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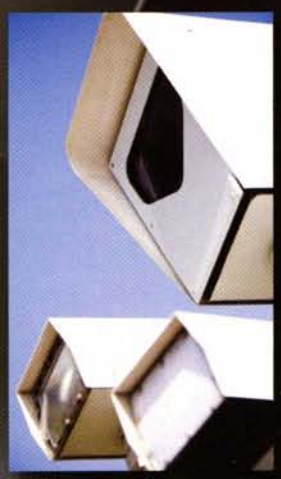
NEW JERSEY COPS

Eye in the sky



Strength training for female officers

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BY MATT BRZYCKI

Female cops who do strength training can expect to reap the same benefits as their male counterparts. This includes reducing their risk of injury; enhancing the functional ability of their musculoskeletal system; improving their appearance; increasing their mental alertness; and improving their self-confidence and self-esteem.

But in a sense, women actually have more to gain from strength training than men. For instance, osteoporosis is more common in women. Strength training can help reduce the ravages of this disease by improving bone density.

MISCONCEPTIONS

It's hard to believe but it wasn't always socially acceptable for women to lift weights. Prior to the early 1980s or so, it was thought that strength training would "masculinize" women. Although this fear has subsided, several misconceptions continue to linger.

One misconception is that strength training causes a loss of flexibility. If anything, lifting weights throughout a full range of motion will maintain or even improve flexibility. Women who have residual fears about becoming less flexible can do a series of stretches both before and after their strength training.

But perhaps the biggest misconception is that strength training produces large, unsightly muscles. Increases in muscular strength are often accompanied by increases in muscular size. While this is true for men as well as women, increases in muscular size are much less pronounced in women. In one study, for example, 47 women improved their muscular strength in the leg press by nearly 30 percent after 10 weeks of training yet the largest increase in muscular size that was experienced by any of them was less than one-quarter inch. A small percentage of women have the genetic potential to attain a significant increase in the size of their muscles. However, the vast majority of women can gain considerable muscular strength with little change in their muscular size.

GENDER DIFFERENCES IN STRENGTH

Comparing the differences in strength between genders is often done from the standpoint of absolute strength – that is, purely how much weight that can be lifted without considering any other factors. In terms of absolute strength, the average man tends to be far stronger than the average woman. This isn't really surprising since the average man is larger than the average woman. (The differences in absolute strength between men and women vary according to the areas of the body that are being compared; the differences aren't as great in the lower body as in the upper body.)

It must also be noted, however, that some women are much stronger than the average man. Dozens of women, for example, have lifted more than double their bodyweight in the bench press. At least three women have lifted more than 400 pounds; one has lifted 440 pounds. Needless to say, most men aren't capable of such noteworthy performances in the bench press.

But returning to an earlier point, doing comparisons of the differences in strength between genders should be made relative to a measure of size such as bodyweight and/or body composition.

Done this way, the strength differences between men and women are less substantial. One researcher examined the response of men and women who used the same training program. When expressed relative to bodyweight, the leg strength of women was nearly identical to that of men. And when expressed relative to lean-body (fat-free) mass, the leg strength of women was actually slightly higher than men. (In this study, the upper-body measures for men were significantly greater than they were for women regardless of how the values were compared.) As a result, making comparisons relative to body composition essentially reduces any gender differences in strength.

Here's something else that's interesting: In a study that involved 18 physical education students (seven women and 11 men) and five male bodybuilders, there were no significant differences between men and women when strength was expressed relative to muscular size. Therefore, the differences in strength between men and women appear to be in the volume of muscle fibers not in the makeup of muscle fibers. This means that although men usually have larger muscles than women, the force exerted by equal-sized muscles is roughly the same in both genders.

THE BOTTOM LINE

Contrary to popular belief, there's no need for gender-specific strength training. Even with the use of a high-powered microscope, it's literally impossible for a scientist to differentiate between the muscle tissue of men and the muscle tissue of women. So in general, women can utilize the same strength-training program as men. And women can do so without fear of losing flexibility or developing a masculine physique.

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