

Letter from the editor

by Jeffrey A. Potteiger, Ph.D., FACSM

Welcome to the Spring issue of the *ACSM Fit Society* Page. In this issue, we remember that food and fitness regimes are not universal – we have cultural and ethnic considerations to keep in mind. Our theme is “Population-Specific Health and Fitness Issues.” We will examine why certain populations are more at risk for certain diseases than others and what preventative measures can be taken by these populations to ensure healthier, happier lives.

We hope you use this information to enhance your health and wellness. Remember to visit ACSM online for additional health and fitness information (www.acsm.org).

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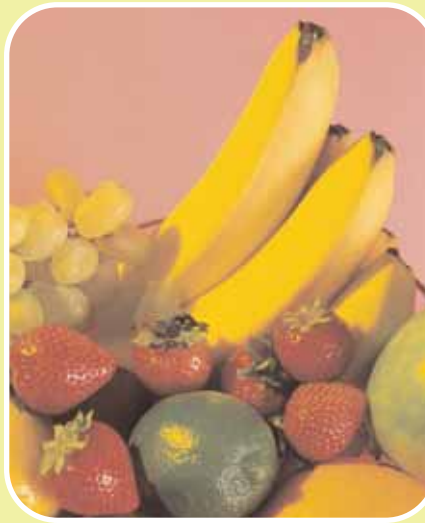
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THEME: POPULATION-SPECIFIC HEALTH & FITNESS ISSUES

Healthy Foods Based on Culture

by Stella Lucia Volpe, Ph.D., R.D., LDN, FACSM



Food – A Major Part of Our Lives

Food is a major part of our lives. Our relationship with food is based on a number of factors; however, our culture plays a primary role in our relationship with food. Growing up as a first-generation Italian with homemade pasta, polenta, pizzelles, etc., I can tell you that food is integral to my family during our daily meals as well as on holidays and other special occasions. Food is important to our celebrations of all kinds – whether that be baptisms, weddings or funerals.

With respect to all cultures, it is safe to say that food is important. Food sustains our lives. In addition to its celebratory aspect, food also is important in athletic performance, regardless of one's culture. Nonetheless, it is imperative that we respect and understand the differences in food intake based on a person's culture. Furthermore, if a person needs to drastically change his/her food intake based on

cardiovascular disease, for example, and/or to dramatically improve his/her exercise performance, we again need to respect food cultures, and work on making changes that can still embrace his/her likes and dislikes.

How can we assist athletes to choose foods that are healthy and part of their culture? For athletes of all levels, cultures and types (e.g., elite, recreational, overweight, those with diabetes mellitus, etc.), learning their typical workout routines is equally as important as learning their food likes and dislikes. In addition, learn what their goals are both with their physical activity and their dietary intake. Working with a Registered Dietitian (R.D.) and/or a Licensed Dietitian/Nutritionist (LDN) is key to properly obtaining their typical dietary intake, likes, and dislikes. In addition, the R.D. can help to establish daily energy (calorie) needs.

Table 1. Twenty-four Dietary Recall of Hypothetical Athlete

Breakfast	Two bowls of congee (a watery rice gruel that resembles porridge) 4 ounces of chicken 2 ounces of mushrooms 2 crullers (also known as “deep-fried devils”, these are twisted strips of dough - about 12 inches long, which have been deep-fried in oil) 8 ounces of black tea
Snack	Mixed fresh fruit
Lunch	12 ounces of water Hamburger on white bun 6 ounces of French fries 12 ounces of soda
Snack	White steamed bun filled with sweet barbecued pork
Dinner	6 ounces of white rice 3 ounces of fish 3 ounces of steamed mixed vegetables 8 ounces of black tea

Sources:
<http://chinesefood.about.com/library/weekly/aa100499.htm>
http://www.nydailynews.com/lifestyle/food/2007/03/21/2007-03-21_buns_in_their_ovens.html

Once workouts, goals, likes, dislikes, and specific cultural practices have been ascertained, the next step is to work with

Healthy Foods (continued from page 1)

the athlete to consider what he/she is willing to change from a nutritional aspect. Again, this is the time to continually work with a R.D. or LDN, who has the proper education and experience. See Table 1 for an example of a 24-hour recall from a 43-year-old female competitive athlete. She works out from five to seven days per week, and is very fit, yet, would like to lose about 10 pounds. She is Asian (Chinese)-American and consumes foods that are typical of the Chinese upbringing she had from her parents; her mother was born in mainland China, her father was born in Hong Kong. Nonetheless, because she was raised in the United States, her dietary intake reflects a mixture of both Chinese and U.S. cultures.

After meeting with this athlete and discussing her likes, dislikes and overall eating and athletic goals, the R.D. would work with her

on a revised general dietary intake. In general, this athlete eats quite well when she eats based on her Chinese culture (though, portions may need to be decreased some, based on her desire to lose weight; however, the portions should not be lowered tremendously, due to her heavy workout schedule). However, the main meal that the R.D. can work on is her lunch, which is usually consumed quickly, due to her work schedule. If she can alter her lunch to a healthier, lower-fat option most of the time, this will help her with her weight loss and her athletic performance. Thus, a grilled chicken sandwich on a whole grain bun, with a salad, and baked potato, and 100-percent juice, skim milk, sports drink or water to drink, would be a better choice than what she is consuming for lunch at present. In addition, her typical Chinese snack of white steamed bun filled with sweet barbecued pork is also fine for her to consume some of the

time, but that may need to be altered to another typical Chinese snack, or to a smaller portion for her weight loss goals. In general, she also needs to consume more water throughout the day for hydration purposes, and she should try to increase her fruit and vegetable consumption for increased antioxidant intake for her performance, as well as to increase satiety at meals, which will also help her with her weight loss.

Bottom Line

Considering food likes and dislikes based on culture is extremely important with respect to changes in dietary intake, as well in thinking about overall fitness and health goals. Respecting these differences in others is crucial as well.

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Q & A

by Anthony Luke, M.D., M.P.H.

Q: I have read that the French live longer. Does drinking a glass of wine really help you live longer?

A: The life expectancy in France is actually 79.73 years, putting it no. 16 on the rank list for countries' life expectancy. The number one country for long life was actually Andorra, followed by Macau and Singapore, according to the 2006 CIA World Factbook. However, there is something to be said for French wine related to longer life. Red wine, more so than white wine, contains an abundant amount of phenolic acids, polyphenols, and flavonoids. These agents have effects on the lining of blood vessels and can help relax small arteries thereby improving blood flow. Interestingly, French wine, in particular, has a higher amount of polyphenol levels, compared to wines produced in other areas. Therefore, it appears that there is some cardiovascular protection enjoyed by moderate drinkers of red wine. What is moderate intake? Studies reported a reduction in major cardiovascular events with 150-300 ml of red wine daily (1 to 2 glasses). However, the flavanoids and agents in grape juice may also have the same benefits. Finally, there is a theory of the "French Paradox," that the high fat and high protein diet often consumed by French people is also associated with lowered cardiovascular disease. Something that the French are doing seems to be right. Vive la France!

Q: Why are Kenyan runners such good runners?

A: African runners have been very dominant in elite distance running. Dr. Tim Noakes examines this in his book, *The Lore of Running*, 4th Edition (Human Kinetics, 2001). In one interesting chapter, he discusses the observations that Vincent Sarich, a professor at UC Berkeley, has made, including that the ratio of African elite long distance runners versus the remainder of the population is almost 80 athletes per million males in the United States, compared to one out of 20 million for the rest of the world. Possible explanations for the superior performance of Kenyan runners may be related to improvements in endurance; greater ability to resist fatigue from running; specialized skeletal muscle build; a thinner, lighter anatomy; better training methods; and/or strong mental toughness. There is always the debate between genetics versus the environment, which is a controversy that remains unanswered. However, there seem to be multiple factors that make Kenyan runners very special athletes.

Q: My pediatrician tells me my child is overweight. People in my family are overweight. Is this something that runs in the family? Does ethnicity play a role?

(continued on page 4)

Asian Women and Osteoporosis

by Karen Hind, Ph.D.



Osteoporosis has become a major health concern for all women; at least one in three women will develop the disease in her lifetime. It progresses silently, but the resulting disabling fractures are painful and can lead to a loss of independence and quality of life. Osteoporosis is diagnosed when the density of bone falls past a certain point and fractures can occur when bone density and bone structure become too fragile to withstand minor trauma.

The main message that should be communicated to women about osteoporosis is “prevention.” However, while certain ethnic groups appear to be more at risk than others, public information about osteoporosis tends to be generalized to the population as a whole. Asian women have a particularly high risk of developing osteoporosis, largely because of genetics, but also because of certain lifestyle factors.

Genetics

Asian women are genetically smaller, slender and lighter than women of other ethnic populations. Having a small frame and a low body mass are recognized risk factors for osteoporosis because of its association with low bone density.

Low bone density

The diagnosis of osteoporosis is based on the density of bone, thus bone density is important when assessing osteoporosis risk. Studies such as the National Osteoporosis Risk Assessment Study have found that Asian women have the lowest bone density and lowest bone mineral content when compared to other ethnic groups. Thus, Asian women are more likely to be diagnosed with osteoporosis.

Fracture risk

The incidence of vertebral fractures is as high in Asian women as in Caucasian women, but studies report lower rates of hip fracture in Asian women. This is quite strange considering Asian women have lower bone density than other ethnic groups. There are several possibilities why this is so. For instance, Asian women may fall less. It is also possible that their small bone size may lead to the interpretation of their bone density as low when in fact it is normal (bone density is measured using dual-energy X-ray absorptiometry, which is two dimensional, so does not take into account bone size). However, there are other reports from studies using three-dimensional techniques that bone deficiencies at the spine exist in Asian women after controlling for bone size. Whether or not Asian women have a lower fracture risk is not clear, but for all women, it is important to optimize bone health as much as possible.

Diet

Compared to Caucasian women, Asian women and girls have been found to consume lower amounts of calcium. One study found that most Asian women are lactose intolerant and avoid dairy products, which are the primary and most readily available source of calcium. In addition, some Asian women (Hindu) follow strict vegan diets. Dietary calcium intake is crucial to bone health to help replace the mineral that is lost through every remodeling cycle, and it is recommended that women consume 1,000 milligrams of calcium daily. It is advised that women who suspect that they may be lactose intolerant seek a food tolerance test to confirm this before excluding all dairy from their diet. If a woman is lactose intolerant, or their religion does not permit them to consume dairy, there are alternative forms of calcium from food sources or supplementation. One study has concluded that soy isoflavones can have a positive effect on bone density in Asian women. Other good sources include green leafy vegetables, sesame seeds, almonds and oranges.

Vitamin D is also fundamental to bone health. Muslim women's clothing restricts exposure of the skin to sunlight, the source from which the majority of an individual's Vitamin D is obtained. It is recommended that women have a daily intake of around 400 international units of Vitamin D for bone health and other important physiological functions. If this is not possible from sunlight exposure, Vitamin D can also be sourced from supplementation.

Physical activity

Finally, but importantly, regular, weight-bearing physical activity is imperative for good bone health. Unfortunately, there are reports of lower physical activity levels in Asian women as compared to Caucasian women. These lower levels of exercise appear from around the age of 12, with reports of Asian girls taking part in less-loaded physical activity and extra-curricular sports.

Culturally and historically, some barriers against sports participation may exist for Asian women. Studies report that some Asian women believe that physical activity challenges boundaries to femininity and cultural identity. The dress code of certain religions can also bring difficulties for Asian women to participate in sport and exercise. However, since Tiffany Chin won the Women's U.S. Figure Skating Championship in 1985, there have been increasing numbers of positive female role models for Asian women in competitive sport. Good examples are Melissa Bulanhagui (figure skating), Michelle Wie (golf), and Amy Chow (gymnastics and pole vault).

Exercises that provide loading to the skeleton are good choices for Asian women (e.g. walking, aerobics, dance, tennis, and badminton). Tai Chi has also shown to be successful in maintaining good bone health in Asian women. The American College of Sports Medicine's Position Stand, “Physical Activity and Bone Health,” recommends that exercises for preserving bone health be performed for 30 to 60 minutes per day, three to five times per week, at a moderate to high intensity.

Asian women appear to be at risk for osteoporosis, although their fracture risk is unclear. For Asian women who are concerned about their bone health, regular, weight-bearing physical activity and a diet high in calcium and with adequate Vitamin D, are modifiable and important strategies.

Diabetes in Mexican Americans

by Tinker D. Murray, Ph.D., FACSM and Roberto Treviño, M.D.



Mexican Americans comprise approximately 66 percent of the United States' ethnic sub-group of Hispanics, including Puerto Ricans (island and continental), Cuban Americans, and Central and South Americans. On average, about 2.5 million, or 9.5 percent, of Hispanics and Latino Americans 20 years old or older have been diagnosed with diabetes, and Mexican Americans are 1.7 times likely to have diabetes as non-Hispanic whites. Non-Hispanic blacks are also at higher risk for diabetes and are 1.8 times more likely to have diabetes than non-Hispanic whites.

Why are Mexican Americans at higher risk for diabetes? Many researchers suggest that some ethnic sub-groups, like Hispanics, have inherited a "thrifty gene" that predisposes them to develop diabetes more readily than other sub-groups. However, other researchers would argue that Mexican Americans are genetically similar to white children, but because of environmental similarities, their risk factor levels are more similar to African American children. For example, national research data from 2002 indicates that the rates for overweight (a major risk factor for diabetes) were 27 percent for Mexican American children, 27 percent for African American children and 12 percent for non-Hispanic white children. This suggests that environment can supersede genes in predisposing an individual to higher levels of diabetes risk.

To design effective interventions it is important to understand risk factors that are associated with diabetes.

For adults, diabetes risk factors are the following:

- Overweight
- Age greater than 45
- Parent, brother, or sister with diabetes
- Female who has had gestational diabetes (abnormal glucose levels during pregnancy or who has delivered one baby weighing more than 9 pounds)
- Blood pressure greater than 140/90, or you have been told you have high blood pressure
- HDL Cholesterol (good cholesterol) less than 35, or triglyceride level is greater than 250
- Physical inactivity

Research from the National Diabetes Prevention Program has shown conclusively that adults (regardless of ethnicity) can reduce their risk for diabetes by 58 percent with lifestyle modifications that include: eating less fat and fewer calories, exercising for a total of 150 minutes a week, and aiming to lose seven percent of their body weight with the goal of maintaining the weight loss. It appears that adults older than 60 can achieve even greater diabetes risk factor changes (71 percent reduction) by following the same guidelines.

Programs like the Bienestar and Neema School Health Programs developed by the Social and Health Research Center (S&HRC) in San Antonio, Texas, have been shown to reduce diabetes risk in youths. Bienestar and Neema mean "wellbeing" in Spanish and Swahili, respectively. These programs are designed to help Mexican American and African American youth modify unhealthy behaviors associated with diabetes (high saturated fat intake, high sugar intake, low dietary fiber intake, low physical activity, and overweight).

Both Bienestar and Neema are based upon social cognitive and capital health theories. To promote positive health behaviors, social cognitive theory helps youth and adolescents understand the interrelationships between individual beliefs and knowledge, with regards to their surrounding social support. Social capital theory helps youth and adolescents understand the interrelationships between financial, individual, and social messages that can help them change unhealthy behaviors. The Bienestar and Neema Programs have been shown to reduce blood glucose levels in youth.

Currently, a national diabetes prevention study titled "HEALTHY," sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases, is being conducted to determine if lifestyle modifications (like those for adults in the Diabetes Prevention Program) can reduce the diabetes risks for young adolescents. The study subject pool includes more than 50 percent minorities, especially Mexican

Americans and African Americans, in lower socioeconomic categories. The results of the study are expected in 2009.

The delivery of health care is more than just taking a medication. For Mexican American patients, in addition to a scientific method, health care must be personal and cultural. According to the National Diabetes Education Program's Web site, diabetes is a self-managed disease. It is important that people with diabetes learn to take responsibility for their day-to-day care. The risks for diabetes, as well as the complications of diabetes, can be controlled by keeping blood glucose, blood pressure, and cholesterol in the target ranges as monitored by personal physicians.

People with diabetes can also manage their disease by eating healthy foods, being physically active, taking diabetes medicine as prescribed, and by regularly testing their blood glucose levels. Finally, various ethnic sub-groups, like Mexican Americans, can benefit by having the opportunity to develop social capital via community education and support programs that educate about how to prevent and control diabetes.

Selected Resources for Learning More About Diabetes:
National Diabetes Education Programs, <http://ndep.nih.gov/>
Social and Health Research Center, <http://www.sahrc.org>

Q & A (continued from page 2)

A: Childhood obesity is a serious epidemic that we will continue to face in the 21st century. It's estimated in the United States that more than 30 percent of children are overweight or obese, and countries around the world are facing similar concerns. It is a problem with many causes, including very importantly our daily lifestyle habits as they pertain to eating and exercise. There are medical conditions and some role for genetics in the development of obesity; however, the majority of cases are still due to overeating and insufficient physical activity. Parental factors are crucial in addressing the problem, as parents are still the main role models for children. Many of the successful weight loss programs and studies actively involve the parents in the program, many times getting them to reduce their weight as well! Making sure that the family eats well and performs regular exercise has been shown to be an effective approach for improving weight. Unfortunately, there does seem to be some relationship between higher obesity rates in specific ethnic groups, specifically Native Americans, aboriginal populations (such as in Australia), black and Hispanic populations. However, the epidemic of childhood obesity is a multi-dimensional problem and it will take efforts on individual, community and societal levels to fight the problem. Everyone has a role to play.

African Americans and Obesity: Beyond Lifestyle Choices

by Christina Andux and Robert Hickner, Ph.D.



Obesity is the second-leading cause of preventable death in the United States, taking more than 200,000 lives a year. Though many would like to blame the epidemic on fast food diets and a fast-paced lifestyle, there are factors other than the environment that contribute to obesity. There are genetic, neurological, physiological, biochemical, cultural, and psychological factors that come into play. According to current statistics, 77 percent of African American women in the United States are overweight or obese, compared to 66 percent of all adult Americans. Some of the factors contributing to difference in obesity rates between African American and Caucasian individuals are that African Americans are more likely to have high blood pressure and diabetes, be less physically active than their Caucasian

counterparts, and receive less medical care. According to a study by the Harvard School of Public Health, there was little correlation between obesity in African American women and socioeconomic position over time. This indicates that there are underlying factors, other than environmental, that result in racial differences in obesity.

Recent studies have begun to find possible biochemical explanations for the difference in the prevalence of obesity in African Americans and Caucasians. Obese African Americans store more fat, especially in the abdominal regions, due to a higher amount of proteins in the fat synthesis pathways inside of the cell. There is also less fat breakdown (lipolysis) in African Americans, though the cause for this is yet to be determined. Fat oxidation in muscle is also reduced in sedentary, obese and lean African Americans compared to sedentary Caucasians. The good news is that both obese African American and Caucasian women were equally able to increase their muscle's ability to utilize fat, with as few as 10 consecutive days of aerobic exercise. This is very encouraging, as a lower level of fat utilization has been associated with obesity-related metabolic diseases, such as Type 2 diabetes.

As studies continue to help pinpoint ways to reduce obesity, it is up to the community to make the public aware of the consequences of the obesity epidemic and how to use lifestyle modifications to decrease the prevalence of obesity. According to the [Joslin Diabetes Center](#) and the [American Diabetes Association](#), Type 2 diabetes is nearly twice as likely to occur in African Americans as Caucasians. Heart disease and high blood pressure have also been shown to occur earlier and more frequently in African Americans than in other populations. Behavioral issues that lie within the African American community include a lower overall level of physical activity and diets higher in fat. These lead to health consequences of obesity other than Type 2 diabetes, including stroke, sleep apnea, gallbladder disease, fatty liver disease, osteoarthritis, and reduced fertility, among others.

With this news it seems logical to ask what can be done to reduce the incidence of obesity, particularly in susceptible populations. [The American Obesity Association](#) provides tools with which to battle the obesity epidemic.

BMI: Body Mass Index is a tool that is used to evaluate body fat by the weight (in kilograms) to height (in meters) ratio of a person. The Internet provides various sites where BMI calculators can be used to find one's weight category. Any BMI greater than 30 kg/m indicates obesity.

Diet: The [U.S. Department of Health Customized Food Pyramid](#) can be used as a guideline to eating a healthy, balanced diet. In addition to following the food pyramid, simply cutting out fast food, fried food, sugary drinks, and alcohol intake can greatly improve cholesterol levels and allow for weight loss. A healthy diet is high in fiber and nutrients and low in fat, especially saturated, and cholesterol. The [American Dietetic Association](#) also provides methods to learn about portion control and how one can eat a satisfying volume of food while still restricting caloric intake.

Physical Activity: As society has become increasingly dependent on cars, the Internet, and technology, physical activity has become something that must be scheduled into the day rather than a daily aspect of life. With this in mind, the community should provide clean and safe recreation facilities for children and adults alike. On an individual basis people should consider finding ways to walk or bike more throughout the day, whether to work or just around the neighborhood. This may be a greater challenge to some individuals than others based on their neighborhood geography, facilities, and typical work schedule. The important point for all to remember is that a few minutes of physical activity throughout the day is better than avoiding physical activity because there is no appropriate location or time for a sustained 30-60 minutes of activity. Take an [interactive quiz](#) to get an idea of just how much America's portions have increased over the years. Use this [online calorie calculator](#) to find out how many calories you expend doing your favorite exercise or activity.

There are ways to help reduce the risk and prevalence of obesity other than the recently popularized liposuction or gastric bypass surgery. The best approaches all include lifestyle modification. By changing diet, physical activity level, behaviors, and attitudes about health, obesity can be overcome. Continuing research on the racial differences and similarities in obesity patterns can help to discern ways to reduce the prevalence of obesity in society. Whether the answer lies in genetics or sociological factors, it is important to be aware of the issues and use the knowledge to start living a healthier life today.

Exercise Design and Implementation for Specific Populations

by Wendell C. Taylor, Ph.D., MPH and Melicia C. Whitt-Glover, Ph.D., FACSM



Physical inactivity contributes to 200,000 premature deaths and \$77 billion in direct health care costs each year. Fewer than 15 percent of the U.S. population achieves the recommended amount of physical activity, and more than 25 percent are sedentary. People with disabilities and some racial/ethnic minority groups have lower levels of physical activity than non-Hispanic whites. Personal, social, environmental, policy, and societal factors can contribute to physically active lifestyles and sedentary behavior. Here are selected best practices for designing exercise programs for people with disabilities and racial/ethnic minority groups.

People with disabilities

Based on an adapted physical education manual of best practices, strategies for designing exercise programs people with disabilities are outlined below.

The assessment process identifies challenge areas and determines goals and activities that promote development as well as activity modifications to permit participation. A motor assessment can gather information about gross and fine motor skills, sensory integration, sensory-motor skills, leisure-recreation-sport skills, and physical fitness. A comprehensive assessment is critical in the decision-making process about the physical activity environment.

The adaptation process encompasses both modifications and accommodations. In a school context, a modification is changing the manner in which instruction is delivered; an accommodation is changing the learning environment to ensure the needs of the student are met. In leisure and recreation facilities, modifications and accommodations may include provision of wheelchair ramps into a weight room, a transfer chair to access a pool, or a bowling ramp. These strategies can be used to make it possible for an individual with a disability to participate in an activity of choice.

Specific adaptations are needed by disability condition (*i.e.*, cognitive or physical), specific game and sport, and person's challenges and abilities related to strength, speed, endurance, balance, and coordination. Project INSPIRE has a Web site (<http://www.twu.edu/inspire/>) with useful information about individuals with disabilities including instructional techniques, sport organizations, and health and safety issues. Additionally, the National Center on Physical Activity and Disability has a highly regarded Web site (www.ncpad.org).

Transportation can be a major barrier for people with disabilities. For example, a lift bus may be available only during specific times of the day, but physical activity opportunities may extend beyond the hours of the lift bus. Provision of alternative forms of transportation can make it possible for an individual with a disability to participate in activities throughout the day.

From a therapeutic recreation perspective, self-determination and activity inclusion are important philosophies. Self-determination advocates that the individual chooses the type of physical activity and with whom, where, and how (*e.g.*, adaptation of rules). Activity inclusion means participation with friends (with and without disabilities). An example is doubles tennis with each team composed of one up (no wheelchair) and one down (in wheelchair) players.

Many of the strategies described in the next section also may be relevant for people with disabilities.

Racial and ethnic minorities

Three recent reviews have been conducted to identify best practices designed to increase physical activity levels among African American, American Indian, and Latino communities. Suggested best practices include:

Use of a family-centered approach that includes parents/caregivers as well as children in programs designed to increase physical

activity levels. Evidence suggests that interventions that include parents/caregivers, particularly mothers, and children are more successful than interventions targeting parents alone and children alone. Appropriate caution is needed when attempting to implement interventions that include men and women together. The types of activities that appeal to men and women often differ, and it is important to either identify activities that both genders enjoy, or to offer separate interventions for men and women that incorporate activities targeted specifically to each gender. When family-centered approaches are not possible, provision of childcare and/or activities for children may increase the likelihood that individuals who have childcare responsibilities can participate in programs.

Encouragement of activities that are culturally relevant (*e.g.*, salsa dancing among Latino communities; African dance and gospel aerobics among African American communities) can impact participation among racial and ethnic minorities. Particularly for Spanish-speaking communities, provision of classes and instruction in Spanish may increase the likelihood that these individuals will attend and feel comfortable in programs.

Encouragement of activities that can be performed in short bouts, in a variety of settings, and/or do not require special equipment (*e.g.*, walking).

Creation of or use of existing social support networks consisting of family and friends, to encourage physical activity and to engage in physical activity with the target participant and/or to assist with family and childcare obligations to allow the target participant time for engaging in physical activity.

Use of structured, group-based, and supervised programs with clear goals for physical activity and opportunities during group-based programs to practice engaging in physical activity. Many participants indicate that they understand what "moderate-intensity" means when engaging in physical activity and that they understand the concept of a 10-minute bout of physical activity. Yet few participants, when prompted, can actually demonstrate moderate-intensity physical activity or a 10-minute bout of physical activity.

Provision of practical tips related to physical activity participation, including proper attire and footwear, the FITT principle (Frequency, Intensity, Time, and Type of physical activity), safety precautions, and links between physical activity and morbidity and mortality.

Provision of information related to community-based resources that can be used for physical activity.

Detailed and specific suggestions for incorporating physical activity into one's daily routine (e.g., short physical activity breaks such as the Take 10!, Fuel Up! Lift Off, and Booster Break concepts). Many times participants are encouraged to incorporate physical activity into their daily routines, but providing concrete suggestions based on individual participants preferences, schedules, etc., can increase the likelihood that suggestions will be implemented and sustained.

Specific advice on how to identify, address, and overcome barriers associated with regular physical activity.

Targeting subgroups at risk for physical inactivity is an important strategy to improve the health of our communities. To build a strong evidence base, best practices should be incorporated in physical activity interventions and programs and evaluated for effectiveness.

THE ATHLETE'S KITCHEN

Nutrition: Your Missing Link?

by Nancy Clark, MS, R.D., FACSM



"I've got my training down to a science, but nutrition is my missing link."

"My diet is horrible. I'm so good at exercising but I'm so bad at eating."

"I'm training hard but not getting the results I want. I guess I should eat better...?"

Some athletes joke about their seafood diet. They "see" food, and they eat it. Sometimes they eat too much, and often they eat the "wrong" foods. While there's no secret some

good athletes have junky diets, the question arises: How much better could those athletes perform if they were to eat better?

The answer, as documented by research studies, suggests 6 to 20 percent better. Wow—that's a lot! Eating the right foods at the right times makes a significant improvement not only in today's performance and weight management, but also in tomorrow's health and well-being. I've helped many very good athletes build bigger muscles, run faster marathons, compete with higher energy; and many fitness exercisers to train better, lose weight, and improve dramatically. Perhaps you can significantly enhance your health and performance by fueling your body appropriately.

Don't Just Eat; Eat Right

To their demise, many athletes not only fail to eat well, they are also unaware of the benefits to be gained by consulting with a sports dietitian. The common explanation is "I know what I should eat, I just don't do it." If this sounds familiar, you undoubtedly do know you should get your Vitamin C from fruits and veggies, not from C-3 supplements (translation: Chocolate Chip Cookies). And you undoubtedly know you shouldn't dive into the half-gallon container of ice cream the minute you return home from the health club. But why do you continue these behaviors? And how can you revise those habits? These are the issues that deserve your attention.

Nutrition information often goes in one ear and out the other, without getting stuck in your brain and put into action. That's because you may be confusing "eating well" with undesired feelings of denial and deprivation, or with a deficiency of "fun foods" and an excess of "duty foods." Life without ice cream can seem dark and gloomy. Plus, on a sub-conscious level, you may be responding to media's messages that persuade you to indulge. You deserve a food reward today. Right?

Given that you know what you should eat for health and performance, you have no need to team up with a sports dietitian, right? (After all, why would you pay someone to embarrass yourself while confessing your quirky food habits?) A sports dietitian can help you have cake and eat it too—and find a livable balance between a "junky diet" and real sports nutrition support that is both enjoyable and benefits your training and performance.

Knowledge is power

You don't know what you don't know. I work with a lot of highly intelligent athletes with lots of nutrition knowledge, but they are not registered dietitians (R.D.s) with at least four years of undergraduate education related to food and nutrition sciences and another year

or two of a dietetics internship and/or graduate school. Your coach, exercise physiologist, personal trainer, and teammates may appear to be nutrition experts and offer nutrition advice, but only registered dietitians (R.D.s) have the training that makes them professionally recognized as the true nutrition experts.

R.D.s who specialize in sports nutrition can now take an exam to become Board Certified as a Specialist in Sports Dietetics (CSSD). The American Dietetic Association, the nation's largest group of nutrition professionals, acknowledges this specialty niche—just as they do for R.D.s who specialize in renal disease and pediatrics. Sports dietitians who meet specific educational requirements and work experiences are eligible to take the exam and qualify for this meaningful CSSD title. CSSDs know the ins and outs of foods and fluids as they relate to physical activity and athletic performance.

Make an appointment today

To find a local CSSD sports dietitian, use the "Find a SCAN Dietitian" referral network at www.SCANdpg.org, the Web site for SCAN, the sports nutrition dietetics practice group of ADA. Or go to www.eatright.org, ADA's Web site. Put your zip code into the Find a Nutrition Professional referral network. What can you learn from a CSSD/sports dietitian?

- How many calories you deserve to eat... and how many of them can be from junk food (if desired).
- When to eat so you optimize energy, muscle growth and repair, and performance. No more running out of gas during workouts... or at work, for that matter!
- The right balance of carbs to fuel your muscles and protein to build your muscles—with sample menus and food ideas.
- How much dietary fat is ok to eat—without clogging your arteries—and how to choose foods with health-protective fats.
- How to sneak more fruits and veggies into your daily food plan so you effortlessly enjoy these sources of abundant all-natural vitamins and minerals.
- Tips to tame the cookie monster. (Hint: The cookie monster visits when you get too hungry; front-load your calories.)
- How to get enough protein at meals, even if you are a vegetarian. The money you save on protein supplements can likely pay for your nutrition consultation!

The Bottom Line

If you show up for training, physical therapy, massages, etc., but do not show up for sports meals, think again. When your goal is to move to the next level of performance, consulting with a sports dietitian can be your winning edge.