

## HEALTHY LIFESTYLES FOR JUDGES

*Don Bridges (with a little help from my friends)*

One of the sad realities of transition from the Bar to the Bench is this often quoted admonition to new judges: “You will gain weight during your first six months on the Bench.” The sedentary nature of our work, combined with the rigors of travel, the stress of making decisions significantly affecting the lives of others, the temptation to over-indulge at lunch, and the onset of back problems or age or job related ailments could cause one to conclude that the oath of office ought to be accompanied by a warning from the Surgeon General: “Caution: serving on the Superior Court may be hazardous to your health.”

The purpose of this paper is to dispel this notion and, drawing upon comments by our colleagues and other “experts,” provide a brief outline of the steps each of us can take to improve the healthfulness of our lives on the Bench. The input from fellow judges came in the form of answers to a questionnaire circulated in a completely unscientific and random manner. This input will be supplemented by your answers to these and additional questions during the Conference. Through this exercise, our goal is to receive helpful recommendations from among our own members, those who know and have experienced firsthand the problems posed by the “lifestyle” that accompanies service on the Superior Court. We will then compare these impressions with the recommendations of “experts” in the fields of nutrition, exercise and general wellness.

There is no shortage of literature on wellness. The shelves of every bookstore are stocked with books touting the latest diet, exercise and fitness programs. Americans spend \$40 billion per year on books, programs and products designed to help us lose weight. When was the last time you attended a Conference *without* talking to a colleague who had recently begun a new diet? Some of us have tried them all—Weight Watchers, Atkins, South Beach, you name it, and usually without success.

One of the more helpful books on healthy living is *Dr. Bob Arnot’s Guide to Turning Back the Clock* (Little Brown 1995). Many of us remember Dr. Arnot from his regular appearances on the CBS Morning Show. The premise of his book is that you do not have to surrender to the effects of aging; that you can not only slow down but actually *reverse* the aging process through healthy choices of nutrition and exercise. As evidence for this premise he cites the example of Walt Stack, who at age 84 begins his day out with a 50 mile bike ride, followed by a 17 mile daily training run, capped off by a mile swim in the San Francisco Bay. Fortunately, the suggestions from our colleagues and me do not include such drastic lifestyle choices, nor is it necessary that we do so in order to reset our biological clocks. Nonetheless, many of the “expert” opinions cited in this paper come from Dr. Arnot. In fact, he suggests that those who will realize the greatest benefit from his recommendations are:

- Those who haven’t practiced optimum nutrition
- Sedentary persons

- Those who are aerobically fit who have never built any muscle
- Those who are muscularly fit but aerobically unfit.

How many of us do not fit into at least one of those categories? It is apparent that this author is targeting those who have further to go. You might say that our Conference represents a target audience.

Other sources that I have used for this paper include *Muscle Logic; Escalating Density Training Changes the Rules for Maximum-Impact Weight Training*, by Charles Staley (Rodale 2005) and a number of articles found on the Internet.

### *Reviewing the Questionnaire*

In our informal survey, judges were asked what warnings they would offer to new judges about the ways in which serving on the bench may be hazardous to your health. The warnings most commonly provided include the following:

“The nature of the work is sedentary, involves too much sitting.” (55% of respondents)

“Job lends itself to eating big lunches.” (40%)

“Too much stress.” (35%)

“The job is solitary; counteract this by interacting with family and friends.” (30%)

“You will need to get more exercise.” (obviously related to 1 above) (30%)

Simply reading through these warnings is depressing in itself. If these points were better publicized, we would probably have fewer contested elections because no one would want to file for our seats. In spite of the warnings, 65 per cent of those surveyed indicated that they suffer from no significant health problems. From among the remaining 35 per cent, the most common ailments mentioned were high blood pressure or cholesterol, migraine headaches and being overweight. It is also encouraging that 70 per cent of respondents indicated that they now exercise 3 or more times per week; 15 per cent described themselves as sedentary, 10 per cent were somewhere between sedentary and exercising 3 times per week and the remaining 5 per cent considered themselves as “athletic.” Exercise is mentioned as a major concern and recommendation throughout answers to the questionnaire, so it is good to know that, by and large, we practice what we preach.

When asked for their recommendations for maintaining a healthy lifestyle, an overwhelming majority of judges mentioned exercise as a top concern. Of those surveyed, 75 per cent included “Get regular exercise” among their recommendations for healthful living. Other top responses were “Be careful with your diet” (55 per cent); “Develop a hobby” (40 per cent); “Nurture family and personal relationships” (30 per

cent); “Get outside for fresh air” (30 per cent); “Find a stress reliever” (25 per cent); “Do something outside the law” (25 per cent); “Limit alcohol consumption” (25 per cent); and “Take vacations and weekend trips” (20 per cent). Fifteen per cent of all respondents indicated variously that we should “Keep up with your reading”, “Separate work from personal time”, “Practice your faith”, “Maintain contacts with the Bar”, “Don’t take yourself too seriously” and “Limit the time spent sitting.”

Respondents to our survey most often chose “Walking” as a form of exercise. When judges were asked about their favorite exercise activities outside the normal workday, 65 per cent chose walking, more than twice the level of the next categories of Gardening/Yard Work, using an Elliptical Trainer, Weight Training and Biking (each enjoyed by 25 per cent of respondents). Of those surveyed, 20 per cent are golfers, while 15 per cent of respondents engage in running, playing basketball, using a treadmill or generally exercising at a gym.

Recommendations for exercise or physical activity during the workday also were weighted heavily in favor of “Walking.” Top responses included Walking (in general) (55 per cent); “Take the stairs” (40 per cent); “Walk to lunch” (25 per cent) and “Stretching” (20 per cent).

Exercise also appeared as the top recommendation from judges among suggested activities while staying at a hotel during travel assignments. Fifty five per cent of respondents suggested exercise, followed closely by the recommendations of “Reading” (50 per cent); “Take a walk” (40 per cent); “Get outside/explore the area” (25 per cent). Other suggestions included “Visit friends”, “Get on the Internet” and “Phone home.”

Although our judges recognize the importance of exercise, it appears that relatively few of us find it to be relaxing. As a stress reliever, exercise appeals to a mere 15 per cent of respondents. A far more popular relaxation activity was “Reading,” favored by 40 per cent of those surveyed. Other popular pastimes were “Spending time with family or friends” (35 per cent); “Gardening/yard work” (35 per cent); “Music” (25 per cent); “Golf” (20 per cent) and “Fishing/hunting” (tied with exercise in general at 15 per cent).

Our judges provided a variety of recommendations concerning healthy eating. Top recommendations for healthy snacks were:

Nuts (40%)

Apples (40%)

Cereal or granola bars (20%)

Yogurt (15%)

Bananas (15%)

Water (10%)

Raisins (10%)

Other recommendations were oranges, pears, tangerines, Gatorade, sunflower seeds, grapes and prunes.

There was also a lengthy list of foods that our judges recommend be avoided. The culprits most commonly named were:

Fatty/greasy foods (30%)

Fried foods of any kind (25%)

Breads and carbs in general (20%)

Desserts (20%)

Alcohol (15%)

Burgers/fast food (15%)

French fries (15%)

Soft drinks (10%)

Caffeine (10%)

Other problem areas mentioned were cream sauces, chocolate, sweet tea, barbecue, pasta, chips and country ham.

Based upon this unscientific survey, one could conclude a number of points, most of which are painfully known to all of us, either intuitively or from experience:

1. Serving on the Superior Court does, in fact, present a number of potential hazards to our health due to the extremely sedentary nature of the work, a daily temptation to over-indulge at lunch, the stressful nature and solitariness of decision making, and the tendency to exercise less than we should.
2. The demands of travel interfere with our exercise programs because of time constraints and because we are simply “too tired” after a full day in court, usually combined with a commute.

3. Well aware of the need for exercise, most of us make an effort to achieve some exercise on a regular basis, primarily through walking, although we also enjoy a wide range of other activities. Many of us seek opportunities for some physical activity during the workday, usually through walking.

4. We recognize the problems arising from the stress and solitude associated with our jobs, with many of us seeking to counter these factors by reaching out to family and friends, relaxing through reading, gardening, music and sports.

5. We have identified certain foods as being healthy or unhealthy and make at least an effort to follow a healthy diet. We are well aware that we should avoid fatty and greasy foods, fried foods of all kind (French Fries in particular) and desserts; limit our intake of certain carbohydrates, bread, alcohol, burgers and other fast foods and that we should be careful about sodas and other drinks with caffeine. When snacking, we know that we should choose nuts and apples, cereal bars and yogurt, as well as other fruits.

Frankly, there are no great surprises appearing in the survey results. Most of us could have predicted many of the responses prior to reading the results. It might be helpful, however, to take these results and go one step further, comparing some of them with recommendations from other “experts” on the steps we can take to improve the healthfulness of our lifestyles.

*“Expert” Advice on Exercise.*

*How much exercise is needed.* Most of us agree that we need “more exercise,” but how much and what kind of exercise do we need? For weight loss and general health, the United States Surgeon General recommends: “Be physically active for at least 30 minutes (adults) or 60 minutes (children) on most days of the week.” A more complete set of guidelines has been adopted by The American College of Sports Medicine and the American Heart Association in their Physical Activity Guidelines as revised in August, 2007.

Under these guidelines, a healthy adult between the ages of 18 and 65 needs endurance exercise, which noticeably accelerates the heart rate for at least 10 minutes at a time. This can be achieved either with moderate or vigorous exercise for 30 minutes a day, 5 days a week. The exercise routine can be moderate, vigorous, or a mix of the two. The 30 minutes can be broken up into 10 minute increments, so long as they total a minimum of 30 minutes a day. A moderate level of activity noticeably increases your heart rate and breathing rate. You may sweat, but you are still able to carry on a conversation. Examples include brisk walking, easy jogging, treadmilling, exercising on an elliptical trainer, bike riding, swimming and dancing. An easy walk of less than 10 minutes does not count as aerobic activity. You can build moderate activity into your lifestyle by walking briskly for at least 10 minutes to the bus, but just adding steps on your pedometer does not count.

As an alternative to 30 minutes of moderate exercise, you can meet the guidelines by substituting vigorous aerobic activity for 20 minutes a day on 3 days of each week. Vigorous aerobic exercise means that you are breathing rapidly and only able to speak in short phrases. Your heart rate is substantially increased, and you are likely to be sweating. On a scale from 1 to 10, vigorous exercise would be a 7 or 8. Examples of vigorous exercise are running, cycling, or swimming at an intense level.

In addition to moderate or vigorous aerobic activity, these guidelines also recommend strength training exercises two days a week, consisting of 8 to 10 strength-training exercises, with 8 to 12 repetitions of each exercise. Strength training exercises are defined as those that have you lift, push or pull to increase muscle strength and endurance. They include lifts with dumbbells and barbells, or may be accomplished with resistance bands or gym equipment.

These guidelines are considered minimum standards for maintaining good health. Longer and more frequent workouts will further improve fitness and reduce the risk of chronic disease and weight gain. (Haskell WL, Lee IM, Pate RR, Powell KE, Blair SN, Franklin BA, Macera CA, Heath GW, Thompson PD, Bauman A. "Physical Activity and Public Health. Updated Recommendation for Adults from the American College of Sports Medicine and the American Heart Association." *Circulation*. 2007 Aug 1.

*Walking for exercise.* As many of us can attest, walking is an excellent way to begin or build upon in an exercise program. The obvious advantages of walking are that it requires little or no equipment, can be enjoyed almost anywhere, is low impact with less danger of injury and provides an opportunity to get outside and enjoy some fresh air. As noted above, the goal should be to achieve a moderate level of aerobic exercise through walking. Attached to this paper is an article downloaded from *About.com*, providing further details about weight loss through walking as well as suggested walking programs. If you are interested in tracking calories burned through walking, you can find an online calculator that will help you compute the calories burned while walking at <http://walking.about.com/library/cal/uccalc1.htm>.

*The importance of muscle.* As we move into more vigorous exercise programs, there are a number of principles that come into play. According to Dr. Arnot, the "twin engines" that propel a person in "Turning Back the Clock" are (1) aerobic fitness and (2) lean muscle mass. Muscle mass is important and, in fact, crucial for weight control due to the fact that muscle is metabolically active, burning calories faster than other body tissue, *even when you are not moving*. Unfortunately, the aging process includes steady loss of muscle tissue, unless we work to reverse that process. In fact, the typical male will lose as much as 6 pounds of muscle per decade after the age of forty. The average 25 year old has 18% body fat, while the average male at age 65 will have 38% body fat. Every pound of muscle gained (or lost) will result in an increase (or corresponding decrease) in metabolic rate of 30 to 40 calories per day, *without any change in activity*. Gaining 5 pounds of muscle could help you burn an additional 1,400 calories per week, without any increase in activity! Therefore, it is essential that our exercise programs include both aerobic and strength conditioning. (Staley, p. 4).

*The importance of varying exercise routines.* For most of us, “exercise” consists of a set routine. Once we choose a routine, we tend to stick with it, whether our preference is walking, running, or working out on a Stairmaster or elliptical machine. If we do strength training, we might fall into a pattern of lifting the same weights or working on the same Cybex machines time after time each week. Unfortunately, this type of routine can limit the benefits of exercise. The reason for this is the fact that the human body, like any living system, adapts to new stresses so that it becomes “immune” to the stress. Because of this adaptability, runners who go out and run the same 5 mile course every day will eventually become slower and slower. Runners who understand this pattern will train with “intervals,” running a series of short bursts.

*How to get better.* The “experts” recommend strategies such as running intervals as routines to raise the *lactic threshold (LT)*, which can only be accomplished by crossing from *aerobic* exercise into exercise in the *anaerobic* range. *Aerobic* exercise is vigorous, producing an increased heart rate, sweating and shortness of breath, but it is done at a level that can be maintained for a fairly long period. During *anaerobic* exercise, lactic acid levels in the body will reach a level, the *lactic threshold*, where the body can no longer produce energy aerobically, resulting in muscle pain to the point that the athlete must either slow down or stop until the pain diminishes. The best way to improve performance is to increase the athlete’s LT, and this can best be accomplished by exercising within the *anaerobic* zone, just below the LT, for 30 to 45 minutes twice a week. One way of estimating your LT is to monitor your heart rate during exercise. Your LT will fall somewhere between 80% and 90% of your maximum heart rate. While maximum heart rate varies depending upon conditioning, it is generally tied to age, as shown by the table reproduced below.

### **MAXIMUM AND TARGET HEART RATES\***

Age	Maximum Heart Rate	Fitness Zone (60-70%)	Aerobic Zone (70-80%)	Anaerobic Zone (80-90%)
20	200	120-140	140-160	160-180
25	195	117-137	137-156	156-175
30	190	114-133	133-152	152-171
35	185	111-130	130-148	148-166
40	180	108-126	126-144	144-162
45	175	105-123	123-140	140-158
50	170	102-119	119-136	136-153
55	165	99-115	115-132	132-148
60	160	96-112	112-128	128-144
65	155	93-108	108-124	124-140
70	150	90-105	105-120	120-135

Your maximum heart rate is about 220 minus your age.

*\*Note: A few high blood pressure medications lower the maximum heart rate and thus the target zone rate. If you're taking such medicine, call your physician to find out if you need to use a lower target heart rate.*

By exercising in bursts that approach 90% of your maximum heart rate, you can push your LT somewhat higher. How can this be accomplished? Rather than stumbling onto the elliptical and setting the same program every day, do a series of “intervals” by cranking up the resistance or increasing your speed for several 2 minute bursts, sandwiched between 2 minute recovery periods. You might also move from the elliptical to the weight room. Weight training is generally considered *anaerobic* rather than *aerobic* exercise because your repetitions will usually end near your LT, when you can no longer continue. In order for your weight training to be most effective, you will need to increase steadily your weights, your reps, or both as your body becomes stronger. This principle is illustrated by the legend of Milo of Crotona. Young Milo, in order to become stronger, chose a weight lifting program whereby he lifted the same calf onto his shoulders every day. The plan was successful, as Milo’s strength increased at the same rate as the calf grew until eventually he was lifting a full grown steer onto his shoulders. (Staley, pp. 7, 18). If you want to get faster and stronger, it is essential to vary your workout routine, including interval training and steady increases on weights and repetitions.

#### *“Expert” advice on Nutrition*

So far, our advice from judges has been “Watch what you eat,” with a variety of foods to choose or avoid. We have also warned about the danger of “eating big lunches.” It would be impossible in this brief space to provide much advice on diet and nutrition, but much of the literature can be boiled down to a number of basic rules:

1. *Avoid starvation diets.* Many “experts” tell us that it our concerns should be directed toward *what* we eat rather than *how much*. In fact, Dr. Arnot and others would have us “*eat more to weigh less.*” Dieting is counter productive because it lowers the metabolic rate, thereby slowing the rate at which calories are burned. Weight loss that results in loss of muscle actually *advances* the aging process—not exactly what we are looking for.

2. *Eat foods when you need them.* Your mother was right—breakfast really is the most important meal of the day, fueling the body for the day ahead and raising the metabolism so that calories are burned at a higher rate. Rather than following the American tradition of three big meals a day, many “experts” now recommend 5 or 6 smaller meals throughout the day. You can also “cheat” by eating immediately after exercise, while your metabolism remains elevated from the exercise.



3. *Choose foods that help regulate blood sugar.* Elevated blood sugar levels create problems for many of us, including excess belly fat, sudden fatigue from “crashing” after a sugar spike, hunger between meals due to rapid fall in blood sugar or more serious problems such as the onset of diabetes. Our judges are right: we need to avoid desserts in order to regulate blood sugar levels, but we should also avoid white bread, pancakes, bagels, doughnuts, soft drinks and candy bars. It also helps to eat foods high in fiber, which slows the absorption of sugar into the bloodstream. Dr. Arnot recommends that 70% of our foods should consist of “slow-burning carbs,” which include:

**Cereals:** oatmeal, wheat germ and whole-grain cooked cereals.

**Legumes:** dried beans, baked beans, black-eyed peas, split peas, kidney, pinto and navy beans.

**Vegetables:** lima beans, peas, artichokes, asparagus, beans, beets, broccoli and tomatoes.

4. *Include lean high quality protein in your diet.* If we adopt an exercise program that builds muscle, our bodies will need protein as an essential building block for that muscle. For most of us, the problem lies in the source of that protein—from a “meat and potatoes” or “burger and fries” type diet. In those cases, the benefit of the protein is far outweighed by the damage from the high fat content. Excellent sources of protein include eggs (especially egg whites), skim milk, fish, chicken, turkey, oatmeal and peanut butter.

5. *Maintain a low fat diet.* On this point, all of the “experts” agree with what our judges know: foods high in fat content are a killer. We know to avoid fatty, greasy sandwiches and other foods, as well as cream sauces. Likewise, it is counter-productive to order a salad with bleu cheese dressing or a grilled chicken sandwich with mayonnaise on white bread.

6. *“Watch what you eat.”* This recommendation from several of our judges comes almost verbatim out of “Turning Back the Clock.” In fact, Chapter 10 of that book is entitled “Be a Watchdog,” in which we are warned to watch out for the “Big Three”: corn syrup, white flour and hydrogenated oils. With so many “bad” foods out there, what can we eat that is healthy? The book includes a number of tables setting out the “best foods,” which are reproduced with this article. Dr. Arnot suggests that we memorize our favorite foods from each of these lists so as to order them time and again when eating out.

One of our judges noted a particular dislike for sweet potatoes, which happens to be the healthiest of all vegetables, loaded with Vitamin C and fiber. Other vegetables at the top of the list are carrots, spinach, collard greens, red peppers and broccoli. If you order a salad at lunch, make sure that it is made with romaine lettuce or spinach, which are far better for you than iceberg lettuce. Otherwise your salad may have little nutritional value.

Many of our judges consider apples to be a healthy snack. In fact, more than a dozen other fruits provide more benefit, including papaya, cantaloupe, strawberries, oranges, tangerines, watermelon, peaches, pineapple, bananas and prunes. But the apple is still far healthier than the doughnuts sometimes offered to us by our bailiffs.

Low fat yogurt tops the list of dairy products, with skim milk and mozzarella cheese also being high on the list.

### *Conclusion*

As noted above, a cursory review of our survey responses might indicate some health hazards in judicial lifestyles. It might be worth noting, however, what is *not* included in the survey, particularly any questions comparing stress levels, work schedules and exercise routines of our judges with those experienced in their *previous* positions. Many of us found the lifestyles of private practice to be far less healthy. In fact, one of judges included this warning to new judges: “Too much time off.”

The reality is that, for most of us, our court schedule, even with travel is not an unreasonably long day. With a little effort, we can find time for 30 minutes of exercise 5 days a week. Even if we have fallen into a habit of sedentary lifestyles, it is still possible to “turn back the clock” through good nutrition and exercise.

“BEST” FOODS

Vegetable (1/2 cup cooked unless noted)	Score <sup>1</sup>	Vitamin A	Vitamin C	Folic Acid	Iron	Copper	Calcium
Sweet Potato, no skin(1)	582	†	†	#		†	
Carrot, raw(1)	484	†	†				
Carrots	408	†				#	
Spinach	241	†	†	†	†	#	†
Collard Greens, frozen	181	†	†	†	#		†
Red Pepper, raw(1/2)	166	†	†				
Kale	161	†	†			#	#
Dandelion Greens	156	†	†	NA	#	NA	#
Spinach, raw(1 cup)	152	†	†	†	#		#
Broccoli	145	†	†	†			
Brussels Sprouts	128	†	†	†	#		
Broccoli, frozen	127	†	†	†			#
Potato,baked,w/skin(1)	114	NA	†	#	†	†	
Mixed Vegetables,frozen	111	†	#				
Winter Squash	110	†	†	#		#	
Swiss Chard	105	†	†	NA	†	NA	#
Broccoli, raw	100	†	†	#			
Snow Peas	90		†	NA	#		
Mustard Greens	85	†	†	NA		NA	#
Kohlrabi	82		†	NA		NA	
Romaine Lettuce(1 cup)	78	†	†	†		NA	
Cauliflower	77		†	#			
Asparagus	75	†	†	†		#	
Green Peppers, raw(1/2)	67	#	†				
Potato,baked,no skin(1)	67	NA	†			†	
Parsley, raw(1/4 cup)	66	†	†	#	#		
Green peas, frozen	64	†	†	†	#	#	
Avocado,California(1/2)	63	†	†	†	#	†	
Okra	61	#	†	#			#
Collard Greens	57	†	†				
Endive, raw(1 cup)	56	†	#	†			
Parsnips	53		†	†		†	
Rutabaga	48		†				
Cabbage	47		†				
Artichoke (1/2)	46		†	#		#	
Mushrooms	43		#		#	†	
Cabbage, raw	39		†	#			
Corn	39		#	†			
Boston Lettuce, raw(1 cup)	38	†	#	†			NA
Green Beans	37	#	†	#			
Tomato, raw (1/2)	37	#	†				
Beets	32		#	†			
Summer Squash	31	#	#	#		#	
Corn, frozen	23			#			
Lettuce, Iceberg(1 cup)	22			#			
Radishes, raw (1/4 cup)	17		†				
Celery, raw (1 stalk)	14		#				
Onions, raw (1/4 cup)	14						
Eggplant	12						

Alfalfa Sprouts (1/2 cup)	11	
Cucumber, raw	11	
Mushrooms, raw	10	
Garlic, raw (1 clove)	3	NA

<sup>1</sup> There is no USRDA for fiber, so CSPI made up its own, 25 grams, and factored it into the scores in the table.

# Contains between 5 and 9 percent of the USRDA

† Contains at least 10 percent of the USRDA

Blanks indicate less than 5 percent USRDA

NA means data not available

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FRUIT	Score	Calories	Vitamin A	Vitamin C	Folic Acid	Potassium <sup>2</sup>	Fiber <sup>1</sup>
Papaya (1/2)	252	59	†	†	NA	†	†
Cantaloupe (1/4)	213	47	†	†	#	†	
Strawberries (1 cup)	186	45		†	#	#	†
Oranges (1)	169	62	#	†	#	#	†
Tangerines (2)	168	74	†	†	#	#	†
Kiwis (1)	154	46		†	NA	#	†
Mango (1/2)	153	68	†	†	NA		#
Apricots (4)	143	68	†	†		†	†
Persimmons (1)	134	118	†	†		#	†
Watermelon (2 cups)	122	100	†	†		†	#
Raspberries (1 cup)	117	61		†	NA	#	†
Grapefruit, red, pink (1/2)	103	37	#	†			
Blackberries (1 cup)	101	74		†	NA	#	†
Apricots, dried (10)	97	83	†			†	†
Grapefruit, white (1/2)	84	39		†		#	
Honeydew melon (1/10)	81	46		†	NA	†	
Peaches (2)	77	74	†	†		#	†
Pineapple (1 cup)	77	77		†		#	#
Blueberries	68	82		†			†
Cherries	64	104	#	†		†	†
Nectarines	64	67	†	†		#	#
Bananas	60	105		†	#	†	#
Plums	60	72	#	†		#	#
Prunes	59	101	†			#	†
Apples	58	124		†		#	†
Pears	48	98		†		#	†
Grapes	46	90		†		#	†
Figs	39	95				#	†
Raisins	35	124				#	#
Dates	30	76				#	#

<sup>2</sup> There is no USRDA for fiber, so CSPI made up its own, 25 grams, and factored it into the scores in the table

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## **WALKING FOR EXERCISE AND WEIGHT LOSS**

**Walking Off Weight:** Walking at a moderate pace for 30-60 minutes burns stored fat and can build muscle to speed up your metabolism. Walking an hour a day is also associated with cutting your risk of heart disease, breast cancer, colon cancer, diabetes and stroke. Isn't it time to work 1-hour walks into your busy lifestyle?

This tutorial will describe how walking burns calories and fat, what speed is appropriate, how long and how often to walk, and methods to track your activity.

Weight is determined mostly by the balance of calories - how many you burn vs. how many you eat each day. To lose weight, you need to increase your activity to burn more and/or eat fewer calories each day.

### **Calories and Weight**

A pound of fat equals 3500 calories. To lose 1 pound a week you will need to expend 3500 more calories than you eat that week, whether through increased activity or decreased eating or both. Losing 1-2 pounds of fat a week is a sensible goal, and so you will want to use the combination of increased activity and eating less that will total 3500 calories for 7 days.

### **How You Burn Calories**

Your weight x distance = energy used walking. Time does not matter as much as distance. If you speed up to walking a mile in 13 minutes or less, you will be burning more calories per mile. But for most beginning walkers, it is best to increase the distance before working on speed. A simple rule of thumb is 100 calories per mile for a 180 pound person.

### **Note About the Calories Chart**

You burn more calories per mile at very low speeds because you are basically stopping and starting with each step and your momentum isn't helping to carry you along. Meanwhile, at very high walking speeds you are using more muscle groups with arm motion and with a racewalking stride. Those extra muscles burn up extra calories with each step. Running may burn more calories per mile as there is an up and down motion lifting your weight off the ground as well as moving it forward.

## **Walking and exercise without dieting can prevent weight gain**

The minimum daily requirement of exercise to prevent weight gain is 30 minutes a day of walking, or 12 miles a week of walking or running. A study of sedentary, overweight men and women (aged 40-65 years) showed they lost body fat and weight when they walked or ran 12 miles a week during an 8-month study, without changing their diet. A control group of non-exercisers all gained weight and fat during the 8-month study.

### **Get Your Minimum Daily Requirement of Walking**

"From the perspective of prevention, it appears that the 30 minutes per day will keep most people from gaining the additional weight associated with inactivity," said Cris Slentz, Ph.D of the Duke University research team in a news release.

"Given the increase in obesity in the U.S., it would seem likely that many in our society may have fallen below this minimal level of physical activity required to maintain body weight."

### **More Exercise and Higher Intensity Even Better**

The group that exercised at 65-80% of maximum heart rate (equivalent of running or racewalking) for 20 miles a week saw even better results than those who either ran for 12 miles a week or walked for 12 miles a week. This shows that more is better.

### **Results**

Walking 30 minutes a day or 12 miles a week at 40-55% maximum heart rate: Lost 1% of body weight, lost 1.6% of waist measurement, lost 2% of body fat and gained 0.7% lean muscle. Jogging at 65-80% of maximum heart rate for 12 miles a week: lost 1% of body weight, lost 1.4% of waist measurement, lost 2.6% of body fat, and gained 1.4% lean muscle.

Jogging at 65-80% of maximum heart rate for 20 miles a week: lost 3.5% of body weight, lost 3.4% of waist measurement, lost 4.9% of body fat, and gained 1.4% lean muscle.

Non-exercise control group: Gained 1.1% weight, gained 0.8% waist measurement, gained 0.5% body fat.

### **Exercise Without Dieting Reduces Health Risks**

The study shows the effects of exercise without dieting in maintaining body weight and reducing risk of major illness. "This study revealed a clear dose-response effect between the amount of exercise and decreases in measurements of central obesity and total body fat mass, reversing the effects seen in the inactive group," Slentz said. "The close relationship between central body fat and cardiovascular disease, diabetes and hypertension lends further importance to this finding."

The Duke study was published in the Jan. 12, 2004 "Archives of Internal Medicine." The study was supported by a \$4.3 million grant from the National Heart, Lung and Blood



Institute. The trial, dubbed STRRIDE (Studies of Targeted Risk Reduction Interventions through Defined Exercise), was led by Duke cardiologist William Kraus, M.D.

### **Burn Calories While You Sleep**

You can burn more calories, every hour, every day, even while sleeping by building up muscle. When you add muscle to your body, you are increasing your basal metabolic rate - the number of calories you burn each day at rest. We aren't talking about Schwarzenegger-like muscles, just toning your legs, arms, stomach and shoulders.

- **Absolute Beginner Walkers:** You build leg muscles as you increase your walking time and distance. Concentrate on building the amount of time you spend walking.
- **Seasoned Walkers:** For those who have been walking for months or years, you will need to alter your walking style to build more muscles just from walking. Learning to racewalk, you would be building new muscle and burning more calories per mile.
- **Not Interested in Racewalking:** For those who are not interested in racewalking to build muscle, you should add some strength training to your weekly exercise schedule in addition to walking in order to build muscle.

### **Burn More Walking Calories per Mile**

- **Learn to Racewalk:** At speeds over 13-minute mile rate you are burning more calories per mile as you use more muscle groups, as well as building muscle.
- **Use Walking Poles:** Fitness walking poles such as Nordic Walker, Exerstrider sticks or Leki poles is an option for those who cannot walk fast and want to burn more calories per mile.
- **Carry Extra Weight:** I do not recommend doing this, but if you do it you should add no more than 10 pounds and wear it in a backpack or at your hips so your body can remain balanced and your posture is not thrown off. Walking with poor posture or adding weight to your arms or legs can lead to injury.

### **Vary Your Workout for Maximum Effect**

Do you walk the same distance and pace most every day? Do you feel like your fitness improvement has stalled? Do you want to prepare for a walking race, relay, or marathon? Time for a schedule with a variety of walking workouts.

This weekly suggested schedule, developed by Dave McGovern for his racewalk clinics, is for every kind of walker, including fitness walkers and racewalkers. You can mix and match the workouts below. The week should include one day of Economy workouts to build speed, two days of Threshold workouts to build aerobic performance, and one day of long distance. In between each of these workouts should be a rest day or a day of easy walking.

**Monday:** Rest day. No walking of significant distance or intensity.

**Tuesday: Economy Workout.** Warm up for 10 minutes at an easy pace. Then walk as fast as you can for 30 seconds or 200 meters (two city blocks in most cities). After 30 seconds, drop down to an easy pace for 2 minutes. Repeat the 30 seconds speed/2 minutes rest 8-12 times. Cool down with a 10 minute easy pace walk.

**Wednesday: Recovery.** Easy 3 mile walk at 65-70% of your max heart rate. This is a pace at which you can easily maintain a conversation but are breathing harder than at rest.

**Thursday: Threshold Workout #1 - Speed.** 10 minute warm up at easy walking pace. Walk fast for 8 minutes or 1 kilometer at 85-92% of your max heart rate. Then slow down to an easy pace for 2 minutes. Repeat this for 3-4 repetitions. Cool down for 10 minutes at an easy pace. The threshold pace is strenuous, but one you could maintain throughout a 10 kilometer/6 mile race. You will be breathing very hard and able to speak only in short phrases.

**Friday: Recovery.** Easy 3 mile walk at 65-70% of your max heart rate.

**Saturday: Threshold Workout #2:** Steady state or tempo workout. Warm up for 10 minutes at an easy pace. Walk 20-30 minutes at 85% of your max heart rate then cool down with 10 minutes easy pace.

**Sunday: Distance Workout.** 8-12 kilometers (5-7 miles) at 70-75% of your max heart rate. This is a conversational pace.

The key to these workouts is not to exceed your lactate threshold - working out so hard and long that your body builds up lactic acid in the muscles. This occurs when you workout at 90% or more of your maximum heart rate for more than 50 minutes. By knowing your Maximum Heart Rate and using a heart rate monitor, you can ensure that you are working out at the right pace for the various workouts.