Fitness Testing: Is There a Value?

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The purpose of fitness testing is to determine the fitness level of an individual and the ideal starting point at which that person can start an exercise program. This testing is usually implemented prior to beginning an exercise program, although it can be used as an intermittent measuring tool to determine progress. Fitness testing comprises the following:

Questionnaire (regarding the individual's health status). This is an important step since health problems must be addressed and brought to the instructor's attention... as well as having the client sign a waiver to legally protect the instructor in case of an unforeseen and uncontrollable mishap.

The remainder of the testing procedure (below) holds little validity. Before addressing each point, think about this analogy. If you were to measure your living room, to put in a new carpet or hardwood flooring, you would measure the ENTIRE area with a tool designed for and CAPABLE of performing the job, such as a measuring tape. You would not measure ONE PART of the floor and guess on the total dimensions. Nor would you use your foot length and tell the carpet dealer that your living room is twenty paces by thirty paces since your foot length is not a universally accepted or a proven method of measurement – unlike the yard, meter, or real foot (twelve inches, in this case). Keeping the above in mind, consider the following:

Body Composition. The percentage of body fat is measured, often with fat calipers (since they are inexpensive compared to other methods). You will find that the more out-of-shape (fat) the person is, or the better conditioned/more muscle the person has, the more inaccurate body fat percentages become if using calipers as the tool of measurement.

Calipers are acceptable for determining millimeter (mm) thickness, in order to establish data for comparison purposes, but the readings, together with the mathematical formulas provided, should be avoided to determine body fat percentage. About eight years ago, I had a very experienced user (who taught and certified instructors in fitness testing) tell me that my body fat was close to 20%, although my abdominals were quite visible and the remainder of my body fairly lean and muscular. Then in the past few years some I.A.R.T. students claimed their clients were 14-15% body fat, yet the clients had no visible abdominals and a hefty amount of fat covering their bodies!

Moreover, mm thickness can vary significantly between individuals who perform the test, depending on how and where they grab the tissue to be measured. Even experienced caliper users must be quick in application and take a single reading since continual prodding and pulling of the skin alters the architecture and pliability of the tissues with different results emerging. Nor will caliper body fat measurement account for areas not measured. Some individuals, for example, have large buttocks and carry an excessive amount of fat in that area. (I tend to carry it in the low back and butt more than in other areas, which is not typical across the board. Many men have leaner buttocks and carry more fat in the front of the abdominals.) Yet, the buttocks are not a measured site. So, how does the mathematical equation know when and when not to make allowances for a fat rear end that may or may not exist?

Muscular Strength and Muscular Endurance. Don't expect to prove your worth on the leg press or bench press (not that doing so discloses much), but rather with a hand-held dynamometer. In other words, the strength of your grip supposedly tells the fitness tester how strong you are overall! Therefore, if you have a relatively weak grip, compared to the average population, and regardless of the strength in your remaining muscle groups, you just scored a negative and are, apparently, in worse shape than the average population on the basis of strength.

So, what if a person has a weak grip? Will this limit his or her ability on chest, back or leg exercises, or to build a good body? Or to obtain good health? No.

Although I regularly perform gripping exercises, my grip is barely above average for my sex and age group. At the time I did my fitness test (8 years ago) I was one standard deviation below normal in grip strength, although I could leg press several hundred pounds and easily chin my body weight for fifteen clean reps. My father, being a plumber, used his grip daily and scored almost three standard deviations above normal, yet I could out-lift him in the gym and was more fit overall.

The muscular endurance test was measured through a maximum count (ballistic, crank-them-out-as-fast-as-you-can) of push-ups and sit-ups/crunches. After twenty push-ups, my upper body was so pumped I could not continue. After eighteen crunches, my abdominals also fatigued significantly (although I may have focused too much on form and getting a good contraction). Again I scored below normal since I was used to a short tension time while under intense strain. I did not practice high rep push-ups or crunches – hence, the SAID Principle. Although I had good pectoral development and a six-pack, I was apparently out of shape as far as muscular endurance was concerned.

Does it matter if a person has poor endurance in the push-up and sit-up? What if the goal is to increase lean muscle and strength, which is anaerobic in nature, not requiring performance of dozens of consecutive repetitions?

Flexibility. I have great flexibility in some muscle groups, particularly my shoulder joints and ankles, and to a lesser degree my hips. Yet, and due to laziness on my part, I never sustained good flexibility in my hamstrings (although that is changing). I can easily do rock bottom squats, but stiff-legged toe-touches are uncomfortable. Guess how fitness testers measure flexibility?

The fitness tester has you sit on the floor and bend forward with locked knees. I was about 2-3 inches from reaching my toes, and scored below normal in flexibility.

I never understood the need or desire to touch one's toes with locked knees since I don't recall having to perform such a feat in my activities of daily living. Moreover, with locked knees, excessive forward bending increases the compression and strain on the lumbar discs, an unhealthy practice if performed regularly for most people.

Moreover, what if a person has tight hamstrings? What bearing does it have on exercises other than the stiff-legged deadlift and, to a lesser degree, a few other lower body movements?

There is little purpose behind this testing except authorities felt flexibility had to be tested in some manner. And rather than test the range-of-motion of all joints, it is easier to focus on a muscle group that is typically tight and inflexible amongst the average population.

Cardio-Respiratory Fitness. The fitness tester has you step up and down (forward then backward) on a three tier stepping platform to a specific beat played over a cassette machine. If accomplished for a specific period of time, without having the heart rate raise above the maximum rate allowed for your age group, you then proceed to the next level of step-ups at a faster beat. You continue this process until your heart rate exceeds the maximum associated at that particular cadence or beat for your age group.

What I noticed, similar to the other testings, is that the ability to keep your heart rate down had much to do with being used to the activity (i.e., specific adaptations). I was not used to stepping up and down on a few steps, so a certain percentage of effort was utilized in the skill of doing so. Had I practiced only a few times prior to being tested, I could have increased my proficiency by an extra level.

Regardless, I did score two standard deviations above normal for cardiorespiratory fitness. Ironically, I never did any cardio-type training (only bodybuilding), yet my wife regularly used the Stairmaster and scored lower than I did! What must be considered is that her leg length was much shorter, so she had to exert greater effort to climb the same stair height. Consequently, this test did not take into account the relative size of the person to the testing implement in question, similar to a short person versus a tall person deadlifting a given weight (if both were to have the same strength ability).

Moreover, as with any other physiological factors, the ability to improve cardiovascular fitness is limited – more so than muscular strength or muscle mass. That is not to suggest that cardio efficiency cannot be improved upon, but only by a marginal degree. Either you were born with the ability to run a marathon or you were not. Furthermore, the goal of the client may not be to dramatically enhance cardio fitness.

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It has been argued that fitness testing, at least, provides a benchmark in which to compare future tests – to see if the client has made improvement. Rather, that is the purpose of exercise progression and accurate workout record keeping.

Moreover, and after twenty years experience in this field, this particular industry standardized test has never helped me make a decision in exercise prescription. I could never figure out how it could. If someone is obese, it is obvious that they require additional cardio work and greater volume and frequency to help bring down fat stores. And more attention needs to be applied toward safety of training (particularly with the heart). I don't need to squeeze their fat and measure it with calipers to provide me that information!

Other idiosyncrasies will present themselves during the initial low-intensity workouts, including joint ROM and flexibility throughout the entire body, ability to sustain constant activity (muscular endurance and cardio endurance), and their strength levels throughout all muscle groups, which is far more accurate and data-usable than a highly-restricted fitness test. Furthermore, how useful is fitness testing to establish an exercise program if you consider the following:

1. Most fitness instructors prescribe the same beginner 'canned' programs to everyone regardless of fitness level (there is nothing wrong with doing so if the program has a solid and sensible construction).

2. An instructor who is concerned about the welfare of the client should start them off at a very easy pace, regardless of how they measure up to the average population, to avoid excessive muscle soreness and to focus on the skills and technique of the exercises/movements in question.

In sum, I see little value in providing a fitness test (apart from the questionnaire), except to make the instructor appear knowledgeable in the eyes of the client – and to generate capital for the organizations that offer fitness testing certifications and the companies that sell the testing equipment (often being one in the same). Consequently, and when reflecting upon the above arguments, is fitness testing, as it currently stands, an industry standard we need?