

You'd think that in the Age of Information we'd know better, but unfortunately there's still a lot of nonsense being published about strength training for women.

or example, many Pilates instructors still claim that unlike weight training, their workouts make muscles longer, like a ballerina's. Nice sales pitch, but if this were possible, joint stability in humans would be compromised and our

coordination would regress to that of a boneless chicken. Then I read where a fitness celebrity who has sold millions of exercise videos for women said that the hamstring is a muscle that is attached to the ankle! Maybe, if the women the celebrity is referring to also happen to be frogs! (I could go on with countless such examples, all equally absurd . . . but maybe another time.)

When I asked *Fit Body* editor Laura Dayton about all this misinformation, she summarized the problem as follows: "When it comes to writing for women, in a battle between logic and emotion, emotion always wins. Thus, many authors tell women what they want to hear, rather than the truth." The result, unfortunately, is that many young women are subjected to an incredible amount of unsupportable blather and are therefore confused about how to get in shape, whether it's to improve athletic performance or simply to

improve their quality of life.

Having worked with female athletes at all levels, from 7-year-old figure skaters to Olympians to middle-aged women with herniated discs, I'd like to dispel eight myths about weight training for women.

Jessi Butterfield is a Level 9 gymnast and a member of the Team BFS Weightlifting Club.

Her athletic accomplishments haven't hurt her academics, as she recently graduated from high school with a two-year college degree.



Sarah Cardinal, our 2004 BFS High School Female Athlete of the Year, continues to excel in all areas of her life. This year she threw 150' 8" in the discus, 152' 4" in the hammer, and 43' 11/2" in the shot, and recently broke her school record in the clean and jerk with a lift of 226 pounds. As if that weren't enough, on May 7 she earned the runner-up position in the Junior Miss Blackford Idaho Beauty Pageant.

Myth 1: Weight Training Makes Women More Masculine

Most girls who train for strength or muscular gains will never acquire the degree of muscle mass associated with boys who lift weights simply because girls have less of the muscle-building hormone testosterone. In fact, the typical male has ten times the level of testosterone of a female!

It's true that strength gains are often associated with increased bodyweight, but this does not necessarily mean there is always an increase in size. Muscle tissue is denser than fat. As a female athlete trains for strength, her bodyfat is likely to decrease while her muscle tissue increases, causing her overall bodyweight to increase or stay the same. For example, I worked with one adult figure skater a few years ago who, in a span of about six weeks, decreased the circumference of each thigh by four inches without any change in her bodyweight. Although the numbers on the scale did not move, the change in her figure was significant—and her coach was very pleased. These results were possible because

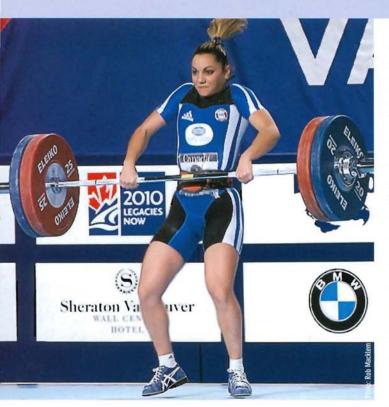


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even though this athlete was adding muscle - and a heck of a

lot of strength! — she was also losing inches because her bodyfat was decreasing.

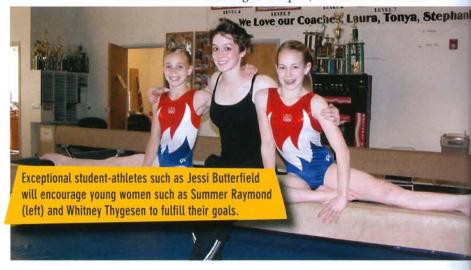
Each woman's potential for building muscle size is unique, depending on her body type, hormonal makeup and other hereditary factors. Without the use of anabolic steroids, few women strength athletes will ever develop the extreme muscular size common among male strength athletes. Also, as Laura Dayton used to tell me, "Consider that underneath every shapely curve of a women's body lies a muscle." Weight training is a good thing!

says Charles Poliquin, a strength coach who has worked with numerous women who have won medals in the Olympics and have broken world records. "They can attain, on a pound-forpound basis, 85 percent of a man's strength."

One reason women generally do not excel in tests of upper body strength is that men, and boys as well, tend to perform more manual labor than women do. Who climbs the tree to do the trimming, pulls down the broken fence, and wheelbarrows in the new sod? Sure, girls and women chip in with the chores, but usually much of the backbreaking stuff goes to the men. So it's not so much a physiological issue as a cultural one.

Myth 3: Women Should Not Squat Because It Widens the Hips

This was a myth that can be traced to Vince Gironda, a legendary bodybuilding guru who trained physique champions and movie stars. Gironda said that squats would widen the hips and detract from the aesthetic V-taper that bodybuilders like. Nonsense. According to Poliquin, there is no scientific or



Myth 2: Women Cannot Excel in OverHead Lifting, Chin-ups and Push-ups

The current world record in the clean and jerk for women is 402 pounds. A 106-pound teenage girl did a 255-pound clean and jerk. A 12-year-old girl did a 308-pound clean and jerk. So much for that theory!

The fact is, women can make significant improvements in upper body strength if they decide to work on it. I train several female weightlifters at the Olympus Gymnastics Training Center in Salt Lake City, Utah. Every workout I see young women climbing thick ropes and performing multiple chin-ups and handstand push-ups. "As far as chin-ups are concerned, that is the exercise where women are actually closest to men when trained properly,"

empirical evidence to corroborate the belief that squats widen the hips. "When the gluteus maximus develops, it grows back, not out, because neither the insertion nor the origin is at the hip. If squats did widen the hips, Olympic lifters, who devote as much as 25 percent of their training volume to squats, would be built like mailboxes."

Myth 4: Aerobic Training Is More Effective for Women in Helping Them Lose Fat

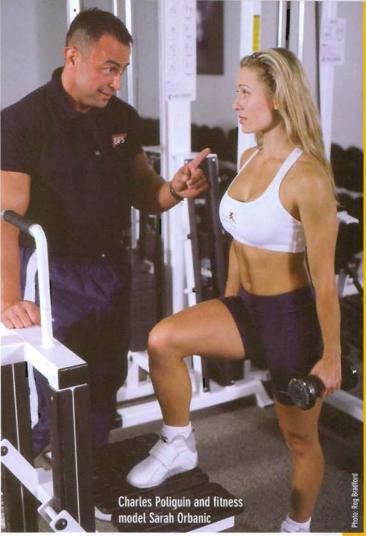
Females carry more fat and store it more efficiently than men, making it harder for women to maintain a lean, athletic body. All that aside, the low level of resistance used in aerobic training does not elicit the hormonal response that would bring about positive body composition changes.



In contrast, by increasing muscle mass and stimulating the release of natural biochemicals such as growth hormone, weight training will raise a woman's metabolism (the rate at which a person burns calories) and will help her burn fat and stay lean, perhaps even more effectively than will aerobics. Another problem with aerobics is that it produces cortisol, which has the effect of decreasing muscle mass and consequently her metabolism.

Many women believe that in order to stay lean they must perform aerobics. The fact is, weight training can be just as effective as aerobic training to lose fat. In fact, it's possible to overtrain so much with aerobics that the body actually gains fat. One study found that the aerobic instructors who taught the most classes had the highest bodyfat levels!

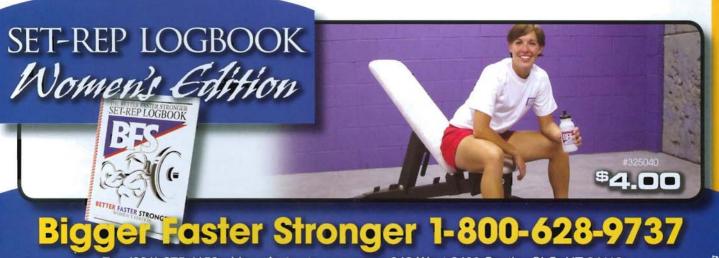
Another interesting phenomenon is that some types of aerobic training can increase fat storage in the hips and thighs. According to Poliquin, the body adapts to spinning exercise by storing



intramuscular and subcutaneous fat in the hip and thigh areas — think of marbling in beef — to provide a more readily available source of fuel for the muscles.

Myth 5: Weight Training Can Stunt a Girl's Growth

One reason this myth has survived may be traced to the decreasing height of women gymnasts. In her fascinating book about female gymnasts and figure skaters, *Little Girls in Pretty Boxes*,





Joan Ryan writes that the average height of the gymnasts on the 1976 US Olympic team was 5 feet, 3 ½ inches, whereas the average height of the 1992 US Olympic team was 4 feet, 9 inches. An uneducated assumption might be that the difference could be attributed to the ever-increasing intensity of the workouts these athletes perform. If you carried that argument to the next step, you'd expect that young girls who lift weights would experience the same reduction in height.

The fact is, the reason our top gymnasts became shorter on average is due to selection: shorter athletes tend to be stronger, pound for pound, than taller athletes. This "relative strength" difference makes it more likely that shorter athletes will excel. Likewise, most figure skaters tend to be relatively short, even the men.

As we've discussed in BFS magazine in several articles, there is very little risk that weight training will stunt growth, either by prematurely closing growth plates or by some other means. In fact, the available literature from Russian scientists suggests otherwise. Further, weight training increases bone density, thereby decreasing the risk of women developing osteoporosis in later years.

Myth 6: Women Cannot Train Like Men

One of the biggest challenges in designing strength training programs for girls at the high school level is that many girls have little or no weight training experience. It can be an intimidating experience for girls to be put in a coed class with boys who have had several years of weight training or, as stated earlier, more of a background in manual labor.

For these girls, it's best to start them with a program of higher repetitions to help them learn and perfect proper lifting technique. This also makes sense from a biological perspective, as even with an equal level of weight training experience women tend to be less "neurologically efficient" than men. What this means is that girls can enjoy good progress for a longer period of time on higher repetitions than boys because they have greater difficulty recruiting the fastest, fast-twitch muscle fibers.

Science aside, from a practical standpoint a female athlete may be able to make better progress on the BFS program for an even longer period of time than a male athlete. So whereas a college male who trains for one sport may do better on a more sophisticated periodization model, many college female athletes may do better on BFS.

Myth 7: Women Are Not As Disciplined in the Weight Room As Men

In my early interviews with high school coaches I found that many had much better results when girls trained by themselves. Perhaps this reflected a social taboo that it wasn't OK for girls to be strong or that there was something unfeminine about a girl training to be fit. Currently I find that in almost all my interviews there is no issue with girls training with boys, and often the girls will even help with the spotting.

In coed health clubs of the recent past, one of the problems was that women often felt the desire to dress up for the gym, making attendance inconvenient, says Laura Dayton, whose Lady of America fitness club in Napa, California, is the fifth largest among the 2,000 locations of this worldwide franchise. There were also distractions, she notes, such as feeling unjustly stereo-

typed by the men if they lifted heavy weights, or just being hit on when they trained. Hopefully, as these social stereotypes break down, more girls and women will become increasingly comfortable in coed weight training environments.

Myth 8: America Has the Best Strength Training Programs for Women Athletes

For a number of reasons, American women have been slow to begin programs designed to develop their optimum strength. This lack of serious strength training becomes most apparent when you look at the performance of our international-level female athletes in events such as the discus, shot put and javelin throw —sports that all require superior upper torso strength coupled with power from the hips, buttocks and thighs.

According to the latest records, our male athletes are able to hold their own — and often excel — in international competition. American women, however, fall far short of their European counterparts in those Olympic sports that rely on dynamic strength. For the past several decades, European and Russian women have monopolized international competition in virtually all the throwing sports. The statistics didn't improve after last year's summer Olympic games either. Not only didn't we win any medals in the discus, shot put or hammer throw but we also didn't have a single athlete finish in the top ten!

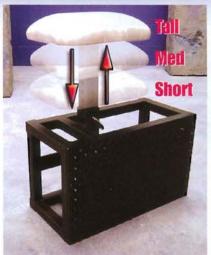
The fact that European and Eastern Bloc women dominate these power sports does not imply that they are made of tougher stuff, but it does mean that they use better training methods. American coaches are well aware of the benefits of long-term strength training programs — progressive weight training programs and improved training facilities have been upping the poundages and

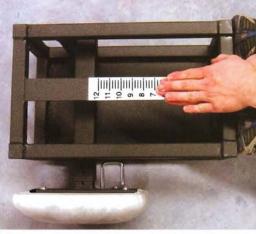
BFS Clinician Katie Krall performs lateral plyometrics on the BFS Plyo ramp. increasing the strength of our male athletes for quite some time. But American athletic coaches have been reluctant to apply these same strength training techniques to our women athletes, and many of these women have themselves been reluctant to undertake a serious program for building muscular strength.

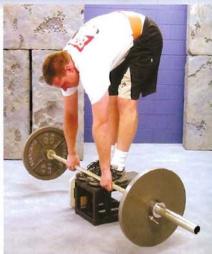
As social and cultural attitudes about female strength trainers continue to become more positive, greater numbers of women will begin to pursue serious power training programs. Then we can look forward to a new influx of athletic talent who will continue to shatter the existing records for women strength athletes.











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