The Garden State's Law Enforcement Journal ■ May 2010

NEW JERSEY COPS

Director is a safe bet for first responders

How much can one lift?


Matt Brzycki

BY MATT BRZYCKI

Perhaps the most common question that's asked of those who do weight training is "How much can you lift?" Back when Olympic-style lifting (or "weightlifting") was in vogue, the answer to this question was usually the most weight that someone could press overhead. Around the early 1970s, powerlifting began to grow as a sport and soon surpassed weightlifting in popularity. Since then, the answer to this question is usually the most weight that someone can bench press.

THE 1-RM

Far too much emphasis is placed on how much someone can lift for a one-repetition maximum (1-RM). Being able to lift a lot of weight one time doesn't mean much other than being able to lift a lot of weight one time.

From 1984 to 1990, I was the Assistant Strength Coach at Rutgers University. One year, the Head Strength Coach, Paul Kennedy, received a phone call from a team in the Canadian Football League. Coach Kennedy was asked how much two of our wide receivers, Andrew Baker and Boris Pendergrass, could bench press. He responded, "Are you forming a bench pressing team?"

Coach Kennedy's point, of course, was that how much the athletes could lift in the bench press had nothing to do with being football players. Similarly, how much you can lift in the bench press has nothing to do with being a police officer. (The lone exception would be if your fitness test requires you to do a 1-RM.)

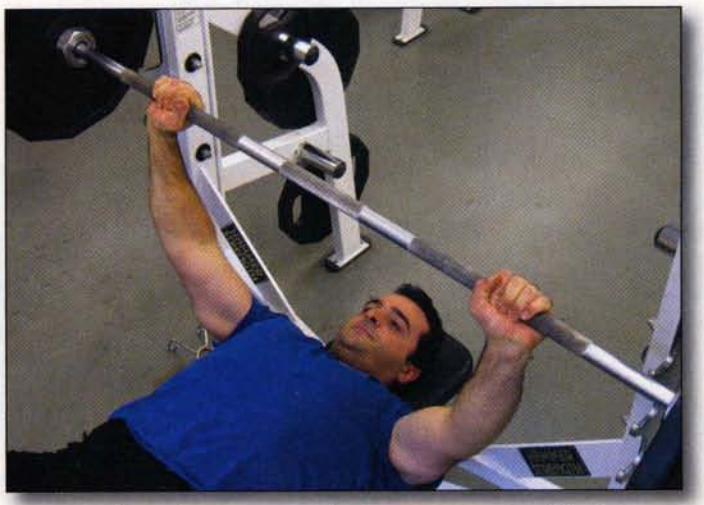
In the sport of competitive weightlifting – namely, Olympic-style lifting and powerlifting – the goal is to lift as much weight as possible one time. Some of you may, in fact, be competitive weightlifters; most of you are not. Unless you're a competitive weightlifter, there's absolutely no need for you to "max out" or see how much you can lift for one repetition. And even if you're a competitive weightlifter, you don't have to perform 1-RMs (or low-repetition sets) until you get close to a meet.

The main concern with doing a 1-RM is the high potential for injury. When performing a 1-RM, good technique often goes out the window. Plus, doing a 1-RM places a considerable amount of stress on the muscles, connective tissues and bones.

It's much safer for you to do at least six repetitions in all of your exercises. A 6-RM – the most weight that you can lift six times – corresponds to about 85% of a 1-RM.

ESTIMATING YOUR 1-RM

In order to get stronger, your efforts must be made progressively more challenging over time. You don't really need to do a 1-RM or "test" yourself in certain exercises to monitor your progress. If you're recording your workout data – and you should – you can simply check your workout card or log to see whether



or not you're making progress in the amount of weight that you use. Example: If you did 8 repetitions with 150 pounds a month ago and can do 8 repetitions with 155 pounds now, then you've made progress (and gotten stronger).

Nevertheless, some individuals are either curious about their 1-RM or use it for motivation. The good news is that there's a way to estimate a 1-RM without actually doing a 1-RM and that's through the use of a prediction equation. With a prediction equation, you can get a decent idea of your 1-RM in a safe and practical manner without having to "max out."

Over the years, a number of these equations have been developed. Of all the prediction equations, the simplest is probably "weight lifted divided by (1 - 0.025X)" where "X" is the number of repetitions-to-fatigue. To avoid confusion, let's break it down.

After you do as many repetitions as possible with a weight that doesn't permit you to complete more than about 10 repetitions, follow these three steps:

1. Multiply the number of repetitions you did by 0.025.
2. Subtract this number from 1.
3. Divide the weight you lifted by the number found in step #2.

To illustrate, suppose that you did 8 repetitions to the point of muscular fatigue with 150 pounds. First, multiply 8 by 0.025. This equals 0.2. Second, subtract 0.2 from 1. This equals 0.8. Finally, divide 150 by 0.8. This yields an estimated 1-RM of 187.5 pounds.

THE BOTTOM LINE

With very few exceptions, it isn't necessary for anyone to do a 1-RM. If you want an idea of your 1-RM, you can go to fatigue with a weight that allows no more than about 10 repetitions and then estimate your 1-RM using a prediction equation.

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).