

Every Little Bit Helps by Ann Gerhardt,
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Bottom Line at the Top: It doesn't take much physical activity to improve health.

The latest 'proof' for current exercise recommendations comes from a study of sedentary, overweight women. These women, starting at miserable levels of fitness, performed moderate activity at 50%, 100% or 150% of current exercise recommendations for 6 months. That translated to 72, 136 and 192 minutes of walking per week.

Going from no exercise to a measly 72 minutes of walking per week boosted their fitness level by 4.2%. Each incremental increase in walking time spurred an additional 2% gain in fitness. Presumably longer or more frequent walks could have bumped it even higher.

How high could they go if they had Forrest Gumped themselves into continuous frenetic activity? Eventually fitness, defined by peak oxygen consumption (VO₂max), must max out. VO₂max varies from person to person and is genetically determined. Whether or not we achieve our maximum capacity depends on how hard we train.

VO₂max depends on the lungs to take up oxygen and transfer it to blood, the heart and circulation to pump the oxygen and blood to the muscles, and the muscles to pull oxygen out of the blood and use it. Sedentary males average a VO₂max of 45. Sedentary females have slightly lower levels, about 39. Recreational athletes typically hover between 45 and 65.

Until we can genetically engineer more fit humans, it appears that we are stuck at a maximum VO₂max of 85 for males and somewhat less for females. Elite cyclists and some of the best runners in history, like Alberto Salazar, peaked at 85, while Joan Benoit Samuelson (long-time American marathon record-holder) maxed out at 78.

The good news is that we don't need to achieve our maximum fitness capacity to reap the longevity and health benefits of exercise. The bad news is that we don't have a reliable measure of those benefits. Physical activity reduces cardiac and vascular disease without necessarily affecting weight, cholesterol or blood pressure levels. That means that we can't use blood pressure, cholesterol and weight to determine whether or not we are doing enough.

No single lab test assesses exercise adequacy. VO₂max measurement requires a special laboratory and costs money. Rather than a single number we can measure, there are a constellation of physiologic processes affected by exercise, most easily measured.

Some individuals do get immediate positive feedback from their exercise: My patient whose legs hurt less since he

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started to walk ½ mile per day has an easy guide to measure the effect of his exercise. For most, however, it takes decades to see outcomes like less heart disease, stroke and cancer.

How much is enough??? Long ago people didn't worry about exercise prescriptions. Without cars, desk jobs and TV's, walking and physical activity were just part of life. As lifestyles changed, so did attitudes about moving our bodies. By the 1970s, people figured out that regular exercisers live an average of 3.5 years longer and without cardiovascular disease than those who don't. Enough information was available about the beneficial effects of vigorous exercise that national health organizations began issuing physical activity recommendations to the public.

Initially cardiologists and sports medicine specialists prescribed vigorous exercise, 20 minutes per day, three days a week, while the Centers for Disease Control (CDC) and Surgeon General advocated longer, more moderate exercise. The different exercise prescriptions confused people, not recognizing that the groups' goals were different: The former groups pushed for improved fitness and the latter aimed for overall general health and longevity.

As understanding of the benefits of less vigorous activity grew, the two ends of the spectrum migrated to a common, middle ground. Recognition that small amounts of activity, accumulated over the day, all 'count' towards health had a huge impact on exercise goals. Now most groups agree that **we all should perform moderate activity 30 minutes or more on most days of the week, even if it comes in three 10-minute sessions per day.**

Don't lull yourself into believing that this is the last iteration of the exercise prescription tale. New information should lead to further refinement. Doctors might even be able to prescribe unique workout plans to fit each person's needs.

How much do people do??? The CDC acquired self-reported data from people all over the U.S. via random-digit dialing. Only 37 – 52% of people claim to exercise regularly by current standards. The range of 37% – 52% reflects different patterns according to race and sex. This data probably over-estimates exercisers, since many people refused to respond and, for those who did, self-reported data has proven time and again to skew reality towards overestimating 'good' behavior. The statistics are even

worse in individuals with type 2 diabetes, 69% of whom report no or inadequate regular physical activity in a national health survey.

Can we do enough? Many studies of couch potatoes embarking on fitness programs instill hope. Theoretical models of human behavior propose that adoption and continuation of an exercise lifestyle follows a series of steps, starting with a contemplation phase. For some, this phase lasts a lifetime, punctuated frequently by avoidance maneuvers. For others, an action phase follows, which involves actually moving.

If this does not cause apoplexy, one can enter the maintenance phase, the hardest of all, but absolutely necessary to achieve long-term health benefits. (Tapering off to an occasional walk with the dog not only begets a fat dog, but fails miserably to achieve any health benefits.)

The good news is that the “no pain, no gain” philosophy has been replaced by “every little bit helps.”