SPORTS
NUTRITION GUIDE

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1. WINTER AND NUTRITION

Fueling for Cold Weather Exercise

Some athletes embrace winter's chill as a welcome change from exercising in summer's heat. But others complain about hating cold weather. If that's your stance, remember that exercising with proper nutrition (and layers of dry clothing) offers the opportunity to chase away the chills. After all, an aerobic workout can increase your metabolism by 7 to 10 times above the resting level. This means, if you were to exercise hard for an hour and dissipate no heat, you could raise your body temperature from 98.6° to 140° F. (You'd cook yourself in the process!) In the summer, your body sweats heavily to dissipate this heat. But in the winter, the warmth helps you survive in a cold environment. Runners can enjoy a tropical environment in their running suit within minutes of starting exercise...

Because food provides the fuel needed to generate this heat, the right sports diet is particularly important for skiers, skaters, runners and other athletes who are exposed to extreme cold. The following article addresses some common questions and concerns about winter and nutrition and offers tips to help you enjoy the season.

For safety sake, winter athletes should always carry with them some source of fuel in case of an unexpected slip on the ice or other incident that leaves them static in a frigid environment. Winter campers, for example, commonly keep a supply of dried fruit, chocolate or cookies near by for fuel if they wake up cold in the middle of the night. You want to have an emergency energy bar tucked in your pocket, just in case...

Why do I feel hungrier in the winter than in the summer?
A drop in body temperature stimulates the appetite and you experience hunger. Hence, if you become chilled during winter exercise (or when swimming, for that matter), you'll likely find yourself searching for food. Eating "stokes the furnace," generates heat, and helps warm your body.

Food's overall warming effect is known as thermogenesis (that is, "heat making"). Thirty to sixty minutes after you eat, your body generates about 10% more heat than when you have an empty stomach. This increased metabolism stems primarily from energy released during digestion. Hence, eating not only provides fuel but also increases heat production, warmth.

Do I burn more calories when I exercise in the cold?
Cold weather itself does not increase calorie needs. You don't burn extra calories unless your body temperature drops and you start to shiver. (And remember: the weather can actually be tropical inside your exercise outfit.) Your body does use a considerable amount of energy to

warm and humidify the air you breathe when you exercise in the cold. For example, if you were to burn 600 calories while cross-country skiing for an hour in 0° F weather, you may use about 23 percent of those calories to warm the inspired air. In summer, you would have dissipated this heat via sweat. In winter, you sweat less.

If you are wearing heavy clothes, you will burn a few more calories to carry the extra weight of skis, boots, heavy parka, snow shoes. The Army allows 10% more calories for the heavily clad troops who exercise in the cold. But the weight of extra clothing on, let's say, winter runners is generally minimal...

Why do I find myself shivering when I get cold?
Shivering is involuntary muscle tensing that generates heat and offers a warming effect. When you first become slightly chilled (such as when watching a football game), you'll find yourself doing an isometric type of muscle tensing that can increase your metabolic rate two to four times. As you get further chilled, you'll find yourself hopping from foot to foot and jumping around. This is Nature's way to get you to generate heat and warm your body. If you become so cold that you start to shiver, these vigorous muscular contractions generate lots of heat--perhaps 400 calories per hour. Such intense shivering quickly depletes your muscle glycogen stores and drains your energy. This is when you'll be glad you have some emergency food in your pocket!

What's a big nutritional mistake made by winter athletes?
Failing to drink enough fluids is a major problem among winter athletes—hockey players, skiers, runners and winter hikers alike. Cold blunts the thirst mechanism; you'll feel less thirsty despite significant sweat loss (if you overdress), to say nothing of respiratory fluid loss. That is, winter athletes need to consciously consume fluids to replace the water that gets lost via breathing. When you breath in cold dry air, your body warms and humidifies that air. As you exhale, you lose significant amounts of water.

Some winter athletes purposefully skimp on fluids because urinating can be problematic—too much hassle to shed layers of clothing (ski suit, hockey gear, snow pants, etc.) Yet, dehydration hurts performance and is one cause of failed mountaineering adventures.

What's best to eat to warm myself up?
If you become chilled by the winter weather, as can easily happen if you

Wear sweaty, wet clothing that drains body heat

Fail to wear a hat (30 to 40% of body heat can get lost through the head)

Drink icy water (from a water bottle kept on your bike or outside pocket of your backpack when winter hiking), the best way to warm yourself up is to consume warm carbohydrates—hot cocoa, mulled cider, and steaming soup, as well as oatmeal, chili, and pasta. The warm food, added to the thermogenic effect of eating, contributes to rapid recovery.

In comparison, cold foods and fluids chill your body. Research subjects who ate a big bowl of ice cream in five minutes experienced a drop in fingertip temperature of 2° F in the first five minutes, 5° in 15 minutes. In summer, this cooling effect is desirable, but in winter, hot foods are the better way to warm yourself. Bring out the thermos of soup!

Why do I gain weight in the winter?

Some people eat more because they are bored and less active. Instead of playing tennis, they are eating mindlessly in front of the TV. For others, the change of seasons has a marked effect upon their mood (known as seasonal affective disorder, or SAD). Changes in brain chemicals increase carbohydrate cravings and the desire to eat more. Holiday temptations also contribute to weight gain. A study of 195 people indicates they gained on average 0.8 pounds in the six weeks between Thanksgiving and New Years. Overweight and obese people gained even more, with about 14% of the group gaining more than five pounds. The problem is, very few of the subjects lost those holiday pounds. Hence, yearly holiday weight gain becomes a major contributor to America’s obesity problem ... that's eight pounds in ten years.

One weight management solution is to stay active in the winter. By investing in proper clothing, you'll be able to stay warm from head to toe. You'll benefit from not only being able to enjoy exercise but also from sunlight—a good way to battle winter depression (and attempts to cheer yourself up with food). Winter exercise is an asset for managing health, weight and the winter blues. The tricks are to dress right, fuel well, prevent dehydration -- and you’ll stay warm!

2. PEANUT BUTTER

A Super Sports Food

In this day and age of energy bars, protein powders and weight gain shakes, many athletes forget about “real" foods, such as peanut butter. Peanut butter, in my opinion, is one of the best sports foods around. It’s tasty, inexpensive, satisfying, nourishing—and even good for our health. But all too often, I hear athletes say "I don't keep peanut butter in my house. It's too fatty, too fattening." or "I ration peanut butter to once per week—on my Sunday morning bagel." They try to stay away from peanut butter. That’s nuts!

Yes, peanut butter is calorie-dense. But it can beneficially fit into your sports diet. The following information explains why I vote peanut butter (and all nuts and nut butters, for that matter) to be a super sports food for athletes who want to eat well and invest in their health.

Peanut butter is satiating and satisfying ... perfect for dieters.
Because you will never win the war against hunger, your best bet is to eat foods that keep you feeling fed. This means, foods with protein and fiber—like peanut butter (and nuts, in general). You'll feel fuller for longer if you have half a whole wheat bagel with peanut butter, as compared to the same amount of calories of a plain white bagel. The protein and fiber in peanut butter "sticks to your ribs" and is not fattening–unless you overeat total calories that day.

A Purdue University study reports subjects who ate peanuts every day did not overeat daily calories. (Kirkmeyer, Int'l J Obesity 24:1167, 2000) Peanut eaters tend to naturally eat less at other times of the day. (Alper, Int'l J Obesity 26:1129, 2002) Plus, if you enjoy what you are eating on your reducing diet, you'll stay with the food plan and be able to keep the weight off. This is far better than yo-yo dieting!

Peanut butter is a quick and easy way to reduce your risk of heart disease.
Just slap together a peanut butter (and honey or jelly) sandwich on multi-grain bread, and you have the makings of a heart-healthy meal, if not a childhood memory. A quick and easy peanut butter sandwich is healthier, by far, than a fast food burger or fried chicken dinner and far better than, let's say, an equally easy "meal" of chips or ice cream. That's because peanut butter offers health-protective mono- and polyunsaturated oil. Trading burgers (saturated fat) for peanut butter sandwiches reduces your risk of developing heart disease. In fact, the more often you eat peanut butter (and nuts), the lower your risk of heart disease. (Hu, J Am College Nutr 20(1):5, 2001) Start spreading peanut butter (instead of butter) on toast. Enjoy PB & banana for a "decadent" snack in place of ice cream.

Peanut butter is an affordable source of calories.
If you are a hungry athlete who needs 3,000 or more calories a day, you can spend a significant amount of money fueling yourself (especially if you routinely eat protein bars, weight gain shakes and other engineered sports foods). Peanut butter can fuel your body without breaking the bank. One hundred calories of peanut butter (about 1 tablespoon) costs about 7¢, far less than 100 calories of other protein sources, such as cottage cheese (55¢ per 100 calories), tuna (60¢) and deli turkey breast (75¢). The cost of 200 calories of peanut butter is about 15¢, far less than the $1.49 you'd spend on 200 calories of an energy bar... and generally, the peanut butter is far tastier!

Peanut butter is a source of protein, needed to build and repair muscles.
But take note: peanut butter is not protein-dense. That is, two tablespoons of peanut butter, the amount in an average sandwich, provides about 7 grams of protein. In comparison, the calorie equivalent of turkey in a sandwich offers about 20 grams of protein. Athletes who weigh 140 pounds may need 70 to 100 grams protein per day; 200-pound athletes, 100 to 150 grams. For 100 grams of protein, you'd have to eat the whole jar of peanut butter! Unlikely!

To boost the protein value of peanut butter, simply accompany it with a tall glass of milk: a PB&J sandwich + 16 ounces lowfat milk = 28 grams of protein, a good chunk of your daily requirement. Milk simultaneously enhances the value of the protein in the peanut butter sandwich. That is, peanuts are low in some of the essential amino acids muscles need for growth and repair. The amino acids in milk (as well as those in the sandwich bread) nicely complement the limiting amino acids in peanuts.

Peanut butter is a source of vitamins, minerals and health-protective food compounds.
For example, peanut butter contains folate, vitamin E, magnesium and resveratrol, all nutrients associated with reduced risk of heart disease. Magnesium is also associated with reduced risk of adult-onset diabetes. Peanut butter offers a small amount of zinc, a mineral important for healing and strengthening the immune system. As an athlete, you need all these nutrients to keep you off the bench and on the playing field.

Peanut butter contains fiber--not a lot (1 gram per tablespoon) but some.
Fiber in food contributes to a feeling of fullness that can help dieters eat less without feeling hungry. Fiber also promotes regular bowel movements and helps reduce problems with constipation. By enjoying peanut butter on whole grain bread, you can contribute 6 to 8 grams of fiber towards the recommended target of 20 to 35 grams fiber per day.

Peanuts contain mostly health-protective mono- and polyunsaturated fats.
When peanuts are made into commercial peanut butter (such as Skippy or Jif), some of the oil gets converted into a harder, saturated fat. This keeps the oil from separating to the top. The hardened oil, called trans-fat, is less healthful. But the good news is, commercial peanut butters contain only a tiny amount of trans fats and just a small amount of (naturally occurring) saturated fat. For example, only 3.5 of the 17 grams fat in two tablespoons of Skippy are "bad."

To minimize your intake of even this small amount of unhealthful fat, you can buy all-natural peanut butter. If you dislike the way the oil in this type of peanut butter separates to the top of the jar, simply store the jar upside down. That way, the oil rises to what becomes the bottom of the jar when you turn it over to open it. And if you eat peanut butter daily, you won't have to refrigerate it, thereby making the all-natural peanut butter easier to spread.

Caution: Peanut butter is a poor source of the carbohydrates needed for muscle fuel. Don't try to subsist on peanut butter by the spoonful! Luckily, peanut butter combines nicely with banana, bread, apples, oatmeal, crackers, raisins, and even pasta (as in Thai noodle dishes). These combinations will balance your sports diet.

3. HOW TO EAT WELL

A Primer for Athletes

Eat well. Believe it or not, that's what most active people need to learn to do. Eat for performance. Eat for health. I am surrounded by athletes who do not know how to eat well. They know how to skip breakfast and lunch. How to stay away from carbs. How to blow their diets. These athletes would not only perform better but also be healthier down the road if they could eat better on a daily basis, eat at the right times to optimize energy, eat the best foods to promote future good health, and eat wisely to manage weight.

For many athletes, eating well seems a trivial concern. They joke about overdosing on Vitamin C-3 (Chocolate Chip Cookies). They are influenced by these prevailing beliefs: Food is fattening; I don't have time to eat or I don't have time to eat well. A survey of 50 collegiate football players reports they averaged 59% of their calories from sugars and fats. Yes, that's a lot of junk food...

The daily intake of those football players contrasts sharply with the daily diet of Diana Dyer, a three-time cancer survivor who optimized her eating and acquired remarkable benefits. After having been diagnosed with breast cancer for a second time (11 years after her first breast cancer diagnosis–and this was several years after a childhood neuroblastoma), Diana decided she would put only "protective foods" in her body. This means a soy-shake with fruit, flax and berries for breakfast, and lunches and dinners abundant with fresh fruit, colorful salads, beans, nuts, fish, soy and other wholesome foods. Being a dietitian, Diana also recognizes the need for "soul foods" (birthday cake, chocolate chip cookies). She eats them on occasions when she wishes to nourish her soul.

So has all this healthy eating done any good? Diana believes her optimal diet is largely responsible for the increase in her white blood cell count. It rose from the too low 2,500 cells/cubic millimeter it had been for 11 years after her first breast cancer treatment to the more normal level of 4,700 after her second breast cancer treatment. As I listened to Diana tell this story at Grand Medical Rounds at the Dana Farber Cancer Center, I internalized how powerful and strong food is as a health protector. Yes, food is fuel and one of life's pleasures, but the right foods can also be critical health protectors and healers. (Diana's book A Dietitian's Cancer Story and her web site www.cancerRD.com offer more information about healing food plans.)

The purpose of this article is to invite you to think how you eat and to offer a few tips on eating well as an athlete ... eating healthfully, appropriately and enjoyably. Eating to heal the tiny injuries that occur with each workout. Eating to refuel the muscles and prepare them for the next session. Eating to optimize muscular growth, enhance the immune system, and protect your body from the diseases of aging. I hope the information will inspire you to choose a positive

sports diet that repairs your muscles optimally, fuels them energetically, and protects your good health.

Eating Tip #1: If you have weight to lose, eat; don't diet.
Diets are oppressive, unrealistic and ineffective. They tend to leave you hungry all day long and you will never win the war against hunger. As a client of mine decreed, "My mother put me on my first diet when I was nine years old, I have gotten fatter and fatter with every successive attempt to lose weight. Diets have made me fat, not thin!" So true. Do not diet!

The best way to control your weight is to eat—wholesome foods, quality calories, protective foods. Starting at breakfast, have a fruit smoothie, oatmeal topped with nuts and honey, multi-grain toast smothered with peanut butter, yogurt with berries and granola. All of these choices are quick and easy, tasty, health protective and energy enhancing. Fear not that you'll "get fat" eating breakfast. Research indicates breakfast eaters are not only leaner than breakfast skippers, but also have better quality diets overall. Plus, you need a hearty breakfast to fuel your afternoon workout (or refuel your morning workout) and dampen the desire for evening junk food. The best way to lose weight is to eat satiating food; you can feel fed but still lose body fat. See Tips #2 and #3...

Eating Tip #2: Include more fiber-rich breads, cereals, fruits and vegetables on a daily basis.
Fiber is satiating; it keeps you feeling fed. Think oatmeal, fruit smoothie, fruit on bran cereal, trail mix, fruit salad. Enjoy abundant colorful vegetables—red tomatoes, yellow squash, green beans, orange carrots. Visit the salad bar . Have a pile of stir-fried veggies with brown rice.

Take a break from Frosted Flakes, PopTarts, Oreos, soda pop, even non-essential sports drinks and highly processed energy bars. By eating all the colors of the rainbow, you'll consume a variety of health protective fibers and phytochemicals that you'll never find in any vitamin pill, protein powder or gel. Diana eats at least 9 to 14 servings of fruits and vegetables per day--that's two or three fruits with each meal plus abundant vegetables.

Eating Tip #3: Eat more nuts and peanut butter.
Nuts add crunch to a meal and substance to a snack. Peanut butter adds oomph to a sports diet. Feared as being fattening, research indicates that people who eat nuts or peanut butter five or more times a week are not fatter than those who stay away from nuts. That's because nuts offer a satisfying combination of fiber + protein--two substances that abate hunger.

The fat in nuts is health protective. It boosts your immune system and reduces your risk of heart disease and adult-onset diabetes by more than 20%. Healthful fat is an important part of an athlete's diet, particularly if you do endurance exercise. Research suggests that runners who boosted their fat intake from a very low fat diet to an average fat intake improved their performance. The researchers believe the additional fat replenished intra-muscular fat stores and provided more fuel for sustaining long workouts.

Instead of snacking on Pringles and Ritz, reach for almonds or peanuts. No hardship there! Enjoy peanut butter & honey sandwiches and PB on multigrain bagels. Even commercial peanut butters like Skippy and Jiff have negligible amounts of the bad (trans) fats that contribute to heart disease. Enjoy this super sports food!

Eating Tip #4: Boost your calcium intake.
--not only for your bones but also for improving blood pressure and weight management.
Aim for a calcium-rich food at each meal, be it lowfat milk on cereal, yogurt with lunch and/or a decaf latte for an afternoon boost. Eight ounces of yogurt offers 400 milligrams of calcium; 8 ounces of milk, 300. Your target is 1,000 to 1,500 mg/day. Lowfat dairy foods are also excellent sources of high quality, muscle building protein. Eating milk on cereal before a workout or enjoying a chocolate milk afterwards for a recovery food is a perfect way to get a protein-carb combination that enhances muscle growth and repair, as well as optimizes refueling.

Inspired?
If so, here's a sample sports menu to fuel your good intentions! (Adjust the eating times according to your workout schedule.) The simplest guideline is to have at least three different types of food at each meal.

7:00 am: Oats (raw or cooked) + almonds + milk + banana + latte

11:00 am: Whole wheat wrap + hummus + baby carrots + yogurt

3:00 pm: Peanut butter + graham crackers + chocolate milk

7:00 pm: Salmon + brown rice + broccoli + salad/olive oil dressing

4. RECOVERY FROM HARD EXERCISE

If you are an avid athlete, you've undoubtedly noticed the latest hype surrounding recovery nutrition. The sports supplement industry is bombarding us with commercial recovery foods and fluids that generally offer some combination of carbs and protein. Questions arise: How important is proper nutritional recovery? And how essential are these products to your performance? The purpose of this article is to help you refuel appropriately after your workouts and optimize your performance.

If you are a fitness exerciser--an athletic person who works out three or four times a week for 30 to 60 minutes--you can be less focused on recovery nutrition than the athlete who works to fatigue one or two times a day. Your body does not become depleted during fitness workouts, plus you have plenty of time to refuel before your next exercise session. But if you are an athlete who exercises to exhaustion, does double workouts and needs to rapidly recover from one exercise bout to prepare for the next one, your recovery diet deserves full attention. A few examples include:

-*soccer players in a weekend tournament*
-*swimmers competing in two events at a meet*
-*triathletes doing two-a-day workouts and yes*
-*the compulsive exerciser who spends too much time at the health club*

You'll be able to perform better during repeated bouts of hard exercise if you have planned your recovery diet and have the right foods and fluids readily available to adequately replace calories, carbohydrates, protein, fluids and sodium.

Calories
If you are tired, time-crunched and without a nutrition recovery plan, you might have trouble consuming enough calories (as well as carbs) and fail to replace depleted glycogen stores. A simple solution is to quench your thirst (and abate your hunger) by drinking less water and more cranberry, grape or any other appealing fruit juice. Juices provide the fluid you need, as well as carbs and calories.

If you are trying to lose weight by restricting calories, your best bet is to fuel adequately by day to ensure strong workouts. Then, have a lighter dinner and fewer evening snacks. Do not try to restrict by day and exercise on empty; you'll have poor workouts.

Carbohydrates
To replenish depleted blood sugar and muscle glycogen stores and recover from the demands of strenuous exercise, your should plan to consume carbohydrates as soon as tolerable,

preferably within 30 minutes post-exercise. Muscles rely on carbs for fuel, so think again if you are on an Atkins-type low carb diet.

Athletes who weigh 100 to 200 pounds need 75 to 150 grams (300 to 600 calories) of carbohydrates repeatedly every two hours, for six hours. The trick is to plan ahead and have the right foods and fluids readily available for frequent snacking. Otherwise, you may neglect your recovery diet by mindlessly eating nothing--or whatever is around: donuts, burgers, hot dogs, nachos, chips, and other high fat choices that fail to refuel your muscles. If you have trouble tolerating solid food, experiment with liquid recovery foods, such as Instant Breakfast, Boost, chocolate milk or fruit smoothies—excellent sources of carbs + fluids, as well as a little protein.

Protein
Consuming some protein along with the carbs stimulates faster glycogen replacement. The protein also optimizes muscular repair and growth. Yes, you can buy commercial recovery foods such as Hammer Pro or Endurox R4, but you can just as easily and appropriately enjoy cereal with milk, fruit yogurt, bagel with a little peanut butter or any other sports snacks that offer a foundation of carbs with an accompaniment of protein (i.e., 40 grams carbs, 10 grams protein).

Fluids
If you've become very dehydrated (as indicated by scanty, dark urine), you may need 24 to 48 hours to totally replace this loss. Because thirst poorly indicates whether or not you've had enough to drink, throughout the day sip on enjoyable (non-alcoholic) beverages until your urine is pale yellow (like lemonade), not concentrated, dark (like beer). Fruit juices, smoothies and milk shakes offer both nutritional and health value, more so than sports drinks. For example, orange juice contains 20 times more potassium than Gatorade.

Preventing dehydration during exercise is preferable to treating dehydration post-exercise. To determine your fluid needs, simply weigh yourself naked before and after an hour of hard exercise during which you drank nothing. The weight loss reflects sweat loss. You can then develop a schedule for drinking adequate fluids during exercise to minimize sweat losses and hasten recovery. A two pound per hour loss equals 32 ounces or 1 quart. This can be prevented by drinking 8 ounces every 15 minutes of exercise.

Sodium
When you sweat, you lose some sodium (a part of salt). You are unlikely to deplete your body's sodium supply unless you sweat hard for more than 4 to 6 hours. Most athletes easily replace sodium losses within the context of a standard American diet that offers 6 to 12 times the amount of needed salt. But if you eat primarily “all natural” or unprocessed foods, and simultaneously add little or no salt to your meals, you might consume inadequate sodium. This can hinder fluid retention. Eating salty foods (soup, pretzels, salted crackers, table salt) is an appropriate part of a recovery diet for most healthy athletes. Sports drinks are only a weak source of sodium compared to munching on salty snacks. That is, 8 ounces of Gatorade offers only 110 milligrams sodium; a handful of pretzels (0.5 oz) offers 250 milligrams.

If you need to rapidly recover to prepare for a second bout of exercise within an hour or two and are worried about digestive problems, consuming a tried-and-true sports drink might be a safe choice. But if you can tolerate food, you'll be able to refuel and rehydrate better with higher carb fluids (juices) along with salty snacks: crackers, pretzels—whatever else tastes good and digests comfortably. Foods with a moderate to high Glycemic Index (i.e., sugary sweets, white bread, soft drinks, honey) are among the best choices. They rapidly enter the bloodstream and are readily available for fuel.

Rest

You aren't "being lazy" if you take a day off after a hard workout; you are investing in your future performance. Your muscles need time (plus adequate carbs and calories) to refuel and heal. Daily hard exercise optimizes glycogen-depletion, dehydration, needless fatigue and injuries-but not performance!

5. MIRROR, MIRROR ON THE WALL

Are Muscular Men the Best of All?

"I'm worried about my son. He's spending more time in the gym than at college. He thinks he's scrawny but he's not."
"My boyfriend's diet includes four protein shakes and four protein bars every day. Isn't that a bit excessive...?"
"I want to be massive ... I want more muscle, less fat."

There's a new syndrome emerging from behind gym doors. It's called muscle dysmorphia. You might notice it in the weight room of your gym. Some weightlifters have a pathological belief their muscles are too small. They have a poor body image; they are ashamed of, embarrassed by and unhappy with their bodies. They have a passionate desire to not only build muscle, but also to avoid gaining fat. This preoccupation with building muscles manifests in excessive weight lifting (spending 4+ hours a day at the power gym), excessive attention to diet (consuming protein shakes on a rigid schedule), excessive time spent "body-checking" (looking in mirrors, CDs, window reflections, etc.)., excessive weighing of themselves (10 to 20 times per day), too little time spent with family and friends (but who'd want to be with a wimp, anyway???) and not uncommonly, use of anabolic steroids.

Is this over concern with body size a new obsession? Perhaps. In the past few years, we have been increasingly exposed to half-naked male bodies (i.e., underwear ads for Calvin Klein, shampoo ads with muscular men taking showers). Even brief exposure to these media images can affect a man's view of his body.

In a study of the media's effect on male body image, a group of college men viewed advertisements with muscular men while another group viewed neutral advertisements with no partially-naked male bodies. The men were then given a body image assessment (while unaware of the hypothesis being tested in the study). The men exposed to the muscular images showed a significantly greater discrepancy between the body they ideally would want to have and their current body size. (Leit, Int'l J Eating Disorders, April '02) Another study suggests up to a third of teenage boys are trying to gain weight to be stronger, fitter, have a better body image and do better at sports. (J Am Diet Assoc, Jan. '01)

The irony is, while college-age men may believe a larger male body is more attractive to the opposite sex, women report desiring a more normal-sized body. In a study with men from three countries (U.S., Austria, France), the subjects were shown a spectrum of body images and then asked to choose

1) The body they felt represented their own body

2) The body they would ideally like to have

3) The body of an average man of their age

4) The male body they felt was preferred by women

Men from all three countries chose an ideal male body that was about 28 pounds more muscular than their current bodies. They also reported believing women prefer a male body with 30 pounds more muscle than they currently possessed. Yet, an accompanying study with women indicated women actually preferred an ordinary male body without added muscle. (Pope, Am J Psychiatry, Aug. 2000)

At the Massachusetts Eating Disorders Association's (MEDA) annual conference, Roberto Olivardia shared his research on body image in adolescent boys. Olivardia is a psychology instructor at Harvard Medical School and co-author of The Adonis Complex. (Adonis is the Greek god who exemplifies ideal masculine beauty and the desire of all women.) Olivardia explained that adolescence is a time for exploring "Who am I?" Without a doubt, so much of who a teen is is defined by his body. Because today's boys have been exposed from day one to GI Joe dolls, Hulk Hogan, and Nintendo's Duke Nukem, they have relentlessly received very strong messages that muscular bodies are desirable.

Muscularity is commonly associated with masculinity. Compared to ordinary men, muscular tend to men command more respect, are deemed more powerful, more threatening, more sexually virile. Muscular men perceive others as "backing off" and "taking them seriously." Not surprisingly, men's desire for muscles has manifest in a dramatic increase in cosmetic surgery for muscle (and penile) implants.

Olivardia expressed concern the "bigger is better" mindset can often lead to the use of anabolic steroids. He cited statistics from a study with 3,400 12th grade high school boys: 6.6% reported having resorted to steroids; more than two-thirds of the boys started before the age of 16. (Buckley, JAMA 260:344, 1988) Olivardia regrets that steroids are commonly used shamefully, in secrecy. "Men will tell someone they use cocaine before they admit to using 'juice'."

Steroids carry with them serious medical concerns: breast enlargement, impotence, acne, mood swings, risk of heart disease, prostate cancer, liver damage and AIDS (from sharing needles)?? to say nothing of sudden death, if not now perhaps 20 years from now. "Roid rage," the fierce temper that easily contributes to brutal murders and violence against women, is an immediate danger. Olivardia reminds us not every male who lifts weights struggles with muscle dysmorphia. Those at risk include boys who have been teased as a child about being too fat or too short. The boys at highest risk are those who base their self-esteem solely on how they look.

What's the solution? According to Olivardia, young men need education about realistic body size so they can correct the distorted thought "if some muscle is good, then more must be better." They might also need treatment for obsessive-compulsive disorder. The sad part is, most men believe they are the only ones on this planet who have this problem; they take a very long time to admit the need for therapy. And when they do, too few programs exist to help them explore the function this obsession serves in their life: it offers a sense of control. They mistakenly believe control of their bodies equates to control over their lives.

6. EIGHT LAST MINUTE NUTRITION TIPS

For Endurance Athletes

"I'm in a two-day rugby tournament. I need food help!!"
"This weekend, I'm riding in a 100 mile bike event. What should I eat the day before?"
"For a charity fundraiser, I'm participating in a 24-hour aerobathon. How can I avoid hitting the wall???"

If you have looming in the near future an endurance event—century bike ride, marathon, or any other competition that will tax your endurance, you may be concerned about the best nutritional preparations. The good news is, even if your training is over, you can still significantly enhance your performance with winning food strategies.
Without a doubt, what you eat and drink during the last few days and hours before exhaustive exercise makes a difference. By eating wisely and well, you can enjoy lasting energy without hitting the wall! Here are eight last minute nutrition tips for enhancing endurance.

1. Carbo-load, don't fat-load.
Carbohydrate-rich foods include cereals, fruits, juices, breads, rice, plain baked potatoes and pasta with tomato sauce. Lower carbohydrate choices include donuts, cookies, buttery potatoes, ice cream, cheesy lasagna and pepperoni pizza. These fat-laden foods may taste great and fill your stomach but fat does not get stored as muscle fuel.

2. No last minute hard training.
By resting your muscles and doing very little exercise this pre-event week, your muscles will have the time they need to store the carbohydrates and become fully saturated with glycogen (carbohydrate). You can only fully carbo-load if you stop exercising hard! You can tell if your muscles are well carbo-loaded if you have gained 2 to 4 pounds pre-event. Your muscles store three ounces of water along with each ounce of carbohydrate. (This water will be released during the event and be put to good use.)

3. No last minute dieting.
You can't fully carbo-load your muscles if you are dieting and restricting your calories. You will have greater stamina and endurance if you are well fueled, as compared to the dieter who may be a few pounds lighter but has muscles that are suboptimally carbo-loaded. Remember: you are supposed to gain (water) weight pre-event!

4. Drink extra fluids.
You can tell if you are drinking enough fluids by monitoring your urine. You should be urinating frequently (every 2 to 4 hours); the urine should be clear colored and significant in volume.

Juices are a good fluid choice because they provide not only water and carbohydrates but also nutritional value. Save the sports drinks for during the event.

5. Eat tried-and-true foods.
If you drastically change your food choices (such as carbo-load by eating several extra bananas), you may end up with intestinal distress. Simply eat a comfortable portion of the tried-and-true carbohydrates you've enjoyed during training. You need not stuff yourself! If you will be traveling to a far away event, plan ahead so you can maintain a familiar eating schedule despite a crazy travel schedule.

6. Eat a moderate amount of fiber.
If you stuff yourself with lots of white bread, bagels, crackers, pasta and other foods made with refined white flour, you may end up constipated. Include enough fiber to promote regular bowel movements—but not too much fiber or you'll have the opposite problem! Moderate amounts of whole wheat bread, bran cereal, fruits and vegetables are generally good choices. (If you are concerned about diarrhea, limit your intake of high fiber foods and instead consume more of the refined breads and pastas.)

7. Eat the morning of the endurance event.
You'll need this fuel to maintain a normal blood sugar level. Although your muscles are well stocked from the foods you've eaten the past few days, your brain gets fuel only from the limited amount of sugar in your blood. When you nervously toss and turn the night before the event, you can deplete your blood sugar and, unless you eat carbs, you will start the event with low blood sugar. Your performance will go downhill from there.

Plan to replace the energy lost during the (sleepless) night with a light to moderate breakfast as tolerated. This will help you avoid hitting the wall. Stick with tried-and-true pre-exercise foods: cereal, bagels, toast, fruit, energy bars and/or juice. These carb-based foods invest in fueling the brain, as well as staving off hunger. If a pre-event breakfast will likely upset your system, eat extra food the night before. That is, eat your breakfast at 10:00 pm.

8. Consume carbs during the event.
During endurance exercise, you'll have greater stamina if you consume not only water, but also some carbohydrates, such as sports drinks, gels, bananas or dried fruit. You should target about 100 to 250 calories/hour after the first hour to avoid hitting the wall (For example, that's 16 to 32 ounces sports drink/hour.) The slower you run, the more you need to fuel yourself during the event. Some athletes boost their energy intake by drinking diluted juices or defizzed cola; others suck on hard candies or eat chunks of energy bar, animal crackers and other easily chewed and digested foods along the way. Your muscles welcome this food; it gets digested and used for fuel during the event. And hopefully, you will have experimented during training to learn what is able to settle best.

7. BREAKFAST IS FOR CHAMPIONS

Without question, breakfast is the meal that makes champions. Unfortunately, many active people follow a lifestyle that eliminates breakfast or includes foods that are far from champion builders. I commonly counsel athletes who skip breakfast, grab only a light lunch, train on fumes, gorge at dinner and snack on “junk”until bedtime. They not only rob their bodies of the nutrients needed for health, but also lack energy for high quality workouts.

A satisfying breakfast tends to invest in better health than does a grab-anything-in-sight dinner. Sarah, a collegiate athlete, learned that fueling her body's engine at the start of her day helps her feel more energetic and also able to choose better quality lunch and dinner foods. That is, when she has granola, banana and juice in the morning, as well as a sandwich & yogurt for lunch, she stops devouring brownies after dinner.

Excuses to skip breakfast are abundant: "No time", "I'm not hungry in the morning" and "I don't like breakfast foods." Weight conscious athletes pipe up "My diet starts at breakfast." These excuses are just that, excuses; they sabotage your sports performance.

Here's a look at the benefits of eating breakfast. I hope to convince you that breakfast is the most important meal of your sports diet.

Breakfast for Dieters
If you want to lose weight, you should start your diet at dinner, not at breakfast! For example, do not eat a meager bowl of Special K for your "diet breakfast." You'll get too hungry later in the day and crave sweets. A bigger breakfast (cereal+toast+peanut butter) can prevent afternoon or evening cookie-binges. An adequate (500-700 calorie) breakfast provides enough energy for you to enjoy your exercise, as opposed to drag yourself through an afternoon workout that feels like punishment.

If you are trying to lose weight, you should target at least 500 to 700 calories for breakfast; this should leave you feeling adequately fed. To prove the benefits of eating such a big breakfast, try this experiment:

1) Using food labels to calculate calories, boost your standard breakfast to at least 500 calories. For example, add to your english muffin (150 calories): 1 tablespoon peanut butter (100 cal.), 8 oz. orange juice (100 cal.) and a yogurt (150 cal). Total: 500 calories.

2) Observe what happens to your day's food intake when you eat a full breakfast vs. a skimpy "diet breakfast." The 500+ calorie breakfast allows you to successfully eat less at night and create the calorie deficit needed to lose weight.

Remember: your job as a dieter is to fuel by day and lose weight by night. Successful dieters lose weight while they are sleeping; they wake up ready for another nice breakfast that fuels them for another high energy day.

Breakfast for the Morning Exerciser

If you exercise first thing in the morning, you may not want a big pre-exercise breakfast; too much food can feel heavy and uncomfortable. However, you can likely tolerate half a breakfast, such as half a bagel, a slice of toast, or a banana before your workout. Just 100 to 300 calories can put a little carbohydrate into your system, boost your blood sugar so that you are running on fuel, not fumes, and enhance your performance. You'll likely discover this small pre-exercise meal adds endurance and enthusiasm to your workout. In a research study, athletes who ate breakfast were able to exercise for 137 minutes as compared to only 109 minutes when they skipped this pre-exercise fuel.

After his morning workout, Jim, a banker, felt rushed and was more concerned about getting to work on time than eating breakfast. Using the excuse "No time," he overlooked the importance of refueling his muscles. I reminded him: Muscles are most receptive to replacing depleted glycogen stores within the first two hours after the workout, regardless of whether or not the athlete feels hungry. I encouraged Jim to be responsible! Just as he chose to make time for exercise, he could also choose to make time for breakfast.

One simple post-exercise breakfast is fluids. Liquid breakfasts take minimal time to prepare and very little time to drink, yet they can supply the calories, water, carbohydrates, protein, vitamins and minerals you need--all in a travel mug. (You can always get coffee at the office.) Because Jim felt thirsty after his morning workout, he found he could easily drink 16 ounces of juice or lowfat milk. Sometimes, he'd make a refreshing fruit smoothie with milk, banana and berries.

Later on mid-morning, when his appetite returned, Jim enjoyed the rest of his breakfast: (instant) oatmeal, multi-grain bagel with peanut butter, yogurt with granola, a banana--or any other carbohydrate-rich foods that conveniently fit into his schedule. This nutritious “second breakfast” refueled his muscles, abated hunger & curbed his lunchtime cookie cravings.

Breakfast for the noon-time, afternoon and evening exerciser

A hearty breakfast is important for people who exercise later in the day. It not only tames hunger but also provides the fuel needed for hard workouts. Research has shown that athletes who ate breakfast, then four hours later enjoyed an energy bar 5 minutes before a noontime workout were able to exercise 20% harder at the end of the hour-long exercise test compared to when they ate no breakfast and no pre-exercise snack. (They worked 10% harder with only the snack.) Breakfast works! Breakfast + a pre-exercise snack works even better!

What's for breakfast?

From my perspective as a sports nutritionist, one of the simplest breakfasts of champions is a wholesome cereal with lowfat milk, banana and orange juice. This provides not only

carbohydrates to fuel the muscles, but also protein (from the milk) to build strong muscles, and numerous other vitamins and minerals such as calcium, potassium, vitamin C, iron (if you choose enriched breakfast cereals) and fiber (if you choose bran cereals). Equally important is the fact that cereal is quick and easy, requires no cooking, no preparation, no refrigeration. You can keep cereal at the office, bring milk to work and eat breakfast at the office. Breakfast is a good investment in a productive morning.

The Bottom Line

Breakfast works wonders for improving the quality of your diet. That is, eating breakfast results in less "junk food" later in the day. Breakfast also enhances weight control, sports performance, daily energy levels and future health. Breakfast is indeed the meal of champions. Make it a habit--no excuses!

8. PREVENTING FATIGUE

During Long Workouts

"I'm at the gym from 5:30 to 7:00 pm and feel exhausted by the end of my workout. What can I do to prevent fatigue?"

"I'm training for a marathon ... I dread the long runs. I'm dragging after 12 miles. Any suggestions for how to boost my energy?"

"I'm whipped by the end of my after school soccer practices ..."

Preventing fatigue is the number one concern of active people who exercise for more than an hour. Sound familiar? If so, this article can help you enjoy high energy and enhanced stamina during long, hard exercise sessions. (For shorter exercise sessions, a pre-exercise snack and some water should fuel you well.)

To prevent fatigue during extensive exercise that lasts for more than 60 to 90 minutes, you have two nutrition goals:

- to prevent dehydration
- to prevent your blood sugar from dropping

The following tips can help you reach those goals.

Sweat and Dehydration
When you exercise hard, you sweat. Sweating is the body's way of dissipating heat and maintaining a constant internal temperature (98.6°F). During hard exercise, your muscles can generate 20 times more heat than when you are at rest. You dissipate this heat by sweating. As the sweat evaporates, it cools the skin. This in turn cools the blood, which cools the inner body. If you did not sweat, you could cook yourself to death. A body temperature higher than 106°F damages the cells. At 107.6°F, cell protein coagulates (like egg whites do when they cook), and the cell dies. This is one serious reason why you shouldn't push yourself beyond your limits in very hot weather.

When you sweat for more than an hour, you lose significant amounts of water from your blood. The remaining blood becomes more concentrated and has, for example, an abnormally high sodium level. This triggers the thirst mechanism and increases your desire to drink. To quench your thirst, you have to replace the water losses and bring the blood back to its normal concentration.

Unfortunately for athletes, this thirst mechanism can be an unreliable signal to drink. Hence, you should plan to drink before you are thirsty. By the time your brain signals thirst, you may have lost one percent of your body weight, the equivalent of 1.5 pounds (24 ounces) of sweat for a 150-pound person. This one-percent loss corresponds with the need for your heart to beat an additional 3 to 5 times per minute. This contributes to early fatigue.

Thirst sensations change with age and older people, even athletes, become less sensitive to thirst. For example, 56-year-old hikers became progressively dehydrated during 10 days of strenuous hill walking. The younger, 24-year-old hikers remained adequately hydrated. This means older people, in particular, should carefully monitor their fluid intake. Light colored urine, in significant volume, is a sign of adequate hydration.

Most athletes voluntarily replace less than half of sweat losses; thirst can be blunted by exercise or overridden by the mind. To be safe, always drink enough to quench your thirst, plus a little more. If you know how much you sweat, you can then replace those losses according to a plan. To learn your sweat rate (and fluid targets), weigh yourself naked before and after a workout. For every pound (16 ounces) you lose, you should strive to replace 13 to 16 ounces (80 to 100% of that loss) while exercising. This requires training your gut to handle this volume. Do not drink more water if your stomach is already sloshing; enough is enough!

You might find it helpful to figure out how many gulps of water equate to 16 ounces, and even set an alarm wristwatch to remind you to drink on schedule. You'll also need to plan on having the right quantity of enjoyable fluids readily available. Do not be in such a rush to start your workout that you fail to bring with you the sports drinks and fluids that will enhance your efforts.

Carbohydrates and Blood Sugar

As I've mentioned above, you can significantly increase your stamina by consuming a pre-exercise snack that provides fuel for the first hour of the workout and by drinking adequate fluids during exercise. The third trick to enhancing endurance is to consume carbs after an hour of exercise. Depending on your body size and ability to tolerate fuel while you workout, you'll want to target 100 to 250 calories of carbohydrates per hour of endurance exercise. The larger you are, the more calories you need. For example, if you weigh 180 pounds, you should target about 250 calories per hour, such as 8 ounces of a sports drink every 15 minutes, or a 250-calorie energy bar + water.

During a moderate to hard endurance workout, carbohydrates supply about 50 percent of the energy. As you deplete carbohydrates from muscle glycogen stores, you increasingly rely on the carbs (sugar) in your blood for energy. By consuming carbohydrates such as sports drinks, bananas, or energy bars during exercise, you can both fuel your muscles as well as maintain a normal blood sugar level. Because your brain relies on the sugar in your blood for energy, keeping your brain fed helps you think clearly, concentrate well, and remain focused. So much of performance depends on mental stamina; maintaining a normal blood sugar level is essential to optimize your workouts and boost your stamina.

Your body doesn't care if you ingest solid or liquid carbohydrates--both are equally effective forms of fuel. You just have to learn which sports snacks settle best for your body--gels, gummy bears, dried figs, animal crackers, defizzed cola, whatever.

Despite popular belief, sugar can be a positive snack during exercise and is unlikely to cause you to "crash" (experience hypoglycemia). That's because sugar feedings during exercise result in only small increases in both insulin and blood glucose. Yet, too much sugar or food taken at once can slow the rate at which fluids leave the stomach. Hence, "more" is not always better.

Because consuming 100 to 250 calories /hour of exercise (after the first hour) may be far more than you are used to taking in during exercise, you need to practice fueling while exercising to figure out what foods and fluids settle best. You'll learn through trial and error which snacks help prevent fatigue, boost performance and contribute to enjoyment of your long, hard workouts.

9. CARBOHYDRATE BASHING

A Passionate Pastime

As a nutrition writer, I rarely get much feedback from my readers. But recently, I got bombarded with responses to an article I wrote about carbohydrates. Dr. Atkins' fans turned out in force to bash carbohydrates and praise protein. Clearly, I failed to clarify the carbohydrate confusion that abounds among today's dieters. Here is further information about this complex topic.

Reader's Comment:
"The obesity epidemic coincided with the advent of the high carb, low fat American Diet. Plain and simple, obesity is caused by overconsumption of carbs..."

Response:
Obesity is a very complex problem, related not just to food but rather to a person's lifestyle. Hence, we need to look at the whole picture, not just carbs. Exercise is one important part of the obesity picture. Our society lacks sidewalks for walking to school, paths for biking to work, safe neighborhoods for kids to play outside. We use too many escalators, too many ride-on lawn mowers, and watch too much TV. This abundance of inactivity in the American lifestyle has caught up with adults and kids alike.

Today's family lifestyle is also taking its toll. Working parents who are tired, stressed and lack time to cook wholesome meals appreciate the convenience of take-out meals and the comfort of mindless eating in front of the TV. Big portions add (momentary) pleasure; food can all too easily become a (fattening) de-stresser.

Reader's Comment:
"Most fat people believe they are overweight because they are weak willed and eat chocolates. Actually, they are overweight because they eat pasta, rice and bread. These carbs create an insulin reaction that drives their blood sugar low and forces them to eat more... "

Response:
Most fat people are overweight because they eat more calories than they burn off. People who eat pasta, rice and potato are not destined to gain weight. That is, if carbs caused obesity, then why are rice-eating Asians (who live in their native country) not fat? Because they get plenty of exercise in their daily lives! Why are pasta-eating marathoners not fat? Because they also get plenty of exercise. Activity, not carbohydrate intake, makes a critical difference between obesity and health.

Reader's Comment:
"I have had success on the Atkins Diet and I NEVER could have lost fat with the low fat approach. My blood sugar swings so wildly on a high carb diet that there was no way I could lose weight. That's biology..."

Response:
Yes, each person is metabolically unique and we need to honor and respect differences in reactions to foods. For example, some people are sensitive to caffeine and prefer to avoid evening coffee; others can drink coffee at night and sleep just fine. Some people can handle three beers; others get drunk on half a can. And some people can enjoy candy bars and soda pop; others feel a sugar-surge followed by a "crash." But does this mean that coffee, alcohol and sugars are evil? No.

Before anyone bashes the general category of "carbs," I recommend they separate carbs into positive and negative groupings:

- Carbs with fiber--such as whole grain bread, bran cereal, oatmeal, apples, broccoli and other wholesome fruits, vegetables and unrefined grain foods—are an important part of a balanced diet. They offer an assortment of vitamins, minerals and phytochemicals that protect your health. They rarely cause "sugar crashes."

- Refined carbs, such as white flour and white sugar, are the main culprits that trigger a strong insulin response. Yet, eating refined carbs with protein and fat buffers their insulin response. That is, if you put peanut butter (instead of jelly) on a piece of white toast, you'll get less of a rise in blood sugar. Hence, carb bashers should look at the whole diet, not just a single food.

Reader's Comment:
"Americans are fatter than ever because nutritionists have told them to eat more carbs and cut the fat. This makes logical sense, but in reality, doesn't work."

Response:
When the "cut the fat" movement started, the nutrition messages not only failed to acknowledge the benefits of dietary fat (satiety, flavor) but also put too little focus on the type of fat. Just as we need to look at the kinds of carbs we eat (fruits, vegetables and whole grains vs refined sugar and flour), we also need to look at the kinds of fat we eat. We now know more about the health benefits of fats from plants (olive oil, canola oil, walnuts, flaxseed) and fish (tuna, swordfish, salmon, lox). These plant and fish oils are associated with a lower risk of heart disease and diabetes as compared to diets abundant with animal fats (greasy burgers, bacon, many fast food meals).

Today's nutrition message should be “cut the bad fat”: donuts, Big Macs, big cookies. But we can and should enjoy the enhanced flavor and satiety that comes with having some (health-protective) oils, seeds and nuts in the diet. Almonds and peanuts are no longer taboo.

Reader’s Comment:
“The Atkins Diet advocates eating protein at each meal. This gives a person a chance to control his appetite. My typical diet is eggs for breakfast, then chicken breast, salad and lots of steamed veggies. Low carb, low fat, high protein...”

Response:
True. A high protein diet need not be a high (saturated) fat diet. And if you balance the protein with colorful salads (topped with chickpeas and kidney beans), abundant steamed vegetables, and fruit for dessert, you can consume muscle-fueling carbs that are unlikely to trigger the desire to eat “more.” Yet, my concern as a sports nutritionist, is that serious athletes who avoid bread, rice, pasta and other dinner starches commonly fail to consume adequate carbs to fully fuel their muscles. This hurts their performance; they lack stamina and endurance.

The good news is, most active people can metabolize carbs just fine. That is, when an athlete eats, let’s say, jelly beans, the body quickly and easily transports that sugar into the muscles. But when an unfit person eats jelly beans, he or she requires more insulin to do the same job. This high amount of insulin triggers problems with hunger, food, weight, health. Hence exercising, not avoiding carbs, is the best weapon in the war against obesity.

10. ALCOHOL AND ATHLETICS

A Users Guide

Alcohol and athletics seems to go hand-in-hand: tail-gating before football games, quenching thirst at the pub after a team workout, celebrating victories with champagne. Athletes are supposed to be role models for health and fitness, but sometimes too much alcohol in their sports diet taints that image.

Yes, athletes shoulder high expectations and great importance is placed on sports. But does this stress justify the higher alcohol intake in athletes compared to their non-athletic peers? One might think the detrimental effects of alcohol on performance would make these folks less likely to drink alcohol. Not the case. Even serious recreational runners drink more than their sedentary counterparts.

The Bad News
Alcohol is a highly addictive substance and is the most abused drug in the United States. Prolonged consumption can lead to cellular changes in the liver, heart, brain, and muscles and result in cirrhosis, pancreatitis, irregular heart beats, stroke, and malnutrition. Even moderate drinkers have a higher risk of oral cancer, and women who drink may have a higher risk of breast cancer. Alcohol is associated with adverse effects on safety and performance. For example, in a survey of 400 ski injury victims, 20% of the skiers tested positive for alcohol.

The Good News
Alcohol in moderation has health benefits. Red wine, for example, contains health-protective phytochemicals that may reduce the risk of heart disease. Wine may explain why the people in France, who have been eating a high fat diet for years, enjoy better heart-health than might be expected. Red wine is also a good source of dietary iron, a mineral that helps prevent anemia. Beer has a few nutritional merits, such as a significant amount of B-12, a vitamin important for vegetarians.

Alcohol for Athletes
• Alcohol is a depressant and--apart from killing pain—offers no edge for athletes. You can't be sharp, quick, and drunk. Late night partying that contributes to getting too little sleep before the next morning's event creates another problem. Pre-competition, you may hanker for some alcohol to calm anxiety, but alcohol has a deleterious effect on reaction time, accuracy, balance, eye-hand coordination and endurance. It will not help you exercise faster, stronger, or longer.

• Alcohol is a poor source of carbohydrates. A 12-ounce can of beer has only 14 grams of carbs, as compared to 40 grams in a can of soft drink. You can get loaded with beer, but your muscles

will not get carbo-loaded—unless you consume pretzels, thick-crust pizza or other carbo-rich foods along with the beer.

• Alcohol is absorbed directly from the stomach into the bloodstream, appearing within 5 minutes after you drink it. After a hard workout, alcohol on an empty stomach can quickly contribute to a drunken stupor. One wise runner came to realize he'd rather enjoy the natural high from exercise than get brought down by a few post-exercise beers.

• Drinks that contain congeners--red wine, cognac, whiskey--are more likely to cause hangovers than other alcoholic beverages. The best hangover remedy is to not drink excessively in the first place. But if you have a hangover, drink fruit juice or broth.

• Beer is often a significant source of post-exercise fluids; athletes commonly consume larger volumes of beer than they might of water or soft drinks. Yet, the alcohol in beer has a diuretic effect--the more you drink, the more fluids you lose. This is bad for recovery and often bad for the next exercise bout. While low-alcohol beer allows for proper rehydration, regular beer sends athletes running to the bathroom. One study showed that athletes who drank beer eliminated about 16 ounces more urine (over the course of 4 hours) than those who drink low-alcohol (2%) beer or alcohol-free beer. (Sherreffs. J Appl Physiol 83(40:1152, 1997) For optimal rehydration, minimize alcohol intake.

• Your liver breaks down alcohol at a fixed rate--about 4 oz. wine or 1 can of beer per hour. Exercise does not hasten that process, nor does coffee. Caffeine just makes you a wide-awake drunk.

• Hot tubs, alcohol and athletes are a bad combination. The hotter your body, the drunker it may get. Alcohol impairs your ability to control your body temperature, plus the high temperature of the hot tub heightens the body's response to alcohol.

• Winter sports and alcohol are also a dangerous combination. Don't drink while skiing. Apres-ski, if you choose to drink alcohol, alternate with soft drinks or juices for carbs and fluids.

• The calories in alcohol are easily fattening. People who drink moderately tend to consume alcohol calories on top of their regular caloric intake. These excess calories promote body fat accumulation, particularly in the trunk area--the well-known "spare tire." A study with subjects who ate a standard breakfast and then an appetizer before lunch--about 350 calories of either white wine and high-fat foods, or vegetable juice and low-fat foods--showed they ate about 200 more calories at lunch following the alcohol appetizer, and did not compensate for this overfeeding at dinnertime. (Tremblay, AJCN 1996; 63:479-82) The bottom line for dieters: it's harder to feel full when alcohol becomes a part of your diet because alcohol stimulates the appetite. If you are trying to maintain a lean machine, abstaining is preferable to imbibing.

• If you are destined to drink, drink moderately. The definition of moderate drinking is two drinks per day for men, and one for women. And have at least have a glass of water for every drink.

Alcohol Abuse
Caution: Alcoholism tends to run in families. In the general population, drinking problems occur in about 16- 24% of men and 5% of women. People under 45 years have higher rates of alcohol problems than do older folks. Be conscious of your ability to keep alcohol consumption within socially and medically acceptable bounds. Don't start drinking if you can't easily stop.

Better than Beer
Many problem drinkers choose to trade their addiction to alcohol for a healthier addiction--exercise. They've come to appreciate this " natural high" as being better than that from beer. Let’s drink to that .... Drink water, that is!

11. VALUE MEALS

The High Price of Fast Foods

Someone once joked that building lots of McDonald's and Burger Kings in "enemy territories" would eradicate the need for atomic bombs; the obese population would soon self-destruct. Unfortunately, Americans have become are our own worst enemy and obesity has reached epidemic proportions. More than 60% of American adults are, well, super-sized as are 14% of American teens and 13% of 6- to 11-year olds.

While most of the readers of this column are fit and healthy, you've perhaps noticed your uncle, parent or neighbor become bigger and talk about high blood pressure, heart disease, diabetes and another undesirable health conditions. These diseases of aging not only interfere with longevity but also lead to worrisome medical expenses. This nation cannot afford to be so unhealthy!

Obesity is indeed a complex condition associated with over-eating, under-exercising, stress, fatigue and TV-viewing, among other factors. Some say obesity stems from ignorance. Children, in particular, may be unaware of the health dangers of a steady diet of fast foods; most would happily eat chicken nuggets and french fries daily. In New York, a person is suing four fast food chains (KFC, Burger King, McDonald's and Wendy's) for contributing to his obesity, diabetes and heart disease. His complaint: he didn't know how bad these foods were for his health.

With luck, good changes will arise from this suit. For example, perhaps we'll eventually see Nutrition Facts printed on fast food wrappers, telling us about a Super Burger's calories, fat and sodium content. Or perhaps a warning label will appear:

"Consuming a steady diet with large portions of fatty, high calorie foods can be dangerous to your health."

While the verdict is unclear as to whether the food industry can be held accountable for America's problem with obesity, this suit does raise consciousness about the industry's efforts to overfeed Americans. Between value meals and super-size portions, hungry people can all-to-easily be lured into gluttony while thinking "I only ate one serving...." One Cinnabon, mind you, is more than enough for two people.

While I do believe that all foods (even fast foods, in moderation) can be balanced into a healthful diet, I also recognize the food marketing industry is succeeding at their goal of getting us to consume more and more and more. (For example, have you noticed how Coke, which originally came in an 8-ounce bottle and then in a 12-ounce can, is now prevalent in 20-ounce

bottles—enough for at least two people?) Hence, the purpose of this article is to help you grasp the importance of feeding appropriate portion sizes to yourself, your family, and most importantly to the children who have never seen “small” as a menu option.

The High Price of Value Meals

At Burger King (and most other fast food restaurants), you can “Size it your way”; that is, you can have a medium, large or king-sized value meal with incremental increases in the fries and soft drink. By ordering the value meal, as opposed to ordering each item separately, you’ll save 78¢ per increment (medium to large; large to king-size). And for those 78¢ you can get about 200 to 250 more calories. Calorie for calorie, the medium value meal costs a bit more than the king-size meal (3.5¢/calorie vs 3.2¢/calorie). The king-size Whopper with Cheese value meal offers a total of 1,825 calories from the burger, fries and soft drink. This equates to:
1) a whole large cheese pizza (that would more likely feed the whole family, not one person) or
2) the whole day’s worth of calories for the average women.

If you are looking for the whole day’s calories in one dose, as well as the whole day’s fat intake (if not more), this king-sized value meal is seemingly a bargain. Unfortunately for our health, most people eat two other meals in their day—and the medical bills related to obesity will not come with a bargain price!

If you are a fast food eater, you have to decide for yourself if a value meal is truly a good deal–-and if it is really the best way to spend your calories. After all, almost half of those calories all too often come from fat, cloggage and the stuff that makes heart attacks. For example, Burger King's Whopper with cheese medium value meal provides almost 1,400 calories (equivalent to 3/4 of a pizza that feeds a family of three) and 71 grams of fat (more than you need). A peanut butter and jelly sandwich costs far less and is far more healthful...

The best value at a fast food restaurant is to NOT get the value meal, but rather just get one item. That is, by having just the Whopper with Cheese (no fries or soda, thank you), you can save 590 calories and $2.10. You’ll still be left with 800 calories (that need to be balanced with low fat choices at other meals). This is more than enough for most hungry people.

Even impoverished students, who commonly ponder how to get the most calories for the least amount of money, should skip the fries and soda. The Whopper with cheese costs about 3.6¢ per calorie, as opposed to the soda (5.6¢/calorie) and fries (4.4¢). Now of course, you'll save a few pennies per calorie if you upgrade to king size. But then, do you really want that money to go to waist?

For children, Burger King’s “Big Kid Meal” is also a bad deal. For $4.39, a child can get a double cheeseburger, small fries and a small soda. This comes to just under 1,000 calories--the equivalent of two hefty peanut butter and jelly sandwiches or half a large cheese pizza (food for two kids, not one). I guess that's why it's called the “BIG Kid’s Meal"; a steady diet of Big Kid’s Meals will make kids big (and fat) ... that’s for sure.

Equally worrisome, kids who eat the whole meal because it is just “one portion" will get stuffed. Each time a child overeats, he or she chips away at the body’s natural ability to regulate an appropriate intake. The desire for big food grows, as does the waistline.

Perhaps it's time to move back in time to "slow foods"; you know, the homemade meals that nourished the body, fed the soul and were one of life's pleasures?

12. PROTEIN POWER

The Truth About Supplements

When you look at the ads in almost any sports publication, you cannot help but notice the supplement industry is hard at work promoting protein powders, bars and shakes. Their goal: to convince athletes they need extra protein to build muscles and recover from exercise. Never before have I talked to so many frenzied athletes, bodybuilders and marathoners alike, who are worried their standard diets are protein deficient and inadequate to support their sports program. They commonly ask: *What's the best protein supplement?*

My response: *Why do you think you even need a protein supplement in the first place? You can easily get the protein you need through standard foods. Believe it or not, very few athletes need any type of protein supplement. Yes, protein supplements can be helpful in certain medical situations. For example, an athlete with anorexia may be more willing to consume a protein shake then eat tuna, cottage cheese or chicken. Patients with cancer or AIDS often benefit from protein supplements if they are unable to eat well. But I have yet to meet a healthy athlete who is unable to consume adequate protein through his or her sports diet. Hence, the purpose of this article is to look at the myths and facts surrounding protein supplements, so you can make informed decisions regarding your sports diet.*

How much is enough?
Only 10 to 15% of total calories need to come from protein. Although athletes require slightly more protein than does a sedentary person, a hungry athlete tends to eat hefty meals with large portions of protein-rich foods. That extra peanut butter sandwich, second chicken breast at dinner and taller glass of milk satisfies any and all protein needs?-without any supplements.

The recommendations for a safe, adequate protein intake are:

Category	**Protein Needs**	
	gms/lb	***gms/150 lb person***
Sedentary person	0.4	60
Recreational exerciser, adult:	0.5-0.75	75-112
Competitive athlete, adult:	0.6-0.9	90-135
Growing teenage athlete:	0.8-0.9	120-135
Dieting athlete, reduced calories:	0.8-0.9	120-135

Maximum for all healthy athletes: 0.9 gram pro / lb (2 gm/kg)

Note: Protein needs change depending upon calorie intake. That is, if you are dieting to lose weight and are in calorie deficit, you will need more protein than if you are eating adequate calories. Your muscles burn protein for energy when fuel is scarce.

Example: If you weigh 160 pounds and want the maximum acceptable protein intake (0.9 gms pro/lb), you'd need 144 grams of protein--an amount you could easily consume from a day's diet that includes 1 quart skim milk (30 gms protein), 1 can tuna (30 gms pro), and 8 ounces chicken breast (70 gms pro). The small amounts of protein you get from the foods that fill out the rest of your diet (cereal, bread, broccoli, frozen yogurt, etc.) will bring you to more than 144 grams of protein. More protein will not be "better." And no scientific evidence supports the idea the protein or amino acids in supplements are in any way superior to the protein from eggs, milk, lean meats, fish, soy or other ordinary foods.

Is more better?
Eating more than the recommended protein intake offers no benefits. Apart from being costly, a protein-based diet commonly displaces important carbs from the diet. That is, if you have an omelet and a protein shake for breakfast instead of cereal with banana, you'll consume fewer carbs to fuel your muscles properly. Carbs are the primary fuel for athletes who do muscle-building resistance exercise. Once your muscles become carb-depleted, fatigue sets in and your workout is over. Your diet should provide extra carbs, not extra protein.

If you consume too much protein from supplements, you may also fail to invest in optimal health. For example, I had one client who daily ate five protein shakes and four protein bars--to the exclusion of standard food. Displacing natural foods with engineered foods (such as protein supplements) limits your intake of the vegetables, fruits, grains, fiber, phytochemicals, natural vitamins and other health-protective nutrients that Nature puts in whole foods.

Pre and Post Exercise Protein

Q. *I've heard I should eat a protein bar for a pre-exercise snack?*

A. *Protein has typically been consumed at meals, away from the time of exercise. New research suggests eating protein before you workout can optimize muscle development. Pre-exercise protein digests into amino acids that are then ready and waiting to be taken up by the muscles after a strength workout. This does not mean you'll evolve into Charles Atlas; you'll simply optimize your body's ability to build and repair muscle at that moment.*

The amount of protein needed for this benefit is tiny--about 6 grams (less than one ounce of meat). You certainly do not need a hefty pre-exercise protein bar nor a thick steak. A yogurt,

cereal with milk, or a slice of peanut butter toast will do the job just fine! A pre-exercise protein supplement is a needless expensive.

Protein source	Cost	Gms. Protein	Cost/gm pro
MetRx Big 100 Bar	$2.50	26 gms	9.5¢
PowerBar ProteinPlus	$1.95	24	8¢
Tuna, 6 oz can	$0.99	30	3.5¢
Skim milk, 1 quart	$0.75	32	2.5¢
Peanut butter, 2 Tbsp	$0.15	7	2¢

Q. *I've heard I should I eat protein right after I exercise to enhance the speed of glycogen recovery?*

A. Supposedly, eating some protein along with carbohydrates after exercise stimulates insulin, and that stimulates greater glycogen uptake. At least five carefully controlled studies have shown the addition of post-exercise protein does not offer any advantages when the athlete eats adequate calories from carbs. My advice: If you refuel with wholesome, refreshing meals that appeal to you, you'll inevitably get the nutrients you need. Fruit & yogurt, nuts & raisins, bagel sandwich and pasta with meat sauce are just a few popular recovery foods that offer an enjoyable combination of both protein and carbs to refuel, rebuild and repair muscles.

13. DISORDERED EATING, FOOD OBSESSIONS AND COMPULSIVE EXERCISE

There's another way to live!

"I made myself run 5 extra miles today because I ate a cookie..."

"I try not to eat bagels and crackers. They are my downfall..."

"I spend too much of my time obsessing about food..."

Although the E in eating should stand for enjoyment, many of my clients act as though the E stands for evil. They try to stay away from food, thinking of it as a fattening enemy. While they may not be outright anorexic or bulimic, they certainly eat abnormally: starving themselves by day, stuffing themselves by night, exercising like crazy to burn off calories.

These food-fearers repeatedly choose the same fat-free diet: bran cereal with skim milk and fruit for breakfast, turkey sandwich and pretzels for lunch, apples for snacks, and chicken with a pile of veggies for dinner. No birthday cake, no pizza, no holiday treats. This repetitive menu becomes quite boring and offers little enjoyment when eaten day after day, month after month, year after year. But it feels safe to the dieters; they know they won't get fat by faithfully honoring this rigid food plan.

Not only do these weight-conscious athletes consume a very limited variety of foods, they also claim they consume fewer calories than might be expected given their high level of exercise. They typically report eating about 500 calories less per day then they "deserve." Yet, they fail to lose weight--a sign they are "hibernating" and conserving energy to protect against this perceived famine. As a result of the chronic hunger that accompanies the skimpy food intake, the dieters end up food obsessed. As one woman acknowledged "I'm embarrassed to admit how much time I spend thinking about food...I think about it all day."

If you are an active person who falls into the disordered eating category, rest assured you are not alone. Rather, you are accompanied by many other compulsive exercisers and eaters. From an outside glance, you may appear to "have your act together" but your hidden insides are haunted by the quest to diet and acquire a perfect physique--the illusive body found abundantly in fashion magazines.

Media's messages.
Despite the fact that a rare handful of people naturally have bodies like those of magazine models, media portrays the message you are only beautiful if you are thin. (Make that thin and muscular if you are a man.) Speaking at the annual convention of the Academy of Eating

Disorders (Boston, April 2002), Jean Kilbourne presented her research on the image of women in the media. She pointed out how ads repeatedly offer these damaging messages: women need to be thin to be beautiful; a woman's "outside" assets give her value; women need not be smart, career-oriented or charismatic--just sexually attractive; a woman's main job is to be a sex object. Also, women shouldn't eat if they want to be thin, beautiful, sexually attractive (and brainless due to hunger).

If you take a look at advertisements, you'll notice that women are rarely seen eating; they just look at food. Men, in comparison, are portrayed as having a manly appetite, hence the name, The Man-wich. Think about it: Would The Woman-which sell? Or Hungry Woman TV Dinners? No way! Lean Cuisine is the desired category.

The result of years of bombardment with these messages is that young girls believe they need to be thin at any cost. The cost: no birthday cake, no chips, no pizza, no breakfast, no lunch. Additional costs: food obsessions; guilt upon eating more than a rice cake; low energy, poor sports performance. Food is considered bad, addictive, or a reward for having survived life's stresses. ("You deserve a break today...") Where are the positive messages that food is life-sustaining, nourishing and essential to our wellness and self-care?

Let's get real.
So what can we do to help prevent disordered eating and distorted body images? For one, we can redefine health. Is a woman truly healthy (and praiseworthy) if she eats virtually no fat and exercises constantly? According to Jon Robinson, PhD of the Center for Preventive Medicine in Lansing, Michigan and a speaker at the SCAN conference on Eating Disorders (Orlando, April 2002; www.nutrifit.org), fatness is of far less importance than fitness. That is, fat but fit people can be healthy and live long lives.

Contrary to media's messages, the truth is women (and all humans) come in assorted sizes and shapes. No one size is right, good, perfect. Regardless of size, your body deserves to be loved and nourished, not hated and starved, punished with excessive exercise. Take note: the seemingly "dedicated athlete" who exercises religiously and eats "perfectly" may actually be exhausted and unhappy, an obsessive, compulsive exerciser who is trapped in a vicious cycle. Have the courage to point out what you see: "You seem tired; you've lost that sparkle in your eye. Are you OK?"

If you do feel trapped, remember you have the right to choose the kind of life you believe is most worth living. If you are spending too many hours exercising and fretting about what and when to eat and how to purge calories (vomiting? exercising?), know there is a gentler way to live. Perhaps, instead of being on a relentless diet, you could simply learn to love your body for what it is? After all, your beauty comes from the inside out, not from thinner thighs.

And if the truth be told, who (other than you) really cares what you look like? Do you actually care about how others look? Of all the people in your life who have made an impact on you, did any of them have a "perfect body"? Likely not, but were they were still lovely? Yes!

People who fret about food and weight all the time cut themselves off from family, friends and relationships. They deaden their emotions with hunger. That's why people with anorexia can actually lose weight (as compared to most diet failures). They do not eat due to stress, nor do they find enjoyment in eating. They miss out on one of life's pleasures: enjoyable eating.

Finding a lifeline

If you are among the many weight conscious exercisers who finds yourself more and more confused about how to diet without feeling denied, deprived and obsessed, I encourage you to seek professional nutrition guidance from a registered dietitian (RD) who specializes in sports nutrition.

15. CARBOHYDRATE CONFUSION

Ever since Dr. Atkins came out with his carbohydrate-bashing high protein diet, active people (who had been happily enjoying bagels, pasta and pretzels as the foundation of their meals) have suddenly started shunning these excellent sources of muscle fuel. Instead, they are eating more egg whites, cottage cheese, soy shakes and protein-based foods. But questions abound about the role of carbohydrates in the sports diet as well as concerns about insulin and the glycemic effect of foods. The purpose of this article is to address the current state of carbohydrate confusion and provide some clarity for active people who want to eat wisely for good health, high energy, weight control and top performance.

Q: *Are carbs fattening? ... Should I eat less of them?*

A: *Carbohydrates are not inherently fattening. Excess calories are fattening. Excess calories of carbohydrates (bread, bagels, pasta) are actually less fattening than are excess calories of fat (butter, mayonnaise, frying oils) because the body has to spend calories to convert excess carbohydrates into body fat. In comparison, the body easily converts excess calories of dietary fat into body fat. This means, if you are destined to be gluttonous but want to suffer the least weight gain, you might want to indulge in (high carb) frozen yogurt instead of (high fat) gourmet ice cream.*

Q: *Is there a difference between the carbs from starchy foods (like breads) vs the carbs in fruits and vegetables or in candy?*

A: *As far as your muscles are concerned, there is no difference. You can carbo-load on jelly beans, bananas or brown rice; they are biochemically similar. Sugars and starches both offer the same amount of energy (16 calories per teaspoon) and both get stored as glycogen in muscles or used for fuel by the muscles and brain (via the blood sugar). The sugar in jelly beans is a simple compound, one or two molecules linked together. The starch in brown rice is a complex compound, hundreds to thousands of sugar molecules linked together. Sugars can convert into starches and starches can convert into sugars.*

For example:

- When a banana is green (not ripe), it is starchy. As it gets older, it becomes sweeter; in fruits, the starch converts into sugar.

- When peas are young, they are sweet. As they get older, they get starchier; in vegetables, the sugar converts into starch.

Grain foods (wheat, rice, corn, oats) also store their energy as complex strands of sugar molecules, a starch. The starch breaks down into individual sugar molecules (glucose) during digestion. Hence, your muscles don't care if you eat sugars or starches for fuel because they both digest into the same simple sugar: glucose.

The difference between sugars and starches comes in their nutritional value and impact on your health. Some sugars and starches are healthier than others. For example, the sugar is orange juice is accompanied by vitamin C, folate and potassium. The sugar in orange soda pop is void of vitamins and minerals; that's why it's described as "empty calories." The starch in whole wheat bread is accompanied by fiber and B-vitamins. The starch in white breads has lost many health protective nutrients during the refining process. White bread provides muscle fuel, but fewer vitamins.

Q: *If carbs aren't fattening, why do high protein diets "work"?*

A: *High protein diets seemingly "work" because--*

1. The dieter loses water weight. Carbs hold water in the muscles. For each ounce of carbohydrate you stored as glycogen, your body simultaneously stores three ounces of water. When you deplete carbs during exercise, your body releases the water and you experience a significant loss of weight that's mostly water, not fat.

2. People eliminate a lot of calories when they eliminate carbohydrates. For example, you might eliminate not only the baked potato (200 calories) but also two pats of butter (100 calories) on top of the potato and this creates a calorie deficit.

3. Protein tends to be more satiating than is carbohydrate. That is, protein (and fat) lingers longer in the stomach than does carbohydrate. Hence, having high protein (and fat) eggs & bacon for breakfast stays with you longer than does a high carb bagel with jam. By curbing hunger, you have fewer urges to eat and can more easily cut calories until you start to crave carbs and binge eat.

The overwhelming reason why high protein diets do NOT work is dieters fail to stay on them for a long time. They may lose weight, but only to regain it. The trick to losing weight is to learn how to manage the American food supply so you won't regain the weight. Remember: You should never start a food program you do not want to maintain for the rest of your life. Do you really want to never eat breads, potato or crackers ever again????

Q: *I've heard white bread is "poison." Do you agree?*

A: *White bread offers lackluster nutrition, but it is not "poison" nor a "bad" food. White bread can be balanced into an overall wholesome diet. That is, if you have bran cereal for breakfast and*

brown rice for dinner, your diet can healthfully accommodate a sandwich made on white pita for lunch.

White bread's reputation for being “poison” is partially because of its high glycemic effect. That is, 200 calories of white bread quickly digests and causes the blood glucose (blood sugar) to elevate higher than would the same amount of a whole grain, fiber-rich bread. High blood glucose triggers the body to secrete insulin to carry the sugar out of the blood. Insulin can stimulate the appetite, as well as fat deposition. If you are physically fit, however, your muscles readily store the sugar as glycogen with the need of much less insulin. Hence, active people can handle high carb foods and have less need to worry about a food's glycemic effect.

Q: *Should I choose foods based on their glycemic effect?*

A: *As a general trend, yes. Foods with a low glycemic effect tend to be wholesome, fiber-rich fruits, vegetables and whole grains that are health protective and satiating. They can curb the appetite and help with weight management. Yet, the glycemic response to a food varies from person to person, as well as from meal to meal (depending on the combinations of foods eaten). Experiment to learn what food combinations satisfy you and offer lasting energy.*

15. FOOD TO KEEP YOUR BODY HEALTHY

Once upon a time, certain foods were considered pleasurable: bacon & eggs, burgers & fries, ice cream & cookies. People ate them without a twinge of guilt. But as the years pass and good health becomes more fragile, these meals have become known as heart-attacks-on-a-plate.

Thus, my clients repeatedly ask:

What are the best foods to eat to enhance my health?

What are the worst foods to eat...what foods should I avoid?

Indeed, food can be powerfully harmful. A bad diet contributes to not only heart disease but also cancer, hypertension, osteoporosis, obesity, kidney disease, macular degeneration and a plethora of other ailments. Yet, the answer to the question about "bad foods" is simple: the foods to avoid are items that are moldy, poisonous, or to which you are allergic. Other than that, all foods in moderation can be balanced into a healthful diet.

Eat More of the Best
To tip the balance in favor of your good health, you do want to focus your menu on health protective foods. By eating more of the best foods, less of the rest, you can have a powerful impact on your future health and well being. Because genetics plays a big role in health, you also want to take a careful look at your family's health history. For example, genetics likely explains why a seemingly healthy, 48 year-old marathoner was found dead on a running trail. He'd stopped his watch after running for two hours, then collapsed from a massive heart attack, a death similar to that of his father's. Genetics also explains why some women "shrink" at an early age, ending up in pain from osteoporosis at age 60.

We cannot change our genetics, but we can change our diets to optimize our health and longevity. The purpose of this article is offer a few suggestions for easy ways to improve the quality of your daily diet, so that even if you are a junk food junkie, you can take steps towards reaching your life's potential.

Tip #1. Front-load your calories.
Do not "hold off" until dinner to eat a huge meal. People who skimp on daytime meals tend to get too hungry and consequently experience powerful cravings for sweets, fats and "junk." Your good intentions to eat apples and carrots can get trampled in your stampede to devour apple pie and carrot cake. By preventing hunger--that is, by eating a heartier breakfast, lunch and a planned afternoon snack (or even a second lunch, if dinner won't be until after 7:00 p.m.), you'll--consume more nourishing foods at those meals. Cereal, milk and banana at 7:00 a.m. can cure cravings for donuts, pastries or croissants at 10:00 a.m. (and even at 10:00 p.m., for that matter)

reduce the risk of gaining weight. A survey of dieters who lost weight and have kept it off suggests eating breakfast is a key to successful weight management. When you fuel your body with wholesome, hearty meals by day, you are able to eat less at night. Make it your goal to wake up hungry for breakfast!

Tip #2. Eat more whole foods.
Enjoy more whole apples instead of apple juice; more whole wheat breads instead of breads, pitas and wraps made from refined white flour; more whole grain cereals like granola instead of Special K or Rice Krispies. By choosing more whole foods, you get more fiber. Fiber is satisfying; it helps you feel full longer, hence curbs your appetite so you end up eating fewer sweets and fats without feeling denied or deprived. Whole foods also offer more vitamins and health protective phytochemicals that help your body's engine run smoother.

Tip #3. Eat fruit in the morning.
Of all the health protective foods, fruits are among the best. Yet, most Americans eat way too little fruit; it is unable to compete against chips, cookies and candy. The easiest way to improve your fruit intake is to make a point of eating fruit for breakfast, such as a banana on cereal plus a glass of orange juice. (Yes, eating the whole orange would be preferable, but when time is tight, drinking orange juice is better than having no juice or fruit. Calcium-fortified OJ offers an extra bonus.) Choosing fruit for snacks throughout the day can displace "junk."
Some fruits offer more nutrients than others, so try to eat more of the best: oranges (or orange juice), grapefruit, kiwi, bananas, cantaloupe, strawberries and mango.

Tips #3. Eat more veggies.
Munching on pre-dinner carrot sticks or green pepper strips is a healthful alternative to munching on chips. Frozen broccoli, spinach or winter squash are easy options for days when you lacked time to shop for fresh veggies. Your goal: to have veggies cover one-third of your dinner plate. This can reduce your risk of over-indulging in steak or french fries.

Tip #4. Eat more peanut butter and nuts.
Although nuts are high in fat, their oil is health protective. Research suggests people who eat nuts (including peanut butter) five or more time a week have a 50% lower risk of heart disease. While peanut butter on a whole grain bagel for breakfast may seem like a decadent treat to some folks, I consider it an honorable breakfast choice. (Add a glass of lowfat milk and/or a banana for more balance.) Peanuts are perfect for afternoon snacks; you can easily file them under "emergency food" in your desk drawer. They don't spoil and are satiating enough to reduce your dinner appetite plus provide the energy you need to cook, let's say, broccoli and potato for dinner instead of chowing on potato chips the minute you walk in the kitchen door.

Tip #5. Eat fish at least twice a week.
People who eat 2 or more fish meals per week have less heart disease. If you have tuna for lunch once or twice a week, and fish or seafood when you dine in restaurants, you'll easily enhance your fish intake. (Or, you can simply cook fish at home a few times a week.)

Tip #6. Eat more soy foods.
Some folks enjoy a glass of chocolate soy milk for a bedtime snack. Others cook soy sausage or soy bacon for breakfast. Many prefer soy in it's native Indian, Chinese, and Thai cuisines. And others choose soy protein bars. Whatever your method, soy is a healthful choice. The trick is plan ahead, so you can consume soy daily (ideally 3 to 4 servings each day).

Tip #7. Plan time to food shop.
If you schedule weekly time for food shopping, you'll enhance the likelihood of having wholesome, health protective foods readily available. Good nutrition starts in the supermarket!

16. NUTRITION AND INJURIES

Sad but true, being injured is part of being an athlete. Not surprisingly, injured athletes have numerous questions and concerns about nutrition as it relates to healing. Often, they attempt to pump their bodies with super nutrition, similar to pulling out the fire engine in an emergency situation. While enhanced post-injury nutrition does not result in rapid healing, eating well every day of training is a wise bet. That way, if you do get injured, your body will already be in great nutritional shape.

The following article answers the nutrition questions injured athletes commonly ask. Hopefully, you are healthy and don't need these tips. But when and if your injury comes, you'll know the best nutritional attack.

Q: *"I broke my leg in a skiing accident. If I start drinking more milk will the bone heal quicker?"*

A: *No. Most bones take 6 to 10 weeks to heal. Period. Extra calcium will not speed the process. But adequate calcium is important; be sure to eat at least 3 calcium-rich foods per day (cereal/milk+lunch/yogurt+dinner/milk).*

Hopefully you have already invested in optimal bone health by feeding your body plenty of calcium pre-injury. The teen years are particularly prime times for enhancing bone strength. (Unfortunately many teens drink more Coke and Pepsi than milk.) Throughout your lifespan, be sure to maintain bone strength with a strong calcium intake. This advice goes for men as well as for women. Few men recognize that osteoporosis can be a problem for men who live older than 70 years.

Q: *"Should I start taking vitamins to help recover from knee surgery?"*

A: *You do need good nutrition to enhance postsurgical healing. But vitamins are only one little piece of the nutritional picture. Minerals such as iron and zinc enhance healing, as does protein. Your best bet is to first eat wholesome foods; they can supply the nutrients you need. Given that many breakfast cereals, snack foods, and energy bars are vitamin-fortified, you may already be consuming far more vitamins than you acknowledge. Reading food labels can give you helpful information about the amount of vitamins in your standard food choices.*

Instead of rushing to buy vitamin supplements, first buy piles of colorful vegetables, such as broccoli and spinach. (One small stalk of broccoli provides the recommended intake of Vitamin C, a vitamin that enhances healing.) Other vitamin-rich foods include oranges and all citrus fruits, kiwi, and cantaloupe; mineral-rich foods include lean meats, yogurt, and milk. Hopefully, you have been routinely eating these foods pre-injury so your body is already in great nutritional shape.

Q: *"My stress fracture hasn't healed in 6 months. Could my vegetarian diet be slowing the healing process?"*

A: *Unlikely, if you are eating a balanced vegetarian diet that is rich in tofu, beans, nuts, and other plant proteins. But if your vegetarian diet is simply a meatless diet that lacks alternate proteins, YES! The deficiency of protein--and the companion nutrients iron and zinc--may not only slow healing, but also may have triggered the poor bone health that preceded the stress fracture.*

Among active women, protein deficient "vegetarian" diets (such as the bagel & pasta diet) can contribute to amenorrhea (loss of the menstrual period). This results in reduced bone density and a higher risk of stress fractures. Note that amenorrheic women runners have a 4.5 times higher risk of getting stress fractures than do their regularly menstruating peers.

If you are concerned about the adequacy of your vegetarian diet, your best bet is to get a nutrition check-up with a registered dietitian. This nutrition professional will be able to help you consume not only enough protein, but also iron, zinc, and calcium--all nutrients involved in bone health. Hopefully, you'll do this before you get a stress fracture!

Q: *"I'm afraid I'll gain weight now that I'm injured and can't exercise the way I like to..."*

A: *According to weight control theory, the more you exercise, the more you'll eat; the less you exercise, the less hungry you'll be and the less you'll eat. But life factors easily confound this simple system and some athletes do gain weight because they eat for reasons other than hunger. For example, an injured athlete who meets up with his teammates for dinner (after they have worked out) may eat just as much as they do--which could be 600 excess calories for him.*

Many active people equate weight gain with lack of exercise, but I often equate it with stress. That is, weight gained with injury generally relates to injury-created stress and unhappiness.

Injury is a good time to learn that your body won't get fat on you. If you eat when you are hungry and stop when you are content, you won't gain weight. Just be sure to use food for fuel, not for entertainment or lifting your spirits. (Note: you may gain some weight if you are very underweight--but you'll also get healthier.)

Important: do not severely restrict your food intake when you are injured. Your body needs adequate nutrition to heal your injury. Eliminating healthful foods hinders the process. Be wise!

17. COFFEE

Filtering the Facts

"I have 2 cups of coffee in the morning. How bad is that...???

"Should I drink coffee before I exercise?"

"Does coffee count towards my daily water requirement?"

Coffee is a universally loved beverage. Every culture the world around enjoys some type of caffeinated beverage, be it tea in England and Japan, espresso in Italy, or a "coffee regular" in America. Questions abound about the role of coffee in a sports diet: Is coffee good, bad or irrelevant? The purpose of this article is to answer some of the questions athletes commonly ask about coffee as it relates to their daily diet as well as to their exercise program.

Is coffee bad for me? That is, will it hurt my health?
Because coffee is so widely consumed, it has been extensively researched. To date, there is no obvious connection between caffeine and heart disease, cancer or blood pressure. Hence, the general answer, according to leading medical and scientific experts, is normal coffee consumption produces no adverse health effects. (The average American consumes 200 milligram caffeine per day; the equivalent of about 8 to 10 ounces--an average mug--of coffee.) For the 10% of Americans who ingest more than 1,000 milligrams caffeine per day and sustain themselves on the cream and sugar in coffee plus a few cigarettes alongside, heart disease is indeed more common--and linked to the poor diet and unhealthful lifestyle.

What does coffee do to my body?
The caffeine in coffee is a mild stimulant that increases the activity of the central nervous system. Hence, caffeine helps you stay alert and enhances mental focus. Caffeine's stimulant effect peaks in about one hour and then declines as the liver breaks down the caffeine. If you are an occasional coffee drinker, you'll tend to be more sensitive to caffeine's stimulant effects as compared to the daily coffee consumer who has developed a tolerance to caffeine.

What about coffee and women?
Pregnant women should prudently limit caffeine to less than 300 mg. per day (<12 ounces of coffee). Women who are trying to get pregnant might want to reduce caffeine intake even more, but more research is needed to clarify the controversy over the effects of caffeine on fertility. Women who are worried about getting osteoporosis may have heard that caffeine is linked to low bone density. The solution is to consume at least 8 ounces of milk per day. How about putting more milk in your coffee or enjoying some lattes?

Do people get addicted to coffee?
Although coffee has been a popular beverage for centuries, its sustained popularity fails to classify it as "addictive." Coffee is not associated with the behaviors found with hard drugs (such as a need for more and more coffee, anti-social behavior, severe difficulty stopping consumption). If you are a regular coffee drinker who decides to cut coffee out of your diet, you may develop headaches, fatigue or drowsiness. The solution: gradually decrease your caffeine intake rather than eliminate coffee cold turkey. And be aware, if you should get a headache due to caffeine withdrawal, caffeine-containing medicines such as Anacin or Excedrin will foil your efforts to reduce your caffeine intake!

How much caffeine is in espresso?
Ounce for ounce, espresso is about twice as strong as coffee (35 vs 18 milligrams caffeine per ounce of Starbuck's). But because the espresso serving is so small, you end up with less caffeine: 35 mg from one shot (one ounce) of espresso vs 140 mg from an 8-ounce Starbuck's coffee.

How much caffeine do Coke and Pepsi have compared to coffee?
The typical 9-ounce mug of coffee averages 200 milligrams of caffeine. This is about 5 times more than the 35 to 50 milligrams in a can of cola. The real kick from soft drinks comes from sugar, not caffeine.

If I drink too much beer, will coffee help me sober up?
No. Coffee will just make you a wide-awake drunk. Coffee does not speed the time needed for the liver to detoxify alcohol. But coffee does get some water into your body, and that can have a positive effect.

Does coffee count towards my daily fluid needs?
Yes. All fluids count--plain water, juice, soup, watermelon--and even coffee. The rumor that coffee dehydrates people lacks scientific support. Yes, coffee can make you urinate more in two hours--but not in 24 hours. Even during exercise in the heat, athletes can consume coffee and not be concerned about dehydration.

What about pre-exercise coffee: Will it help me perform better?
Perhaps. Studies suggest caffeine taken an hour pre-exercise can enhance performance and make the effort seem easier. Caffeine also mobilizes fat so more gets burned for fuel. Some researchers believe this helps athletes burn less glycogen and enhances endurance. The recommended "dose" is about 1.5 to 3 milligrams caffeine per pound body weight (225 to 450 mg caffeine for a 150 lb person; the equivalent of 10 to 20 ounces of coffee). Caffeine's response varies from person to person. Hence, trial and error will teach you the best practices regarding caffeine intake for your body.

If you are unaccustomed to drinking coffee, take heed: Consuming a mugful of coffee on an empty stomach an hour before, let's say a running event or a rugby game, can leave you feeling unduly jittery, nervous and suffering from "coffee stomach." Yet, if you always drink coffee before you exercise, you'll likely want to maintain that practice before a competition--if for no other reason than it can promote regular bowel movements and keep you out of the porta toilets mid event.

Isn't caffeine considered an illegal drug by the Olympic Committee?
Yes, caffeine in very high doses is considered illegal by the IOC. However the amount most athletes generally consume is far below the legal limit. You'd have to drink 3 to 4 mugs within the hour pre-exercise to reach the limit. That much would likely hurt performance...

18. SPORTS SUPPLEMENTS

The winner's edge?

Is it safe for my 16 year old son to take creatine...?

What's the best protein supplement to build muscle...?

What about Ripped Fuel to lose fat and boost energy...?

Competitive athletes commonly take some type of sports supplement to enhance health, performance or recovery from injury. Yet questions arise: Is the supplement safe? Does it work? This article looks at a few popular sports supplements and separates hype from truth to help you make wise choices.

Supplements to Build Muscle

Protein Powders:

If you are dazzled by the photos of ripped body builders in muscle magazines, you undoubtedly believe the accompanying ads that link protein bars, powders and shakes with magnificent muscle mass. Wrong. The key to bulking up is lifting weights, not eating excessive protein. Certainly, athletes who want to build muscles need adequate protein. But the required amount is easily available through customary foods: milk, eggs, meats, fish, beans, soy, nuts.

The safe and adequate amount of protein recommended by the American College of Sports Medicine, American Dietetic Association and the Dietitians of Canada is 0.5-0.6 gm protein/lb for endurance athletes and 0.7-0.8 grams pro/lb for strength athletes. Hence, the 200 lb. bodybuilder who needs 140 to 160 grams protein/day can easily consume that amount via 1 quart milk (40 gms pro), a 6-oz. can of tuna (40 gm pro) and an 8 oz. chicken breast (65 gm pro). Plus, he'll get even more protein from the other food in his diet. Consuming additional protein from supplements is not only needless, but also costly and displaces the carbs that are needed to provide fuel for the hard, muscle-building workouts.

Athletes who might benefit from protein supplements are vegetarians who fail to consume adequate beans, tofu or other sources of plant proteins. In this situation, consuming a protein supplement is better than consuming no protein.

Creatine:

Popular among strength athletes and those who do repeated bursts of brief, explosive exercise (weight lifting, sprints, ice hockey), creatine is reputed to enhance recovery from one bout to the next. Creatine rapidly re-energizes the energy system that allows the muscles to do repeated bouts of hard exercise. For example, some bodybuilders report better results from their workouts when they use creatine. By being able to repeatedly lift heavy weights, they are able to stimulate muscular growth. This translates into more strength, power and body mass. But not all athletes respond to creatine; some have little or no response.

Athletes who choose to take creatine should know that larger than recommended doses are needless; more is not better. They should also drink extra water to guard against cramps. If you are a parent who questions if your high school athlete can safely take creatine, you'll be relieved to know the research suggests creatine is safe. To date, creatine taken in the recommended doses has not been linked with medical problems. Yet, a wise motto with creatine (and any supplement) is "take at your own risk" due to poor quality control in the supplement industry.

The psychological effects of taking creatine should not be overlooked: Will the young athlete miss out on knowing how well his "all natural" body responds to old-fashioned hard training? This knowledge certainly builds self-esteem; lack of this knowledge may leave a feeling of self-doubt. Hence, I recommend young athletes reach their performance goals by training hard (and wisely) and optimizing their sports diet (i.e., eating a substantial breakfast and lunch to fully fuel themselves for a hard afternoon workout). I discourage the use of creatine in growing bodies.

Supplements for Endurance

Caffeine:

Touted to enhance endurance and the ability to work harder with less perceived effort, caffeine is popular among endurance athletes and those who want a pre-exercise energy boost. Like most ergogenic aids, caffeine's effect varies from person to person. If you rarely drink coffee, you may simply end up with the jitters and a bad case of "coffee stomach." As with any dietary experiment, practice taking caffeine during training so you'll have no surprises on competition day.

Caffeine has the reputation of being a diuretic and contributing to needless dehydration. According to Dr. Larry Armstrong of the University of Connecticut, caffeine's diuretic effect is insignificant--particularly among regular coffee drinkers. Caffeine may speed the rate of urination; you may urinate more in 2 hours--but not in 24 hours.

If you prefer to abstain from pre-exercise caffeine, a tried-and-true route to enhance endurance and performance is to eat appropriately before you workout. Research suggests athletes who

ate 400 calories for breakfast three hours prior to endurance exercise exercised for 27 minutes longer than those who failed to consume breakfast (136 vs 109 minutes). And if you will be exercising more than 90 minutes, you can further enhance endurance by consuming carbs (i.e., sports drink, gel) during exercise.

Ephedra/Ma Huang:

Ephedra (also called ma huang) is a stimulant banned by the NCAA. Ephedra commonly appears in nasal decongestants, cold medications and diet pills. It is also found in Ripped Fuel, a supplement that is popularly to lose fat and enhance energy.

Ephedra in combination with caffeine and also aspirin are bad combinations. Just go to the Center for Diseaes Control's website: www.cdc.gov and check out the number of medical problems and, yes, deaths associated with ephedra. In general, athletes and non-athletes alike should certainly be wary of products with ephedra and not take more than 24 mg. ephedrine per day.

19. EXERCISE AND WEIGHT CONTROL

Myths, Truths and Gender Differences

"I'm training for a marathon with hopes of losing weight..."

"Why does my husband shed pounds when he starts an exercise program and I don't?"

"Does exercising with an empty stomach burn more fat?"

Active people commonly link exercise with weight loss. They believe the more they exercise, the more weight they'll lose. Yet, that is not always the case. Many exercisers end up discouraged when they fail to lose weight despite regular workouts. Women, in particular, commonly complain about lack of results from their exercise program. Men, in comparison, seem to simply add on exercise, (subtract beer and fatty foods) and lose weight with ease.

If you are feeling frustrated by a lack of weight loss from your current exercise program, keep reading. This article might help you understand some myths about exercise and weight control.

Myth: Exercise kills your appetite.

Exercise may temporarily kill your appetite, but hunger will catch-up with you within 1 to 2 hours. Appetite is partially regulated by temperature control. Hence, if you feel hot after a hard workout, you may experience a temporary drop in appetite. However, if you are chilled, such as after swimming, you may feel ravenous.

Exercise's effect on appetite varies according to gender. Regularly exercising male rats tend to lose their appetite and drop weight; female rats get a bigger appetite, eat more and maintain weight. Limited human research supports those findings. Post-exercise appetite also varies according to body fatness. Studies with obese women who added moderate exercise to their sedentary lifestyle indicates they did not eat more, hence they lost weight. Diet and exercise studies with men suggest the fatter they were, the more weight they lost (in comparison to their less-fat peers) because they failed to compensate for the calories burned during exercise.

Myth: The more you exercise, the more weight you'll lose.

Often, the more you exercise, the hungrier you get and the more you eat. For example, you may spend an hour on the StairMaster burning off 500 calories, and then devour twelve Oreos (600 calories) in less than six minutes. After a hard workout, your body is hungry. Your soul may also

be hungry for a reward. After all, you now deserve a treat for having survived the workout, right...?

Men who addon exercise are likely to lose more weight than do women. In one study with previously sedentary, normal weight men and women who participated in an 18 month marathon training program, the men increased their intake by about 500 calories per day; the women increased by only 60 calories-despite having added on 50 miles/week of running. The men lost about 5 lbs. fat; the women none (Int'l J Sports Med, Vol 10 (S1),1989). Similarly, other studies suggest normal weight women fail to lose fat when they add on exercise...

The effects of exercise on weight loss are complex and unclear. Nature seems to efficiently replenish fat stores of lean athletes and prevent them from wasting away. Lean female athletes, in particular, struggle harder than do males to lose body fat and maintain an even leaner physique. In terms of evolution, Nature wants women to have fat and be fertile; men are supposed to be lean hunters.

Myth: You'll lose weight fastest if you exercise at low intensity (i.e., do " fat burning exercise") on an empty stomach.

"Fat-burning exercise"--a low intensity workout that burns proportionately more fat than carbohydrates (glycogen)--is deemed optimal for weight loss. Aerobic exercisers commonly believe they will lose more body fat if they exercise before eating, because fat will be the predominant fuel. Wrong. For fat/weight control, you need to look at the whole day's calorie balance--not just at what you burn during exercise. If, over the course of the whole day, you create a calorie deficit by burning off more calories than you eat, you'll lose body fat. However, if you consume more calories than you expend (as can easily happen if overeat at night), you'll end up gaining fat.

The biggest benefits of low impact, fat-burning exercise are 1) you are less likely to get injured, and 2) you are able to exercise for longer and thereby burn more total calories. The truth is intense exercise may actually contribute to lower percent body fat. Research on 1,366 women and 1,257 men suggests those who did high intensity exercise tended to have less body fat than those who did lower intensity "fat-burning" exercise. (Am J Clin Nutr. Feb '90)

Myth: Injured athletes gain weight due to lack of exercise.

Weight gained during injury is generally due to overeating, not under exercising. Overeating happens when injured athletes eat lumber-jack portions, regardless of their activity level, and ignore the decreased appetite that accompanies decreased exercise. Injured athletes who sit around bored, lonely and depressed may also find comfort in food (despite discomfort with weight gain).

When injured, some very thin athletes migrate to their natural weight, i.e., the weight they would naturally maintain without rigorous exercise and restricted calories. Although they may perceive this as "getting fat," they may be simply "catching up" and attaining the physique that is appropriate for their genetics.

The bottom line: Nature does an excellent job of defending a healthy weight despite adverse conditions. Given extreme amounts of exercise can be interpreted as a famine (due to the high calorie deficit), "food efficiency " may develop in people who maintain a chronic energy deficit. Women are particularly protected by Nature and fail to lose as much fat as do men (who are supposed to be leaner so they can more efficiently hunt and gather food).

If you are exercising to lose weight, I encourage you to separate exercise and weight. Yes, you should exercise for health, fitness, stress relief and, most importantly, for ENJOYMENT. (After all, the E in exercise stands for enjoyment.) I discourage you from exercising to burn off calories. Under those conditions, exercise feels like punishment for having excess body fat. Grueling exercise fails to get integrated into a life-long, health promotion plan.

20. MAKING DIETARY CHANGES

Willpower -- Or Nutrition Skillpower?

"I wish I had more willpower. I just can't seem to stick to any diet and lose weight."

"If only I had more willpower, I wouldn't be tempted by the vending machine. Every afternoon at 3:00, it's like a magnet for me..."

"I'm a junk food junkie. I need some willpower to clean up my diet."

For the athlete with a sweet tooth, cravings for junk food, or with excess body fat, will power is deemed the missing character trait that leads them into nutrition temptation. Athletes who lack willpower commonly beg me to put them on the straight and narrow and empower them with the ability to "just say no" to food sins. They are convinced lack of willpower is the root of their food struggles. I tend to disagree.

The following case studies explain why I disagree and offer another way of thinking about food management. I believe in nutrition skillpower more so than willpower.

Case #1. Sweets Craver

"If only I had more willpower, I could get sweets out of my life" complained Rick, a 27 year old triathlete. He trained hard, tried to eat healthfully but inevitably would succumb to his "downfalls": chocolate chip cookies, candy bars and ice cream. These sweets undermined his intentions to fuel his body healthfully. "I just have no willpower in the afternoon when my training is done for the day. I want a reward...and chocolate rewards me well!"

I reviewed Rick's typical food and exercise program. He ran first thing in the morning, grabbed a small breakfast on-the-run (banana and bagel), then headed for the office. He did his second workout at the gym during his lunch hour, then rushed back to the office. Come three o'clock, he was "starving" and would attack the vending machine.

Rick was indeed correct in describing himself as starving; he was! He had consumed only 500 calories, yet had burned at least 2,500 calories. By afternoon, he was 2,000 calories "in the hole." No wonder he was craving sweets. His depleted body was screaming at him for quick energy.

Rick believed that lack of willpower regarding chocolate created his eating problem. Wrong. Getting too hungry was the problem. He could prevent sweet cravings by eating more calories

earlier in the day. I encouraged Rick to eat a banana and a granola bar before his morning run, refuel afterwards with 16 ounces of orange juice and a bagel with peanut butter, then have half his lunch (a turkey sandwich and a yogurt) at 11:00 (an hour before his second workout), and refuel afterwards with another sandwich and juice. By feeding his body adequately, he prevented the urge to binge on sweets.

"I'm amazed!!! I no longer crave sweets. I haven't had any chocolate all week and I haven't even missed it." Rick needed nutrition skillpower (not willpower): better fueling patterns.

Case #2. Diet Failure

"If only I had more willpower, I could lose weight" complained Roberta, a 42 year old recreational runner. For years, she had been on and off diets, only to feel totally unsuccessful. "I've been trying to lose these same eight pounds for 25 years." Feeling totally helpless, she came to me as a "last resort" to help her achieve her weight goals.

When reviewing her dieting history, I noticed Roberta would diet by trying to exist on fruit for breakfast, salads for lunch, yogurt for snack, and fish with vegetables for dinner. Spartan intake, to say the least-as well as a very limited amount of food. I asked "When you are not dieting, what do you eat?" She quickly listed her favorite foods: granola for breakfast, PB&J sandwich for lunch, spaghetti for dinner. Every time she went "on her diet" to lose weight, she denied herself of these favorite foods. She even went to great extremes to keep cereal, peanut butter and bread out of her house so she wouldn't eat them. She deemed them too much of a temptation for her weak willpower.

I encouraged Roberta to stop looking at food as being fattening, and instead enjoy it as one of life's pleasures. Given she has liked granola, breads and pasta since childhood, she's naive to think she can stop liking them. Instead of trying to keep these foods out of her house, I encouraged her to eat them more often. I pointed out that her standard "diet foods" (fruit, salad and fish) had no power over her because she gave herself permission to eat them whenever she wanted. I encouraged her to eat granola every day for breakfast (and even lunch, dinner and snacks) to take the power away from that food--and simultaneously teach her how to manage eating granola in an appropriate portion.

If you, too, struggle with weight issues, you need to learn how to manage your favorite foods--not how to deny yourself of them. By enjoying appropriate portions of whatever you'd like to eat, as often as you'd like, you no longer need willpower to avoid them. Nutrition skillpower, not willpower, enhances permanent weight loss without denial and deprivation.

A skill that enhances portion management is to eat mindfully (not mindlessly), chew the food s-l-o-w-l-y, taste it and savour each mouthful. By doing so, you'll need far less quantity to be satisfied; you'll be content to eat a smaller portion. You will also diffuse the urge to do "last chance eating." (You know, "Last chance to eat bagels before I go back on my diet...") You can

have more bagels (or whatever) when your body becomes hungry again. Nutrition skillpower wins again!

Case #3. Junk Food Junkie

"If only I had more willpower, I would fewer donuts, chips, ding dongs..." fantasized Jason, a 22 year old graduate student and rugby player. "I know I should eat more healthfully, but I just happen to love junk food..." In the past, Jason had tried to go "on the straight and narrow" by limiting his intake to "good clean calories"-a pattern that left him feeling denied, deprived.

I reminded Jason there is no such thing as a "good" food or a "bad" food, but rather there is a good diet or a bad diet. He could healthfully balance "bad" foods into an overall good diet. I encouraged him to shift his meal patterns to front-load his calories and prevent the hunger that can all-too-easily lead to over consuming "junk." I helped Jason recognize when he ate healthfully, he not only felt better but also exercised better and felt better about himself. Skillpower, not willpower, helped him improve his food choices.

The bottom line
If you believe you need more willpower, think again and consult with your local sports nutritionist.

21. WHEN DIETERS LOSE WEIGHT

Acknowledging Weight Loss

"My wife has lost about 30 pounds. She looks GREAT!"

"My roommate has dropped 10 pounds. She's down to a size 4 and I'm so jealous...!"

"My brother is dieting by eating only one meal a day. He has shed 20 pounds in three weeks ... he looks awesome!"

We all know someone who has lost weight and our knee-jerk response is "WOW...Don't you look GREAT!" At diet workshops, the leader and participants applaud the successful dieters who, upon weighing in, register a lower weight on the scale. Advertisements for weight loss programs idolize how much better you'll look when you shed excess flab. High schools runners ogle over their friend's loss of two pounds.

This praise is intended to be positive but you should be aware it can sometimes backfire. The following story, told by an athlete in recovery from anorexia, can perhaps teach you how to acknowledge weight loss wisely. The story goes like this--

"When I was a student in medical school, I was very unhappy and my life felt out of control. I followed my strong desire to be able to control something , so I started to diet and exercise. I got a bit carried away and within a year, I had to admit myself into an eating disorders program. The surprisingly sad part is, no one saw my unhappiness.

"Mind you, I was in medical school, surrounded by health professionals, and I got nothing but praise the whole way down. Doctors, nurses, friends and family alike would say to me--

- *"You've lost weight. Don't you look great...!"*
- *"You are so dedicated with your exercise program. I feel like I barely have time to sleep, but you manage to get up early enough to run an hour every day. You're too g*ood."
- *"You always eat such healthful food--salads, fruits, rice cakes. I'm living on junk out of the vending machine, and you're preparing your own healthy foods every day. You are just so dedicated when it comes to eating well. I admire you."*

The praise and compliments flowed endlessly--but no one saw this woman's unhappiness. Twenty pounds later, and exhausted with compulsive, relentless exercise, she ran out of energy

and admitted herself into a hospital program for people with eating disorders. She knew her lifestyle was sick, but no one else had seemed to notice. No one made the appropriate comment: "You are looking very thin...are you OK?" or "I'm worried about you. You look so tired and seem to have lost that sparkle in your eyes..."

Another similar episode took place in a health club. A 39 year old man just trying to get back to his college "fighting weight" started dieting and exercising to the extreme. He claimed he was training for an Ironman triathlon. The truth was, he was abusing exercise to lose weight. His thoughts about food and exercise consumed 99% of his day--to the point he did little but exercise, work, sleep, and (try not to) eat. He also heard nothing but praise about his changed body:

- *"You look great...How much weight have you lost???!"*
- *"You are so dedicated with your training program. How do you find time to exercise for two hours every day? You are a better man than I..."*
- *"You are so good with your diet. I wish I had your discipline when it comes to eliminating junk food from my life..."*

After a year, this exhausted "athlete" ended up in my office saying "I don't know if I need to see you or a psychologist..."

In both cases, these "athletes" got nothing but praise as they tumbled into their eating disorders. Granted, their friends, teammates and training partners were not responsible for this happening, but they failed to say appropriate words.

Acknowledging weight loss

So what should you say when someone has lost weight? What you do not want to say is "Have you lost weight??? You look GREAT!!!" This implies:

1) They looked horrible before.

2) Physical size is more important than health.

3) They are a better person if they are lighter. And what happens when the dieter regains the weight (a common occurrence)? Does he or she revert to being a worse person?

Be it two pounds or twenty pounds, the better way to acknowledge weight loss is to shift the focus away from physical weight changes and focus instead on the praiseworthy aspect: the person's improved health status. Here are some recommended phrases to share with dieters who are losing or have lost weight:

- *"You look like you've been working hard at losing weight..." The dieter will be ever-ready to talk about how proud they are of their hard work. Let them brag.*

- *"You look smaller... Is there is less of you to love?" The message is, you are not a better person if you lose weight; you are just less.*

- *"You look pleased with your weight loss. How do you feel about it?" They'll undoubtedly feel healthier, more energetic, super!*

- *"You are looking more fit. How are your workouts going? How is your energy level? How do you feel...?"If they are losing weight appropriately, they'll feel great.*

- *"You appear to be trading some of your excess fat for muscle?" Acknowledge what you see but don't suggest they are a better person.*

Sometimes you can just say nothing. After all, how often do you acknowledge weight gain: *"You've gained weight!!?" (But then, maybe you should: "You look stressed, exhausted. Are you OK...?")*

Regardless of the dieter's response, the goal is to help the person hold a solid appreciation of their value as a person. Their beauty is in their smile, their friendship and caring--not in being size two instead of size twelve. Dieters need to know they are loved from the inside out, not judged from the outside in. If dieters lose weight, they need to fully realize there is simply less of them to love. They are not better, more perfect or more likable. They are just less. But hopefully they are healthier, more energetic, stronger, and happy with these benefits.

22. RECOVERY FROM HARD EXERCISE, PART II

How to rapidly rehydrate

"As a triathlete, I sweat a lot but I also try to drink a lot. I carry a gallon of water around with me. How can I tell when I've had enough to drink?"

"What's best to drink between soccer games in a tournament: water or sports drink?"

"How bad is beer after the rugby game?"

When you are exercising in the summer heat, dehydration is an obvious concern. But even in winter, when you're dripping buckets of sweat while training at the health club, dehydration remains a concern. Regardless of the season, adequate fluid intake deserves full attention from athletes who perform hard exercise-particularly if you are doing double workouts and need to rapidly recover from one exercise bout to prepare for the next one.

Your best bet is obviously to minimize water losses by drinking adequate fluids during exercise. But many athletes, to the detriment of their performance, fail to complete that task either because their sweat losses during exercise are too high or their fluid intake is too low. Whatever the story, rapid recovery from one bout of exercise to prepare for the second bout depends upon replacing fluids and electrolytes (the minerals lost in sweat along with the water). Be you a soccer player in a weekend tournament, a swimmer competing in two events at a meet, a cyclist doing back-to-back century rides, or a triathlete doing two-a-day workouts, you'll be able to perform better during the second session if you have planned your recovery diet. This article addresses fluids for rapid recovery after intense exercise; carbohydrates for rapid recovery were discussed previously in Part I of this two part series.

Minimizing sweat losses

Preventing dehydration during exercise is preferable to treating dehydration post-exercise. To determine how much fluid your body needs, the best plan is to learn your sweat rate. Simply weigh yourself naked before and after an hour of hard exercise during which you drank no fluids. The weight loss reflects sweat loss. By learning your sweat rate under various conditions, you can then develop a schedule for drinking adequate fluids during exercise to minimize sweat losses and hasten recovery. A 2 lb. loss equals 32 ounces (1 quart). In the future, you should target drinking 8 ozs./15 minutes of exercise at that pace and under those climatic conditions.

Because most athletes voluntarily consume only half of what they need, they inevitably need to pay attention to post-exercise recovery fluids. For each pound lost, you should now target

drinking 150% more than that during recovery. That is, if you lost 2 pounds during a workout, you should replace that loss with at least 3 pounds of fluids (48 ozs.) within 2 hours post-exercise. An alternative to counting ounces is to simply monitor your urine. You should be urinating every 2 to 4 hours post-exercise, and the urine should be pale yellow color (like lemonade), not dark (like beer).

What's best to drink for rapid recovery to prepare for the next tennis match or soccer game? Your best bet is fluids and/or foods that contain sodium. That is, if you are going to be consuming only fluids, a sports drink (with sodium) will do a better job of replacing sweat losses than will plain water, juice or soda pop. The sodium enhances fluid absorption and retention. Or, if you prefer sodium-free beverages, simply eat salty foods alongside, such as pretzels, crackers, pizza, or pasta with tomato sauce.

What about sports drinks...?

Sports drinks are designed to be taken during hard exercise, a time when digestion can be compromised due to reduced blood flow to the stomach. Hence, sports drinks are dilute and are actually a weak source of sodium and carbohydrates. If you need to rapidly recover for a second bout of exercise within an hour or two and are worried about gastric distress during the second event, consuming sports drink is a safe bet. But if you have a tolerant stomach, or more than 4 hours to recover, you can refuel and rehydrate yourself with higher carb fluids (juices, soft drinks) along with bagels, pretzels, and whatever carbohydrate-rich foods taste good and digest comfortably. You simply have to learn through trial and error which recovery foods and fluids you tolerate best--particularly in competitive tournament situations where stress and anxiety can take a toll on your digestive system.

What about beer...?

Hands down, a highly popular recovery fluid is beer--but is beer an OK choice for a top notch sports diet? Well, juices and soft drinks are preferable, but alcohol-free beer is fine, and so is near-beer or diluted beer with the alcohol content cut from 4.5% to less than 2.5%. Eating pretzels or other foods along with the beer improves the recovery process by providing carbs and sodium.

CAUTION:

Do not follow the common practice of drinking too much beer and eating too little food! Obviously, this hinders both glycogen and fluid replacement. And be careful to not drink alcohol on an empty stomach. This rugby player explains why: "After a game, when I'm dehydrated and haven't eaten any food that day, a beer hits me like a ton of bricks. I've learned to enjoy the natural high of exercise--it's better than walking around in a drunken stupor. I save the beer for later, when the tournament is all over!"

Can alcohol ever fit into the recovery diet?

According to Australian sports nutritionist Louise Burke, Ph.D., the answer varies. Burke researched the effect of alcohol (vodka) on glycogen replacement. She compared three recovery diets: carbohydrates only, vodka only, or carbs plus vodka. The bottom line: alcohol itself does not convert into glycogen, so it is a poor choice for a recovery fluid. But alcohol itself does not impair glycogen storage, as long as adequate carbohydrates are available. Burke stressed the importance of eating while drinking. Athletes who fail to consume enough carbs while drinking alcohol, plus fail to get up for breakfast the next morning have two strikes against them. Add alcohol's diuretic effect and you've done yourself in for the day!

23. MUSCLE CRAMPS

Do they cramp your style?

"I get excruciating cramps when I play tennis in the heat. Could something be wrong with my diet...?"

"I cramped so badly during the marathon. I had to quit a few yards from the finish line. I just couldn't go any further."

"Should I drink pickle juice to prevent cramps...?"

If you've ever experienced the excruciating pain of a severe muscle cramp, you may fearfully wonder if it will strike again. You may also wonder if nutritional imbalances are at the root of the problem and if diet changes would be the simple solution.

Muscle cramps are poorly understood. Historically, no one has been able to predictably cause a muscle to cramp; this hindered the ability to study the underlying mechanisms that contribute to the these unpredictable spasms. Just recently, researchers have found a way to cause cramps. Hopefully, this will open the door for more research on ways to prevent them from happening.

We do know that muscle cramps most commonly occur among athletes who work their muscles to the point of exhaustion. The overexertion theory of muscle cramps goes like this: When a muscle gets tired, the numerous muscle fibers that comprise the muscle fail to contract in a synchronized rhythm. This is likely related to overstimulation from the nerves that trigger the muscles to contract.

What to do
What should you do if you get a cramp? Popular remedies include massage, stretching, acupressure (relaxing the affected muscle by applying pressure to it), and giving yourself a hard pinch squarely on the upper lip.

What about nutritional remedies? Previous theories have suggested cramping is related to fluid loss and electrolyte imbalance. These theories do not always hold true. (For example, musicians, who do not get sweaty, often complain of muscle cramps.) Yet, if you are plagued by cramps, you should at least rule out any possible factor that might contribute to getting them. Here are a few food tips to help you rule out theoretical nutritional causes.

Theory #1. Lack of water. Cramps often occur when an athlete is dehydrated. (But even athletes who are well hydrated get cramps.) To reduce the risk of dehydration-associated

cramps, simply drink more than enough fluids before, during, and after you exercise. On a daily basis, drink enough fluids so you have to urinate every two to four hours. Your urine should be light colored and copious. During extended exercise, drink as much as tolerated, optimally 8 ounces every 15-20 minutes.

Theory #2. Lack of calcium. Calcium plays an essential role in muscle contractions. Anecdotal stories suggest that athletes who eliminate calcium-rich dairy products can become plagued by muscle cramps. For example, a ballet dancer who added yogurt and skim milk back into her diet reports her cramps disappeared. A mountaineer resolved his muscle cramps by taking calcium-rich Tums.

Exercise scientists question the validity of these anecdotes, believing a calcium imbalance is unlikely to be the cause of muscle cramps. After all, the bones are a calcium reservoir and can supply the body what's needed for proper muscle contractions. Never-the-less, to rule-out any possible link between a calcium-poor diet and muscle cramps, I recommend that athletes plagued by cramps consume calcium-rich foods at least twice a day, such as low-fat milk on cereal and a yogurt for a snack. This good nutritional practice certainly won't hurt them, and may possibly help.

Theory #3. Lack of sodium. Many health-conscious athletes restrict their salt intake on a daily basis, believing this will help prevent blood pressure problems. However, if these athletes are losing a significant amount of sodium through sweat, they may be putting themselves at risk for developing a sodium imbalance that could contribute to cramps. This situation is most likely to occur in extreme sports such as an Ironman triathlon or 100-mile trail run, particularly if the athletes have consumed only plain water during the event, no sodium-containing food or beverage.

Theory #4. Lack of potassium. Athletes who sweat heavily may lose some potassium, but they are unlikely to become potassium depleted. And if they did, the whole body would be affected--not just one muscle. Never-the-less, eating more potassium-rich fruits and vegetables will hurt no one. Theory #5. Lack of pickle juice. Some football players and athletic trainers swear two ounces of pickle juice taken ten minutes before exercise prevents cramps. The reasons are unknown and untested, but there's no harm in trying...!

The above suggestions are only suggestions, not proven solutions. But you might want to experiment with these dietary tips if you repeatedly suffer from muscle cramps. Adding extra fluids, low-fat dairy products, a sprinkling of salt, extra fruits and vegetables, and even some pickle juice certainly won't harm you and may possibly resolve the worrisome problem. I also recommend you consult with a physical therapist, athletic trainer or coach regarding proper stretching and training techniques. Nutrition may play no role at all.

24. ENERGY BARS

Better than a banana?

Once upon a time, candy bars were the most popular energy bars. But in 1987, PowerBars entered the sports scene and started the onslaught of designer sports foods that are fighting for today's food dollar. Questions arise: Are energy bars better than, let's say, bananas? The following article answers the questions athletes commonly ask about energy bars.

Q: *"My workouts have improved since I started eating an energy bar within the hour before I train. Would a banana or some other natural food do the same job, or does this "designer food" have magic ingredients? "*

A: *Energy bars are not magic, nor are they preferable to-or better than-natural foods such as fig cookies, dried apricots, bananas, and other popular pre-exercise carbohydrates. The testimonials in magazine ads often proclaim "I'm a champion now that I eat SuperBar before I work out..."--but the ads fail to mention the athlete used to eat nothing pre-exercise. Clearly, any fuel is better than no fuel. In fact, eating even a candy bar five minutes pre-exercise improves performance when compared to having eaten nothing.*

The "magic" about energy bars is they are convenient, pre wrapped, portable, and durable. They are ready-and-waiting, hassle free. Some energy bars claim to be "easily digested," but digestibility varies greatly from person to person. You'll have to judge that for yourself--be it digestibility of energy bars or bananas, for that matter.

Q: *I get overwhelmed by the numerous kinds of energy bars. Are some better than others?*

A: *Some energy bars, like Clif Bars and Boulder Bars, are made from whole foods; they are filled with fruits, fiber, and wholesome goodness and quality nutrition. They are preferable to the energy bars that taste like candy and are little more than sugar-coated vitamins, minerals, and protein. With names like Fudge Brownie and Devil's Food Cake, do you really think these snacks offer better nutrition than found in an orange, banana, or peanut butter sandwich? And why are no berries listed in the ingredients for the Ironman Yogurt Berry Bar? Who's getting fooled here...*

Q: "I eat energy bars for breakfast on the run, lunch at the office, and snacks before I exercise. Is there a health danger to eating too many energy bars?

A: In the long term, eating too many designer energy bars could potentially lead to health problems. Here's how.

1. In theory, if you eat lots of engineered foods, you can displace too many natural foods from the diet. That is, instead of grabbing a pre-exercise fruit, you choose a Chocolate Brownie Boom Bar. Because fresh fruits and vegetables are among the most health protective foods (and are already underconsumed in the typical athlete's diet), you'll likely end up with an even lower intake of the fiber, carotenoids, and other health-protective phytochemicals found in fruits, veggies, and whole grains. The solution: for each energy bar, be sure to eat a banana, some dried apricots, raisin bran, orange juice, yogurt, or other powerhouse snack food.

2. Eating too many highly fortified energy bars could potentially contribute to an overdose of minerals. An Ironman Bar, for example, provides 50% of the RDA for zinc. When you eat several highly fortified energy bars per day, plus take a multivitamin and mineral supplement and eat highly fortified breakfast cereals such as Total or Smart Start, you're consuming megadoses of vitamins and minerals. Whereas you will most likely excrete the excess vitamins in your urine, your body may develop health problems related to mineral imbalances. That is, minerals compete with each other in the body, and too much chromium, for example, can interfere with zinc absorption. This could potentially weaken your immune system. Too much zinc has been shown to elevate cholesterol levels. Good nutrition relies on the proper balance of nutrients; this balance may be difficult to achieve with excessive supplementation.

3. A diet rich in energy bars is often poor in variety. Athletes commonly consume only 10 to 15 different foods per week. If the bulk of your limited diet is energy bars, think again. You may be missing out on important nutrients obtained from a variety of foods. Food variety adds spice to your nutritional life.

Your goal is to consume at least 20 to 30 different kinds of foods per week. So either eat a variety of natural-food energy bars, or better yet, how about replacing the bars with whole grain bagels, nuts, peanut butter, apples, carrots, oatmeal cookies, and other assorted snacks?

Q: *I'm trying hard to dump my plump. I do well when I eat packaged foods like a Balance Bar or 40-30-30 bar as a fundamental part of my diet plan. Is this a safe way to lose weight?*

A: *Dieters tend to like energy bars because they offer a defined amount of calories, carbohydrates, protein, and fat, and this nutrition information on the label makes it easy for the dieter to calculate his or her food intake. But energy bars have no secret ingredients that promote weight loss. Their small portion assists calorie control by simply having a defined start and finish. That is, when you eat an energy bar, it's gone. But when you grab a handful of pretzels, what's left in the bag can tempt you to eat more…*

Some dieters eat energy bars to the exclusion of whole foods. Bad idea. The best way to not only lose weight but also keep it off is to learn how to eat appropriate portions of your favorite foods. That means learning how to navigate cookies, birthday parties, and fast foods--and not just avoid these foods while you live on energy bars.

The Bottom Line: Eating energy bars is preferable to eating candy bars and Twinkies. But the better bet is to eat a variety of wholesome foods that offer nature's bounty of health-protective compounds. You'll simultaneously save yourself lots of money. Energy bars easily cost $0.70 per 100 calories. In comparison, raisins are only $0.18/100 cals.; banana, $0.20; granola bar, $0.28. When used in sports situations, energy bars can be handy, but for day to day snacking, choose real food.