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## 'Super Slow' the Way to Go?

Slo-Mo Weight Lifting May Produce Some Strength Gains -- If You Can Stand the Burn

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When Richard Szymczyk wants an intense workout, he no longer runs, bikes or swims. The general manager and president of the Fairfax Racquet Club says he gets all the exercise he needs by pumping iron slowly but intensely for 20 minutes a week.

"I was a runner, and I still go out running sometimes," he notes. "But it's a waste of time compared to doing load-bearing exercise. What I'm adding &#x2013;by slow weight lifting&#x2013; is more muscle, which requires more oxygenated blood. It's the muscles that create the demand to improve, and running doesn't put that kind of demand on your system."

With such almost religious zeal and contestable claims, Szymczyk and other enthusiasts are preaching the virtue of slow lifting as the key to overall fitness. Dubbed "SuperSlow" because each "rep" lasts as long as 20 seconds instead of the standard five to seven, the method was introduced and trademarked by a Florida fitness guru more than a decade ago. It's enjoying a new vogue, local trainers say, thanks to recent coverage in Newsweek and on the NBC-TV's "Today" show.

Proponents say slow lifting has a decided advantage over standard weight-training techniques because it puts greater demand on the muscles, thus burning calories faster while minimizing the jerking motions that can lead to injuries. It's intense, for sure, and -- if you're like most people -- you may find it painful enough that only a trainer's watchful eye will keep you going.

But endure the agony, say adherents, and a 20-minute session twice a week -- or even once -- can provide all the cardiovascular benefits of running, cycling and other aerobic activities.

Don't put away your jogging shoes just yet. Despite the hype, few sports medicine experts are buying this as the solution for pumping the nation into shape. While slowing down on the weight bench may minimize the risk of muscle damage, they say, there's little evidence that slow lifting beats standard weight training for building endurance or strength -- and absolutely none that it eliminates the need for aerobic exercise.

Some also question whether stressing the muscle intensely, then allowing it to repair itself and grow thicker with rest supercharges the fat-burning process as much as slow lifting's fans -- and even some news reports -- claim. "By the time you add three pounds of muscle, your body requires an extra 9,000 calories a month just to break even," according to Newsweek. "Hold your diet steady and, presto, you're vaporizing body fat."

"Talk about fuzzy math," responds Glenn Gaesser, professor of exercise physiology at the University of Virginia and co-author of the American College of Sports Medicine's guidelines on the exercise needed to maintain cardiorespiratory and muscular fitness. "Three pounds of muscle burns about 30 calories a

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day or roughly 900 calories a month. If people who tried the SuperSlow routine are 'vaporizing body fat,' it isn't because of the extra muscle they may have added."

Such skepticism hasn't dampened the enthusiasm of slow lift boosters.

"It's the safest form of exercise," says John Pionzio, a certified SuperSlow instructor at Exercise Defined Inc., a SuperSlow training facility in Georgetown. Szymczyk, whose club operates what he says is one of the oldest and largest SuperSlow training centers in the nation, agrees. "We have far more injuries in our racquetball courts," he says.

Part of slow lift's appeal, say advocates, is its versatility. Never mind that the punishing regimen sounds as if it would appeal only to super-buff macho jocks; it can actually be adapted, they claim, to nearly anyone. Dennis Beckman, an instructor at Exercise Defined, ticks off some of his most dramatic success stories:

\* A dance instructor in her mid-twenties who suffered from chronic neck and back pain, who now, he says, "shows off new muscles and boasts of a lack of pain when doing regular workouts."

\* A woman in her thirties suffering from osteoporosis, chronic pain and chronic fatigue who "now has significantly reduced pain, much more energy and can function normally."

\* An NCAA Division I college basketball player who added 11 pounds of muscle in only a month.

To bolster their argument, slow lift advocates cite studies conducted in 1992 and 1998 by Wayne Westcott, fitness research director at the South Shore YMCA in Quincy, Mass. Westcott, incidentally, says he is not an advocate for slow lifting, but conducted the studies out of scientific curiosity.

In each study, Westcott says, participants did 13 exercises on Nautilus machines consisting of one set of 10 repetitions lasting seven seconds per rep, while another group did half as many reps, but doubled the time for each rep. The result? After eight weeks in the first study and 10 weeks in the second, the slow-trained group gained an average of 50 percent more strength than the conventionally trained group.

Critics' response that neither study -- nor any other involving slow lifting -- is solid enough to have appeared in a peer-reviewed journal was undercut recently when a paper containing results from both Westcott studies was accepted for publication in an upcoming issue of the Journal of Sports Medicine and Physical Fitness.

Skeptics are undeterred.

While Patrick O'Shea, a professor of exercise and sports science at Oregon State University and author of "Quantum Strength Fitness II: Gaining the Winning Edge," concedes that slow lifting builds muscle mass quickly, he says that for athletic events requiring sprinting and strength, "it's useless. For athletic fitness, you want to do your resistance training with explosive force. That's why slow training doesn't provide the best benefits."

He also warns that some people's tendency to hold their breath while lifting could send the blood pressure of older slow lift participants skyrocketing, because the lifting time is extended. (To prevent this problem, Pionzio teaches people at the Georgetown facility where he works to breathe throughout their lifting routine.)

O'Shea and other exercise physiologists also take strong exception to some over-the-top claims of Ken Hutchins, who trademarked SuperSlow and now markets the technique. Only activities that promote temporary muscular failure within one to three minutes are demanding enough to constitute true exercise, says Hutchins, thereby dismissing jogging and a host of other activities -- along with the teachings of fitness authorities from the American College of Sports Medicine to the U.S. Centers for Disease Control and Prevention.

Sports scientists deride the idea that weight lifting alone can provide the same cardiovascular benefits as traditional aerobic exercise. And they're apoplectic over claims by Hutchins and other slow lift proponents that people compromise their gains from resistance training if they do aerobic exercise as well.

"There's no truth to that whatsoever," says Gaesser. "Aerobics and resistance training can coexist. One does not detract from the other." William Kraemer, head of the Human Performance Laboratory at Ball State University in Muncie, Ind., agrees. "You can't bring the cardiovascular system into play with just resistance training," Kraemer says.

A 1995 study by Kraemer in the *Journal of Applied Physiology* examined the maximal oxygen capacity -- a primary measure of cardiovascular fitness -- of regular exercisers. He found that while runners could increase their maximal oxygen consumption by just running, weight lifters could not do the same on a strict program of resistance training. "There's no weight training that exists that's really going to be effective by itself in promoting total fitness," he says.

Setting aside slow lifting's most grandiose fitness claims, does the method have merit as a strength-training technique -- part of the two- to three-day-a-week exercise regimen recommended for everyone over age 30 to combat muscle and bone loss?

Experts concede that the typical couch potato will likely realize some benefits from slow lift training program -- provided he or she can tough it out. But similar benefits, they say, would result from any strength conditioning regimen. James Graves, an exercise scientist at Syracuse University in New York who has devoted about half of his more than 80 published studies to strength training, says most beginners would be better off using conventional methods.

Strength can be improved without pushing your muscles to failure, says Gaesser. "A deep muscle burn is neither necessary nor desirable for the average person in search of a fitter body."

While slow lift training does produce strength gains and is generally safe, Graves says, "the downside is that it's a very intense way to train, and most of us are not able to tolerate that kind of intensity" unless coached by a personal trainer.

If you plan to try it solo, find yourself a big clock or timer first. Without it, fast or slow is likely to be hard to gauge. Says Westcott, "If you don't have someone there with a stopwatch timing you, what you think is a 10-second lift often only turns out to be a five-second lift."

For optimum results, you'll also need to resist the tendency to compensate for higher intensity by switching to lower weights. "When you lower the weight," says Kraemer, "you lower your recruitment of muscle fibers," which reduces muscle and strength gains.

And one more thing: Before you start, you may want to consider the aftermath of Westcott's slow lift studies -- the part you won't read about in the published research. "The bad news," says Westcott, "is

that when I finished both studies, only one of the 147 people involved . . . wanted to continue the training. We feel it's a little too tedious, too tough for the average person." Kim McDonald is a science and sports medicine writer in San Diego.

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