

The Unadulterated Truth about Exercise and Fitness

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The fitness industry is big business, and there is a definite inclination to make claims that are more marketable. Almost nothing is more marketable than the current “less is more” movement, which is simply another version of the something for nothing pitch.

The major support for the new wave of programs expounding the superior benefits of very moderate exercise is the Dardik Institute study. This group of researchers from Harvard Medical School, Columbia University College of Physicians and Surgeons, and the Dardik Institute are quite impressive.

The Dardik study involves 10 healthy women who did a one-minute bout on an exercise bike or trampoline (jogging) and then rested for seven minutes. The women logged only 40 minutes worth of low impact exercise per month.

According to the study authors the women saw dramatic increases in cardiovascular health, boosts to their immune systems, and significant decreases in stress and anxiety. Dardik even claimed that his Heart Waves program would prevent cancer and improve the health of individuals with AIDS, Parkinson’s, and other diseases. The study publicist declares that these results call into question the entire aerobics industry.

Most of us would love for this to be true, and who could argue with scholars like these? But, that is exactly what Gina Kolata, science writer for *The New York Times*, does in her book entitled *Ultimate Fitness* (Farrar, Straus, and Giroux Books, New York, 2003).

Kolata sees many studies as publicity-seeking promoters submit their work to her in the hopes of widespread media coverage. She has been burned many times by articles printed in top medical journals after which fatal flaws were found.

Skeptical of the popular message purported by this particular study, she decided to get to the bottom of it. First, she submitted the study to two different

statisticians who are experts in the design of clinical studies. Aside from finding the study quite unimpressive, they found serious problems with its construction. Basically, the researchers had done 23 statistical tests looking for a positive indication that the treatment had an effect. There was a 66 percent chance of finding something positive, which means the results would most likely be a statistical fluke. There are formulas to correct for chance results, but the authors didn’t bother to use them. There were also no control groups and a very small number of subjects (10).

Kolata then follows the money trail to find that the study is funded by a publicly traded company selling fitness programs and products based on this study, a study deemed ludicrous by two leading statisticians. Kolata also found that Dardik lost his medical license in both states in which he practiced.

Unfortunately, much of the early research on exercise was poorly constructed, including studies on the benefits. Most physiologists were shocked when a well-constructed study by Dr. Steven Blair found that the greatest jump in cardiovascular health took place when individuals simply progressed from the couch potato category into the bottom fitness group. Although there were small increases each time subjects elevated into a higher category, the percentage decrease in cardiovascular risk was greatest by just exercising moderately.

So the media broadcast the news that moderate exercise was sufficient. Unfortunately this was interpreted by the public to mean that moderate exercise was sufficient for weight loss as well, when this is certainly not the case. Kolata reminds us that it is all about the heart.

Physiologists and trainers began emphasizing how little a person could exercise and still get benefits. Exercise became something you practiced for medicinal effects. Little was said about looking good and feeling better.

Steven Blair, the epidemiologist whose studies spawned this emphasis, still runs long and hard every day. He says that intense exercise helps him

control his weight.

Ken Cooper, founder of the Center for Aerobics Research in Dallas, states that “People who are physically fit are less depressed, they have less hypochondria, they are different psychologically.”

Most people are not motivated to exercise for health reasons. They exercise because they want to look good and feel better. However, this requires a pretty vigorous effort on a regular basis. How intensely, how often, and for how long do we have to exercise in order to dump fat and feel better?

The gold standard for intensity has traditionally been the Target heart rate formula. Doctors and trainers advise people to work out at 60 to 80% of their maximum heart rate, which is guesstimated as 220 minus your age. The originator of this formula has laughed at the way Americans took to the formula and extended it beyond its original purpose, which was to provide a general guideline for beginners. It was not intended to be a standard for fit individuals.

Kolata points out that one of the urban legends of exercise is that moderate exercise causes the body to burn more fat. It is a misunderstanding of the relationship between the muscles’ use of fat versus its use of carbohydrate for energy during exercise. As intensity increases, the body uses a greater percentage of carbohydrate calories for fuel.

For the longest time nobody stopped to consider the total number of calories burned. In fact, the exerciser can use up as much as twice as many calories by leaving the “fat-burning zone” and getting into the high intensity zone (90% according to the formula). While it is possible to overdo this, few people do. Most people don’t realize how hard they can exercise or what they are capable of. It is easy to think that you are working harder than you really are. For this reason Kolata recommends wearing an accurate heart rate monitor. The idea is to find your own limits and be as strong and lean as your genes will allow.

In recent years, organizations such as *The Firm* have touted muscle training as the way to increase metabolism and burn fat. Claude Bouchard, a

researcher studying the influence of genes on the ability to train, says that weight lifting doesn’t effect resting metabolism at all because the amount of increase in the muscle is minuscule compared to total skeletal muscle. A top male athlete could only gain a maximum of 2 kilograms.

If you want to use up greater numbers of calories, it is necessary to use the large muscle groups (hip and thigh muscles) intensely for an extended time. Thirty to forty minutes daily is required for most people to lose significant amounts of fat.

Kolata traces many of the current fitness fads such as the Gold’s Gym *Body Pump* program, *Bodyblade*, and *SuperSlow* back to their roots. She found no backing in terms of reliable research studies or even superior results other than in their advertisements.

According to the *Journal of Strength and Conditioning Research*, the *SuperSlow* program did not produce results in women as good as a traditional program of weight-training. Kolata says, “It is an important fact of exercise life that those who are selling the products and programs end up as the sole authorities on their effectiveness. The success or failure depends on the zeal of the program’s founder.”

It would be tempting to get cynical and consider all training advice to be dubious. However, Kolata points out that although good research often gets lost in the marketing hoopla, there is a body of solid research that can be trusted. She refers to research conducted for scientific inquiry rather than for marketing purposes.

There are a few basic reasons for exercising, and how you go about it depends on your goal. If you want to improve your health and reduce your cardiovascular risk, solid research indicates that moderate exercise will accomplish that. Walking briskly at a 15-20 minute mile pace for 20-30 minutes a day will do the trick. You can even divide it up into 10-minute chunks, and you don’t even have to get out-of-breath.

Working harder than a moderate pace does provide further modest increases in cardiovascular health. However, these increases are small in comparison

with the huge increase achieved by exercising moderately after being sedentary. To maintain these health benefits, it is important to exercise consistently.

If you are interested in becoming stronger in order to function better and be able to balance your body weight well, then you should include strength training in your program. At this time there is no solid evidence that weight training will decrease your risk of osteoporosis. There are a number of studies that found increases in bone density with high impact exercise.

Most people exercise because they want to look good and/or feel better. Moderate exercise is unlikely to come through on this one. Your success in dumping fat depends on the intensity and duration of your workout, your eating habits, and your genes. Most people would lose weight by sweating hard on a regular basis. Exercise physiologist Donald Kirkendall says, “If you want to push performance, you’ve got to push the intensity. The biggest way to gain fitness is to push intensity.” (Kolata, 266)”

Some people actually exercise because they love physical exertion, but I rarely mention this reason because it’s not one of my reasons for keeping it up for 25 years. I have never been addicted to exercise or found it very enjoyable. However, after losing over 20 pounds and a couple inches off my hips at age 27, I decided it was worth the effort to get out there and run.

Over the years I have done a variety of activities that keep my heart rate above the moderate level, including aerobics, running, and exercise machines. Ten years ago I added three, 15-minute strength-training bouts each week to maintain my aging muscles.

Perhaps the most gratifying benefit was my increased energy level. Some people are naturally more energetic, but I used to avoid energy expenditure unless my adrenaline was up for a game of basketball or field hockey. After six months of running I actually enjoyed behaving energetically and ceased looking for ways to save my energy.

God meant business when he declared that man would have to work by the sweat of his face (Gen. 3:17, 19). With the entrance of sin man inherited a body that grows weak without work and strong only with hard labor. Most anything in this fallen world must be maintained. Without regular upkeep things deteriorate.

So, I guess it is up to each of us to decide how much upkeep is enough. But we do need to consider what is the best way for us to accomplish our goals. Personally, I want to spend the least amount of time to get the greatest amount of good. I’m not interested in exercising any more than I have to in order to get what I want. I want all the benefits of exercise and none of the liabilities, which means I also have to do it right.

Exercise is just something we have to do these days because life itself is no longer exercise. We don’t need to transport ourselves or physically exert ourselves to get food. We have the “luxury” of sitting, standing, or walking briefly while we do our work. So, I don’t mind volunteering to do a little extra work.

The Center for Disease Control and Prevention says that only about eight percent of the population exercises consistently hard enough to get life-changing benefits. I consider myself to be one of them. I’ve found a strategy that works better than any pill ever could, and I intend to stick with it.

