

Women and Weight Training: Countering Myths and Misperceptions

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Because most women have no interest in becoming big and muscular, women believe their training programs should be quite different from men's programs.

From this key concern -- becoming too big -- a number of myths and misperceptions have evolved about women's weight training. Such myths and misperceptions have kept many women from weight training or training with any degree of effectiveness. Most women are, unfortunately, not doing the one activity -- weight training -- that can truly shape their bodies in a highly attractive way, greatly improve their health now and in the future, and markedly improve strength.

This article counters myths and misperceptions about women and weight training and makes the case that in most instances the training programs for women and men will be virtually identical.

Moreover, the principles of training governing these programs are the same. There are not separate training principles for women and men because training principles are universal.

Let's first examine a number of these myths and misperceptions and then provide principles and prescriptions for successful training applicable to both men and women.

Myths:

The chief concern of women is that by weight training they will become big, muscular, and highly defined. This is a myth and misperception because few individuals of either sex have the genetic endowment to develop a large, defined musculature. Women and men possessing these characteristics seem to be more the norm today only because bodybuilding for women and men has become more popular and, hence, visible in print and electronic media.

A safe bet is only several women out of 10,000 could ever develop the appearance of a top bodybuilder. Unless a woman reading this article is one of those several out of 10,000, becoming too big and muscular is not a concern of the other 9,996 women!

Taking a quite different tack, many women believe they are incapable of gaining much strength and thus restrict themselves to using light weights, high repetitions, and high sets. There also may be a fear of injury if heavier weights are used. Many women cannot lift as much weight or move as much resistance as men simply because women tend to have less lean body mass than men and few women have trained seriously for any length of time.

Actually, on a basis of lean body mass, many women are capable of proportionally becoming as strong as many men. Thus, Jane may have 100 lbs of lean body mass at a total body weight of 125 lbs and do squats with 150 lbs. John may have 170 lbs of lean

body mass at a total body weight of 200 lbs and do squats with 255 lbs. The proportion of weight used in the squat to lean body mass (1.5 to 1.00) is the same. Both Jane and John will profit from the same program based on the same principles, and neither will risk injury if they train correctly.

In this example, notice that Jane at 125 lbs is still not a large person. She is very unlikely to develop large legs even by being able to squat 10 to times with 100 lbs because the genetic traits necessary for developing large muscle are exceedingly rare.

Based both on the fear of getting too big -- which is an unreasoned fear -- and the quite contrary belief that women can't get very strong, many women adopt a training program revolving around the notion of "toning" plus a large amount of aerobic training. The purpose of this regime is presumably to remain "small", keep weight under control, and maintain a "fit and feminine appearance". Thus, another myth and misperception is that toning and large amounts of aerobics are the smart training choices for women. Let's see why this is, indeed, a misperception.

Toning is a term that has no scientific basis.

It is not a term that appears in exercise physiology books. It's a made-up term. But what does toning mean in popular parlance? The term implies using light weights or other resistance presumably to derive some small muscular effect -- for strength and appearance. With toning, the idea seems to be not to put forth much effort (intensity) but to do a great deal of work (volume) -- many sets, many repetitions. It's been known for at least 50 years that this is an ineffective training method. Here's why.

According to the well-established size principle, muscle fibers are recruited -- this means the order they "fire" or work - based on the intensity of effort. Smaller slow-twitch fibers will be recruited for lower-intensity efforts, while more and other fast-twitch fibers are only recruited with higher- intensity efforts.

Simply put, lower-intensity toning does not effectively work the muscles. But what about doing many repetitions and many sets? Such training practices are not only ineffective; they are a total waste of time. They wear you out and give you nothing in return.

There is virtually no evidence to support the common practice of doing multiple sets for each exercise. That is, there is no additional benefit of doing two or three sets let alone the many sets of one exercise that many women do. It is basically a waste of time and effort and can actually reduce the quality of the workout. That's because doing a great deal of work is exhausting, time consuming, and undermines the ability to recover and adapt from a workout. Rather what is effective is using high intensity sets for each exercise.

Intensity: As soon as the word "intensity" is introduced, most women become intimidated and turned off because they equate the term with using a great deal of weight or other resistance, something they fear or see on an absolute basis they can't do as well as most men. Intensity, however, does not signify any specific weight or resistance or, for that matter, a specific number of repetitions. The weight or resistance used is relative to the strength of each individual, and the specific number of repetitions used is somewhat

arbitrary.

Intensity does mean the degree of effort you are putting forth at a given time. The surest way to effective weight training for women or men is training with high intensity in a progressive manner.

Let's see exactly what this means by focusing on only one specific muscle, the biceps. The most basic exercise movement for the biceps is the curl, which can be done with a barbell, dumbbell, or machine. In our example, you can properly curl 25 lbs for 5 slower repetitions. This means you curl the weight up ("concentric" part of the movement) in about 6 to 8 seconds with no momentum, pause for a second, and slowly lower ("eccentric" part) the bar in 3 or 4 seconds for each repetition. Thus, each repetition will take between 9 to 12 seconds and the total time for the set is about 45 to 60 seconds. You can no longer move the bar in proper form after the fifth repetition; you "fail" at that repetition. This is a very high-intensity set because at the fifth repetition you are working with maximum effort.

It is the maximum effort and then just slightly exceeding yourself next time that provides your muscles -- in this case your biceps -- with the correct training stimulus.

What if you just stopped at four repetitions? Since you are capable of five good repetitions, the four-repetition set does not provide the appropriate stimulus. What about doing what many women do in their routines, perform five sets with 15 lbs for 10 repetitions each? Again, you have not provided the correct stimulus because these sets are merely submaximal duplications of themselves.

With high-intensity, progressive training, your task next time is to try to do another repetition in good form with 25 lbs, i.e., 25 x 6. You would have progressed on repetitions. Four to six slower repetitions in a movement is a good goal. Once you have reached your repetition goal, for the next workout, you would slightly increase the weight, e.g., to 27 lbs. Chances are you will only be able to do four repetitions with this added weight, so you begin the progression toward six repetitions which will take an additional set of workouts. The process is called the double progression system because you attempt to increase either repetitions or weight in each successive workout. It's a basic universal principle of weight training that applies to everyone, women and men.

Now here's a point women (and men) should really love. Progressive high-intensity training is so effective you cannot do many high-intensity sets (volume), and you cannot train very often (frequency). High-intensity -- the effective way to train -- is incompatible with high volume (doing a lot of sets) and high frequency. In training, more is not better; it's usually worse. Train purposefully and hard and then rest and recover.

You may at first be incredulous about the specific example shown here; but once you understand and apply the principles of high-intensity training, you will be incredulous no longer.

Example: The toning program for biceps (and this is just one simple muscle) is one you may find in many training articles and books for women. The beginner and advanced programs take a good deal of time, and it's got to be boring repeating the same exercise

over and over. The high-intensity biceps program takes only a few minutes per week and less for the advanced training. The reason for the further reduction in sets (volume) and workouts (frequency) is that more advanced trainers -- women and men -- can bring greater focus and intensity to their exercise so they need less work (volume) and more time for recovery (less frequent training).

Still incredulous? Keep this main idea in mind. The high-volume toning approach does not properly train muscles. It's a waste of time and energy. The very brief, high-intensity approach provides the necessary stimulus for strength and muscle increases. Once the stimulus has been provided by your efforts, no more exercise is required. Additional exercise is unnecessary. It's not a question of how much exercise you can possibly tolerate but exactly what is the correct dose of exercise that is required to make improvements in strength and muscle mass.

Body Composition: Women who slowly and modestly gain more muscle will change their body composition. Such women will have more lean body mass and less fat. If you're one of these women, you'll look a lot better. Now here's another key point, and it's closely related to the fear of getting too big. Muscle weighs more than fat. Training will strengthen and reshape a woman's body, and she may weigh slightly more than before she started training.

However, the scale weight is not nearly as significant as a woman's body composition. Indeed, an untrained or improperly trained woman weighing 130 lbs may be 30% body fat, almost 40 lbs of fat. The same properly trained woman may weigh 132 lbs but with only 20% body fat, and she'll look terrific! Women who are effectively training should not simply depend on the scale. If you need to have your progress quantified, aside from the increase in strength you'll be showing, consider having body fat measurements done every month or so. That's where you'll notice some meaningful difference.

Aerobic Training: Now, what about aerobic training? Shouldn't women who want to lose weight and body fat do many hours per week of lower- or moderate-intensity aerobic training? This is another myth and misperception that needs to be countered. Here are the reasons. The rate of "burning" calories in lower-intensity aerobics is, indeed, low. Even if your goal was simply to expend calories, this isn't a great way to do it. For example, to expend several hundred calories in lower-intensity aerobics, you may have to do a 90-minute workout. Is that how you want to spend your time?

Such lower-intensity aerobic training does virtually nothing for your cardiovascular fitness. Intensity in cardiovascular workouts just as in weight training is the key. Intensity in cardiovascular training is defined in terms of the percent maximum oxygen consumption or for convenience sake the percent of your maximal heart rate. Your maximum heart rate is approximated by the formula of 220 minus your age.

So a conditioned 40-year-old woman could have a maximum heart rate of 180 beats per minutes, perhaps a bit higher if she was in really good condition. Cardiovascular workouts at 50-60% of your maximum heart rate just do not do much for cardiovascular fitness, and the rate of caloric expenditure is low. There's no reason why such aerobic training should be at the "heart" of any woman's or man's program. Such lower to moderate activity could

be, however, a peripheral, optional part of the program, particularly if outside of exercise time life is pretty sedentary. It's only recently that work and day to day living has required so little activity so doing some activity each day can have some real health and mental health benefits. This will be discussed later.

Safely and progressively training at 75-85% and occasionally 90% of your maximum heart rate can do a great deal to increase a woman's fitness, and the rate of caloric expenditure is high. Moreover, it appears interval-type higher-intensity training, that you can do on any machine or is the basis of many step and other classes, is an excellent way to become fitter. Another way to do interval training is simply to intersperse walking up steps or hills or simply walking faster for 30 seconds to two minutes during more moderate steady state walking.

There's also some evidence that performing higher-intensity aerobic interval training results in more fat "burning" (oxidation) after the training session than the more usual steady state training. This is because higher intensity weight training or interval training creates a real disruption to the metabolism. It takes time after training, hours, to return to a more balanced state. The entire process requires more calories. So you get great fitness, a high rate of caloric expenditure, and "fat burning" in one workout.

Here again are some points women and men will love. If you build more muscle mass, even modestly so, you will modestly but meaningfully increase your resting metabolic rate. This means you expend more calories all the time. So, coupling effective weight training with interval training is a sure-fire way to change body composition.

Keep this in mind. There is no requirement of every-day aerobics. Moreover, just as with weight training, volume isn't important. There's very little evidence that doing longer aerobic training in any way increases cardiovascular fitness. It's intensity that counts. Forget once again the myth and misperception that more is better. Performing countless hours of lower-intensity aerobics will not melt away fat or "reshape" a woman's body. What it will do is waste a good deal of time and lead to terminal boredom.