SLOW VS. FAST

BY FRANK CLAPS, MED, CSCS

How slow should your strength training go?

SHOULD YOUR REP speed move at a glacial pace, rivaling the cashier at the express checkout line? Or is it better to "explode" with each repetition, pushing the work phase faster than the proverbial speeding bullet? And what about the more traditional speed seen at most gyms? As has always been the case when it comes to resistance training, there are few cut-and-dried answers.

Here's one spin: Researchers from Japan recently published findings suggesting that the size and strength benefits of a "slow" regimen—three seconds for the work phase and three seconds for return using a lower intensity (55 to 60 percent of one-rep maximum)—were equal to those garnered from regular speed strength training at a higher intensity (80 percent 1RM).

But not all experts are buying in.

"The study was only 13 weeks with untrained young men," says Gary R. Hunter, PhD, a professor in the Human Studies Department of the University of Alabama. "Almost any kind of training regimen will create substantial improvements in the first 13 weeks of training." Hunter also points out that, for many muscle groups in the study, the "normal-paced" group actually showed greater increases in mass than the slower-paced group. "It's not that the slow-pace and low-intensity training won't be able to increase strength and muscle size," he says. "But slow training will be inferior for expending energy and increasing muscle size, strength and especially power for either normal-paced or explosive training."

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>
> *says Mark Stephenson of the NSCA Human Performance Center*

"Theoretically," notes strength and power consultant Harvey Newton, a former USA Olympic Team coach and author of *Explosive Lifting for Sports* (Human Kinetics, 2006), slow training increases the time you place your muscles under tension. Because the time increases when you do slow movements, "one can abbreviate their training to include only one or two sets of each exercise and, also theoretically, gain maximum benefits," says Newton.

Note carefully Newton's use of the word "theoretically." It's important, because he can cite several other studies that indicate that slow training, while safe, may not yield maximum size or strength increases. So, in the case of slow training, what works in theory may not work for you in the gym. Slow training may, in fact, be especially detrimental for athletic performance, notes Mark Stephenson, MS, CSCS-D, ATC, director of the Human Performance Center of the National Strength and Conditioning Association. "When you train slow, you become slow," he says. Additionally, he notes that slow training is also "very time-consuming and tedious," a fact that can work against the busy guy who has limited time in which to build his physique. "I prefer to utilize both traditional and explosive types of training," Stephenson recommends.

Indeed, there is a growing body of research that suggests you may want to try fast or "explosive" movements, performing the "work," or concentric, phase as fast as possible. Writing in the training journal *Peak Performance*, John Sampson, a lecturer and doctoral student at the University of Wollongong, Australia, notes that "Explosive muscle contraction can lead to superior activation of muscles." In other words, moving the weight fast during the work phase may help increase the number of muscle fibers that are involved and the stresses placed on them. This can lead to greater size and strength.

Although most explosive training involves lighter weights, Sampson points to research in which one set of a heavy load performed at a fast speed garnered the same size and strength results as three sets of the same exercise performed at a slower speed. Of course, while this is an option, most guys will likely stay with multi-set combinations. Another study asked one group of exercisers to perform four sets using a heavy load, resulting in muscle failure after six reps (which generates more strength than muscle size). A second group was asked to perform four sets of exercises against the same resistance level but was restricted to only four reps performed as fast as possible. After 12 weeks, both groups experienced similar size and strength gains. "Not only did the explosive group perform 30 percent less total work but they also achieved the same gains without working to failure," says Sampson. Many experts believe that working to failure on a regular basis can be detrimental in the long run.

But this is not to suggest that there is no place for what you would consider the "normal-paced" strength training seen in most gyms. "I am unaware of any studies that suggest negative effects of this type of training in terms of gaining muscle size and/or strength," suggests Newton. "Since bodybuilders usually train at this tempo, one can conclude that muscle growth is likely to occur."

According to Hunter, "Normal-paced training may be a little better for muscle size," the stated goal of most *Maximum Fitness* readers.

There may even be a role, albeit limited, for some slow-paced workouts, Newton notes. "I have used each of these three speed protocols in my training and in the training of athletes," he says.

So what's the conclusion? "There is no right or wrong answer as to what speed of lifting is best," says Newton. "The individual and the situation dictate the protocol to be used." For Hunter, like Stephenson however, "some combination of regular and explosive training would be best." So for variety, give each duration a try, but be especially careful about explosive training. "Logic would dictate that the risk of injury may be greater with explosive training," notes Hunter. He suggests that you first build "a strong base with normal-paced training," emphasizing good technique. That way, if you do try to "explode," your form will be so entrenched that dangerous variations may be avoided. Just like life, even training has a "caveat emptor" attached to it. MF

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