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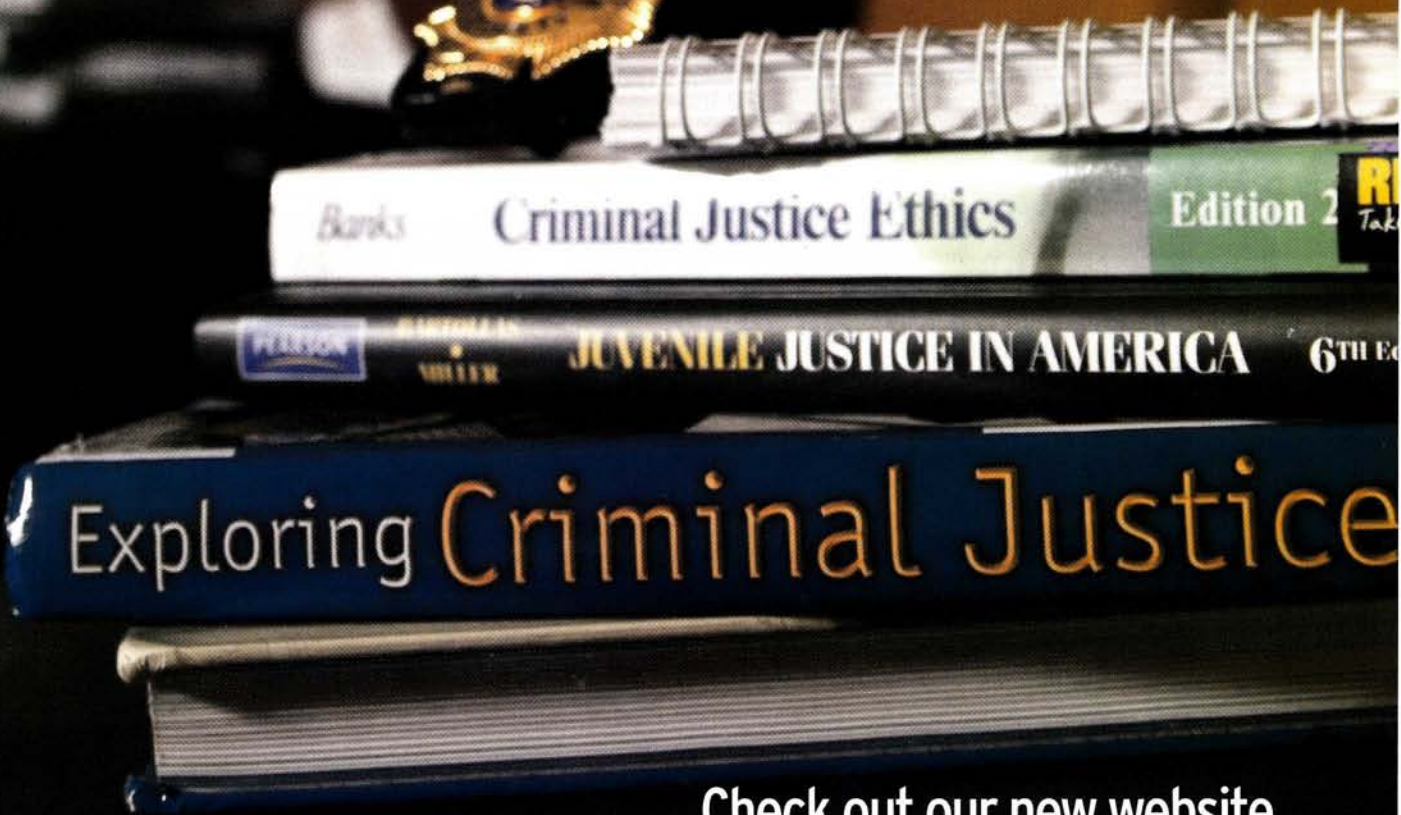


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The '4x4' adds up with multiples



**Matt
Brzycki**

Research has shown that there are no significant differences between doing one set and as many as four sets of each exercise. In one study, for example, 35 men who had been strength training for an average of 2.9 years were randomly assigned to three groups: One group did one set of each exercise; another group did two sets of each exercise and the third group did four sets of each exercise. Except for the number of sets, the groups did an identical program, training four times per week for 10 weeks.

All three groups had a significant increase in muscular size, strength and power. Moreover, there weren't any significant differences between the three groups.

So, you can achieve just about the same results from performing either a single set of each exercise or multiple sets (provided, of course, that your level of effort is adequate). For a variety of reasons, many people enjoy doing multiple sets of each exercise. Given the popularity of multiple sets, let's take a look at a few applications. But rather than the "same old, same old," this discussion will examine a novel multiple-set application known as the "4x4 Workout."

WHAT IT IS

The 4x4 Workout is the brainchild of Ken Mannie, the strength and conditioning coach at Michigan State University. With more than 25 years of experience at the collegiate level, Coach Mannie has had an excellent opportunity to "put into practice" a wide assortment of routines, including the 4x4 Workout.

This multiple-set application is quite simple yet extremely challenging. As the name might imply, the 4x4 Workout is a series (or "circuit") of four exercises repeated four times. In other words, it's four sets of four exercises which is a total of 16 sets in the workout.

PRACTICAL APPLICATIONS

The 4x4 Workout has many variations. In fact, you can devise 4x4 Workouts that target your lower body, upper body and total body.

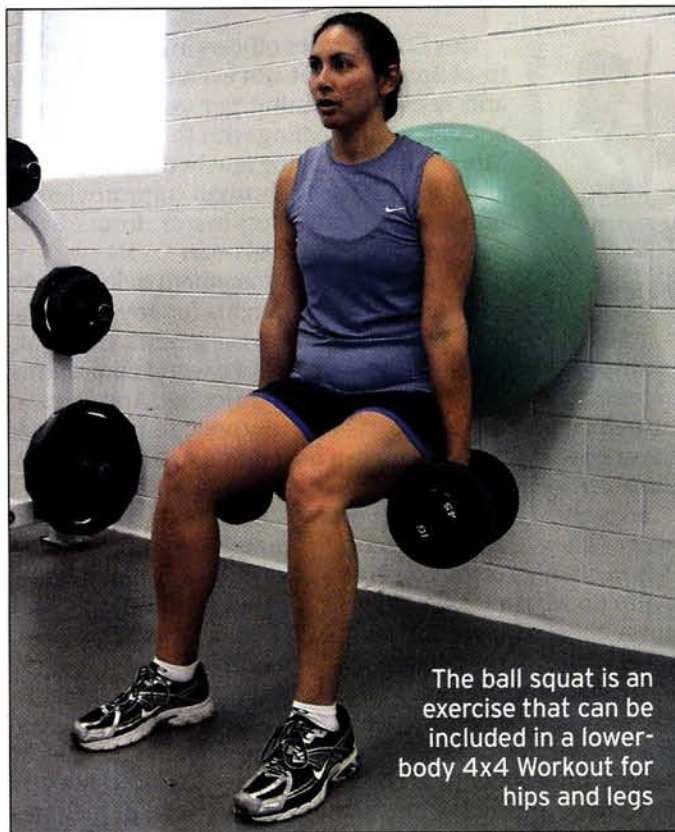
A lower-body workout would include a series of four exercises for the hips and legs such as dead lift, leg press, ball squat and lunge.

An upper-body workout is a series of two "pushing" exercises for the chest and two "pulling" exercises for the upper back that are done in an alternating fashion. An example is a series that includes bench press (push), seated row (pull), incline press (push) and lat pulldown (pull).

A total-body workout is a series of two exercises for the lower body and two exercises for the upper body (one for the chest and one for the upper back). An example includes the ball squat, leg press, bench press and seated row.

To be clear, in each of these examples, the series of four exercises would be done four times, meaning that each workout is comprised of 16 sets.

Although the aforementioned examples incorporate multiple-joint (MJ) movements, Coach Mannie notes that a 4x4 Workout can use single-joint (SJ) movements or a combination of multiple- and single-joint movements. An example for a



The ball squat is an exercise that can be included in a lower-body 4x4 Workout for hips and legs

lower-body workout is a series of the leg press (MJ), leg curl (SJ), ball squat (MJ) and leg extension (SJ).

Another option is to do a series of four multiple-joint movements followed by a series of four single-joint movements and repeat this sequence of eight exercises one more time (to make up the total of 16 sets). An example is a series of the bench press, seated row, dip, chin, bent-arm fly, pullover, tricep extension and bicep curl.

A goal is to take as little recovery as possible between each of the four exercises in the series. Then after a series is completed, take a few minutes of recovery before beginning the next series of four exercises. Of course, the recovery period can be shortened or lengthened based on your level of conditioning. (Note: Although the pace between the four exercises in a series should be fast, the speed with which you perform your repetitions should not.)

In a lower-body workout, aim for 15 repetitions in the first series of four exercises then do 12 repetitions in the second series, 10 repetitions in the third and eight repetitions in the fourth. In an upper-body workout, aim for 12 repetitions in the first series of four exercises then do 10 repetitions in the second series, eight repetitions in the third and six repetitions in the fourth. ♥

Matt Brzycki is the Assistant Director of Campus Recreation, Fitness at Princeton University. A former Marine Drill Instructor, he has authored, co-authored or edited 16 books on strength and fitness, including SWAT Fitness (which is available at www.optacinternational.com).