 2010 Dietary Guidelines. The Dietary Guidelines for Americans are updated every five years by the USDA and the United States Department of Health and Human Services (HHS) and provide evidence-based nutrition information and advice for people age two and older. They serve

as the basis for federal food and nutrition education programs and the nutrition labels found on food containers.

MyPlate helps you use the Dietary Guidelines to:

- Make smart choices from every food group.
- Eat nutrient-dense foods to get the most nutrition out of our daily caloric intake.
- Stay within daily calorie needs.
- Balance nutritious eating with regular physical activity to maintain a sensible weight, reduce obesity and improve your health.

While MyPlate helps us understand the balance and variety of food we need to consume, it doesn't show the quantities of foods we need to eat, or take into account our age and activity level. That's where the Dietary Guidelines and food nutrition labels help.

The HHS/USDA Dietary Guideline chart on page 3 provides estimated calorie amounts specific to gender, age and activity level. It is important to note these are only guidelines and some individuals—especially athletes and pregnant women—may need more calories. To more specifically calculate your caloric intake, you can visit <a href="https://www.choosemyplate.gov/SuperTracker/">www.choosemyplate.gov/SuperTracker/</a>. Click the Weight Management



box. Enter your weight, height, exercise level and you will get a plan with specific calories tailored to your needs. You also can click the Sample Meal Plans tab to get food portions.

#### **HHS/USDA Dietary Guidelines**

Recommended Daily Caloric Intake				
		Carlantan	Moderately	A . 1
Gender	Age	Sedentary Lifestyle	Active Lifestyle	Active Lifestyle
Female	4-8	1200	1400-1600	1400-1800
	9-13	1600	1600-2000	1800-2000
	14-18	1800	2000	2400
	19-30	2000	2000-2200	2400
	31-50	1800	2000	2200
	51+	1600	1800	2000-2200
Male	4-8	1400	1400-1600	1600-2000
	9-13	1800	1800-2200	2000-2600
	14-18	2200	2400-2800	2800-3200
	19-30	2400	2600-2800	3000
	31-50	2200	2400-2600	2800-3000
	51+	2000	2200-2400	2400-2800

When making food choices, you should keep the following recommendations in mind:

#### Fruits and vegetables should fill half your plate

- Eat a variety of vegetables, especially dark-green, red and orange, plus beans and peas. Fresh, frozen and canned vegetables all count.
- Add fruit to meals and snack that are fresh, frozen, canned, dried, or a 100% fruit juice

#### Whole grains should make up half of your daily grains

• Choose 100% whole-grain breads, cereals, crackers, pasta and brown rice. Check ingredient lists on food packages to find whole-grain foods.

Continued on next page



#### Choose fat-free (skim/nonfat) or lowfat milk

• Fat-free (skim/nonfat) and lowfat milk provide the same amount of calcium and other essential nutrients as whole milk, but less fat and calories. If you're lactose intolerant, try lactose-free milk or a non-dairy, calcium-fortified drink.

#### Consume different protein sources

- Eat a variety of foods such as seafood, nuts and beans, as well as lean meat, poultry and eggs. Tofu and quinoa also can boost your protein as non-meat alternatives. Try the hearty and healthful quinoa recipe featured in this issue.
- Keep your portions lean and small—no larger than the size of a deck of cards.



### Limit sodium and empty calories from solid fats and added sugars

- Make intelligent food choices and simple substitutions such as having fruit for dessert, or 100%
  juice in place of sugary drinks to help ensure you're eating nutrient-rich foods.
- Add spices, herbs, lemon juice or food flavorings such as vanilla or almond extracts to season food without adding salt.
- Make major sources of saturated fats such as pizza, cheese, sausage and hot dogs an occasional meal, not everyday foods.

#### Enjoy your food, but eat less

- Avoid oversized portions. If eating out, cut your serving in half and ask your waiter to box half to take home before you take a bite. If it isn't on your plate, you won't be tempted to over eat.
- Use a smaller plate, bowl and glass.
- Cook at home more often to control what is in your food.
- Check restaurant menus for lower calories options when eating out and ask for a vegetable or fruit in place of fries or onion rings.
- Keep track of what you eat. Write down how much and when to determine total daily calories and any behavior or environmental factors influencing your choices.

#### Be physically active—your way

• If you're not already exercising, there's no time like the present to start. Choose activities you like and can do. Start slowly—10 minutes at a time—and build gradually.

Continued next page



- Children and teens should perform at least 60 minutes or more a day of physical activity.
- Adults should do at least 2.5 hours or aerobic physical activity each week at a moderate level such as a brisk walk or, 1.25 hours of aerobic physical activity each week at a vigorous level. Being active 5 or more hours each week can provide even more health benefits. Spreading aerobic activity out over at least 3 days a week is best. Also, each activity should be done for at least 10 minutes at a time. Adult also should do strengthening activities like push-ups, sit-ups and weight lifting at least 2 days a week.

If you are unsure of what your dietary requirement should be or have a nutrition question, email it to the OTRF dietitians at *stevenchudikmd@qmail.com/*.

#### Find more healthful eating tips at:

- ChooseMyPlate.gov (USDA)
- EatRight.org (Academy of Nutrition and Dietetics)
- KidsEatRight.org (Academy of Nutrition and Dietetics)



#### Deborah Ward, MBA, RD, LDN

For more than 30 years, Deborah has been educating healthcare providers, clinicians, patients and consumers about nutrition and healthful living. In this role, she worked in hospitals as a clinical dietitian, as a coordinator for the American Dietetic Association's Quality Management & Research Team, as a dietetic resource for the National Center of Nutrition and Dietetics consumer nutrition hotline, and author of several professional journal articles. Deborah currently is a dietitian and case manager focusing on pediatric, maternal and lactation nutrition for the DuPage County Health Department, a clinical dietitian at Adventist Hinsdale Hospital, and a group educator for Hinsdale

Health & Nutrition Center's Optifast® weight management program. She also is the director for the Hinsdale Complete Health Improvement Project (CHIP), a lifestyle improvement program.



#### Carol Burtnack, RD, LDN

A registered clinical dietitian for Adventist Hinsdale Hospital, Carol's nutrition career began at Andrews University, Berrien Springs, Mich., where she received her bachelor of science degree. While attending Andrews, she worked as a research assistant and co-authored an article published in *Nutrients*, an open access, peer-reviewed journal of food science and nutrition. Carol gained hands-on clinical experience during her dietetic internship at Hinsdale Hospital and working with nearby community healthcare resources. She is a member of the Academy of Nutrition and Dietetics and its sports, cardiovascular and wellness nutrition practice group.

#### Gluten-free diet provides necessary nutrients without gastric sensitivity

Chances are you've seen products on grocery store shelves, entrees listed on restaurant menus and even celebrities proclaiming it as a diet, but do you really know what it means when a food is glutenfree? If you do, have you tasted a gluten-free food? For many the name alone may be a turnoff, but for millions of people, worldwide, following a gluten-free diet is the difference between enjoying a healthy, normal lifestyle or dealing with the ill side effects of gluten intolerance.

Gluten is a protein found in certain grains such as wheat, rye, barley and triticale (a cross between wheat and rye). Traces may be found in oats unless marked gluten-free and milled in a facility that does not package other gluten containing foods. Gluten also is used as a food additive to help improve both taste and texture in foods like gravy, french fries and deli meats.



Gluten is completely harmless for most

people, except for those diagnosed with celiac (see-lee-ak) disease, also known as celiac sprue, non-tropical sprue and gluten-sensitive enteropathy, or non-celiac gluten sensitivity (NCGS). Both celiac disease and NCGS involve an immune reaction to gliadin, a form of protein found in gluten. Over time, the immune reaction can damage the inner surface of the small intestine making it unable to absorb certain nutrients needed for growth and development and cause or contribute to such conditions as:

- Malnutrition
- Anemia
- Osteoporosis or osteomalacia, a softening of the bone that also is known as rickets in children.
- Lactose intolerance
- Cancer
- Neurological complications

There are no typical signs and symptoms of celiac disease. Most people with the disease have general complaints such as intermittent diarrhea, abdominal pain and bloating after eating gluten. However, these also are symptoms of other gastrointestinal conditions including irritable bowel syndrome, gastric ulcers and Crohn's disease, to name a few. Sometimes, though, symptoms are less obvious such as muscle cramps, joint pain or a skin rash. If you or your child suffers from any of these symptoms, you should consult a physician to be screened for celiac disease before eliminating gluten from your diet. To get accurate test results, you have to be eating gluten products as part of your regular diet.

Presently, there is no known cure for celiac disease or NCGS, but you can effectively manage it by changing your diet. If you have been diagnosed with celiac disease or NCGS, or if you are unsure how to modify your diet to one that is gluten-free, you might want to consult a Registered Dietitian to ensure you get all of your nutritional needs while following a gluten-free diet.



#### **Keen what?**

No, (keen-wah).

Spelled quinoa, this odd sounding word actually is one of the most nutritious grains in the world with more than 16% protein compared to 7.5% for rice or 14% for wheat when you compare 1 cup cooked



portions. Quinoa's protein contains all nine essential amino acids including lysine that is necessary for cell production. The World Health Organization touts quinoa's protein equivalence to that of milk and NASA is considering it as a possible sustaining food for long space flights. In addition to protein, quinoa is a good source of potassium, B-vitamins, iron and fiber.

Generally considered a grain, quinoa technically is the seed of the Chenopodium or Goosefoot plant—a relative of leafy green vegetables with edible leaves like

spinach and Swiss Chard. The origins of this super grain date back thousands of years to the Incas where it was one of their dietary staples along with corn and potatoes.

As a crop, quinoa thrives in poor soil, arid climate and mountainous altitudes so it remained a regional "secret" until 1982 when it was introduced to the United States. Today, most quinoa is imported from South America, although it is being raised on the high slopes of the Rocky Mountains. Because most quinoa is imported it is more expensive than other grains, but when cooked it increases three to four times in volume so you do not need as much in a recipe making it a reasonable value for an exceptional nutrition benefit.

Quinoa grains are about the same size as millet, but more flat with a pointed, oval shape. The color varies—from pale yellow and red, to brown and even black. Quinoa cooks quickly to a light, fluffy texture. As it cooks, the external germ, which forms a band around each grain, spirals out, forming a tiny crescent-shaped "tail," similar to a bean sprout. Although the grain itself is soft and creamy, the tail is crunchy, providing a unique texture to complement quinoa's delicate flavor. It can be substituted for rice in most recipes and used to enhance foods like soup, salad and pudding. It also is available as pasta that makes it more versatile for those needing to restrict gluten or wheat products from their diets.

Quinoa seeds are naturally coated with a bitter substance called saponin that can be mildly toxic. Therefore, it is important to wash/rinse it before cooking even if the package claims it was washed/rinsed. To remove this coating, place the seeds in a fine meshed strainer and run water through until it is no longer cloudy or sudsy. In its raw state, quinoa is gluten free. However if you have a gluten intolerance, make sure to check the package information to ensure the quinoa was not processed in a location that also processes wheat, barley, rye or triticale because cross-contamination could occur.

You can find quinoa at these local grocery stores and online at:

Costco Wholesale Trader Joe's IHerb.comNuts.com Puritan.com

Dominick's Whole Foods Nuts.com SunOrganicFarm.com

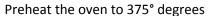
Jewel-Osco BulkNuts4You.com PleasantHillGrain.com



#### Gluten-free baked quinoa ratatouille

If you are looking for a hearty and nutritious new recipe, try this one for ratatouille made with quinoa. If you don't have quinoa on hand, it can be made without.

- 1 Tablespoon olive oil
- 2 Cloves garlic, minced
- 1 Red onion, thinly sliced
- 1 can 14.5 ounces diced tomatoes and the liquid
- 2 Tablespoons tomato paste
- 1 Teaspoon dried basil
- 1/2 Teaspoon dried oregano
- 1/2 Teaspoon dried thyme
- 1 Tablespoon chopped fresh parsley
- 1 Large eggplant (about 1 pound) cubed
- 1 Green pepper, thinly sliced
- 2 Zucchini squash, sliced
- 1 Yellow summer squash, sliced
- 1 Cup rinsed and cooked quinoa (Cook according to package instructions. Rinse\* before cooking.)
- 3/4 Cup shredded part-skim mozzarella cheese (or Italian cheese blend, if desired)



- 1. In a large, nonstick skillet, heat the olive oil over medium heat. Add the minced garlic and onion slices and sauté for 5 minutes until soft and translucent.
- 2. Add the diced tomatoes and liquid, tomato paste, basil, oregano, thyme and parsley. Continue to cook for 1 to 2 minutes. Remove from heat.
- 3. Spray a 9"x 11" baking dish with a non-stick cooking spray. Begin layering the ratatouille starting with half of the tomato and onion mixture. Top with all of the uncooked, sliced and cubed vegetables. Add the remaining tomato and onion mixture.
- 4. Spread the cooked guinoa on top and sprinkle with shredded cheese.
- 5. Cover with foil and bake for 40 to 45 minutes. Remove the foil for the last 5 minutes of cooking time to slightly brown the toppings.

Makes approximately 4, 1-1/4 cup servings.

#### **Nutrition per serving**

Calories: 234 Fat: 8 g Cholesterol: 13.4 mg Sodium: 380 mg

Carbohydrates: 31.4 g Fiber: 8.3 g Protein: 11 g

Recipe courtesy of John Wiley & Sons, from Easy Gluten-Free: Expert Nutrition Advice with more than 100 Recipes by Tricia Thompson, MS, RD, and Marlisa Brown, MS, RD, CDE, CDN, and the American Dietetic Association. ©2010, John Wiley & Sons.

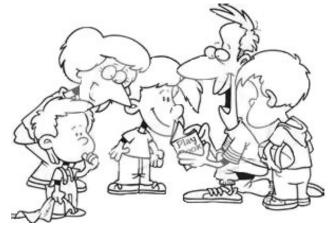
\*Purchasing quinoa already rinsed saves preparation time. Quinoa's outer shell contains saponin, a bitter resin-like coating. Quinoa is usually rinsed before it is packaged and sold, but it is best to rinse again to remove any of the powdery residue that may remain on the seeds. The presence of saponin is obvious by the production of a soapy looking "suds" when the seeds are swished in water. Placing quinoa in a fine mesh strainer and rinsing thoroughly with water easily washes the saponin from the seeds.





## Healthful, easy snacks are family game winners

Busy schedules crammed with kids' activities, meetings, social commitments and chores can make eating healthfully a challenge unless you and your family have a game plan. Fast foods are the usual "first down play" for many families on the go because of convenience and reasonable prices, but they are not necessarily the most healthful choice. Therefore, your game plan needs to include team participation and practice, practice, practice. First, everyone should become acquainted with the new "play"



should become acquainted with the new "play book."

Your body needs fuel throughout the day, as well as pre- and post-game carbohydrates, protein and fats. Research shows eating before exercising or playing improves an athlete's performance compared to those who fasted.

Whenever you eat a pre-game snack/meal make sure to allow adequate digestion time. A large, high carbohydrate meal can be consumed 3.5 to 4 hours before the start of a game or exercise. A small meal or snack should be consumed 2 to 3 hours prior to playing/exercising. Most small carbohydrate snacks are usually tolerated if consumed an hour before the game/exercise starts.

A pre-game or pre-workout energy snack/meal should contain fluids to maintain hydration, be high in carbohydrates to maintain blood sugar levels and replace glycogen stores and moderate amounts of protein and iron. It also is important the food is familiar to the athlete to avoid gastrointestinal distress.



These pre-game snacks are winners:

- Half of a bagel with peanut butter
- Energy or granola bar
- Piece of fresh fruit and small handful of nuts
- Fruit smoothie made with lowfat milk, yogurt, or both
- Handful of homemade trail mix made of Cheerios®, nuts, pretzels and dried fruit
- Raw vegetables with hummus or lowfat dressing for dipping
- String cheese with whole grain crackers

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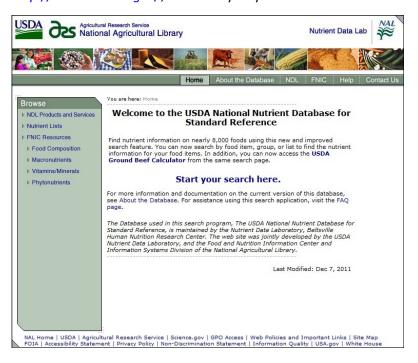
For a post-game/post-workout snack, it is extremely important to replenish lost nutrients and fluids to ensure proper recovery. Food choices should include an adequate amount of complex carbohydrates—potatoes, rice, bread, pasta or cereal, healthy fats, protein and lowfat chocolate milk (February OTRF newsletter).

These easy post-game ideas will help ensure you and your body are ready for the next game:

- Lean turkey sandwich on whole grain bread with or without soup
- A salad with quinoa, garbanzos or other beans and vegetables
- Baked potato with broccoli, lowfat cottage cheese and sesame seeds
- Whole grain wrap sandwich with your favorite protein food, lettuce and tomato
- Whole grain burrito with lowfat cheese, black beans or lean chicken, cilantro, salsa and corn



These suggestions will get your season off to a successful start, but you will probably want to add some of your own plays. If you are unsure what to include, or want to check some player favorites, use the United States Department of Agriculture's (USDA) National Nutrient Database, <a href="http://ndb.nal.usda.gov/">http://ndb.nal.usda.gov/</a>, for an easy way to check nutrients and calories in comparable mounts.



Why not start the game clock with National Nutrition Month and begin choosing healthier and more nutrient-dense foods for snacks and meals and skip the fast food? Not only will the team feel better and have more energy, you also can have fun planning your next winning play.

#### **Nutrition in the news**

Here are some noteworthy items making news headlines you might have missed.

#### New guidelines planned for school vending machines

The Obama administration is working on setting nutritional standards for foods that children can buy outside the cafeteria. With students eating 19% to 50% of their daily food at school, the administration says it wants to ensure what they eat contributes to good health. The proposed rules are expected soon.

#### Study reveals exercise "fuels" the brain

A study published the February 2012 *Journal of Physiology* found that eating after exercising not only restores glycogen levels in the brain, but increased it by as much as 60% resulting in "supercompensation"—a type of brain carbo-loading that returned to normal levels within 24 hours. In participants who continued daily exercises, the glycogen levels remained elevated when compared to sedentary participants. These findings suggest to researchers that increased storage and utility of brain glycogen could be involved in the "development" of a better, sharper brain, or at the very least the reason to reach for chocolate milk or a banana after a prolonged/strenuous sports event or exercise that leaves you tired.

### Orthopaedic Surgery and Sports Medicine Teaching and Research Foundation Helps People Stay Fit and Healthy

Steven Chudik, orthopaedic surgeon and sports medicine physician with the Steven Chudik Shoulder and Knee Injury Clinic, founded the Orthopaedic Surgery and Sports Medicine Teaching and Research Foundation (OTRF) in 2007. OTRF is a nonprofit, 501 (c)(3)organization dedicated to funding research and education for the purpose of keeping people active and healthy.

Dr. Chudik has experienced a growing demand by patients, athletic trainers and clinicians for up-to-date medical information and unbiased research on injury prevention—especially for children—as well as facts on arthritis and wear and tear on joints, cartilage, tendons, ligaments, etc. To fulfill these requests, OTRF produces and distributes this newsletter, shares information about health performance-related issues like nutrition and fitness, hosts athletic training educational programs, conducts seminars for healthcare providers and the community and most important, funds unbiased research and development particularly in emerging areas such as arthroscopic and minimally invasive surgery for injuries to the meniscus, labrum, rotator cuff, ACL and cartilage.

However, none of this is possible without ongoing financial support. We are extremely grateful to all those who have contributed in the past. Many of the donations came from patients or their family members who benefited from Dr. Chudik's orthopaedic and sports medicine expertise. If you might be interested in helping us continue our research, please speak with Dr. Chudik or one of his staff. Also, many companies sponsor programs that match charitable contributions made by their employees. Some even match donations made by retirees and/or spouses. Matching gift programs are a great way to double your generosity. Regardless of the amount, every contribution helps make a difference.





# ORTHOPAEDIC SURGERY AND SPORTS MEDICINE TEACHING AND RESEARCH FOUNDATION

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