

Exercise for Good Health

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In the 9 August 2004, *Wall Street Journal*, Tara Parker-Pope writing on "Health Matters" reviewed the exercise area. I am going to review her review hoping to come up with distinct recommendations. Many of her ideas are repeated below; direct quotes are so marked.

Her thesis is, when it comes to exercise, a little bit goes a long way. There is general agreement that, "people really need to rethink exercise. The critical thing people need to understand is that it does not take that much exercise to be fit."

General Recommendations for Exercise

There are two pieces of information regarding exercise that we need to be aware of before we discuss recommendations: 1) we need to differentiate between exercise for good health and exercise directed toward weight control and 2) exercise activities are additive, each day we do not need to do 30 minutes of exercise in a single session; three 10 minute sessions are just as effective. This essay is directed towards exercise for good health.

"The Surgeon General and the American College of Sports Medicine" advise, "moderate exercise at least three to five days a week." In another kind of number, "The Surgeon General's actual recommendation is to get enough exercise to expend 1,000 or more calories per week. It does not seem to matter if it takes three days or seven days to expend those calories."

Top health groups "recommend that we engage in about 30 minutes of moderately intense physical activity four or five days a week." In the 30 August 2004, issue of *Time*, at least 30 minutes per day, three days per week was listed as the minimum.

There are other voices. "Two years ago (2002), the Institute of Medicine, a Washington-based independent adviser to the government on national health issues, announced its recommendations that people exercise at least an hour a day (seven hours per week)."

"So why did the Institute of Medicine tell us we should be exercising seven hours a week? The group's recommendations were part of an overall report on weight control, and were suggested as the best way to prevent people from gaining weight. Research does show that people who have lost large amounts of weight may need to exercise more to keep it off."

Exercise Indices

Moderately intense physical activity is defined as walking at a determined pace that can be as slow as 20 minutes per mile, 5 minutes per quarter mile. The caloric expenditure of energy is a function of the rate of walking and body weight.

Occasional exercise was described as exercising less than once a week.

Quantifying the Several Recommendations (Making sense of the numbers)

What are the several suggestions, repeated below, saying, in terms of a numerical recommendation for minutes of moderately intense exercise per week?

Top health groups recommend that we engage in about 30 minutes of moderately-intense physical activity 4 or 5 days per week: this is 120 to 150 minutes per week.

The Surgeon General says that we should expend 1,000 calories per week in exercise. Using data from Pfeiffer (1989), Figure 1, I estimate that when I walk 20 minutes per mile I will expend energy at the rate of 330 calories per hour; therefore, in three hours, 180 minutes per week, I will approach 1,000 calories per week. [I show, in Figure 1, a graph of "Calories Expended in Walking" as a function of "Rate of Walking" and body weight. The graph was developed using the data of Pfeiffer (1989).]

The Institute of Medicine suggests an hour per day; an hour per day is 7 hours or 420 minutes per week.

The highest requirement is 420 minutes per week; perhaps an average requirement is 150 to 180 minutes per week and a minimum is 120 minutes per week.

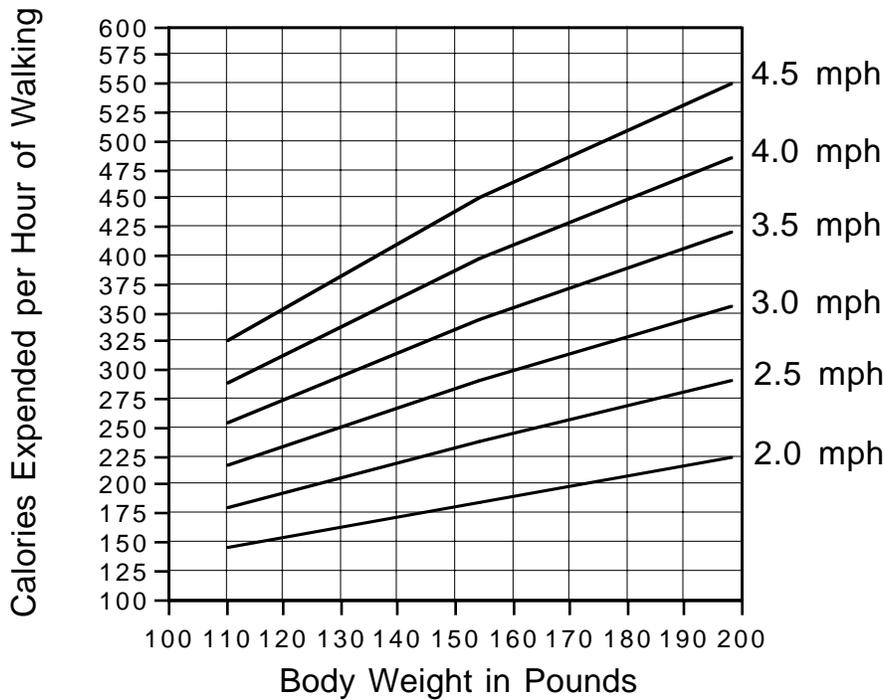


Figure 1. Calories Expended per Hour of Walking as a Function of Body Weight, for Six Walking Rates in Miles per Hour (mph). Graph developed using published data (Pfeiffer, 1989).

Pflug's Personal Exercise Program

I try to walk at least 20 minutes every day. I fail sometimes, but probably succeed 90 percent of the time.

My own program is to walk at least 20 minutes every day; this is 140 minutes per week, which is considerably more than the minimum, but a little less than the average. If we do more than the minimum several days per week, we are up to the average of 150 minutes of moderate exercise per week.

I believe that there is a personal advantage to having as an objective doing moderate exercise every day. This does not mean that I will actually exercise every day, but I will exercise nine days in ten. In addition, several days in ten I may walk 30 or 40 minutes.

When the plan is to exercise every day, then I know that I should exercise every day, whereas, if the plan is to exercise 3 or 5 times per week, then I will have to decide which days to exercise. Perhaps I will often put it off and will not do as much exercise as I should for the week. This is why I believe that planning to exercise every day is the best strategy, even though I realize that I may only do it 90 percent of the time.

Recent Studies on Exercise and Fitness

In the July 2004, *American Journal of Preventive Medicine*, Swedish researchers showed that older adults who exercised only once a week were 40 percent less likely to die during the 12-year study period than those who did nothing at all.

"The most recent study from Sweden followed more than 3,200 men and women over the age of 65. After accounting for differences in age, education, smoking habits, and illnesses such as diabetes or hypertension, researchers found that people who said they 'exercise only occasionally' still had a 28 percent lower risk of dying during the 12-year study period than those who described themselves as inactive."

In the January 2004, issue of *Diabetes Care*, there was a report of a study of 2,000 men with diabetes; it was found that being moderately fit reduced a man's annual risk of dying by 65 percent compared with men in the poor-fitness category.

Concluding Comment

Exercise is essential in maintaining a healthy body for the young, the middle aged, and the elderly. One of the problems is that we need enough exercise, but excessive exercise is contraindicated.

The challenge for each of us is to find the balance; the exercise requirement is unique for each individual and will vary with age and lifestyle.

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